INTERNATIONAL COURT OF JUSTICE

CASE CONCERNING PULP MILLS ON THE RIVER URUGUAY (ARGENTINA *v.* URUGUAY)

MEMORIAL ARGENTINA

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INTRODUCTION

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Section I

General background

0.1. The dispute which the Argentine Republic (hereinafter "Argentina") submitted to the International Court of Justice on 4 May 2006 is embittering to a concerning extent the traditionally fraternal and exemplary relations between Argentina and the Eastern Republic of Uruguay (hereinafter "Uruguay").

0.2. Argentina and Uruguay are two countries deeply united by historical, social and cultural links that go beyond mere neighbourly relations between States. The Treaty on the River Uruguay of 1961 describes these eloquently, its preamble referring to "the close and immutable bonds of affection and friendship which have always existed between their respective peoples"[1].

0.3. The successive announcements, in the space of 16 months, of the construction of two enormous pulp mills on the left bank of the River Uruguay, near the town of Fray Bentos in the Uruguayan Department of Río Negro[2], marked a sudden and serious deterioration in these relations. Several factors reflect the scale of the situation:

— firstly, the unilateral decisions of the Uruguayan Government to authorize the construction of the two mills were taken in breach of the clear requirements of the Statute of the River Uruguay. That treaty, which was signed by the two States at Salto (Uruguay) on 26 February 1975 and entered into force on 18 September 1975 (hereinafter "the 1975 Statute"[3]), establishes close co-operation between the two riparian States which had

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previously been entirely satisfactory, a key element being the procedure for prior notification and consultation laid down by Articles 7 to 13[4];

— secondly, the anticipated impact on the environment and the quality of the river waters is bound to be substantial, as pulp mills are among the most polluting types of industrial plant; the city of Gualeguaychú and its region, situated on the Argentine bank of the river, opposite the site chosen for the mills, are centres for agriculture and, in particular, ecological tourism, which is developing rapidly there; and

— thirdly, the population of the Argentine province of Entre Ríos in general and of the city of Gualeguaychú in particular has a long community tradition of protecting the environment.

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[1]Treaty between the Argentine Republic and the Eastern Republic of Uruguay concerning the Boundary Constituted by the River Uruguay, Montevideo, 7 April 1961. United Nations, *Treaty Series (UNTS)*, Vol. 635, No. 9074. Anns., Vol. II, Ann. 1.

[2]Anns., Vol. VIII, Anns. 1 to 4. On the characteristics of these mills, see para. 0.16 and Chap. VII, Sec. III.

[3]*UNTS*, Vol. 1295, p. 339 (No. 21425). Ann., Vol. II, Ann. 2, and Ann. I to the Application.

[4]See Chap. III, Sec. II.

0.4. Indeed, for some years the province of Entre Ríos has been deeply concerned to respect the environment. The city of Gualeguaychú leads the way in developing this ecological awareness[5].

0.5. The sudden announcement, on 21 September 2006, by the management of the Spanish company ENCE, which had obtained authorization from the Uruguayan authorities to construct one of the two mills at issue near Fray Bentos, that it was abandoning the project[6], does not affect the substance of the dispute. Firstly, there is no question of the abandonment or relocation of the other mill, whose construction by the Finnish company Botnia is proceeding apace and whose production capacity will be twice that initially planned by ENCE for its own mill. Secondly, while ENCE has abandoned the siting of the latter in the immediate vicinity of the Botnia mill, it has announced that it intends to build it elsewhere[7], at a location yet to be confirmed when this Memorial went to press[8].

0.6. Because of the uncertainty in this respect, this Memorial has been drawn up on the basis of the situation existing on the date it was completed. Evidently, if the situation regarding the ENCE project were to change, Argentina reserves the right to adapt its conclusions and supporting arguments accordingly[9].

Section II

Procedure

0.7. Against this background, Argentina filed with the Registry of the International Court of Justice on 4 May 2006 an Application instituting proceedings against Uruguay, in which it requested the Court to find that the authorization, construction and future commissioning of two pulp mills on the left bank of the River Uruguay are in breach of the respondent State's obligations under the 1975 Statute and the other rules of international law referred to by that Statute, and that these breaches engage the international responsibility of Uruguay with all ensuing legal effects.

0.8. At the same time, Argentina filed a request for the indication of provisional measures pursuant to Article 41 of the Statute of the Court and Article 73 of the Rules of Court, based on the significant and irreversible damage that the commissioning of the mills will cause to the quality of

[5]For example, its waste treatment system is the only one of its kind along the River Uruguay and in the areas affected by it. See Chap. VI, paras. 6.51 and 6.52.

[6]See "ENCE SE QUEDA; ESTUDIA RELOCALIZACIÓN DE SU PLANTA", 21 Sept. 2006, http://www.presidencia.gub.uy/_web/noticias/2006/09/2006092109.htm (Anns., Vol. VI, Ann. 1); "DECISIÓN DE ENCE NO AFECTA LA ESTRATEGIA URUGUAYA", 22 Sept. 2006, http://www.presidencia.gub.uy/_web/noticias/2006/09/2006092205.htm (Anns., Vol. VI, Ann. 3).

[7]See the press conference by the Chairman of ENCE, Mr. Juan Luis Arregui, and the Chief Executive, Mr. Pedro Oyarzábal, Montevideo, 21 Sept. 2006 (Anns., Vol. VI, Ann. 1), the press release by ENCE of 22 Sept. 2006, http://www.ence.es/Publico/publica_cnmv.php?Id=64 (Anns., Vol. VI, Ann. 4) and "VÁZQEZ: LO OFICIAL DE ENCE ES QUE NO SE VA DEL PAÍS", 28 Sept. 2006, http://www.presidencia.gub.uy/_web/noticias/2006/09/2006092802.htm (Anns., Vol. VI, Ann. 5) or "PLAN ESTRATÉGICO DEL GRUPO ENCE (PERÍODO 2007-2011)", 27 Oct. 2006, website of the Uruguayan Presidency, http://www.presidencia.gub.uy/_web/noticias/2006/10/2006102701.htm (Anns., Vol. VI, Ann. 6).

[8]At their press conference of 21 Sept. 2006, the management of ENCE did not answer journalists' questions on this subject (Anns., Vol. VI, Ann. 1). Regarding the announcement made on 12 Dec. 2006 by the Chairman of ENCE that the CMB project was to be relocated and sited close to the Uruguayan town of Punta Pereira on the Río de la Plata, see Chap. VIII, paras. 8.6 and 8.7.

[9]See Conclusions, para. 9.2.

6 the waters of the River Uruguay and the serious ecological, social and economic effects that the construction of the plants are causing and will cause in the areas affected by the river, including its right bank.

0.9. By its Order of 13 July 2006, the Court found that "the circumstances, as they now present themselves . . ., are not such as to require the exercise of its power under Article 41 of the Statute to indicate provisional measures"[10]. However, the Court stated that "in proceeding with the authorization and construction of the mills, Uruguay necessarily bears all risks relating to any finding on the merits that the Court might later make"[11]. It also pointed out that "the Parties are required to fulfil their obligations under international law", stressed "the necessity for Argentina and Uruguay to implement in good faith the consultation and co-operation procedures provided for by the 1975 Statute, with CARU [Administrative Commission of the River Uruguay; see Chapters II and III] constituting the envisaged forum in this regard" and further encouraged "both Parties to refrain from any actions which might render more difficult the resolution of the present dispute"[12].

0.10. By a second Order made on the same date, the Court fixed the time-limit for the filing of the Memorial of Argentina as 15 January 2007 and that for the filing of the Counter-Memorial of Uruguay as 20 July 2007. This welcome brevity shows that the Court has recognized the need to settle the dispute referred to it by Argentina in the shortest period compatible with the detailed presentation of their respective arguments by the Parties. This Memorial has been filed in accordance with that decision.

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Section III

Scope of the dispute

0.11. In its Order of 13 July 2006 on Argentina's request for the indication of provisional measures, the Court held that:

> "the present case highlights the importance of the need to ensure environmental protection of shared natural resources while allowing for sustainable economic development; whereas it is in particular necessary to bear in mind the reliance of the Parties on the quality of the water of the River Uruguay for their livelihood and economic development; whereas from this point of view account must be taken of the need to safeguard the continued conservation of the river environment and the rights of economic development of the riparian States"[13].

0.12. This wording defines concisely and exactly an important aspect of the scope of the present dispute, relating to the threat posed to the environment of the River Uruguay and to the sustainable economic and social development of the Argentine province of Entre Ríos by the

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[10] Para. 97.

[11] *Ibid.*, para. 78.

[12] *Ibid.*, para. 82.

[13] *Ibid.*, para. 80.

definite construction of one enormous pulp mill[14] at a particularly sensitive site and the likely construction of another mill elsewhere on the section of the river common to the Parties[15].

0.13. Moreover, the Court is effectively being asked to "rescue" the 1975 Statute: through its total and continuous disregard for the procedures laid down by Chapter II of that instrument and its refusal to carry out, in prior consultation with Argentina, i.e. before the granting of authorization for the planned mills, a full and precise assessment of the effects of their construction and commissioning, Uruguay has in fact dealt a blow to this treaty, strict observance of which will ensure "the optimum and rational utilization of the River Uruguay"[16] and, beyond that, harmonious relations between the Parties.

8 0.14. As Argentina explained in its Application[17], the dispute arose following the unilateral authorization issued by the Government of Uruguay on 9 October 2003 to the Spanish company ENCE to construct a very large pulp mill on the left bank of the River Uruguay, some 30 km from the Argentine city of Gualeguaychú (the largest conurbation on the section of the River Uruguay common to the Parties, with nearly 100,000 inhabitants) and 12 km from the Argentine resort of Ñandubaysal. One of the main revenue sources of this part of the Argentine province of Entre Ríos is ecological tourism[18].

0.15. This project, entitled "Celulosa de M'Bopicuá" (hereinafter "CMB"), was swiftly followed by another, on an even larger scale, since on 14 February 2005, the Government of Uruguay authorized the Finnish company Oy Metsä-Botnia AB (hereinafter "Botnia"), also unilaterally and in breach of the 1975 Statute, to construct another mill ("Orion"), with an even greater production capacity, just 7 km from CMB[19]. The location of the two mills is shown in Figures 1 and 2.

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[14]On the characteristics of this mill, see para. 016 and Chap. VII, Sec. III.

[15]See para. 0.6.

[16]Art. 1 of the 1975 Statute.

[17]See paras. 5-23 of the Application.

[18]See Chap. VII and Ann. M to the Latinoconsult report ("Assessment of the fluvial environment of the proposed Botnia pulp mill on Río Uruguay") at http://www.ecopaedia.com.ar/publico/ea_report/ (username: ea_annex; password: ea_annex).

[19]In addition, on 5 July 2005, Uruguay authorized Botnia to construct a port connected to the mill planned by the company (Anns., Vol. VII, Ann. 15). This port was unilaterally authorized to operate on 24 Aug. 2006 (see para. 0.23). Furthermore, a third major pulp mill project is planned on behalf of the Swedish-Finnish transnational company Stora Enso. This mill, also with a production capacity of 1 million tonnes, is due to be sited on the Río Negro (see Ann. XXV to the Application and Anns., Vol. VI, Ann. 7).

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Fig. 1

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Fig. 2

0.16. When fully on stream, it was anticipated that the two mills, construction of which should be completed in August 2007 for Orion and July 2008 for CMB[20], would initially produce 1 million tonnes and 500,000 tonnes of pulp respectively[21], with CMB's output subsequently also being increased to 1 million tonnes[22]. In terms of their production capacity, these mills are currently among the largest in the world[23].

0.17. The announcement by the management of ENCE, in September 2006, when the drafting of this Memorial was already at an advanced stage, that it was provisionally abandoning the construction of the CMB mill[24] — at least at the planned site — has no major bearing on the scope of this dispute. This is because:

— the procedure followed by Uruguay in authorizing the construction of the CMB mill was a gross breach of the letter and the spirit of the 1975 Statute and is in the nature of a threat to that treaty, the safeguarding of which is one of the principal issues in these proceedings[25]; the announced abandonment of the project does not remove those irregularities, which constitute a dangerous precedent; and

— the adverse effects of the Orion mill clearly remain and are far from negligible, even when viewed in isolation[26].

11 0.18. By its nature, the pulp industry is highly polluting[27] and the siting of the Orion mill on the River Uruguay is sure to cause damage to its environment and the areas affected by it, including the health and well-being of the communities living on both sides of this shared natural resource. As emphasized by Mr. Enrique Viana, Uruguayan National Prosecutor,

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[20]CR 2006/47, 8 June 2006, p. 46, para. 15 (Mr. Reichler). See also the affidavit by Ms Alicia Torres, National Director for the Environment, Observations of Uruguay, Exhibit 1, pp. 10-11, the affidavit by Mr. Ponce de Léon, *ibid.*, Exhibit 3, p. 2, para. 8, and Anns., Vol. VI, Ann. 14.

[21]Ann. I to the request for indication of provisional measures.

[22]The management of ENCE have indicated that, when it is built on a new site, their pulp mill will also have a capacity of 1 million tonnes (Anns., Vol. VI, Ann. 1).

[23]Anns., Vol. V, Ann. 2.

[24]See para. 0.5.

[25]See para. 0.13.

[26]See Chap. VIII, para. 8.7. Moreover, ENCE has in no way abandoned its plans to build a mill of the same type elsewhere in Uruguay, although the exact site for the relocation had not been confirmed when this Memorial was completed.

[27]According to Delores Broten and Jay Ritchlin: "Pulp and paper is the third largest industrial polluter to air, water, and land in both Canada and the United States, and releases well over a hundred million kg of toxic pollution each year" (National Pollutant Release Inventory, 1996). More specifically on the impact of the paper industry on water, they point out: "Pulp mills are voracious water users. Their consumption of fresh water can seriously harm habitat near mills, reduce water levels necessary for fish, and alter water temperature, a critical environmental factor for fish" (Delores Broten and Jay Ritchlin, "The Pulp Pollution Primer", http://www.rfu.org/PulpPrimer.htm). Professor Wayne Gray also indicates, as regards atmospheric pollution, that:

> "As part of the manufacturing process, pulp and paper mills generate sulfur dioxide and particulate matter-dust, soot, and ashes . . . from the burning of fossil fuels like coal and oil for energy. Both pollutants can cause respiratory problems, damage to property, and reduced atmospheric visibility. Sulfur dioxide contributes to acid rain that can devastate forests hundreds of miles from its source." ("Pulp (non)fiction: air pollution in the pulp and paper industry", http://www.clarku.edu/activelearning/departments/economics/gray/grayD.cfm), Anns., Vol. V, Ann. 14.

More generally on these aspects, see Chap. VII, Sec. III.

> "the collective health of the residents of both riversides will be placed in great, mediate and immediate peril, . . . as well as all of the common environmental resources with the Argentine Republic . . . The site location of the plants . . . will result in an assault to the especially protected Eastern riverside of the Río Uruguay and constitutes an irruption or an abrupt territorial invasion . . ."[28]

12 0.19. This is even less acceptable since the River Uruguay, which constitutes the frontier between the Parties for a distance of some 500 km (see Fig. 3), has been the subject of a detailed legal régime protecting not only the respective rights of the two riparian States, but also the aquatic environment and that of the river and the areas affected by it. At the time it was established, this régime was undoubtedly a model of its kind, which still today remains in step with — and even ahead of, in some respects — the general rules protecting international waterways and their environment, to which, moreover, it explicitly refers[29]. The Statute of 26 February 1975, a treaty which is the outcome of a long maturing process, marked in particular by the adoption, in 1961, of the Treaty concerning the Boundary Constituted by the River Uruguay[30], and, in 1971, by the Argentine-Uruguayan Declaration on water resources[31], contains two principal features[32]:

— firstly, it prescribes for the Parties a set of material obligations aimed at ensuring the rational, sustainable and equitable utilization of the waters of the river, and at protecting its environment and that of "the areas affected by it"[33];

— secondly, to this end, it imposes on the Parties specific requirements for co-operation, for example prior notification and consultation if works are planned "which are liable to affect navigation, the régime of the river or the quality of its waters"[34] and where these risk entailing "any change in the ecological balance" or involve "pests and other harmful factors in the river and the areas affected by it"[35].

Fig. 3

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[28]Claim filed against the Uruguayan Government by Dr. Enrique Viana, National Prosecutor of the Eastern Republic of Uruguay, 12 Sept. 2005 (extract), Anns., Vol. VII, Ann. 17.

[29]Cf. Arts. 1 and 41 *(a)*.

[30]7 April 1961, *UNTS*, Vol. 635, p. 98 (Anns., Vol. II, Ann.).

[31]Declaration on water resources, 9 July 1971, Argentina-Uruguay (Anns., Vol. II, Ann. 11)

[32]For a detailed account of the 1975 Statute, see Chap. III.

[33]Cf. Art. 36, "*sus áreas de influencia*" in the original Spanish text (Anns., Vol. II, Ann. 2).

[34]Art. 7, first subparagraph; see also Arts. 11, 27, 34 and 35.

[35]Art. 36; see also Art. 13.

13 0.20. This is undoubtedly so in the case in point. Moreover, be that as it may, a joint settlement has proved impossible, since Uruguay has from the outset[36] decided to proceed unilaterally, without consulting Argentina and without applying the procedures for prior notification and consultation laid down by the Statute. In particular, regardless of the provisions of Chapters II, XIII and XIV of the 1975 Statute, it did not inform CARU of its plans before granting the necessary authorizations, failed to provide it and Argentina, through CARU, with the information required to fully assess the likely effects of the works on the régime of the river, the quality of its waters and the areas affected by it, and took no account of the reasoned objections by Argentina and other bodies which were concerned by the risks resulting from the construction and commissioning of the plants[37].

0.21. This case therefore relates to a series of varied and numerous breaches by Uruguay of its obligations under the 1975 Statute. It is especially important in terms of protecting the environment, of which the Court has indicated on several occasions that it:

> "is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment."[38]

0.22. By complying neither with the requirements imposed by the 1975 Statute in this respect nor with those to which it refers, Uruguay is damaging the interests of the substantial human community which depends to a large extent for its sustainable development on the quality
14 of the waters of the river and on the protection of the areas affected by it from pollution. And, by evading the rules laid down by the Statute regarding co-operation between the riparian States, Uruguay is depriving the very content of this treaty of its substance.

0.23. This is all the more concerning because, regardless of the warnings of the Court, which, in its Order of 13 July 2006, had stressed the necessity for the Parties "to implement in good faith the consultation and co-operation procedures provided for by the 1975 Statute"[39], Uruguay authorized Botnia on 24 August 2006, still without referring the matter to CARU (or by presenting it with a fait accompli) and without any consultation with Argentina, to commission the port associated with the Orion mill[40] and, on 12 September 2006, to use for industrial purposes substantial quantities of water extracted from the River Uruguay[41].

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[36]See the statement by Uruguay's Minister for Foreign Affairs, Mr. D. Opertti, to the Uruguayan Senate on 26 Nov. 2003; Senate of the Eastern Republic of Uruguay, Foreign Affairs Committee, sitting of 26 Nov. 2003, speech by the Foreign Minister, Mr. Didier Opertti (document 3 submitted to the Registry by Argentina on 2 June 2006, also contained in the Anns., Vol. VII, Ann. 4). See also Chap. II, para. 2.26.

[37]For a detailed account of the procedure followed by Uruguay and the protests by Argentina, see Chap. II.

[38]Advisory Opinion of 8 July 1996, *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I),* pp. 241-242, para. 29; see also Judgment of 25 Sept. 1997, *Gabčíkovo-Nagymaros Project*, *I.C.J. Reports 1997*, p. 78, para. 140 and Order of 13 July 2006, *Pulp Mills on the River Uruguay*, para. 72.

[39]Para. 82; see para. 0.9 above.

[40]See resolution R/DN/100/2006 of DINAMA (Dirección Nacional del Medio Ambiente — Department of the Environment) of 24 Aug. 2006 (Anns., Vol. VII, Ann. 15).

[41]See the resolution of the Uruguayan Ministry of Transport and Public Works of 12 Sept. 2006 (Anns., Vol. VII, Ann. 16).

Section IV

Structure of the Memorial

0.24. Given the extremely restrictive position adopted in oral argument by Uruguay as regards the extent of the Court's jurisdiction in this case, Argentina is obliged to make a number of introductory comments on this subject (Chap. I).

0.25. To further clarify the facts set out in Chapter II regarding the origins, existence and development of the dispute, Chapter III describes the legal context of the latter, i.e. the set of rules applicable to the settlement of the dispute, beginning with a detailed analysis of the Statute of the River Uruguay of 1975, particularly in the light of the practice of the States.

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0.26. The account of the facts and the description of the applicable law allow the full scale of Uruguay's breaches of its international obligations to be appreciated, both procedural (Chap. IV) and material (Chap. V).

0.27. To complete its presentation of the scope of the dispute, the key aspects of which have been briefly highlighted in this introduction, Argentina devotes the next two chapters of its Memorial to describing:

— both the overall environment concerned by the planned mills and their associated facilities, i.e. the River Uruguay and the areas affected by it, and the specific features of the part of the river on whose bank Uruguay has unilaterally decided to site the mills that are in dispute (Chap. VI); and

— the damage that would result from the construction and commissioning of the Orion mill and the associated facilities and, possibly, the CMB mill, whether at the site originally planned or elsewhere on the River Uruguay or one of its tributaries (Chap. VII).

0.28. Finally, before setting out its submissions pursuant to Article 49, paragraph 4, of the Rules of Court, Argentina will indicate in Chapter VIII the remedies called for by the responsibility that Uruguay has engaged through the breaches of international obligations that may be attributed to it.

CHAPTER I

JURISDICTION OF THE COURT

19 1.1. In its Application, Argentina stated that the jurisdiction of the Court to deal with the present case was based on the first paragraph of Article 60 of the 1975 Statute, under the terms of which:

> "Any dispute concerning the interpretation or application of the Treaty and the Statute which cannot be settled by direct negotiations may be submitted by either Party to the International Court of Justice."

1.2. During the consideration of Argentina's request for the indication of provisional measures, Uruguay did not contest the jurisdiction of the Court on this basis[42], and the Court found that "the Parties are in agreement that the Court has jurisdiction with regard to the rights to which Article 60 of the 1975 Statute applies"[43]. However, Uruguay asserted "that such jurisdiction exists prima facie only with regard to those aspects of Argentina's request that are directly related to the rights Argentina is entitled to claim under the 1975 Statute", and insisted "in this regard . . . that rights claimed by Argentina relating to any alleged consequential economic and social impact of the mills, including any impact on tourism, are not covered by the 1975 Statute"[44].

1.3. There is no need to go back over the jurisdiction in principle of the distinguished Court to deal with the Application under the terms of Article 60 of the 1975 Statute (and Article 36, paragraph 1, of the Rules of Court), which is accepted by Uruguay and which it could not in any event go back upon. As pointed out by the Permanent Court:

> "If, in a special case, the respondent has, by an express declaration, indicated his desire to obtain a decision on the merits and his intention to abstain from raising the question of jurisdiction, it seems clear that he cannot, later on in the proceedings, go back upon that declaration."[45]

20 On the other hand, something should be said on the extent of this jurisdiction and on the precise role the Court is called upon to perform in the present case, matters on which the Parties could prove to disagree.

1.4. It goes without saying that Argentina is not in any way claiming, contrary to what counsel for Uruguay gave to understand at the Court's hearing of 8 June 2006, that Article 60 of the 1975 Statute gives "the Court jurisdiction to settle any international dispute whatever between Uruguay and Argentina"[46]. Argentina therefore shares Uruguay's opinion that "the only disputes

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[42]Hearing of 8 June 2006, CR 2006/47, p. 33, paras. 4 and 5 (Mr. Condorelli); p. 52, para. 31 (Mr. Reichler).

[43]Order of 13 July 2006, para. 59.

[44]*Ibid*, para. 58; for the arguments of Uruguay, see hearing of 8 June 2006, CR 2006/47, pp. 33-37, paras. 5-13 (Mr. Condorelli), p. 52 , para. 31 (Mr. Reichler).

[45]PCIJ, Judgment of 26 April 1928, *Rights of Minorities in Upper Silesia (Minority Schools), Series A, No. 15*, p. 25. See also ICJ, Judgment of 25 March 1948, *Corfu Channel, Preliminary Objection, I.C.J. Reports 1947-1948*, p. 29.

[46]*Ibid*, pp. 33-34, para. 6.

covered *ratione materiae* by the compromissory clause concerned are those relating to the interpretation or application . . . of the Statute"[47]. But it is still essential:

1. not to distort the very subject of Argentina's Application, as Uruguay is doing; and

2. not to interpret the 1975 Statute in a way that is incompatible with its subject and purpose, as Uruguay is also doing.

1.5. As regards the first point, a simple reading of Argentina's Application is enough to refute the argument that it is only claiming breach of "Articles 7 *et seq.* of the Statute"[48]: neither paragraph 2 of the Application, defining the "Subject-matter of the Dispute", nor paragraph 24, setting out the "Grounds of Law Relied on by Argentina", nor paragraph 25 concerning the "Decision Requested" restrict the subject of the Application solely to the breach of Article 7 (and of the procedural provisions immediately following it in Chapter II). Argentina is indeed asking the Court to find that Uruguay has not complied with the obligations incumbent upon it in this respect[49], and that is a key element of its requests, since it entails no less than safeguarding the integrity of the 1975 Statute[50] and protecting the River Uruguay and the areas affected by it.
21 However, that is not the end of the list of breaches of the treaty obligations incumbent on Uruguay under the Statute which are imputable to it and for which Argentina is seeking reparation.

1.6. Without necessarily being exhaustive, the list of obligations breached by Uruguay — and expressly or implicitly cited in the Application — includes at least the following:

— the procedural obligations resulting from Article 1 and Articles 7 to 12 of the 1975 Statute, and Articles 27 or 34 referring to these;

— the obligations relating to use of the river for navigation (Arts. 3-6);

— the obligations concerning use of the waters of the river, for example for industrial purposes (Art. 27);

— the obligations relating to management of the soil and woodland, the ecological balance of the river and the areas affected by it, and the conservation and preservation of living resources (Arts. 35-37); and

— the obligations regarding the prevention of pollution (Arts. 40-43).

1.7. Moreover, Uruguay is giving an excessively narrow interpretation both of its obligations resulting from Article 7 of the 1975 Statute and of the other relevant provisions.

1.8. Under the terms of Article 7, any plan to construct or modify works "which are liable to affect navigation, the régime of the river or the quality of its waters" requires the State

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[47] *Ibid*, p. 34, para. 6.

[48] *Ibid*, p. 34, para. 7; see also p. 37, para. 14.

[49] Cf. for example para. 25.1 *(c)* of the Application, whereby Argentina requests the Court to adjudge and declare that Uruguay has breached "the obligation to comply with the procedures prescribed in Chap. II of the 1975 Statute"; see also para. 24 *(c)*.

[50] On this point, see paras. 1.11 and 1.14 of this Memorial.

contemplating it to initiate a complex procedure[51] involving CARU and, ultimately, the International Court of Justice, since "[s]hould the Parties fail to reach agreement within 180 days" after one of them has come to the conclusion that the execution of the work "might significantly impair navigation, the régime of the river or the quality of its waters", "the procedure indicated in Chapter XV shall apply"[52]. In this case, however, by failing to submit the plans to construct the
22 CMB and Orion mills and the associated works to CARU, Uruguay has not allowed the process provided for in Chapter II of the Statute to be started, thereby depriving all its provisions of their effect, including Article 12. The Court nonetheless has jurisdiction in these proceedings on the basis of Article 60, which entitles it to rule on "*any dispute* concerning the interpretation or application . . . of the Statute"[53].

1.9. Strangely, at the hearings concerning Argentina's request for the indication of provisional measures, Uruguay claimed that the Court only had jurisdiction to deal with the dispute arising from the construction and commissioning of the mills at issue in so far as these would result in an impairment of the quality of the waters of the river and with the consequences "stemming directly from such impairment by cause and effect"[54]. It certainly does, but that is not the sole form of jurisdiction in the present case.

1.10. Firstly, Uruguay appears to have a peculiarly restrictive view of what is meant by the expression "régime of the river". At the hearings on the request for indication of provisional measures, counsel for Uruguay merely stated that "the pulp mills . . . are not liable to affect navigation or the régime of the river; nor does Argentina so claim"[55]. The fact is that Argentina, both in the Application instituting proceedings[56] and the request for indication of provisional measures[57], and in its oral arguments relating to that request[58], has constantly drawn attention to the breaches "of the régime of the river" which have the effect of causing damage to the ecology, the economy and tourism, while distinguishing this, as does the 1975 Statute, from the deterioration of the quality of the waters of the River Uruguay.

23 1.11. The 1975 Statute was of course concluded to protect the "quality of the waters" of the River Uruguay but also, more generally, its "régime". That is why it refers systematically to the "quality of the waters" on the one hand but also to the "régime of the river" and the areas affected by it on the other, i.e. all the factors that affect, and are affected by, the ecosystem of the river as a whole.

1.12. There can be no doubt that the standards regarding water quality include the standards and requirements regarding pollution (Arts. 41, 42 and 43) and the protection of the ecological balance of the area of the River Uruguay and the areas affected by it (Arts. 35, 36 and 37).

Moreover, restricting application of the procedure under Articles 7 *et seq.* solely to works liable to affect the quality of the waters of the river would have the absurd result of authorizing works which, while complying with those standards, would in other respects cause "significant

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[51]For a detailed description of this, see Chap. III, Sec. II.

[52]Arts. 11 and 12 of the 1975 Statute.

[53]See paras. 1.1 to 1.3 above.

[54]Hearing of 8 June 2006, CR 2006/47, p. 34, para. 8 (Mr. Condorelli).

[55]*Ibid*.

[56]See Application, pp. 9-10, para. 4 *(e)*, *(f)* and *(g)*.

[57]See Request for indication of provisional measures, pp. 1 and 2, paras. 4 *(a)* and 5.

[58]Hearing of 8 June 2006, CR 2006/46, p. 51, para. 9 (Ms Boisson de Chazournes); p. 60, para. 2 (Mr. Pellet).

damage to the other Party" or affect navigation on the river — something that would be all the more unreasonable since Article 7 specifically requires the parties to enable the other party to assess "the probable impact of such works on navigation" and since the Articles on that topic (Arts. 3-6) are included in the same chapter (Chap. II, "Navigation and works") as the procedural provisions of Articles 7 to 13.

1.13. Secondly, the procedure laid down by Articles 7 *et seq.* of the 1975 Statute is not confined to the hypothesis envisaged in Article 7, i.e. the construction or modification of new channels or works on the river. It is also applicable to:

— use of the waters of the river for domestic, sanitary, industrial and agricultural purposes that is liable to affect the régime of the river or the quality of its waters (Article 27 of the 1975 Statute); and

— exploration and exploitation of the resources of the bed and subsoil of the river that are liable to affect the régime of the river or the quality of its waters (Article 34 of the 1975 Statute).

24 1.14. Furthermore, the procedure under Articles 7 *et seq.* must not only be complied with in respect of those works or undertakings affecting the River Uruguay itself, but also all works or undertakings "which either Party plans to carry out within its jurisdiction in the River Uruguay outside the section defined as a river and in the areas affected by the two sections" (Articles 13 and 29 of the 1975 Statute). The procedure involving CARU provided for by Articles 7 *et seq.* of the Statute therefore has a broader application than Uruguay has given to understand and was established in order to protect the River Uruguay as a system and an ecological whole.

1.15. The compromissory clause contained in Article 60 of the 1975 Statute thus encompasses all the breaches committed by Uruguay, i.e. both of the procedural requirements resulting from Articles 7 *et seq.* and the material obligations regarding protection of the ecosystem of the river as a whole[59]. In the case concerning *Oil Platforms*, the Court pointed out that, to determine whether a dispute relates to the interpretation or application of a treaty, it must "ascertain whether the violations of the Treaty . . . pleaded [by the Parties] do or do not fall within the provisions of the Treaty"[60]. In the present case, each violation cited by Argentina against Uruguay is based on one or more provisions of the 1975 Statute, including — but not exclusively — those in Articles 7 *et seq.* concerning the procedure to be followed in cases where one Party plans to construct works which are liable to affect "the régime of the river or the quality of its waters". The Court therefore possesses, by virtue of Article 60 of the Statute, the necessary jurisdiction to deal with all the breaches of the Statute attributable to Uruguay.

1.16. In conclusion:

(i) Article 60 of the 1975 Statute founds the jurisdiction of the Court in these proceedings;

25 (ii) the proceedings extend to all the breaches attributable to Uruguay of the obligations incumbent upon it under the Statute.

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[59] See para. 1.6 above.

[60] Judgment of 12 Dec. 1996, *Oil Platforms (Islamic Republic of Iran* v. *United States of America), Preliminary Objections, I.C.J. Reports 1996*, p. 810, para. 6.

CHAPTER II

ORIGINS, EXISTENCE AND DEVELOPMENT OF THE DISPUTE

Section I

Introduction

29 2.1. The purpose of this chapter is to explain the origins of the dispute between Argentina and Uruguay regarding the pulp mills and associated works on the River Uruguay, the existence of the dispute, despite its being denied by Uruguay for a time, and how it has developed, including both the way it has been aggravated by Uruguay through successive authorizations of works and the efforts made by Argentina to resolve it.

2.2. To this end, it will set out in turn the events which led to the dispute arising and being aggravated, as a result of Uruguay's initial authorization of 9 October 2003 for construction of a pulp mill (CMB), followed by a second authorization of 14 February 2005 to construct another mill (Orion), the authorization of 5 July 2005 to construct a port associated with the latter, the authorization of 24 August 2006 for commissioning of this port, and the authorization of 12 September 2006 for Botnia to extract and use water from the River Uruguay for industrial purposes. Argentina's attempts to resolve the dispute through direct negotiations and the facts leading up its referral to the International Court of Justice pursuant to Article 60 of the Statute will also be presented. Bearing in mind that, for a certain period, Uruguay denied that the dispute existed at all, this chapter will also demonstrate that this was a mistaken Uruguayan claim.

Section II

The origin of the dispute: the authorization of 9 October 2003 for construction of the CMB mill

2.3. The source of the dispute lies in the authorization granted by Uruguay on 9 October 2003 to the Spanish company ENCE ("Gabenir S.A." at the time of the authorization) for
30 construction of a pulp mill (a project known as *Celulosa de M'Bopicuá or CMB*) on the left bank of the River Uruguay, near the "General San Martín" international bridge and the town of Fray Bentos, opposite the Argentine region of Gualeguaychú. This authorization was issued despite the fact that CARU had of its own accord asked Uruguay to provide it with information on the project, so that it could then decide on the conformity of the works with the Statute of the River Uruguay, which would then have allowed Uruguay to authorize construction of the mill or otherwise[61].

2.4. Well before the unilateral authorization issued by Uruguay on 9 October 2003, the Spanish company ENCE had approached the Uruguayan authorities with a view to the possible construction of a pulp mill in Uruguay. On 22 July 2002, this company had presented DINAMA

[61] See Chap. III, Sec. II.B.

with an environmental impact assessment for its CMB project. No information was forwarded by Uruguay to CARU[62].

2.5. Having learned of the CMB project, CARU requested details from the Uruguayan Ministry of Housing, Land Use Planning and Environmental Affairs (MVOTMA) on 17 October 2002. The note from CARU pointed out that the area affected by the CMB project "is an important tourist zone"[63]. As will be established below[64], the impact of the pulp mills authorized by Uruguay on tourism activity in this region bordering the River Uruguay is one of the major elements in this dispute. CARU received no reply from Uruguay to its request of 17 October 2002.

2.6. On 8 January 2003, DINAMA classified the CMB project as falling within category "C" of the relevant Uruguayan legislation, i.e. "projects entailing activities, constructions or works whose execution could cause a negative environmental impact of quantitative or qualitative
31 significance, regardless of whether preventive or mitigation measures are planned"[65]. This decision, as with other information concerning the project, was not communicated to CARU.

2.7. CARU's Sub-committee on Water Quality and Pollution Control had taken on the task of monitoring the question of the CMB project and drawn attention to the lack of information on the project. In February 2003, the President of the Uruguayan delegation to CARU, Mr. Walter Belvisi, informed the Sub-committee that he had met the Uruguayan Minister of the Environment and asked him for the necessary information concerning CMB. According to Mr. Belvisi, the Minister had given instructions to the Director of DINAMA to forward the information to CARU[66].

2.8. In March 2003, CARU's Technical Secretariat indicated that it had still not received the environmental impact assessment or any other documentation concerning the CMB project. Mr. Belvisi stated that he had contacted both the Minister of the Environment and the Director of DINAMA[67].

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[62]Argentina learned of the existence of this document because it is referred to in DINAMA's final assessment report of 2 Oct. 2003 (see this DINAMA report in the Anns., Vol. V, Ann. 12, and in: *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, Observations of Uruguay, 2 June 2006, Exhibit 1, DINAMA Ann. 9).

[63]CARU, Note SET-10413-UR of 17 Oct. 2002. Anns., Vol. III, Ann. 12.

[64]In Chap. VII, paras. 7.195 to 7.201.

[65]Decree 435/994 of 21 Sept. 1994, Environmental Impact Assessment Regulation, Art. 5 *(Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, Observations of Uruguay, 2 June 2006, Exhibit 1, DINAMA Ann. 4), Anns., Vol. V, Ann. 13. For the classification made by DINAMA, see the initial environmental authorization issued by the Ministry of Housing, Land Use Planning and Environmental Affairs on 9 Oct. 2003, Anns., Vol. VII, Ann. 9; also in *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, Observations of Uruguay, 2 June 2006, Exhibit 1, DINAMA Ann. 9).

[66]CARU, Minutes 2/03 of 21 Feb. 2003, Anns., report No. 232 of the Sub-committee on Water Quality and Pollution Control of 18 Feb. 2003, point (4), pp. 211-212. Anns., Vol. III, Ann. 13.

[67]CARU, Minutes 3/03 of 21 March 2003, Ann. 2, report No. 233 of the Sub-committee on Water Quality and Pollution Control of 18 March 2003, point (5), p. 463. Anns., Vol. III, Ann. 14.

2.9. At its meeting of April 2003, the Sub-committee informed CARU that, although it had made contact with DINAMA and requested information, it had received no reply from the Uruguayan authorities[68].

32 2.10. In view of Uruguay's silence, CARU formally repeated its request for information on 21 April 2003[69]. At its meeting of 13 May 2003, the Sub-committee noted that it had still heard nothing regarding the CMB project[70].

2.11. DINAMA finally replied on 14 May 2003, but by suggesting to CARU that it should contact one of its staff, who in turn suggested forwarding the document entitled "Environmental Impact Assessment, Celulosa de M'Bopicuá. Summary for Public Release", which was already publicly available on DINAMA's website[71]. This document, produced by the Soluziona company, was received by CARU and forwarded to the Sub-committee on Water Quality and Pollution Control, which distributed it to the Parties[72].

2.12. On 16 July 2003, CARU received a note from DINAMA informing it of a public meeting to be held at Fray Bentos on 21 July 2003 concerning the request for initial environmental authorization of the CMB project[73].

2.13. The technical secretary of CARU and its legal adviser attended the public meeting and reported to CARU on the discussions that had taken place. They concluded that, once the various positions had been established (for and against the setting up of the mill), "the need emerged for the studies to be extended, so that they were of a quality that would allow decisions to be taken that were not damaging to the environment and its habitat"[74].

33 2.14. On 15 August 2003, the President of CARU[75], Mr. Belvisi (Uruguay), wrote again to the Uruguayan Environment Minister informing him that more information was essential. In particular, this note from CARU pointed out to the Uruguayan Minister that:

> "In accordance with the decision of this Commission, pursuant to the powers both Governments awarded to CARU in Articles 7 to 12 of the Statute of the River Uruguay, and bearing in mind the importance that the future undertaking will generate within CARU, a study was conducted on the above-mentioned document. This evidenced the need to have further details and information on the environmental

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[68]CARU, Minutes 4/03 of 17 April 2003, Ann. 2, report No. 234 of the Sub-committee on Water Quality and Pollution Control of 14 April 2003, point (5), p. 627. Anns., Vol. III, Ann. 15.

[69]CARU, Note SET-10617-UR of 21 April 2003. Anns., Vol. III, Ann. 16.

[70]CARU, Minutes 5/03 of 16 May 2003, report No. 235 of the Sub-committee on Water Quality and Pollution Control of 13 May 2003, point (5), p. 855. Anns., Vol. III, Ann. 17.

[71]CARU, Note SET-10706-UR of 15 Aug. 2003. Anns., Vol. III, Ann. 18.

[72]CARU, Minutes 6/03 of 13 June 2003, report No. 236 of the Sub-committee on Water Quality and Pollution Control of 10 June 2003, point 6), pp. 1083-1084. Anns., Vol. III, Ann. 19.

[73]CARU, Minutes 8/03 of 15 Aug. 2003, pp. 1400-1401. Anns., Vol. III, Ann. 20.

[74]CARU, Minutes 8/03 of 15 Aug. 2003, Ann., Memorandum SET-1368 of 8 Aug. 2003, p. 1456. Anns., Vol. III, Ann. 20.

[75]The Presidency of CARU is a revolving one, held alternately for one-year periods by the Presidents of the two delegations.

impact assessment study beyond what is provided in the document 'Environmental Impact Study, Celulosa de M'Bopicuá. Summary for Public Release'.

Consequently, we request that the following data be included, in addition to any information you may consider relevant:

— Water quality data generated and collected which were used in the study. Analytical protocols used, including detection/quantification limits.

— Characteristics of the liquid effluent diffusion system within the collector body (emissary).

— Data on entrance and simulations on the emissary diffusion plume. Model used.

— Entry data and simulations made on the movement of pollutants downstream of the discharge point. Model used.

— Data on determination of AOX (absorbable halogenated organisms), frequency of their determination and matrix for the control of effluent and aquatic medium.

— Detailed plan of follow-up and control of environment and liquid effluent.

Any further information you may consider useful for the requested purposes (possible influence of discharged effluents on water)."[76]

2.15. No further information was received by CARU. At its meeting of September 2003, the Sub-committee on Water Quality and Pollution Control once again proposed "repeating the request for information to DINAMA"[77].

2.16. On 8 October 2003, the Sub-committee on Water Quality and Pollution Control stated in its report No. 240 to CARU:

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"The President of the ERU (Uruguay) delegation reports that the Uruguayan Minister of Housing, Land Use Planning and Environmental Affairs, Mr. Saúl Irureta, has informed him that in the next few days, he will send us the report on M'Bopicuá produced by DINAMA, which the company is in the process of 'checking'".[78]

2.17. Without informing CARU in advance, MOVOTMA proceeded to grant ENCE authorization to construct the CMB mill on 9 October 2003[79]. That same day, the President of Uruguay, Jorge Battle, had promised his Argentine counterpart Néstor Kirchner, at a meeting held in Colonia (Uruguay), that no authorization would be issued before the environmental concerns of Argentina had been met. Previously, a similar promise had been made by the Uruguayan Minister

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[76]CARU, Note SET-10706-UR of 15 Aug. 2003. Anns., Vol. III, Ann. 18.

[77]CARU, Minutes 9/03 of 12 Sept. 2003, Ann., report No. 239 of the Sub-committee on Water Quality and Pollution Control of 9 Sept. 2003, point (2), p. 1703. Anns., Vol. III, Ann. 1.

[78]CARU, Minutes 10/03 of 8 Oct.-2003, report No. 240 of the Sub-committee on Water Quality and Pollution Control of 8 Oct. 2003, p. 1958. Anns., Vol. III, Ann. 22.

[79]Ministry of Housing, Land Use Planning and Environmental Affairs, resolution No. 342/2003, 9 Oct. 2003, text in: Observations of Uruguay, 2 June 2006, Vol. I, Exhibit 1, DINAMA Ann. 11.

for Foreign Affairs, Didier Opertti, who had stated that no authorization would be issued before CARU had given its opinion on the report being drawn up by DINAMA[80].

2.18. On 10 October 2003, CARU approved the above-mentioned report No. 240 of the Sub-committee on Water Quality and Pollution Control. Unaware of the authorization issued by Uruguay the previous day, and referring to the urgent requests from the Uruguayan delegation for its government to send the necessary information, the President of CARU, Ambassador García Moritán (Argentina), declared that he "appreciated what had been done by the Uruguayan delegation to ensure strict compliance with Article 7 of the Statute, so that the consultation procedure that was laid down there could take place." And the President added:

35 "Once we are in possession of the material, which we hope DINAMA will be forwarding to us as soon as possible, the appropriate technical meetings will be held to carry out the studies and assessments relating to the project, in accordance with the procedure laid down in Article 7."[81]

2.19. The Uruguayan delegation made no comment. Nor did it inform CARU that the authorization had been issued the previous day.

2.20. A few days later, the Argentine Embassy in Montevideo learned unofficially of the existence of an authorization for construction and informed the Argentine delegation to CARU. The Argentine delegation immediately requested an extraordinary meting of CARU.

2.21. On 17 October 2003, the extraordinary meeting of CARU took place to deal with the situation created by the authorization of construction of the CMB mill. The President of CARU, Ambassador García Moritán, expressed his surprise on learning through the Argentine Embassy in Montevideo that the Uruguayan Environment Minister had authorized the construction of CMB without referral to CARU, in breach of Article 7 of the Statute. The CARU President explicitly cited Article 12 of the 1975 Statute (which refers to the procedure for submission of disputes to the ICJ) "in the event of differences of opinion", concluding that: "the MVOTMA resolution should have been adopted after application of the mechanism laid down [by the 1975 Statute]"[82].

2.22. The Uruguayan delegation did not contradict the Argentine stance. The President of the Uruguayan delegation replied by simply stating that: "as a delegation, we are not in a position to put forward or express any other kind of views, since we do not have all the materials, not even those that could be forwarded to the Commission as antecedents"[83]. The President of the Uruguayan delegation added that he was not familiar with the Ministry's resolution, that his

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[80]As emerges from Note MREU 226/03 of 27 Oct, 2003 from the Argentine Embassy to Uruguay's Ministry of Foreign Affairs, Anns., Vol. II, Ann. 20. The facts referred to in this note have not been contested by Uruguay, including the statement that *"when the Minister of Foreign Affairs, Mr. Didier Opertti, was presented with the concerns on the subject, he emphatically stated that no decision would be taken until the Administrative Commission of the River Uruguay (CARU) had given its opinion on the Environmental Impact Assessment report submitted to the Department of the Environment (DINAMA)*".

[81]CARU, Minutes 10/03 of 10 Oct. 2003, item 3.2. Anns., Vol. III, Ann. 23.

[82]CARU, Minutes 11/03, extraordinary meeting of 17 Oct. 2003. Anns., Vol. III, Ann. 5.

[83]*Ibid.*

36 delegation believed it to refer only to a plan and that "[t]his plan has not arrived here [i.e. in CARU]"[84].

2.23. On 27 October 2003, the Uruguayan Ministry of Foreign Affairs sent a note to the Argentine Government, attaching the MVOTMA resolution of 9 October 2003, DINAMA's final assessment report of 2 October 2003 and the impact study of 22 July 2002 produced by the construction company. The Ministry justified the forwarding of this information simply on the basis of "the spirit of co-operation and good neighbourliness which happily marks the relations between Uruguay and Argentina"[85]. No reference was made to CARU or to the 1975 Statute. This documentation is also far from constituting the information required under the Statute[86].

2.24. That same day, the Argentine Government responded by declaring that such an authorization was not in accordance with the 1975 Statute and other rules of international law, and that the information forwarded did not appear sufficient to allow a decision to be made on the environmental aspects of the project[87].

2.25. Uruguay replied to this note on 7 November 2003, merely forwarding a dossier from MVOTMA on the CMB project but without responding to the objections contained in the Argentine note of 27 October 2003 concerning Uruguay's conduct in breach of the 1975 Statute[88]. Uruguay thus did not reconsider its position, which is to deny CARU's jurisdiction to decide on the pulp mill project. Hence Uruguay neither referred the project to CARU nor provided any further
37 information. As a result of this situation, which prevented CARU from carrying out its responsibilities, CARU suspended its work for more than six months.

2.26. On 26 November 2003, Uruguay's Minister for Foreign Affairs, Didier Opertti, made a statement before the Senate's Foreign Affairs Committee explaining the Uruguayan Government's point of view, which proved to contradict outright the stance adopted by Uruguay's delegation to CARU. For the Minister, these were entirely national works and therefore "subject solely to the Uruguayan legal order"[89], which ruled out, in his view, the application of Chapter II of the 1975 Statute. As he explained:

> "given that they are not bi-national, the only reason or basis whereby these works or this mill — or others like them — could involve the responsibilities of a bi-national body such as the Administrative Commission of the River Uruguay would be if the planned construction works were to jeopardize — according to the provisions of Articles 7 and 8 of the Statute of the River Uruguay — the quality of its waters or the navigability of the river . . .

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[84] *Ibid.*

[85] Note 05/2003 of 27 Oct. 2003 from Uruguay's Ministry of Foreign Affairs to the Argentine Embassy in Uruguay. Anns., Vol. II, Ann. 21.

[86] See Chap. III, Sec. II.B and Chap. IV, Sec. A, paras. 4.15-4.24.

[87] Note MREU 226/03 of 27 Oct. 2003 from the Argentine Embassy to Uruguay's Ministry of Foreign Affairs. Anns., Vol. II, Ann. 20.

[88] Note of 7 Nov. 2003 from Uruguay's Ministry of Foreign Affairs to the Argentine Embassy in Uruguay. Anns., Vol. II, Ann. 32.

[89] Senate of the Eastern Republic of Uruguay, Foreign Affairs Committee, sitting of 26 Nov. 2003. Statement by the Minister for Foreign Affairs, Mr. Didier Opertti, Anns., Vol. VII, Ann. 4.

The Administrative Commission of the River Uruguay is responsible for the management of the River Uruguay, in other words of a shared natural resource. That responsibility has never been called into question; it clearly has that responsibility. Recognizing that the Commission has a specific responsibility at this stage of the procedure would amount to recognizing the presumption that Articles 7 and 8 will be applied. The presumption is that implementation will affect or could affect — I think the term used in the rules is: there will be a definite risk to — the quality of the waters or navigation. Given that these two elements are lacking, it is natural that the Government of Uruguay should not be obliged to refer this matter to the Commission. That would be abandoning our responsibilities, which the Government of Uruguay does not intend to do; it is as simple as that."[90]

2.27. The current President of the Uruguayan delegation to CARU, Ms Martha Petrocelli, explained in her statement to the Environment Committee of the Uruguayan Senate on 12 December 2005 why Uruguay had decided not to submit the CMB mill plan to CARU. In doing so, she confirmed that the intention of the Uruguayan Government had been to deliberately avoid application of the 1975 Statute. The conversation between Ms Petrocelli and the members of the Environment Committee is very revealing on this subject:

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"Mr. LAPAZ: The matter was dealt with: so did the pulp mills seek prior authorization from CARU? Or was the matter raised by one of the members?

Ms PETROCELLI: The matter was raised by the Argentine delegates and accepted by the Uruguayan delegates, but there was no formal submission. Moreover, according to Article 7, it is the State which must make the submission. This particular case came up by surprise. It is the Party — diplomatically speaking — which has to give notification that it is going to carry out construction work — private or public — and announce it in sufficient time. I have been thinking recently that today, time is a serious issue; the timescales are much tighter now than when the Treaty was signed. We are talking about the 1946 Treaty, when announcements could be made well in advance. But there was not really a notification by the Party; the requirement is not on the individual firm, it is for the Party to notify CARU.

The PRESIDENT: Article 7 refers to the need for CARU to be consulted and for the two delegations to give their consent to the plan in question. The legal interpretation is to the effect that since there was no element that could cause contamination, this prior consent was not necessary. Is that the right interpretation?

Ms PETROCELLI: If you read Article 7 carefully, a solution can be found which, like all those in international public law, is a somewhat ambiguous compromise that could fill several libraries. Also, what is contained in Article 7 is a principle of international public law. Where there is a shared or successive river, consultations take place on the works without any involvement of the Statute. Party A is responsible for the construction works; it consults Party B, which has the time to talk or otherwise; so it does not have to indicate straight away that significant damage is involved, and it may later ask for the project to be extended. That means that this is not a very clear stage. I have even looked at the international case law, which states that if there is disruption, that is not a reason to stop anything, which amounts to saying that there has to be clear damage.

So the system would be as follows: first the project is announced at the plant, I allow some time, the information comes back to me, and only then do I submit the

[90] *Ibid.*

project. It seems to me that in the case of the port, I still have some time. So this prior consent to eliminate the consultation is not very viable. That is my humble opinion.

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The PRESIDENT: The Argentines want to take the matter to the OAS (Organization of American States).

Ms PETROCELLI: Yes indeed. I spoke to the Argentine Ambassador, in a relaxed and friendly atmosphere, and I said to him: 'I hope you manage to get to The Hague, because I shan't be there. With any luck, in 2020.' Because there is an issue of time in taking things to The Hague. There is also a reality when it comes to positioning before international tribunals, and sometimes things do not turn out as you wish. I am giving my opinion here. But it is a valid approach. Legally, one can turn things round and round with regard to setting up new bodies. We hope that everything will be worked out in a different way. The point is that Uruguay has been untimely in dealing with this matter. That is the truth of it.

The PRESIDENT: One of the arguments put forward is that if consultation had taken place, the answer would have been no. That is an awkward point. What would have happened if the answer had been no?

Ms PETROCELLI: The works would not have been carried out. We would have had to refer the matter to an international tribunal to establish what damage was caused by a decision to reject."[91]

2.28. In view of the situation created by Uruguay's attitude, the Argentine delegation tried to break the deadlock in CARU. The President of the delegation wrote to the President of CARU on 23 February 2004, forwarding to the Commission the documentation which Argentina had received from Uruguay regarding the CMB project. He also asked for this to be referred to the Sub-committee on Water Quality and Pollution Control, to assess to what extent the planned mill and its commissioning might affect the quality of the waters of the River Uruguay, *"without prejudice to the issues raised by the Argentine delegation regarding Article 7 of the Statute of the River Uruguay at the extraordinary plenary meeting of 17 October 2003"*[92].

2.29. In the meantime, CARU remained deadlocked because of this disagreement. On 2 March 2004, the Foreign Ministers of the two countries, Rafael Bielsa and Didier Opertti, met in **40** Buenos Aires, in the context of a meeting on bilateral and regional affairs. As regards the CMB project, they reached a verbal arrangement in order to resolve the impasse within CARU. Under this arrangement, Uruguay undertook to forward the information required to CARU and, while awaiting this, CARU would carry out water quality monitoring in the region where the CMB project was planned.

2.30. Mr. Bielsa summed up the content of the arrangement of 2 March 2004 with his Uruguayan counterpart as follows when he appeared before the Foreign Affairs Committee of the Argentine Chamber of Deputies on 14 April:

"With regard to M'Bopicuá, the agreement we have entered into with Uruguay will have three stages. The first stage ends with the approval of the works. This stage

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[91]Senate of the Eastern Republic of Uruguay, Environment Committee, sitting of 12 Dec. 2005. Statement by the Uruguayan delegates to CARU, p. 4 of the original Spanish text. Anns., Vol. VII, Ann. 5.

[92]CARU, Minutes 1/04, extraordinary meeting of 15 May 2004 convened by Argentina, p. 6. Anns., Vol. III, Ann. 24.

involves a specific body, the Administrative Commission of the River Uruguay (CARU), and here Argentina will receive all the information from Uruguay. As we know, Argentina has presented two reports on the environmental impact, and both include plans to combat this. The second stage, which is that of construction, will last four years. Argentina has a right of inspection, an element which is not without importance, since the point here is that technological processes exist which make it possible to reduce the environmental consequences in a very significant way. But plants which have these technologies bear much higher costs. Uruguay, as a green country, sixth in the world in terms of protecting the environment, takes these concerns seriously into account.

It seemed to me that we could claim this right of inspection under the Treaty of the River Uruguay, and it is the Commission that will monitor the construction works."[93]

41 There is no doubt that the first stage referred to by Mr. Bielsa is the one *leading to approval of the project*, during which Uruguay was required to forward the relevant information to Argentina, through CARU. This is no more and no less than the effective implementation of Article 7.

2.31. Following this arrangement, Argentina convened an extraordinary meeting of CARU, which was held on 15 May 2004. The President of the Argentine delegation explained that the reason why his delegation had asked for an urgent extraordinary meeting to be convened was that it wished "to call upon this body to engage, as a matter of urgency, the environmental responsibilities granted to it by the Statute, in particular those arising from the construction of a pulp mill near Fray Bentos (Uruguay), 'Celulosa de M'Bopicuá'"[94].

2.32. The content of the Bielsa-Opertti arrangement was summarized as follows within CARU:

"On 2 March 2004, the Ministers of Foreign Affairs of Argentina and Uruguay came to an understanding on how to take this matter forward, namely the provision of information by the Government of Uruguay regarding construction of the mill and, in

[93]Minutes of the meeting of the Minister for Foreign Affairs, Rafael Bielsa, with the Foreign Affairs Committee of the Chamber of Deputies, Buenos Aires, 14 April 2004. Anns., Vol. VII, Ann. 11. Also cited in: Uruguay, Ministry of Foreign Affairs, report on the construction of two cellulose plants on the River Uruguay, Montevideo, 23 Feb. 2006, *in*: http://www.mrree.gub.uy/mrree/Asuntos_Politicos/Planta%20Celu/informe.htm. This same version of the verbal arrangement was included in the Argentine report on the State of the Nation 2004, which refers to the matter in two separate paragraphs. The first appears under the heading "Uruguay", the second under the heading "CARU" (Presidency, Cabinet Office [*Jefatura*], report on the State of the Nation 2004, Buenos Aires, 1 March 2005, p. 106. Anns., Vol. VII, Ann. 18). In accordance with Art. 104 of the Argentine Constitution, ministers present a report on their activities during the previous year at the start of the legislative period, which begins annually on 1 March. The verbal arrangement was also reflected in two reports by the Head of the Cabinet Office to the Argentine Congress (report by the Head of the Cabinet Office, Dr. Alberto Angel Fernández, to the Honourable Chamber of Deputies of the Nation, report No. 64, March 2005, p. 379, Anns., Vol. VII, Ann. 19, and report by the Head of the Cabinet Office, Dr. Alberto Angel Fernández, to the Honourable Chamber of Senators of the Nation, report No. 65, June 2005, p. 528, Anns., Vol. VII, Ann. 20). During the provisional measures phase, Uruguay sent the Court a deliberately truncated version of the relevant passages, both in the original language and the English translation, without providing the Court with the whole text as required by Art. 50 of the Rules of Court. This conduct is all the more regrettable since the passages deliberately omitted are crucial for a correct understanding of the document, and their absence alters the meaning of its content.

[94]CARU, Minutes 1/04, extraordinary meeting of 15 May 2004 convened by Argentina, p. 31. Anns., Vol. III, Ann. 24.

operational terms, the monitoring of water quality by CARU in accordance with its Statute."[95]

2.33. Still referring to the CMB project, the two delegations:

"reaffirmed the arrangement made by the Ministers of Foreign Affairs of the Argentine Republic and the Eastern Republic of Uruguay on 2 March 2004, whereby Uruguay will communicate information on the construction of the mill, including the
42 environmental management plan. As a result, CARU will receive the environmental management plans for the construction and commissioning of the mill submitted by the company to the Uruguayan Government, once they have been forwarded by the Uruguayan delegation. CARU will study these in the context of its responsibilities, taking account of the terms contained in the above-mentioned Ministerial Resolution No. 342/2003, in particular those indicated by the Ministry of Housing, Land Use Planning and Environmental Affairs as measures requiring implementation and additional studies by the company before approval, at the same time drawing up observations, commentaries and contributions which will be forwarded to the Uruguayan Government to be dealt with and resolved with the company. Once these steps have been taken, CARU will be informed further."[96]

2.34. The decision adopted at the extraordinary meeting of CARU on 15 May 2004 was as follows:

"On the basis of the above, as set out and agreed by the Parties, it is decided to forward all the documentation held by CARU on the M'Bopicuá project to the sub-committee on water quality and pollution control, for analysis and assessment as indicated under Specific Conclusions I and II on pages 34 and 35. It is also agreed to request all information on the construction stage, in accordance with the undertakings given by Uruguay's Minister of Foreign Affairs. In this context and in accordance with the Environmental Protection Plan, it is agreed to convene the Committee of technical consultants for the relevant purposes."[97]

2.35. The President of the Argentine delegation pointed out that he had indicated in his note to the President of CARU of 23 February 2004 that he was forwarding to CARU the Uruguayan documentation on the construction of a cellulose plant at Fray Bentos that had been provided by Uruguay's Ministry of Foreign Affairs to the Argentine Embassy in Montevideo, asking for the Sub-committee on Water Quality and Pollution Control to begin work on this documentation, so as to assess to what extent the planned works and their commissioning might affect the quality of the waters of the River Uruguay. As indicated, this note clearly stated:

43 "The foregoing *is subject to the issues previously raised by the Argentine delegation regarding Article 7 of the Statute of the River Uruguay at the extraordinary plenary meeting of 17 October 2003*."[98]

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[95]CARU, Minutes 1/04, extraordinary meeting of 15 May 2004 convened by Argentina, p. 34. Anns., Vol. III, Ann. 24.

[96]*Ibid.*, pp. 34-35.

[97]*Ibid.*

[98]Emphasis added, *ibid.*, p. 4.

2.36. He was thereby referring to Argentina's view that Uruguay had breached the requirement laid down by Article 7 of the 1975 Statute, as expressed at the extraordinary meeting of CARU convened for the purpose by Argentina. After drawing attention to the lack of information on a number of aspects, the President of the Argentine delegation emphasized that "it is important for CARU to act in accordance with the provisions of the Statute and for it to carry out, pursuant to this mandate, the studies it may consider to be lacking"[99].

2.37. The Argentine delegate Mr. Rodríguez pointed out that Argentina had protested at the failure to comply with the consultation procedure laid down by Article 7 of the Statute. Another Argentine delegate, Mr. Rojas, stressed that:

> "the procedure set out in Article 7 and the following articles is essential to assess whether the works planned by one Party on a shared natural resource like the River Uruguay are likely to cause significant damage to the other. For this reason, one should expect as a matter of course a procedure that includes adequate information, one that shows genuine involvement, leading step by step to a solution based on completely sound reasoning and co-operation between the two countries; a procedure that analyzes the direct and cumulative effects which this project may have on the environment, taking account not just of the use or modification of precious natural resources, but also of other development options that might be affected by the construction and future commissioning of Celulosa de M'Bopicuá."[100]

2.38. The Uruguayan delegate Mr. Cardoso welcomed the fact that the two ministers' views had moved closer together and felt that this would *"help find a way to resolve the dispute"*[101]. He emphasized that the Uruguayan delegation did not entirely share the conclusions of Argentina's technical experts, and that the Uruguayan reports, which were of no lesser technical value, did not reach the same conclusions. The same delegate repeated that the Uruguayan delegation did not agree with some of the analyses contained in the reports by the Argentine delegates[102]. Clearly, the Uruguayan delegation recognized that the dispute over the planned mill had not been settled at that stage.

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2.39. Argentina explicitly reserved its position as regards the non-compliance with Article 7 of the Statute and the need for this to be complied with. The Parties noted their differences, but agreed that Uruguay had to supply further information, that this would be examined by CARU, that CARU would forward its observations to Uruguay, that Uruguay would deal with these issues with ENCE, and that CARU should then be informed further. CARU thus restated its responsibilities under the Statute and the requirement for the procedure laid down in Chapter II to be followed. At no point during this extraordinary meeting, nor at any other meeting of CARU, was the construction of the mill approved or a decision taken on whether the project might cause significant damage to the other Party. This is in clear contrast to the procedure which CARU follows when it approves the implementation of a project, as shown for example by resolution 12/01 concerning Port M'Bopicuá[103].

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[99] *Ibid.*, p. 13.

[100] *Ibid.*, p. 28.

[101] Emphasis added, *ibid.*, p. 31.

[102] *Ibid.*, pp. 31-32.

[103] CARU, resolution 12/01 of 27 April 2001. Anns., Vol. III, Ann. 2.

2.40. Clearly, the procedure had not in any event reached the stage of a decision being made by CARU. On the contrary, as explicitly stated in the arrangement of 2 March 2004, Uruguay was to forward further information to CARU, which presupposes that no decision could be taken before that information had arrived. But that information has never been received by CARU.

2.41. The information available was not sufficient to enable CARU to reach a decision in accordance with Article 7 of the Statute. The Parties disagreed on a number of questions of substance. They stated this explicitly on 15 May 2004. In reality, the agreement between the two
45 Ministers was to comply with the procedure under the 1975 Statute, thereby ending the dispute on CARU's jurisdiction to deal with the CMB project. Uruguay has not kept its undertaking of 2 March 2004. Its subsequent behaviour has unfortunately prevented such a settlement from taking place and on the contrary has aggravated the dispute.

2.42. While awaiting the information promised by Uruguay's Minister for Foreign Affairs to his Argentine counterpart, CARU drew up and approved a plan which provided for increased monitoring of the quality of the waters of the River Uruguay in the area of the CMB project, near Fray Bentos. Hence Argentina kept its side of the verbal arrangement.

2.43. The Sub-committee immediately began the preparatory work for monitoring the quality of the waters in the area of the CMB project. Monitoring of the biota was added to the usual monitoring of water quality[104]. The plan for water quality monitoring was subsequently split up, and a self-contained plan for monitoring the quality of the waters in the area where the mill is planned ("PROCEL") was adopted by the Sub-committee on 11 November 2004[105]. The information on the construction of the CMB mill that was promised by the Uruguayan Minister Mr. Opertti has never reached CARU.

2.44. Uruguay claims that these efforts by Argentina to settle the dispute which arose in October 2003 indicate that it had been resolved. Nothing is further from the truth, as will be demonstrated in the following sections of this chapter.

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Section III

The aggravation of the dispute: the authorization of 15 February 2005 for construction of the Orion mill

2.45. The dispute that arose in October 2003 had not been resolved. By not forwarding the information that was required, Uruguay never enabled CARU to begin the procedure laid down in Chapter II of the 1975 Statute[106]. In fact, by authorizing the construction of a second mill less than a year later, without following the procedure laid down by the 1975 Statute, *Uruguay purely and simply rejected the agreement of 2 March 2004*.

2.46. On a date not known to Argentina, the Finnish company Botnia contacted the Uruguayan authorities with a view to constructing a pulp mill in the area of Fray Bentos. On

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[104]CARU, report No. 242 of the Sub-committee on Water Quality and Pollution Control of 15 June 2004, Minutes 3/04 of 18 June 2004, Ann. 3, pp. 624-625. Anns., Vol. III, Ann. 26.

[105]CARU, report No. 247 of the Sub-committee on Water Quality and Pollution Control of 11 Nov. 2004, Minutes 8/04 of 12 Nov. 2004, p. 1951. Anns., Vol. III, Ann. 28.

[106]See Chap. III, Sec. II.B.

30 October 2003, DINAMA classified this project as falling within category "C" of the relevant Uruguayan legislation[107]. On 31 March 2004, Botnia submitted its request for initial environmental authorization, which was supplemented on 7 April 2004[108].

2.47. On 29 and 30 April 2004, Botnia held a meeting with members of CARU in Montevideo to explain its plan for a pulp mill[109]. At its meeting of 15 June 2004, the Sub-committee on Water Quality and Pollution Control considered the possibility of holding a further meeting, so that Botnia could expand on the information previously provided. On this occasion, "[t]he Argentine delegation stressed the importance of the consultation procedure laid down by the Statute of the River Uruguay"[110].

2.48. In August 2004, CARU delegates were invited by Botnia to visit Finland. CARU
47 delegates likewise travelled to Spain at the invitation of ENCE in September 2004[111]. Members of CARU also went to Argentina and Brazil to visit areas where pulp mills are located[112].

2.49. On 18 October 2004, the Presidents of the two delegations met and decided to set up a new subcommittee, the "Sub-committee on the Environment and the Sustainable Use of Water", which would be responsible for the plan for monitoring water quality in the areas of the cellulose mills[113].

2.50. On 19 October 2004, CARU held a meeting with representatives of Botnia. CARU stressed the need for it to have information on the procedure under way with DINAMA[114].

2.51. Consequently, in a note to DINAMA of 16 November 2004, CARU indicated that it had been informed of Botnia's moves to obtain authorization for construction of a pulp mill and asked DINAMA to provide it with the relevant information[115]. This note from CARU has never received a reply.

2.52. On 21 December 2004, DINAMA organized a public information meeting in Fray Bentos on the Botnia project. One of CARU's consultants took part in this[116]. His report to

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[107]See para. 2.6.

[108]*Ibid.*

[109]CARU, Minutes 2/04 of 21 May 2004, p. 151. Anns., Vol. III, Ann. 25.

[110]CARU, Minutes 3/04 of 18 June 2004, Ann. 3, Sub-committee on Water Quality and Pollution Control, meeting of 15 June 2004, item 2 *(b)*, p. 626. Anns., Vol. III, Ann. 26.

[111]CARU, Minutes 6/04 of 17 Sept. 2004, item (3), pp. 1563-1564. Anns., Vol. III, Ann. 27.

[112]CARU, Minutes 2/05 of 11 Feb. 2005, report No. 3 of the Sub-committee on the Environment and the Sustainable Use of Water, pp. 306-309. Anns., Vol. III, Ann. 30.

[113]CARU, Minutes 8/04 of 12 Nov. 2004, p. 1870. Anns., Vol. III, Ann. 28.

[114]*Ibid.*, pp. 1870-1871.

[115]CARU, Note SET-11037-UR of 16 Nov. 2004. Anns., Vol. III, Ann. 36.

[116]CARU, Minutes 1/05 of 7 Jan. 2005, report No. 24/04 of the Technical Secretary of CARU, p. 17. Anns., Vol. III, Ann. 29.

the Sub-committee on Water Quality and Pollution Control confines itself to describing how the meeting was conducted[117].

48 2.53. On 11 February 2005, DINAMA produced its environmental impact study of the pulp mill plan submitted by Botnia. Even though pointing out that the scheme put forward by Botnia contained "information gaps, contradictions (even within the same document) and vague, rather unsatisfactory replies", DINAMA declared itself in favour of authorization[118]. The DINAMA study was not forwarded to CARU.

2.54. Despite the flaws in the mill identified by DINAMA, on 14 February 2005 — three days after the date of the impact study referred to above, and two weeks before the change of government in Uruguay — MVOTMA adopted resolution No. 63/2005, granting Botnia initial environmental authorization for its pulp mill project[119]. No decision had previously been taken by CARU, and nor was it subsequently informed of this authorization. The outgoing Uruguayan Government was therefore aware that, by granting Botnia authorization for the Orion project on 14 February 2005, without referring this to CARU, it was going to aggravate the dispute.

2.55. At the meeting of CARU of 11 March 2005, the Vice-President of the Argentine delegation announced with regret that he had learned through the media that Uruguay was said to have authorized Botnia to construct a pulp mill without going through CARU, and furthermore without replying to its request for information. The President of the Uruguayan delegation himself confirmed that his delegation did not know of the authorization, but that he was aware of the media reports to which his Argentine colleague had referred. This was an exact repetition of what had taken place within CARU when Uruguay authorized CMB. Following a proposal by Uruguay,
49 CARU decided to repeat its request for information to DINAMA of 16 November 2004, which had not received a reply[120].

2.56. Also in March 2005, answering a question from a senator, the Head of the Argentine Cabinet Office explained in his report No. 65 to the Senate:

> "*(a)* The Government has received the environmental impact assessment regarding a pulp mill planned by the Spanish company ENCE, which shows that there will be liquid and gaseous discharges affecting the waters of the River Uruguay and the atmosphere of the Province of Entre Ríos. However, this assessment — produced at the request of the ENCE company — does not take account of the environmental impact of these emissions on our national territory, and must therefore be extended. Moreover, no equivalent documentation has been received concerning the Botnia mill, which is on a much larger scale. An assessment is needed of the environmental impact of the pulp mill complex planned on the left bank of the River Uruguay, as the two mills should be seen as a single unit from the environmental point of view.

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[117]CARU, *ibid.*, report by Mr. Carlos Fernandes Antunes, Annex A to report No. 249 of the Sub-committee on Water Quality and Pollution Control, pp. 65-66.

[118]Uruguay, DINAMA, Environmental Impact Assessment Division, 11 Feb. 2005. Anns., Vol. V, Ann. 8.

[119]Uruguay, Ministry of Housing, Land Use Planning and Environmental Affairs, resolution 63/2005, 14 Feb. 2005. Anns., Vol. VII, Ann. 10.

[120]CARU, Minutes 3/05 of 11 March 2005, pp. 7-10. Anns., Vol. III, Ann. 31.

(b) Information has been requested from the Government of the Eastern Republic of Uruguay on numerous occasions. But the administrative process for authorizing construction of the mills has taken place without respect for the norms of international law, in particular those laid down by the Statute of the River Uruguay.

(c) The Argentine Government has not been involved in the process for authorizing these mills. It has not even been consulted in this respect."[121]

2.57. This report contains a detailed account of the background to the dispute and of Argentina's efforts to ensure that CARU was given responsibility for handling the CMB project. The report also explains the deadlock within CARU because of the lack of consensus on dealing with the issue of Uruguay's unilateral authorization[122]. It adds:

"The Argentine delegation to CARU, where meetings were still suspended, received the documents [those concerning the authorization for CMB] through its Ministry of Foreign Affairs, which also asked for these to be considered by the Administrative Commission of the River Uruguay (Note No. 10ó[sic]/2004 of 24 February 2004). There was no consensus on this move either, given Uruguay's refusal to allow CARU to start considering the matter."[123]

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Section IV

The creation of the GTAN and further aggravation of the dispute through Botnia being authorized to construct a port

2.58. On 1 March 2005, the change of government took place in Uruguay. During his first visit to Argentina, the new Uruguayan President, Tabaré Vázquez, and his Argentine counterpart Néstor Kirchner decided on 5 May 2005 to set up a high-level working group (GTAN) with a view to settling the dispute, on the basis of an environmental impact assessment for the two planned pulp mills, CMB and Orion.

2.59. On the same day, in the context of this presidential meeting, the Argentine Minister for Foreign Affairs, Rafael Bielsa, delivered a note on the planned pulp mills to his new Uruguayan counterpart Reinaldo Gargano, asking him to:

— consider the relocation of the mills;

— provide more documentation on them;

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[121]Report by the Head of the Cabinet Office, Dr. Alberto Angel Fernández, to the Honourable Chamber of Senators of the Nation, report No. 65, June 2005, p. 528. Anns., Vol. VII, Ann. 20.

[122]Report No. 65, *loc. cit.*, pp. 615-621.

[123]Report by the Head of the Cabinet Office, Dr. Alberto Angel Fernández, to the Honourable Chamber of Senators of the Nation, report No. 65, June 2005, pp. 616-617. Anns., Vol. VII, Ann. 20. During the provisional measures phase, Uruguay presented a deliberately truncated version of the relevant passages, both in the original language and the English translation, without providing the Court with the whole text as required by Art. 50 of the Rules of Court. This conduct is all the more regrettable since the passages deliberately omitted are crucial for a correct understanding of the document, and their absence alters the meaning of its content. Uruguay reproduced only two of the six and a half pages of the second report of the Ministry of Foreign Affairs that appears in report No. 65, of which it only translated a single paragraph. This second report contains a detailed account of the background to the dispute and does not allow the conclusion that the arrangement of 2 March brought an end to the dispute over the project.

— maintain the status quo for 180 days to allow studies to be produced of the cumulative impact on the environment[124].

There has never been a formal reply to this note from Argentina.

51 2.60. The following day, 6 May 2005, CARU held a meeting. The President of the Argentine delegation raised an issue before the start of the agenda, pointing out that the consultation procedure laid down by the Statute (Art. 7 *et seq.*) had not been complied with in the case of either the CMB or the Orion project. After recalling the sequence of events, the President of the Argentine delegation continued as follows:

> "The main reason for reminding you of this background is the ongoing concern at the fact that the aforesaid prior consultation mechanism has not yet been applied. Regrettably, the CARU cannot adequately fulfil its tasks if it does not receive all the technical information. In the case of Botnia, it has not received data for the assessment and for determining on a technical basis whether this project generates a substantial environmental effect, as the Statute of the River Uruguay points out in the relevant sections. I would also like to remind you that in the case of M'Bopicuá, the CARU did not receive the relevant data through the usual channels, it was instead through the Argentine delegation that it received such data. We have exchanged ideas on several occasions with the Uruguayan delegation, always encountering the most constructive and responsible spirit for the handling of such issues, and the Argentine delegation cannot do anything other than express its gratitude as to the manner in which such issue has been submitted before its relevant authorities. However, we must mention that the prior consultation mechanism was not observed, and this is serious. The CARU has sent notes to the relevant Uruguayan bodies, and the Argentine delegation expresses its appreciation for such steps and requests additional data on the installation of the M'Bopicuá undertaking, and on Botnia. We regret not having received an answer. We regret to see that the consultation system provided for in the Statute of the River Uruguay is not being implemented and that the CARU cannot benefit from such system. It is the intention of our delegation to raise the issue once again, as it significantly affects several communities on the Argentine coastline on the River Uruguay, and it is obvious that the Uruguayan coastline will also suffer from such effects. It is obvious that breach of the Statute as regards the prior consultation system (Articles 7 *et seq.*) is a very serious matter. It is obvious that should such situation continue, the procedures provided for in the Statute for settling disputes concerning the application of rules provided for therein must be triggered. I wish to point out that we make a reservation of rights in this regard. We once again request the Uruguayan delegation to comply with the prior consultation system as regards Botnia S.A. so that the CARU and the Argentine delegation in particular can analyze whether the projected works involve environmental effects that require corrective measures in accordance with the Statute of the River Uruguay."[125]

Argentina thus reserved the right to activate the procedures laid down in the Statute for the settlement of disputes, if the situation were to continue, i.e. to apply the judicial settlement procedure provided for in Articles 12 and 60 of that Treaty.

52 It is worth noting the response from the President of the Uruguayan delegation, confirming Argentina's view: "the facts have occurred as Mr. Ambassador [García Moritán, President of the

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[124]Note of 5 May 2005 from the Argentine Minister for Foreign Affairs, Mr. Rafael Bielsa, to the Uruguayan Minister for Foreign Affairs, Mr. Reinaldo Gargano. Anns., Vol. II, Ann. 22, which refers to the "planned" installation of two mills.

[125]CARU, Minutes 5/05 of 6 May 2005, pp. 966-968. Anns., Vol. III, Ann. 32.

Argentine delegation] has explained"[126]. This is another clear acknowledgment by Uruguay that it did not follow the procedure laid down in Chapter II of the Statute.

2.61. On 31 May 2005, the Foreign Ministers formally set up the GTAN[127]. The first meeting scheduled for 5 July 2005 in Montevideo was cancelled by the Uruguayan Government[128]. Argentina then proposed holding this first meeting on 12 July 2005. This proposal was rejected by Uruguay, which would not agree to the GTAN starting work unless Argentina withdrew its note of 26 June 2005 to the President of the World Bank. This note expressed the Argentine Government's concern at the possibility of the International Finance Corporation (IFC) deciding to finance the construction of the CMB and Orion mills before the GTAN had carried out the cross-border impact studies and despite Uruguay's failure to comply with the provisions of the 1975 Statute[129].

2.62. The construction work on the Orion mill began in the second half of 2005. Botnia sought to move as swiftly as possible to the construction phase. At the same time, ENCE had begun work on the groundworks for construction of the CMB mill.

2.63. On 5 July 2005, the Uruguayan Government authorized the Botnia company to construct a port terminal in the area of its Orion mill, without previously referring the matter to CARU. Indeed, on that day, Uruguay's Ministry of Transport and Public Works gave Botnia the right to use the riverbed, and authorized the construction of this port, and possibly a number of channels, for Botnia's exclusive use[130]. Once again, Argentina learned of this project through the Uruguayan media, and formally requested the Uruguayan Government to comply with the obligation resulting from Article 7 of the 1975 Statute. It did this through a note dated 27 June 2005, in other words before Uruguay issued the authorization, pointing out that a project of this kind is subject to the consultation procedure under the 1975 Statute. The note also requested Uruguay to appoint its delegation to CARU, so that the latter could resume its work as soon as possible[131]. The new government of President Vázquez had not appointed the new Uruguayan delegates, thereby preventing CARU from operating. This new Argentine note also did not receive a reply. As indicated above, Uruguay authorized the construction of the port eight days later.

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2.64. The GTAN finally held its first meeting on 3 August 2005. At this meeting, the Argentine delegation repeated that its country did not wish to obstruct Uruguay's economic development, but that Argentina was concerned to protect the environment of a shared natural resource and by the impact of the two pulp mills on the areas affected by it. The Argentine delegation drew attention to the note from Mr. Bielsa to Mr. Gargano of 5 May 2005, in which a moratorium was called for, and pointed out that this had not received a reply. It presented a detailed list of the information requested from Uruguay that was still lacking (these requests are set

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[126] *Ibid.*

[127] Joint Communiqué by Argentina-Uruguay: Pulp Mills, Establishment of High-Level Group, Buenos Aires, 31 May 2005. Anns., Vol. IV, Ann. 3.

[128] Uruguay, Note DGAP3/199/2005 of 1 July 2005 from the Ministry of Foreign Affairs to the Argentine Embassy in Montevideo. Anns., Vol. II, Ann. 23.

[129] Note of 26 June 2005 from the Argentine Ambassador to Washington, Mr. Octavio Bordón, to the President of the World Bank, Mr. Paul Wolfowitz, Anns., Vol. II, Ann. 24; Note MREU 178/05 of 5 July 2005 from the Argentine Embassy in Montevideo to Uruguay's Ministry of Foreign Affairs, Anns., Vol. II, Ann. 25; and Note DGAP3/203/2005 of 8 July 2005 from Uruguay's Ministry of Foreign Affairs to the Argentine Embassy in Montevideo, Anns., Vol. II, Ann. 26.

[130] Uruguay, Ministry of Transport and Public Works, resolution of 5 July 2005. Anns., Vol. VII, Ann. 6.

[131] Note MREU 168/05 of 27 June 2005 from the Argentine Embassy in Uruguay to Uruguay's Ministry of Foreign Affairs. Anns., Vol. II, Ann. 7.

out in Appendix II to the Minutes of the meeting), in particular regarding the reasons for the choice of sites, why these were so close to the towns of Fray Bentos and Gualeguaychú and to each other, and the grounds for choosing the "kraft" method of producing pulp.

54 2.65. The Uruguayan delegation pointed out that its country had turned down both the request for a 180-day suspension and the call for relocation of the mills contained in the note from Mr. Bielsa to Mr. Gargano. It provided the Argentine delegation with documentation on the relevant Uruguayan legislation and on the initial environmental authorization granted for CMB and Botnia. On the siting of the mills, the Uruguayan delegation replied that this was a sovereign decision of Uruguay and that:

> "the reason the plant was located at a certain place is alien to the Group and is not one of its competences since, besides being a decision taken prior to the present government, the location of the plants is a fact"[132].

2.66. In the six months following its first meeting, the GTAN held 12 meetings. During this period, the Parties exchanged documentation and raised various issues concerning the environmental and cross-border impact of the mills. It was not possible to bring the Parties' positions together, even as regards the information considered necessary to produce an assessment.

2.67. Meanwhile, Botnia continued with the construction of its Orion mill and started building the port. Argentina twice formally repeated in CARU its demand that Uruguay should fulfil its obligations under Articles 7 to 12 of the Statute, coupled with a request for work to be suspended until CARU had taken a decision on the plan to build the port. The President of the Uruguayan delegation believed that the issue of construction of the port did fall within CARU's remit, but that Uruguay would not suspend the construction work. On 15 August 2005, the Uruguayan delegation also forwarded to CARU the text of the resolution of 5 July 2005 authorizing construction of the port, and on 13 October 2005 delivered some of the information on this subject requested by Argentina. The Argentine delegation believed that, in order to comply with the procedure laid down by Chapter II of the 1975 Statute, in particular Article 9, construction
55 work should be suspended to allow CARU to start dealing with the project[133]. For its part, ENCE also continued with the groundworks for the CMB mill.

2.68. In this context, and contrary to what had been planned, the GTAN was unable to produce a joint report within the scheduled time-limit of 180 days, because of the major differences outstanding between the two delegations. Each delegation produced a separate report at the end of the Group's work.

2.69. In its report of 3 February 2006, the Argentine Delegation to the GTAN reiterated that Uruguay had breached its obligations under the 1975 Statute, noted the shortcomings and errors in the present environmental impact assessments and criticized: the sites chosen; the planned production method; the studies of the impact of effluents on the water and biota, gas emissions and

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[132]GTAN, Minutes of the first meeting, Montevideo, 3 Aug. 2005. Anns., Vol. IV, Ann. 4.

[133]CARU, Minutes 6/05 of 15 Aug. 2005, pp. 1234-1241; 8/05 of 9 Sept. 2005, pp. 1242-1247; 9/05 of 14 Oct. 2005, pp. 1859-1862; Note OCARU 129/2005 of 10 Nov. 2005 from the Argentine delegation to CARU. Anns., Vol. III, Anns. 33, 34, 35 and 38.

solid waste; the lack of preventive and mitigating measures; and the socio-economic impact of the mills in the areas affected by the river[134].

2.70. In its report, the Uruguayan delegation stated that it had sent the Argentine delegation all the information that was available and asked for the remainder from the companies, which had responded "according to the progress of their projects"[135]; this shows very clearly that Uruguay itself did not have full information on the projects. The report took the view that progress had been made on studying the impact of liquid emissions and that, as regards the studies of gaseous emissions, changes had been made in order to assess their impact on the region of Gualeguaychú. The Uruguayan delegation reiterated its positions on the substance of the dispute[136].

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Section V

The failure of negotiations and the support of the Argentine Parliament for referral to the International Court of Justice

2.71. At the end of 2005, given the Parties' conflicting positions on the extent of the information required, the location of the mills and the technology they were to use, and on the fact that the works were continuing and Uruguay was still granting authorizations for construction without following the procedure laid down in the 1975 Statute, it became clear that the work of the GTAN was moving towards deadlock.

2.72. On 14 December 2005, Argentina sent Uruguay a note in which it formally drew attention to the existence of a dispute regarding the 1975 Statute, pointing out that Article 12 of the Statute was applicable, that the procedure indicated in Chapter XV was therefore open to the Parties, and that the period of 180 days laid down by the Treaty for the Parties to reach a settlement through direct negotiations had begun on 3 August 2005, the date of the GTAN's first meeting[137].

2.73. On 26 December 2005, the Argentine Government repeated its serious concern at the major tensions caused by the continuing construction of the mills and the port, which was creating an unprecedented situation in the history of relations between Argentina and Uruguay. Argentina once again called for the work to be suspended, with a view to reaching a swift and final settlement of the dispute[138].

2.74. On 27 December 2005, Uruguay's Minister for Foreign Affairs replied to Argentina's note of 14 December 2005, rejecting the Argentine protests and stating that Uruguay had provided Argentina with all the information requested, showing that the works were being carried out in accordance with national and international standards. The note concluded that there was no dispute

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[134]GTAN, report of the Argentine delegation, Buenos Aires, 3 Feb. 2006. Anns., Vol. IV, Ann. 1.

[135]GTAN, report of the Uruguayan delegation, Montevideo, 3 Feb. 2006. Anns., Vol. IV, Ann. 2.

[136]*Ibid.*

[137]Note SEREE 149/2005 of 14 Dec. 2005 from Argentina's Secretary for Foreign Affairs to Uruguay's Ambassador to Argentina. Anns., Vol. II, Ann. 27.

[138]Note SEREE 154/2005 of 26 Dec. 2005 from Argentina's Secretary for Foreign Affairs to Uruguay's Ambassador to Argentina. Anns., Vol. II, Ann. 28.

57 between the Parties and that the procedure laid down in the 1975 Statute had therefore not been opened[139].

2.75. By a note of 12 January 2006, Argentina rejected this last Uruguayan note, highlighting the intrinsic contradiction between Uruguay's arguments and the denial of the existence of a dispute. The same note stressed the interpretations of the facts and the law given previously by Argentina[140].

2.76. On 16 January 2006, in response to the previous note, Uruguay renewed the terms of its note of 27 December 2006[141].

2.77. The period of 180 days laid down for the activity of the GTAN expired on 3 February 2006, without the Parties reaching an agreement[142].

2.78. On 14 and 16 February 2006, the Argentine Minister for Foreign Affairs explained the state of the dispute to the Foreign Affairs Committees of the Chamber of Deputies and the Senate[143]. Both houses of the Argentine Congress adopted resolutions in which, given the failure of the direct negotiations, they supported the Government's decision to refer the matter to the International Court of Justice.

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Section VI

Further Argentine attempts to achieve a bilateral settlement of the dispute

2.79. During February 2006, the Argentine Government proposed on several occasions that the works should be suspended for a limited period to allow objective impact studies to be carried out, with a view to settling the dispute. These proposals were not taken up by Uruguay.

2.80. It should be pointed out, in this context, that in his address to Congress of 1 March 2006, President Kirchner formally invited President Vázquez of Uruguay to continue to seek a settlement of the dispute, on the basis of a 90-day suspension of construction work on the mills while awaiting an independent environmental impact study[144].

2.81. The same day, the Argentine executive presented its report on the State of the Nation 2005, in which it confirmed Argentina's position of steadfastly continuing to denounce Uruguay's breaches of the requirements under Articles 7 *et seq.*. of the 1975 Statute, and provided

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[139]Note of 27 Dec. 2005 from Uruguay's Minister for Foreign Affairs, Mr. Reinaldo Gargano, to Argentina's Ambassador to Uruguay, Mr. Hernán Patiño Meyer. Anns., Vol. II, Ann. 29.

[140]Note of 12 Jan. 2006 from Argentina's Secretary for Foreign Affairs, Mr. Roberto García Moritán, to Uruguay's Ambassador to Argentina, Mr. Francisco Bustillo. Anns., Vol. II, Ann. 30.

[141]Note of 16 Jan. 2006 from Uruguay's Minister for Foreign Affairs, Mr. Reinaldo Gargano, to Argentina's Ambassador to Uruguay, Mr. Hernán Patiño Meyer. Anns., Vol. II, Ann. 31.

[142]Anns., Vol. IV, Ann. 1.

[143]See the statement by Argentina's Minister for Foreign Affairs, Mr. Jorge Taiana, to the Foreign Affairs Committee of the Chamber of Deputies, 14 Feb. 2006. Anns., Vol. VII, Ann. 12.

[144]Address to Congress by President Néstor Kirchner, 1 March 2006. Anns., Vol. VII, Ann. 13.

a further refutation of Uruguay's arguments. In the section on the environment, the 2005 report states as follows:

> "As regards the controversy between Argentina and Uruguay over the plans to construct two pulp mills on the left bank of the River Uruguay, and to avoid this being aggravated by Uruguay's unilateral authorization of the second mill — planned by the Finnish company Botnia — at the start of May 2005, the Presidents of the two countries agreed to set up a bilateral High-Level Technical Group — the GTAN — which would hold negotiations for 180 days in order to find a solution to the controversy, under the supervision of the countries' Ministries of Foreign Affairs. In this Group, which began its activities on 3 August 2005, Argentina repeatedly asked Uruguay for full and relevant information on the planned mills, in particular to explain why this area was chosen as their location and to establish in an objective and reliable way the cumulative cross-border impact that might be produced on the ecosystem
> **59** associated with the River Uruguay. These requests were not met. On 30 January 2006, after six months of negotiations, the GTAN concluded its activities without being able to reach a consensus."[145]

In the section on relations with Uruguay, the report continues:

> "During 2005, there was a worsening of the dispute between Argentina and Uruguay over the construction of pulp mills and associated facilities on the left bank of the River Uruguay, a waterway shared between the two countries. The main reason for this aggravation was the further unilateral authorization granted by Uruguay, in breach of the Statute of the River Uruguay, for a second mill, planned by the Finnish company Metsä-Botnia, with twice the capacity that had also been authorized unilaterally at the end of 2003 for the Spanish company ENCE. A third unilateral authorization, likewise in breach of the Statute of the River Uruguay, was issued in July, this time relating to the plan for a port terminal associated with the second mill. In all these cases, Uruguay ignored the repeated requests for information and suspension of the projects from Argentina, both in the Administrative Commission of the River Uruguay and at government level, aimed at allowing an objective and reliable study to be made of the cumulative cross-border impact which the planned works might produce on the ecosystem associated with the River Uruguay. With the aim of trying to resolve this worsening of the dispute, the Presidents of the two countries decided to set up a High-Level Group, which began work in August. When this report was being prepared, in December 2005, the intransigence of the Uruguayan delegation in the Group in terms of providing full and relevant information on the projects, despite the repeated requests from its Argentine counterpart, was affecting the prospects of being able to reach an agreement within the lifetime of this negotiating body."[146]

Finally, the report summarized the situation within CARU as follows:

> "A further dispute has arisen within the Administrative Commission of the River Uruguay (CARU) because of the unilateral authorization granted by Uruguay, in breach of the prior notification and consultation procedure laid down by the Statute, for a port terminal associated with one of the pulp mills planned on the left bank of

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[145] Presidency, Cabinet Office *[Jefatura]*, detailed report on the State of the Nation 2005, Buenos Aires, 1 March 2006, p. 83. Anns., Vol. VII, Ann. 21.

[146] *Ibid.*, p. 110.

this cross-border waterway, likewise in breach of the Statute. This dispute has been the subject of consideration by the two governments."[147]

60 2.82. On 11 March 2006, at his meeting with President Kirchner in Santiago de Chile, President Vázquez asked ENCE and Botnia to suspend construction of the mills[148], to allow a bilateral agreement to be concluded. ENCE agreed to suspend work for 90 days, but Botnia, after initially doing the same, then refused to carry this out and held just a 10-day "suspension", coinciding with the Easter holiday week in Uruguay[149]. An agreement was in the process of being finalized between the two countries to set up a panel of independent experts, which would produce a comprehensive independent assessment of the cumulative impact of the two mills on the cross-border environment and propose the measures to be adopted as a result[150]. Because of Botnia's refusal, the meeting at presidential level that was due to be held in Anchorena (Uruguay) to formalize the agreement could not take place[151]. On 6 April 2006, the Uruguayan Government stated that "the direct negotiations with the neighbouring country are at an end"[152].

2.83. Also in April, reports appeared in the press of a plan by the Stora-Enso company to construct a third pulp mill on one of the tributaries of the River Uruguay[153].

61 **Section VII**

Referral to the Court by Argentina and subsequent aggravation of the dispute by Uruguay

2.84. On 4 May 2006, Argentina filed an application instituting these proceedings, and at the same time requested the Court to indicate provisional measures. On 13 July 2006, the Court delivered an Order regarding this request[154].

2.85. On 24 August 2006, Uruguay authorized the commissioning of the port terminal for the Orion mill[155]. Uruguay informed the Argentine delegation to CARU of this authorization on 4 September 2006[156]. When this information was supplied, the port terminal was already in operation. Argentina took the view that this constituted a further breach of the requirement to follow the procedure under Articles 7 *et seq.* of the 1975 Statute and also flagrantly contradicted the Court's recommendation to the Parties in paragraph 82 of its Order of 13 July 2006 to refrain

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[147] *Ibid.*, p. 130.

[148] Presidency, Eastern Republic of Uruguay, "Possible settlement of dispute over Fray Bentos cellulose plants", 11 March 2006, see: http://www.presidencia.gub.uy/_web/noticias/2006/03/2006031101.htm. Anns., Vol. VI, Ann. 9.

[149] Press releases by Botnia of 26 March 2006, ENCE of 28 March 2006 and Botnia of 4 April 2006. Anns., Vol. VI, Ann. 8.

[150] Draft Joint Presidential Declaration on the Full Preservation of the River Uruguay and its Ecosystem (Anchorena Declaration), 3 April 2006. Anns., Vol. VII, Ann. 14.

[151] Ministry of Foreign Affairs (Uruguay), "Cellulose plant dispute: Vázquez-Kirchner meeting temporarily postponed", 4 April 2006, http://www.mrree.gub.uy/mrree/Prensa/informacion0106.htm. Anns., Vol. VI, Ann. 10.

[152] Presidency, Eastern Republic of Uruguay, "Uruguay calls for a Mercosur meeting; it will send a letter to the Hague Court, 7 April 2006, http://www.presidencia.gub.uy/_web/noticias/2006/04/2006040704.htm. Anns., Vol. VI, Ann. 11.

[153] Anns., Vol. VI, Ann. 12.

[154] *Pulp mills on the River Uruguay, Order of 13 July 2006*,.

[155] DINAMA, resolution R/DN/100/2006 of 24 Aug. 2006. Anns., Vol. VII, Ann. 15.

[156] Note CARU-ROU 023/06 of 4 Sept. 2006. Anns., Vol. III, Ann. 37.

from any actions which might render more difficult the resolution of the dispute and to implement in good faith the consultation and co-operation procedures provided for by the 1975 Statute[157].

2.86. On 12 September 2006, Uruguay authorized Botnia to extract and use the waters of the River Uruguay for industrial purposes[158]. On 17 October 2006, the Uruguayan delegation merely forwarded the text of this resolution to CARU for information, without complying with the procedure under the Statute. Argentina took the view that this constituted a further breach of the requirement to follow the procedure under Articles 7 *et seq.* of the 1975 Statute and also contradicted the request made to the Parties by the Court in its Order of 13 July 2006[159].

62 2.87. On 21 September, ENCE announced that it was abandoning construction of its CMB mill at the planned site and proposed to relocate this plant, though without indicating where the new site was planned. The Chairman of the company held his press conference at the offices of the Presidency of the Eastern Republic of Uruguay. Explaining its decision, ENCE's Chairman stated:

> "We are relocating [the plant] because it is impossible from an industrial point of view to construct two plants in Fray Bentos of the kind that are proposed."[160]

2.88. On 3 October 2006, Argentina requested information from Uruguay concerning the environmental impact assessment for the construction of a sulphur plant by the ISUSA company near Agraciada (Department of Soriano), whose output is intended for the Orion mill. Argentina also asked Uruguay to refer this plan to CARU[161]. Uruguay responded by stating that this request was inadmissible[162].

Section VIII

Conclusions

2.89. From the facts set out above, it may be concluded that:

(a) Uruguay was fully aware of the fact that CARU had jurisdiction to deal with the CMB and Orion projects;

63 *(b)* Uruguay deliberately decided not to subject the plans for the pulp mills and associated facilities to the procedure provided for in Chapter II of the 1975 Statute;

(c) Following Uruguay's authorization of the CMB project on 9 October 2003, a dispute arose between the Parties regarding CARU's jurisdiction to deal with the CMB project, with Argentina invoking that jurisdiction and Uruguay rejecting it;

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[157]Anns., Vol. III, Anns. 33 and 41.

[158]Resolution of the Ministry of Transport and Public Works of 12 Sept. 2006. Anns., Vol. VII, Ann. 16.

[159]Note of 1 Nov. 2006 from the Argentine Ministry of Foreign Affairs, International Trade and Religious Worship to the Uruguayan Embassy in Argentina. Anns., Vol. II, Ann. 33.

[160]Press conference by the Chairman of ENCE, Mr. Juan Luis Arregui, and the Chief Executive, Mr. Pedro Oyarzábal, Montevideo, 21 Sept. 2006. Anns., Vol. VI, Ann. 1. See also Introduction, para. 0.5.

[161]Note 177/2006 of 3 Oct. 2006 from the Argentine Embassy in Uruguay to the Uruguayan Minister for Foreign Affairs. Anns., Vol. II, Ann. 8.

[162]Note DGAP3/184/06 of 9 Oct. 2006. Anns., Vol. II, Ann. 8.

(d) On 2 March 2004, acknowledging the jurisdiction of CARU, Uruguay undertook to provide the Commission with the documentation on the CMB project;

(e) Uruguay did not forward the information it had promised, regardless of the arrangement of 2 March 2004;

(f) If Uruguay had kept this undertaking, the dispute could have been settled. On the contrary, Uruguay aggravated the dispute by issuing further authorizations that were not in accordance with Article 7 of the Statute: for construction of the Orion mill, for construction of the port associated with that plant, for the commissioning of the port, and for the extraction and use of water from the River Uruguay by Botnia;

(g) Argentina has protested at the actions of the Respondent and has always maintained its position;

(h) Uruguay has acknowledged on several occasions that its conduct was not in accordance with the provisions of the 1975 Statute.

CHAPTER III

THE APPLICABLE LAW — THE 1975 STATUTE

67 3.1. The Statute of the River Uruguay, which was concluded at Salto on 26 February 1975, enshrines the rights and obligations concerning the management and protection of the River Uruguay. The 1975 Statute contains two clauses which refer to conventions and other instruments (Art. 1 and 41 *(a)*).

3.2. The law applicable to this case will be set out below. In terms of its scope and substance, that law has been framed in a particular way. To begin with, the 1975 Statute — the fundamental repository of the applicable law — is a legal instrument which was negotiated and entered into in a particular context (Sec. I) reflecting the special features of the legal régime of the River Uruguay. In addition, the distinctive form the relevant law takes is apparent in the innovative nature of the system of management, co-operation and protection set in place by the 1975 Statute (Sec. II). Finally, the special nature of the applicable law is bound up with the need to interpret and apply the 1975 Statute in the light of the principles and rules of international law relating to international watercourses and environmental protection (Sec. III).

Section I

The 1975 Statute is a legal instrument which was negotiated and entered into in a particular context

3.3. The River Uruguay is subject to specific rules under the 1975 Statute, which was signed at Salto on 26 February 1975 and entered into force on 18 September 1976[163]. The background to the negotiation and conclusion of the 1975 Statute was characterized by close links of friendship and co-operation between Argentina and Uruguay. That spirit of close co-operation is reflected in
68 the many legal instruments adopted by both States. Those instruments include: the 1961 Treaty concerning the Boundary Constituted by the River Uruguay[164], the 1969 Treaty of the River Plate Basin[165], the 1971 Argentine-Uruguayan Declaration on Water Resources[166] and the 1973 Treaty concerning the Río de la Plata and the corresponding Maritime Boundary (hereinafter "the 1973 Treaty")[167]. Those legal instruments make it possible to understand the significance of and the practice adopted in relation to the rights and obligations provided for by the 1975 Statute.

3.4. The 1975 Statute has special links with the above legal instruments. While the 1961 Treaty concerning the Boundary Constituted by the River Uruguay (hereinafter "the 1961 Treaty") provides the main basis (A), the fact remains that the 1975 Statute is the repository of the legal values and principles relating to co-operation, management and protection where international watercourses are concerned (B).

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[163]Statute of the River Uruguay, 26 Feb. 1975, United Nations, *Treaty Series (UNTS)*, Vol. 1295, pp. 348-355, Anns., Vol. II, Ann. 2.

[164]Treaty concerning the Boundary Constituted by the River Uruguay, 7 April 1961, *UNTS*, Vol. 635, pp. 98-109, Anns., Vol. II, Ann. 1.

[165]Treaty of the River Plate Basin (Republics of Argentina, Bolivia, Brazil, Paraguay and Uruguay), 23 April 1969, *UNTS*, Vol. 875, pp. 14-16, Anns., Vol. II, Ann. 10.

[166]Declaration on Water Resources, 9 July 1971, Argentina-Uruguay, Anns., Vol. II, Ann. 11.

[167]Treaty concerning the Río de la Plata and the corresponding Maritime Boundary, 19 Nov. 1973, *UNTS*, Vol. 1295, pp. 319-330, Anns., Vol. II, Ann. 5.

A. From the 1961 Treaty to the 1975 Statute

3.5. The 1975 Statute was adopted in accordance with Article 7 of the 1961 Treaty concerning the Boundary Constituted by the River Uruguay. The Statute and the Treaty frame the "community of interests . . . and common legal right"[168] that governs the River Uruguay, and they complement each other.

1. The 1961 Treaty symbolizing the co-operation between Uruguay and Argentina

69 3.6. The 1961 Treaty defines the boundary constituted by the River Uruguay between Argentina and Uruguay. Articles 1 to 4 of the Treaty define the River Uruguay and assign the islands and islets to each of the riparian States. Taking that definition into account, the Treaty further defines the jurisdictions of the two States[169] and sets out the obligations pertaining to navigation of the river[170].

3.7. Although the purpose of the 1961 Treaty is to define the boundary constituted by an international watercourse, it is also designed to lay down parameters governing the joint use and management of the waters of the River Uruguay. The 1961 Treaty goes beyond the principle of "co-existence" and promotes *uti singuli* the principle of "co-operation", further developing the general principles of good neighbourliness *(voisinage)* between riparian States on the same international watercourse[171].

3.8. That concern to establish close co-operation between Argentina and Uruguay and to take account of the special features of the River Uruguay permeates both the spirit and tenor of the 1961 Treaty. For instance, the preamble to the 1961 Treaty declares that both States wish to take into consideration the interests and aspirations of the other:

> "The Government of the Argentine Republic and the Government of the Eastern Republic of Uruguay, motivated by the common desire to tighten the close and immutable bonds of affection and friendship which have always existed between their respective peoples, have decided to settle once and for all the question of the boundaries situated in the section of the River Uruguay which constitutes the frontier between the two countries.
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> The two Governments, considering that, while they have identical rights over
> **70** the said section of the river, there are other factors which should be taken into account . . . have decided to adopt as the boundary a composite line which shall take

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[168] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 56, para. 85.

[169] Arts. 8-10 of the 1961 Treaty.

[170] Arts. 5 and 6 of the 1961 Treaty.

[171] On the concept of neighbourliness, see the decision of 17 July 1986 on the *Dispute concerning Filleting within the Gulf of St Lawrence*. In that decision the tribunal held that:

> "while the concept of 'voisinage' is generally used to refer to a situation of geographical vicinity, it is used more specifically in juridical language to qualify situations of proximity which, in order to avoid the creation of continuing frictions, call for continued collaboration for the benefit of the nationals or the public service of two or more States whose activities interlock within a given geographical area. This is, for instance, the case with the utilization of the same river basin, the prevention of pollution, the status of frontier workers or certain customs areas." (*Dispute concerning Filleting within the Gulf of St Lawrence (France* v. *Canada)*, decision of 17 July 1986, *International Law Reports*, 1990, Vol. 82, pp. 590 *et seq.*)

into account the aforesaid considerations and at the same time satisfy as fully as possible the aspirations and interests of the two Contracting States."[172]

3.9. To confer legal substance on the "community of interests" established in the preamble, Article 7 of the 1961 Treaty lays down the obligation to establish jointly a "régime for the use of the river". That régime was to include the following elements:

"*(a)* common standard regulations for the safety of navigation;

(b) a pilotage régime taking present practices into account;

(c) regulations governing the maintenance of dredging and buoying in accordance with Article 6;

(d) reciprocal facilities for hydrographic surveys and other studies connected with the river;

(e) provisions for the conservation of living resources;

(f) provisions for preventing water pollution."

3.10. In a landmark publication entitled *El Estatuto del Río Uruguay*, E. González Lapeyre and Y. Flangini (hereinafter "Lapeyre and Flangini") looked back at the circumstances surrounding the adoption of the 1961 Treaty and give a detailed description of its substance. They quote Judge Jiménez de Aréchaga, who stressed the importance of Article 7 in the structure of the 1961 Treaty as a provision designed to standardize the conduct of the two parties and secure the legal régime governing the River Uruguay[173]. It therefore appears that it was the clear intention of the parties to the 1961 Treaty to establish a system of very close co-operation. That intention was not destined to remain wishful thinking, since the régime for the use of the River Uruguay was to be adopted in the form of a statute, and, indeed, the 1975 Statute of the River Uruguay.

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2. Historical background to the 1975 Statute

3.11. In their above-mentioned book, Lapeyre and Flangini give an account of the negotiations which led to the conclusion of the 1975 Statute of the River Uruguay[174]. That book, whose authors were involved in negotiating the Statute, has an important role to play in shedding light on the circumstances and negotiations surrounding the Statute. Indeed, its role is confirmed by the fact that CARU purchased several copies of the book in 1983[175].

3.12. The negotiations on the Statute of the River Uruguay began in 1969, but, given the climate of mutual trust which was established from the very beginning of the process, Argentina

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[172]Emphasis added. See Anns., Vol. II, Ann. 1.

[173] "This, clearly, implies great progress, since it assumes that uniform rules of this nature must, in future, be laid down on the basis of agreement between the riparian States. This will be in the common interest, since uniformity and certainty in relation to the legal régime applicable to the navigable section of a river in its entirety are the prerequisite for ease and security of navigation. That uniformity can be secured only on the basis of agreement between the riparian States." (E. G. Lapeyre and Y. Flangini, *El Estatuto del Río Uruguay*, Ediciones Jurídicas Amanlio M. Fernández, Montevideo, 1983, pp. 71-72, Anns., Vol. VII, Ann. 1.)

[174]*Ibid*. pp. 72-73.

[175]CARU, Minutes 5/83, resolution 16/83 of 10 June 1983, pp. 337-338, Anns., Vol. III, Ann. 43.

and Uruguay preferred to focus, first of all, on drafting the Treaty concerning the Río de la Plata and the corresponding Maritime Boundary. That Treaty was adopted on 19 November 1973.

3.13. Following the adoption of the Treaty concerning the Río de la Plata, the negotiations on the Statute of the River Uruguay were resumed. They lasted for two years, from 1973 to 1975. Those negotiations too were characterized by the same spirit of mutual trust that characterized the process of drafting the Treaty concerning the Río de la Plata. This was reinforced by the fact that the same Argentine and Uruguayan negotiators were involved in both treaties. The negotiations were concluded on 26 February 1975 when the Ministers for Foreign Affairs of the two States, Juan Carlos Blanco and Alberto Vignes, signed the Statute of the River Uruguay at Salto.

3.14. The Statute of the River Uruguay was approved by the Argentine Parliament by Law No. 21.413 of 9 September 1976 and by Uruguay's Council of State by Law No. 19.769 of 4 May 1976. As stated in the note accompanying the approval by Uruguay's Council of State of the Statute of the River Uruguay:

> "I. This Statute was drawn up in accordance with the provisions of Article 7 of the Treaty concerning the Boundary Constituted by the River Uruguay, which was
72 ratified by the Republic on 19 January 1966 and is designed to establish the joint mechanisms necessary for the integral use of the River Uruguay by the two Contracting Parties, as well as to provide detailed clarification of certain judicial issues that remained unresolved by the criteria laid down in the 1961 Treaty.
>
> II. It is necessary to stress the influence which the solutions adopted in the Treaty concerning the Río de la Plata and the corresponding Maritime Boundary of 19 November 1973 have had on this agreement. It could be said that this influence has been exerted, in particular, at both a spiritual and technical level. At a spiritual level, because the negotiators worked in an atmosphere of marked cordiality which had become firmly established during the course of negotiations on that Treaty, and at a technical level, because they tried to transfer to the River Uruguay, within the framework established by the 1961 Treaty, the solutions envisaged in the treaty provisions concerning the Río de la Plata, adapting them to the special features of the River Uruguay."[176]

3.15. The Argentine Government's note accompanying the draft of Law No. 21.413 also emphasizes the relationship between the Statute of the River Uruguay and the 1961 Treaty. According to that note:

> "The 1961 Treaty set the boundaries between the two countries along the section of the River Uruguay which constitutes the frontier. The Statute supplements it, since it lays down the rules needed to regulate the different activities which take place on the waters of that territorial river, taking account of its special features and motivated, as stated in the preamble, by the fraternal spirit inspiring the Treaty concerning the Río de la Plata and the corresponding Maritime Boundary, signed at Montevideo on 19 November 1973."[177]

3.16. The 1975 Statute lays down and defines strict obligations concerning the utilization and protection of the River Uruguay. That agreement was negotiated over a short period, thanks to the

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[176] *Diario de sesiónes del Consejo de Estado*, 183 sesión ordinaria, 26 April 1976, p. 164, Anns., Vol. II, Ann. 3.

[177] ADLA XXXVI-L, Ley 21.413, pp. 2802-2803, Anns., Vol. II, Ann. 4.

mutual trust that had developed between the parties. It demonstrates the lasting concern that had existed (since 1961) to draw up a stringent and reliable system of rights and obligations pertaining to co-operation on the River Uruguay.

73 B. The regional context for regulating the management of international watercourses and the 1975 Statute

3.17. The adoption of the 1975 Statute marked a further stage in the process of concluding a number of regional and bilateral legal instruments concerning international watercourses. The 1969 Treaty of the River Plate Basin, the 1971 Argentine-Uruguayan Declaration and the 1973 Treaty concerning the Río de la Plata and the corresponding Maritime Boundary are clear illustrations of the continuing desire of Argentina and Uruguay to frame an international legal régime covering the watercourses along which both are riparian States. Consequently, those instruments facilitate a better understanding of the special circumstances which surrounded the adoption of the 1975 Statute.

1. The 1969 Treaty of the River Plate Basin

3.18. The Treaty of the River Plate Basin (hereinafter "the 1969 Treaty") makes it easier to understand the régime of the River Uruguay since it represents one of the first attempts by the States of the La Plata region (namely Argentina, Bolivia, Brazil, Paraguay and Uruguay) to create joint institutions to manage water resources. A specific standing committee, the "Intergovernmental Co-ordinating Committee of the countries of the River Plate Basin"[178] was set up to promote, co-ordinate and monitor the multinational efforts to secure the integrated development of the River Plate Basin. The Committee's mandate demonstrates the determination of the States of the River Plate Basin to establish institutional machinery for the joint management of an international river.

74 3.19. The 1969 Treaty is also significant from a "territorial" perspective *(ratione loci)*. In point of fact, the States of the River Plate region decided to adopt a broad definition of the River Plate including the "River Plate Basin and its zones of direct and measurable influence"[179]. The use of that terminology shows that the States of the River Plate region wished to bring a large geographical area within the scope of the Treaty. It is useful, in this connection, to point out that Article 1 of the Treaty of the River Plate Basin states that the Contracting Parties:

> "shall promote, in the region of the basin . . . the formulation of such operating arrangements and legal instruments as they may deem necessary to achieve the following objectives: *(a)* facilitating and assisting navigation; *(b)* the rational utilization of water resources, in particular by the regulation of watercourses and their multipurpose and equitable development; *(c)* the conservation and development of animal and plant life".

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[178] In Feb. 1967, the Ministers for Foreign Affairs of the five above-mentioned States met in Buenos Aires and adopted a Joint Declaration setting up an Intergovernmental Co-ordinating Committee. The second meeting of the Ministers for Foreign Affairs of the riparian States of the Río de la Plata took place at Santa Cruz de la Sierra in May 1968. The meeting adopted the "Santa Cruz de la Sierra Act" and the statute of the Intergovernmental Co-ordinating Committee. On that point see: "Legal Problems posed by the non-navigational uses of international watercourses: supplementary report by the Secretary-General", *Yearbook of the International Law Commission (ILC)*, 1972, Vol. II (Part Two), p. 354.

[179] Art. 1 of the 1969 Treaty of the River Plate Basin, Anns., Vol. II, Ann. 10.

3.20. That choice of wording influenced the agreements concluded in 1973 and 1975 concerning the River Plate and the River Uruguay respectively.

3.21. The 1975 Statute forms the continuation of the 1969 Treaty of the River Plate which underscores the commitment of the States of the River Plate region to promote the creation of joint institutions to manage water resources. Furthermore, the 1969 Treaty reveals the attachment of those States to the concept of the "basin" of an international watercourse.

2. The 1971 Argentine-Uruguayan Declaration on Water Resources

3.22. In 1971, shortly before the United Nations Stockholm Conference on the Human Environment was convened in 1972, Argentina and Uruguay adopted a Declaration on Water Resources. It was against the backdrop of that declaration that the specific bilateral treaties for the River Plate and the River Uruguay were signed in 1973 and 1975 respectively[180].

75 3.23. According to the preamble to the 1971 Declaration, the two States:

> "have already begun to develop the River Uruguay, as prescribed in the time-table in force for the Salto Grande Dam and in execution of the joint efforts to draw up the River Uruguay Statute, thus providing tangible evidence of the deep understanding and close co-operation between the two Parties"[181].

3.24. In addition, Argentina and Uruguay express their agreement with the fundamental principles which must govern the utilization of international watercourses. According to the two States:

> "The two Foreign Ministers express their agreement on the following basic principles governing the régime for the utilization of international rivers and their tributaries:
>
> 1. The river waters shall be utilized in fair and reasonable manner.
>
> 2. States shall refrain from polluting international rivers and tributaries in any manner and shall conserve the ecological resources in the areas within their respective jurisdictions.
>
> 3. If a State intends to utilize the waters of a river, it shall first transmit to the other States concerned the plans for the works, the plan of operations and other data which may be useful in determining the impact of works in the territories of those States.
>
> 4. Within a reasonable period of time, the requested party must indicate whether there are aspects of the plans or plan of operations which may cause it appreciable damage. If so, it shall indicate the technical reasons and calculations substantiating that claim and shall suggest changes in the plans or plan of operations designed to avoid such damage.

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[180] CR 2006/46, para. 6 (Cerutti).

[181] 1971 Argentine-Uruguayan Declaration on Water Resources, Anns., Vol. II, Ann. 11.

5. Disputes arising in that connection shall be submitted to a Joint Technical Commission for settlement. In the event that the technical experts should disagree, they shall prepare a report expressing their views for consideration by the Governments. The Governments shall endeavour to find a solution through the diplomatic channel or by any other means they may agree upon, striving always to reach an amicable and just solution."

3.25. The 1971 Declaration demonstrates the agreement between Argentina and Uruguay on
76 the principles governing the utilization of water resources, namely equitable and reasonable utilization, the conservation of ecological resources, and the obligation to notify and consult with a view to reaching prior agreement. Those principles are the fundamental pillars of the system of co-operation between Argentina and Uruguay concerning the River Uruguay.

3. The 1973 Treaty concerning the Río de la Plata

3.26. The 1973 Treaty concerning the Río de la Plata played an important role in the drafting of the rules governing the River Uruguay. The 1975 Statute refers to that Treaty, stating that the arrangements covering the two rivers are motivated by the same fraternal spirit[182]. Certain provisions of the 1973 Treaty were taken up in the 1975 Statute. Furthermore, both those instruments confer a significant role on the International Court of Justice in relation to safeguarding the régime set in place.

3.27. Like the 1975 Statute, the 1973 Treaty provides that if the parties are unable to reach agreement on the implementation of a project likely to cause substantial damage to the waters of the river in question, one or other of the parties may refer the dispute to the International Court of Justice[183]. Furthermore, the Treaty concerning the Río de la Plata sets up an Administrative Commission whose remit appears similar to that of the Administrative Commission for the River Uruguay[184].

3.28. It should, however, be pointed out that the 1975 Statute of the River Uruguay sets in place a system of notification and consultation for the purposes of reaching prior agreement which is more demanding than the arrangements set in place by the 1973 Treaty. The latter provides that this machinery is to apply only to projects which may affect the "navigation" or the "régime of the river". The 1975 Statute applies that machinery not only to projects which may affect the
77 "navigation" or the "régime of the river" but also to projects which may affect "the quality of the waters" of the River Uruguay[185]. Furthermore, the 1975 Statute has extended the scope of the obligations by laying down the requirement to protect the River Uruguay and the "areas affected by it".

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[182]According to the preamble of the 1975 Statute: "The Government of the Eastern Republic of Uruguay and the Government of the Argentine Republic, motivated by the fraternal spirit inspiring the Treaty concerning the Río de la Plata and the corresponding Maritime Boundary, signed at Montevideo on 19 November 1973".

[183]See Arts. 22 and 69 of the 1969 Treaty of the Río de la Plata, and Arts. 1 and 60 of the 1975 Statute.

[184]See Art. 60 of the 1973 Treaty of the Río de la Plata and Art. 56 of the 1975 Statute.

[185]In that connection, the Uruguayan negotiators Lapeyre and Flangini state that:

"Under the Statute of the River Uruguay, Articles 7 to 13 thereof, although inspired by the above-mentioned articles [namely Arts. 17 to 22 of the 1973 Río de la Plata Treaty], arrive at a broader solution. In point of fact, the consultation relates not only to significant damage which could harm navigation or the régime of the river, but also that could affect the quality of its waters." (E. G. Lapeyre and Y. Flangini, *op. cit.*, p. 75, Anns., Vol. VII, Ann. 1.)

3.29. The 1969 Treaty of the River Plate Basin and the 1973 Treaty concerning the Río de la Plata and the corresponding Maritime Boundary demonstrate the commitment of Argentina and Uruguay to creating joint mechanisms to manage and protect water resources and their intention to adopt a broad interpretation of the concept of "river".

3.30. Furthermore, the 1971 Argentine-Uruguayan Declaration sets out the fundamental principles governing the utilization and protection of a watercourse. All of these factors combine to illustrate and clarify the particular regional context in which the 1975 Statute of the River Uruguay was adopted and make it easier to comprehend the significance of the rights and duties laid down by the Statute.

Section II

The 1975 Statute, a specific instrument governing the legal régime of the River Uruguay

3.31. The 1975 Statute is made up of 63 articles, divided into 17 chapters. The obligations under the Statute form a unitary and interdependent whole. Obligations that are more procedural in content, such as the obligations to notify and consult, make it possible to put into effect substantive obligations, such as the principle of equitable and reasonable use and the requirement that significant damage should be avoided. Those obligations are interlinked. In the context of the
78 work of the International Law Commission (ILC) on the law of the non-navigational uses of international watercourses, Special Rapporteur S. C. McCaffrey pointed out in that connection that "[t]he substantive and procedural principles . . . form an integrated whole"[186].

3.32. The special nature of the 1975 Statute is evident at three fundamental levels. Firstly, in terms of the innovative system of joint "management" which it introduces (A); secondly, in terms of the exacting nature of the system of "co-operation" which it establishes (B); and, thirdly, in terms of the system of "protection" which derives from the scope of the obligations that the Statute lays down (C). A common thread is apparent at those three fundamental levels: the concern to prevent any unilateral utilization or exploitation of the River Uruguay.

A. An innovative legal régime for *managing* the river

3.33. The 1975 Statute advocates joint management of the River Uruguay. As a result of the establishment of CARU and the obligations to prevent threats to navigation, the régime of the river and the quality of its waters, Argentina and Uruguay have established a very highly developed system of co-operation in relation to the River Uruguay and the areas affected by it. Many aspects of that system are innovative.

3.34. The system of joint management of the River Uruguay comprises physical, territorial, functional and institutional aspects. They illustrate the special nature of the legal régime for the River Uruguay.

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[186]Third Report on the Non-navigational Uses of International Watercourses, by S. C. McCaffrey to the International Law Commission, *ILC Yearbook*, 1987, Vol. II (First Part), A/CN.4/406, p. 23, para. 34.

1. The physical aspect of joint management: the river as a shared natural resource

79 3.35. In the 1975 Statute, Argentina and Uruguay expressed their intention of regarding the River Uruguay as a shared natural resource.

3.36. That the River Uruguay is to be regarded as being a shared resource is evident from the establishment of joint institutions to manage the river. Indeed, Article 1 of the 1975 Statute stresses the need to establish the "joint machinery necessary for the optimum and rational utilization of the River Uruguay"[187]. CARU constitutes the forum par excellence permitting the joint, shared and interdependent management of a shared natural resource such as the River Uruguay[188]. A system of interdependent management of that nature is vital if the aim and purpose of the 1975 Statute is to be secured, namely the optimum and rational utilization of the River Uruguay[189].

3.37. The shared nature of the River Uruguay is also apparent from the fact that obligations are imposed on Argentina and Uruguay at an international level. The 1975 Statute is actually a repository for the international obligations which are incumbent on the two States and precludes either benefiting from any form of privilege to the detriment of the other. It is in the nature of a shared natural resource that it must be subject to international rights and duties to ensure its rational and optimum utilization by all the States concerned. That utilization is, of necessity, dependent on compliance with the international obligations which the 1975 Statute lays down, as well as the other international obligations to which Articles 1 and 41 *(a)* of the 1975 Statute refer. Pursuant to Article 1, the optimum and rational utilization of the river must take place "in strict observance of the rights and obligations arising from treaties and other international agreements in force for each of the Parties".

Pursuant to Article 41 *(a)*, the Parties are required to prescribe appropriate rules and
80 measures to protect and preserve the aquatic environment and prevent its pollution: "in accordance with applicable international agreements and in keeping, where relevant, with the guidelines and recommendations of international technical bodies."

3.38. The "status" of the River Uruguay as a shared natural resource is, finally, reflected in the fact that national use of the river for domestic, sanitary, industrial and agricultural purposes is subject to the obligations laid down in Articles 7 to 12, where utilization of that nature is significant enough to affect the régime of the river or the quality of its waters[190]. The right of each State to use the river within its domestic jurisdiction is, therefore, subject to obligations pertaining to information, notification, consultation and prior agreement, that is to say the strict co-operation mechanism established under the 1975 Statute[191]. That approach is confirmation that any unilateral action which is incompatible with the 1975 Statute and likely to alter the nature of the River Uruguay and the areas affected by it must be rejected or excluded.

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[187] Art. 1 of the 1975 Statute.

[188] See paras. 3.54-3.60 below.

[189] See paras. 3.48-3.53 below.

[190] Art. 27 of the 1975 Statute, Anns., Vol. II, Ann. 2.

[191] Which contradicts Professor Boyle's view: CR 2006/47, para. 39 (Boyle).

2. The territorial aspect of joint management: the concept of the river and the areas affected by it

3.39. In its system of common management, the 1975 Statute included both the river[192] and the areas affected by it. The scope of the Statute is extensive. Pursuant to Article 13, the obligations laid down in Articles 7 to 12 concerning referral to CARU, the exchange of information, notification and consultation for the purpose of reaching prior agreement apply also to all works which either Party plans to carry out on the River Uruguay "outside the section defined as a river and in the areas affected by the two sections", and thus on the Argentine-Brazilian section of the River Uruguay also. In practice, that means that Argentina has agreed to submit its projects relating to the latter section to the procedure under Chapter II of the 1975 Statute, thereby enabling CARU and Uruguay to comment on them. The obligations under Article 13 apply to "all developments which are likely to affect the régime of the river or the quality of its waters"[193]. Consequently, they cover any activity meeting those conditions in the areas covered by the Statute and, in particular, those referred to in Article 13.

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3.40. The significance of Article 13 was described in the note of the Argentine Government accompanying draft Law No. 21.413:

> "In accordance with the aims of the Statute and the principles of international law, the signatory States agree to apply the same consultation procedure to any other project with the characteristics which have been described or any utilization of the waters which is significant enough to affect the régime of the river or the quality of its waters that one of the parties plans to carry out on the River Uruguay within its own jurisdiction, but outside the section of river governed by the Statute or within the areas affected by the two sections."[194]

3.41. That note further points out that:

> "It would be difficult to achieve the aims which have been set, were the States, individually, to act within the areas affected by the river without taking account of the close reciprocal relationship that exists between all parts of a single system. Therefore, and in order to be consistent with the stance adopted by the two countries, the machinery is supplemented by extending the prior consultation procedure to works which either of the riparian States undertakes within its jurisdiction in the areas affected by the River Uruguay which is the subject of the Statute, as well as in other sections of that river not bordering on those areas."[195]

3.42. J. Barberis provided clarification of the scope and significance of Article 13 at the legal and technical meetings of CARU that took place on 17 and 18 September 1987. In relation to Article 13:

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> "The same procedure should be followed when the implementation of the work is likely to impede the flow of an aquifer into the river, or if any party proposes to set

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[192] According to Art. 2 of the 1975 Statute, the "river" means "the section of the River Uruguay referred to in Article 1 of the [1961] Treaty [concerning the Boundary Constituted by the River Uruguay]", Anns., Vol. II, Ann. 2.

[193] Art. 29 of the 1975 Statute.

[194] ADLA XXXVI-D, Ley 21.413, p. 2803, Anns., Vol. II, Ann. 4.

[195] *Ibid*., p. 2805.

up on a tributary of the River Uruguay the kind of industry that causes pollution — a tannery or a plant manufacturing certain chemicals, for example."[196]

3.43. The territorial scope *(ratione loci)* of the 1975 Statute must be assessed by reference to both the term "river" and the term "areas affected". Those areas must be protected in the light of the concepts of the system formed by international watercourses and of their drainage basins. In its report of 1980 on the law of the non-navigational uses of international watercourses, the International Law Commission states that:

"[a]n international watercourse is not a pipe carrying water through the territory of two or more States. While its core is generally and rightly seen as the main stem of a river traversing or forming an international boundary, the international watercourse is something more, for it forms part of what may best be described as a 'system'; it comprises components that embrace, or may embrace not only rivers but other units such as tributaries, lakes, canals, glaciers and groundwater, constituting by virtue of their physical relation a unitary whole."[197]

3.44. The Convention on the Law of the Non-navigational Uses of International Watercourses, adopted by the United Nations General Assembly on 21 May 1997, defines watercourses as: "a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus"[198].

83 3.45. The term drainage basin more specifically clarifies the concept of area affected. According to the International Law Association (ILA), a drainage basin must be construed as "a geographical area extending over two or more States determined by the watershed limits of the system of waters, including surface and underground waters, flowing into a common terminus"[199].

3.46. A report by the Parliamentary Assembly of the Council of Europe of 2004 stressed that:

"The concept of hydrographical basin has gradually taken hold internationally over the past fifty years. A water basin is an area of land from which all surface water flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta.

. . . . . .

The principle of international freshwater management seeks to discourage unilateral changes to basins and harmful modifications of international rivers, and to advocate the setting up of joint water commissions. The idea is to address problems

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[196]J. Barberis, at technical-legal meetings of CARU, 17 and 18 Sept. 1987, p. 68, Anns., Vol. III, Ann. 10.

[197]Second Report by Special Rapporteur Schwebel on the Law of the Non-navigational Uses of International Watercourses. Report of the ILC, documents of the Thirty-second Session (5 May to 25 July 1980), *ILC Yearbook*, 1980, Vol. II (Second Part), p. 110.

[198]Art. 2 *(a)* of the Convention on the Law of the Non-navigational Uses of International Watercourses.

[199]Art. II of the Rules on the Uses of International Rivers, referred to as the "Helsinki Rules", ILA, Report of the Fifty-second conference, Helsinki 1966, London 1967, p. 484 (text reproduced in part in *ILC Yearbook*, 1974, Vol. II (Second Part), doc. A/CN.4/274, p. 396).

related to water resources and services through an integrated approach that considers a basin as a single management and planning unit."[200]

3.47. Those factors dictate a broad interpretation of the term "area affected" as contained in the 1975 Statute. The drainage basin — and, consequently, the area affected — encompasses not only the surface and groundwater but also the land territory within a river's watershed limits. Professor Caflisch points out in this connection that:

84 "the term 'drainage basin' encompasses all of the aquatic elements located within a watershed system . . . as well as — and this is a particularly important point — the land that covers them. Consequently, this is a term which encompasses more than just the aquatic element and has a territorial connotation, and even a regional or sub-regional aspect."[201]

3.48. If Article 13 is interpreted in the light of the concepts of the system of a watercourse and of its drainage basin, then the scope of the 1975 Statute must be deemed to be particularly broad. That is significant for the purposes of assessing the rights and obligations which the 1975 Statute prescribes.

3. Joint management and how it operates: rational and optimum utilization of the river

3.49. It is clear from Article 1 of the 1975 Statute that its purpose relates to the rational and optimum utilization of the River Uruguay. Article 1 reads as follows:

"The parties agree on this Statute, in implementation of the provisions of Article 7 of the Treaty concerning the Boundary Constituted by the River Uruguay, of 7 April 1961, in order to establish the joint machinery necessary for the *optimum and rational utilization of the River Uruguay*, in strict observance of the rights and obligations arising out of treaties and other international agreements in force for each of the parties." (Emphasis added.)

3.50. Respect for the rational and optimum utilization of a river means that the riparian States have to take account of the particular aspects of a watercourse and the possible consequences that uses of the watercourse may have for one or the other of them. Those two adjectives imply that the riparian States are under an obligation to secure, in their utilization of the watercourse, the "optimal" benefits which are compatible with the need to protect the river. The aim of securing the "rational" and "optimum" utilization of the River Uruguay may only be achieved jointly by the
85 co-riparians within "joint machinery", notably CARU; if this joint machinery is not used, the 1975 Statute will be deprived of its aim and object.

3.51. Rational utilization must be assessed and viewed objectively in the light of the obligations which the 1975 Statute lays down in relation to information, notification, consultation and prior agreement. Thus, rational utilization under the 1975 Statute must be based on the rigorous machinery for co-operation that has been set in place for that purpose. Only compliance

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[200] Report of the Parliamentary Assembly of the Council of Europe, 8 April 2004, doc. 10131.

[201] L. Caflisch, "La Convention du 21 mai 1997 sur l'utilisation des cours d'eau à des fins autres que la navigation", *Annuaire français du droit international*, Vol. XLIII, 1997, p. 753.

with the rights and obligations that are clearly determined and defined by the 1975 Statute may serve as an indicator that the River Uruguay is being used rationally and in good faith.

3.52. Optimum utilization, meanwhile, is gauged in terms of the obligation incumbent on each riparian State to prevent any threat to navigation, the régime of the river and the quality of the waters. In that connection, any planned works on and any use of the River Uruguay must be structured in such a way as to minimize damage to the river as a shared natural resource. If this is not the case, the proposed measures in relation to the river and the areas affected by it are likely to deprive one of the riparian States of its right to optimum utilization, that is to say its right to enjoy full use of the river. It follows that optimum utilization is utilization which takes account of any objections a riparian State may raise when the measures are proposed. Optimum utilization implies an assessment of that utilization in the light of the interests of *both* riparian States and not just *one* of them, as well as in the light of the different uses of the river.

3.53. Each riparian State both has the right to use the waters of the river in an optimum and rational manner and is under an obligation to prevent damage to the watercourse. If that requirement is not respected, the other riparian State is deprived of its right to attain optimum and rational utilization of the waters of the river. In that context, in its commentary on the 1994 draft Articles on the Non-navigational Uses of International Watercourses, the International Law Commission took the view that:

86 "[a]ttaining optimal utilization and benefits does not mean achieving the 'maximum' use, the most technologically efficient use, or the most monetarily valuable use, much less short-term gain at the cost of long-term loss. Nor does it imply that the State capable of making the most efficient use of a watercourse — whether economically, in terms of avoiding waste, or in any other sense — should have a superior claim to the use thereof. Rather, it implies attaining maximum possible benefits for all watercourse States and achieving the greatest possible satisfaction of all their needs, while minimizing the detriment to, or unmet needs of, each."[202]

3.54. The principle of rational and optimum utilization, as the aim and object of the 1975 Statute, remains central to the concept of "community of interests" as defined by the International Court of Justice:

> "[the] *community of interests in a navigable river becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the use of the whole course of the river and exclusion of any preferential privilege of any one riparian State in relation to the others* (*Territorial Jurisdiction of the International Commission of the River Oder, Judgment No. 16, 1929, P.C.I.J., Series A, No. 23,* p. 27).
>
> Modern development of international law has strengthened this principle for non-navigational uses of international watercourses as well, as evidenced by the adoption of the Convention of 21 May 1997 on the Law of the Non-navigational Uses of International Watercourses by the United Nations General Assembly."[203]

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[202] Draft Articles on the Law of the Non-navigational Uses of International Watercourses, Report of the ILC, documents of the Forty-sixth Session, 2 May to 22 July 1994, Supplement No. 10 (A/49/10), p. 239.

[203] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *op. cit*., p. 56, para. 85 (emphasis added).

4. Joint management and its institutional form: the Administrative Commission of the River Uruguay (CARU)

87 3.55. Chapter XIII of the Statute of the River Uruguay provides for the establishment of the Administrative Commission of the River Uruguay (CARU). CARU is an essential forum for co-operation between the two riparian States.

3.56. CARU's Statute was adopted, by common accord, on 18 September 1976, on the basis of an exchange of diplomatic Notes, in accordance with Article 53 of the 1975 Statute. Both countries have the same number of representatives at CARU[204] and it has legal personality[205]. According to Article 2 of its Statute, CARU is an international organization which possesses the legal personality required to enable it to carry out its specific mandate[206]. The organization exercises its functions on a permanent basis and has its own secretariat[207].

3.57. CARU's decisions must be adopted with the consent of both delegations, according to the principle "one delegation, one vote"[208]. At least three delegates from each party must be present for CARU to be in valid session[209]. No matter how many of its delegates are actually present, each delegation speaks through its president or substitute president[210].

3.58. CARU's mandate is wide-ranging and it has extensive powers. It has the regulatory powers provided for under Article 56 *(a)* of the 1975 Statute. It exercises its powers in relation to safety of navigation on the river and use of the main channel, conservation and preservation of living resources and prevention of pollution of the river[211].

88 3.59. CARU has, in particular, executive powers in relation to navigation and works envisaged by the parties[212], and it carries out controls and inspections[213]. In that connection, it is responsible for co-ordinating the joint conduct of scientific studies and research[214]. Furthermore, it co-ordinates activities for the prevention and prosecution of illegal acts, the adoption of joint plans, handbooks and communication systems for search and rescue operations[215].

3.60. CARU also has responsibilities in relation to the administration and management of the river. As a result of its position as a preferred point of contact between the two countries, CARU is able rapidly to transmit to the States the communications, consultations, information and

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[204] Art. 49 of the 1975 Statute.

[205] *Ibid.*, Art. 50.

[206] Art. 2 of the 1976 Statute of CARU.

[207] Art. 52 of the 1975 Statute.

[208] *Ibid.*, Art. 55.

[209] Art. 12 of the 1976 Statute of CARU.

[210] *Ibid.*, Art. 13.

[211] Art. 56 *(a)* (1), (2) and (4) of the 1975 Statute.

[212] See Chap. II of the 1975 Statute.

[213] See Art. 28, for example.

[214] Art. 56 *(b)* of the 1975 Statute.

[215] Art. 56 *(d)*, *(e)* and *(f)* of the 1975 Statute.

notifications which they may send to each other in accordance with the Statute[216]. Through the intermediary of CARU, the States regularly exchange information on fishing activities[217]. Argentina and Uruguay may decide to entrust other functions to CARU through an exchange of notes or any other form of agreement[218].

3.61. CARU plays a vital role in maintaining the integrity of the Statute and the proper administration of the machinery for co-operation. That role was highlighted by the International Court of Justice in its Order of 13 July 2006 in response to the request for the indication of provisional measures. The Court in fact held that CARU is entrusted with "the proper implementation of the rules contained in the 1975 Statute governing the management of the shared river resource" and that the parties must "provide CARU with the necessary resources and information essential to its operations". The Court also considered that in order to implement in good faith the consultation and co-operation procedures provided for by the 1975 Statute, CARU constitutes the envisaged forum in this regard[219].

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B. A rigorous legal régime for *co-operation* designed to prevent threats to navigation, the régime of the river and the quality of the waters

3.62. The 1975 Statute is in many respects innovative in terms of the management and protection of an international watercourse. Although concluded 22 years before the United Nations General Assembly adopted the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses, the Statute provides for the establishment of a system of co-operation which is far more rigorous than that laid down by the Convention.

3.63. Co-operation between the riparian States is based, in particular, on referral to CARU, the exchange of information and the obligations to notify and consult with a view to reaching prior agreement. Those obligations relate to any proposed works or use which could have an impact on the river and the areas affected by it.

1. Referral to CARU and the exchange of information

3.64. J. Barberis stressed the importance of having advance knowledge of a proposal when he made the point that:

> "for a State to be able to ascertain whether any form of work or use could cause it significant damage or in fact involves equitable and rational utilization of the waters, it must have advance knowledge of the proposed use or work in question. The States generally use, for that purpose, a procedure which involves notifying the other State of the proposed work and how it will operate and providing any other information the latter State needs to determine the impact of the proposed work on its territory."[220]

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[216] Art. 56 *(k)* of the 1975 Statute.

[217] *Ibid.*, Art. 39.

[218] *Ibid.*, Art. 56 (1).

[219] *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay)*, *Order of 13 July 2006*, pp. 133-134, paras. 81-82.

[220] J. Barberis, *Droits et obligations des pays riverains des fleuves internationaux*, Académie de droit international, Centre d'étude et de recherche de droit international et de relations internationales, The Hague, Martinus Nijhoff, The Hague, 1991, p. 49.

90 3.65. Under the 1975 Statute, the obligation to provide information initially takes the form of compulsory referral to CARU. The substance of that obligation must be determined in the light of its objective, which is to prevent threats to navigation, the régime of the river and the quality of the waters. Consequently, the first subparagraph of Article 7 of the 1975 Statute provides that:

> "If one Party plans to construct new channels, substantially modify or alter existing ones or carry out any other works which are liable to affect navigation, the régime of the river or the quality of its waters, it shall notify the Commission, which shall determine on a preliminary basis and within a maximum period of 30 days whether the plan might cause significant damage to the other Party."

3.66. That provision lays down the obligation to refer to and inform CARU *prior* to any measure regarding the authorization or implementation of a project on the River Uruguay. Therefore, both referral to CARU and the exchange of information within CARU are obligations incumbent on both States under the 1975 Statute. Both of those obligations must be construed in the light of their objective, which is to prevent threats to navigation, the régime of the river and the quality of its waters. In 1981, when speaking at CARU about the Garabi project, Mr. Lapeyre, the President of Uruguay's delegation to CARU, stated that:

> "Article 7 of the 1975 Statute of the River Uruguay is clear when it stipulates that '[the State] shall notify the Commission . . .'. The Statute lays down a procedure under which each country must notify the Administrative Commission and not each other's delegation. That may be considered to be a courtesy, a fraternal gesture of goodwill. However, the procedure is clearly defined. It is for the Administrative Commission of the River Uruguay to review works which either of the parties wishes to carry out."[221]

3.67. Once the party that wishes to carry out or authorize work that is significant enough to **91** affect navigation, the régime of the river or the quality of its waters has referred the matter to CARU, the latter has 30 days in which to give its opinion. If CARU decides that the project will not result in significant damage, the party concerned may carry out or authorize the work.

3.68. CARU may decide that the project is likely to cause significant damage. Alternatively, it may decide not to deliver an opinion. In both cases, the 1975 Statute provides that the party concerned is to notify and inform the other party of the project through the intermediary of CARU[222].

3.69. When CARU took the view that the Garabi project could cause significant damage, Mr. Lapeyre, the President of Uruguay's delegation to the Commission, stressed that:

> "CARU's decision of 18 December 1981, in accordance with the provisions of Article 7 of the Statute of the River Uruguay, concerning the Garabi dam . . . must, in our view, lead to the immediate suspension of the proposed work. In other words, the work must not be undertaken, given that a bi-national body, which has jurisdiction and includes the vote of the delegation of one of the countries that has proposed the works, has adopted a resolution with which the latter must, of necessity, comply."[223]

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[221] CARU, Minutes 8/81 of 13 Nov. 1981, p. 450, Anns., Vol. III, Ann. 7. See para. 3.104 below.

[222] Art. 2 (2) of the 1975 Statute.

[223] CARU, Minutes 6/83 of 29 July 1983, pp. 397-398, Anns., Vol. III, Ann. 8.

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Fig. 1. Procedure under Chapter II of the Statute of the River Uruguay

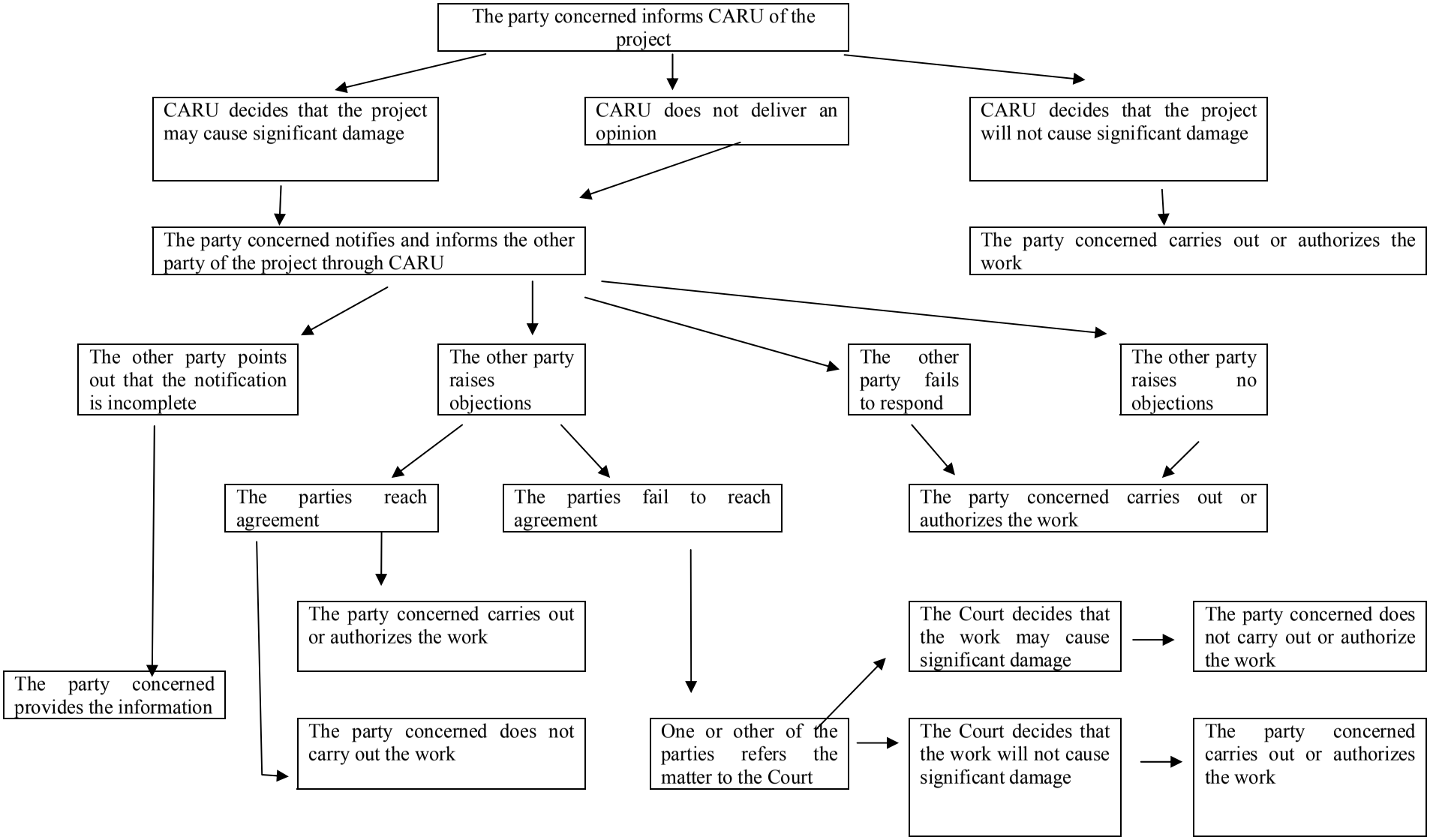

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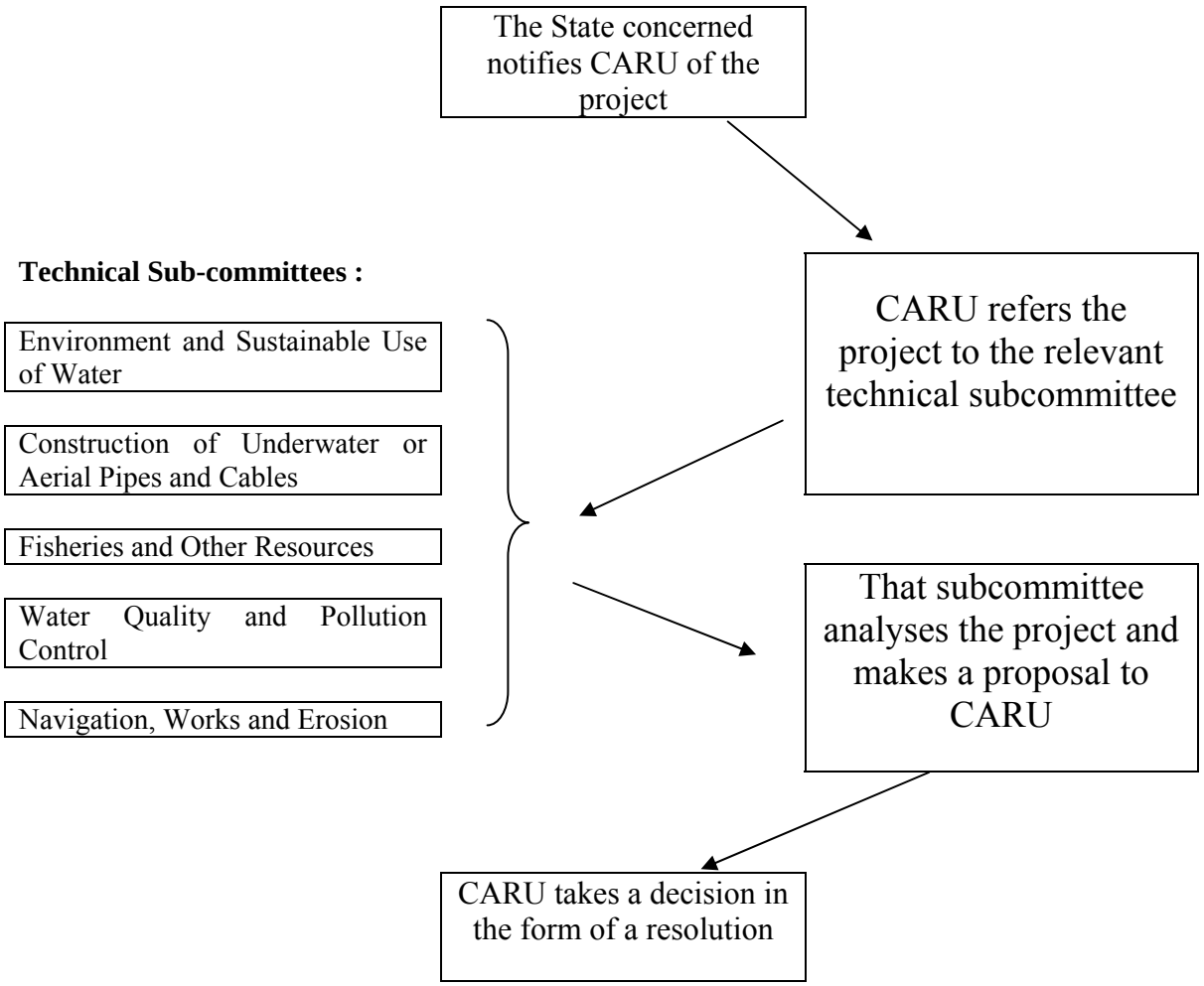
Fig. 2 – The practice CARU follows



3.70. Subsequent practice confirms that interpretation of Article 7[224]. CARU's resolution 12/01 of 2001 concerning Port M'Bopicuá provides a good illustration since it refers explicitly to Article 7[225]. Another example is the cargo terminal at Nueva Palmira[226]. Compliance with the obligation to notify under Article 7 of the Statute means that no project on or use of the river may be authorized or carried out unless CARU has been seised and notified of the proposal.

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2. The obligation to notify

3.71. The purpose of notifying proposed measures is to protect the riparian States of an international watercourse from unilateral initiatives by the other States which could cause them injury. It is the State which is contemplating measures on an international watercourse that takes the initiative to notify. Notification must be given by the State, even if the activities in question are to be carried out by private entities. The commentary on the draft Articles on the Law of the

[224]See paras. 3.100-3.122 below.

[225]Resolution 12/01 of 12 April 2001. CARU, Minutes 4/01, p. 521 *(a)*, Anns., Vol. III, Ann. 2. See paras. 3.119-3.120 below.

[226]CARU, Minutes 2/06 of 17 Feb. 2006, para. 5.2, Anns., Vol. III, Ann. 6. See paras. 3.121-3.122 below.

Non-navigational Uses of International Watercourses, which resulted in the adoption of the 1997 United Nations Convention, makes it clear that a State planning a project on an international watercourse must:

> "notify other States that are likely to be affected by the activity that is planned. The activities here include both those that are planned by the State itself and by private entities. The requirement of notification is an indispensable part of any system designed to prevent or minimize transboundary harm."[227]

3.72. The 1975 Statute provides that if CARU decides that the project may cause significant damage or if CARU does not reach a decision in that regard, "the Party concerned shall notify the other Party of the plan through the said Commission"[228]. The content of that notification comprises:

> "the main aspects of the work and, where appropriate, how it is to be carried out and shall include any other technical data that will enable the notified Party to assess the probable impact of such works on navigation, the régime of the river or the quality of its waters"[229].

95 3.73. If it is to be fully effective, the notification must contain the information and data that will enable the notified State to evaluate the proposed project as accurately as possible, and, in particular, the known but also the potential negative risks the project may involve for the notified State. That is why the information which is communicated must be as comprehensive as possible. An environmental impact assessment (EIA) is an essential instrument in that context, providing an analysis of all the possible environmental and social effects a project may have[230].

3.74. Carrying out an environmental impact assessment may not, of itself, fulfil all of the conditions linked to the notification requirement. Notification must include: "the main aspects of the work and, where appropriate, how it is to be carried out and shall include any other technical data"[231].

3.75. Under Article 8 of the 1975 Statute:

> "The notified Party shall have a period of 180 days in which to respond in connection with the plan, starting from the date on which its delegation to the Commission receives the notification."

During that period, the 1975 Statute lays down two major requirements: these consist in the obligation to co-operate and to provide the notified State, at the latter's request, with all the data and information that is available and necessary to obtain an accurate assessment of the effects of the proposed measures. In that connection, the 1975 Statute provides that:

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[227] Commentary on the draft Articles on the Law of the Non-navigational Uses of International Watercourses, *op. cit.*, p. 283.

[228] Art. 7 of the 1975 Statute.

[229] *Ibid.*

[230] See paras. 3.198-3.209 below.

[231] Art. 7 of the 1975 Statute.

> "Should the documentation referred to in article 7 be incomplete, the notified Party shall have 30 days in which to so inform, through the Commission, the Party which plans to carry out the work."[232]

The Statute makes clear that:

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> "The period of 180 days mentioned above shall begin on the date on which the delegation of the notified Party receives the full documentation.
>
> This period may be extended at the discretion of the Commission if the complexity of the plan so requires"[233].

Article 8 requires the Parties to provide comprehensive information. The notified Party will be able to state its position, with full knowledge of the facts, only provided it receives all of the information and data needed to evaluate the impact of the planned measures.

3.76. Where a State has notified the other Party of its plans, there are three possible scenarios: (1) the notified State does not raise objections; (2) the notified State does not respond within the time-limit laid down; (3) the notified State concludes that the implementation of the works may result in damage.

3.77. The first two possible scenarios are governed by Article 9 of the 1975 Statute, which provides that: "If the notified Party raises no objections or does not respond within the period established in article 8, *the other Party may carry out or authorize the work planned*." Article 10 supplements Article 9 by providing that: "The notified Party shall have the right to inspect the works being carried out in order to determine whether they conform to the plan submitted."

3.78. The third possibility for which the 1975 Statute provides is that the notified State may object to the planned measures. Under Article 11 of the Statute:

> "Should the notified Party come to the conclusion that the execution of the work
97 or the programme of operations might significantly impair navigation, the régime of the river or the quality of its waters, it shall so notify the other Party, through the Commission, within the period of 180 days established in article 8."

And Article 11 further provides that:

> "Such notification shall specify which aspects of the work or the programme of operations might significantly impair navigation, the régime of the river or the quality of its waters, the technical reasons on which this conclusion is based and the changes suggested to the plan or programme of operations."

3.79. Therefore, the 1975 Statute provides that if it objects to a project or a particular form of utilization of the River Uruguay, the notified State is to inform the other party through the intermediary of the Commission within a period of 180 days, as of the date on which the notified party has received comprehensive information. The notified State must state the reasons for its

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[232] *Ibid.*, Art. 8, second subpara.

[233] *Ibid.*, Art. 8, second and third subparas.

objection to the plans of the other riparian State by setting out "the aspects of the work or programme of operations" which may significantly impair navigation, the régime of the river or the quality of its waters, and the "technical reasons" on which this conclusion is based, as well as its suggested "changes" to the plan. It follows that if a State raises objections to the implementation of proposed work, the party concerned may not authorize or carry out that work on a unilateral basis. The Statute lays down a requirement to consult with a view to reaching agreement between the parties. If the two parties reach agreement, they may decide either to carry out or authorize the work or that the party concerned is to refrain from carrying out the work.

3. The requirement to consult with a view to reaching prior agreement with full knowledge of the facts

3.80. If the notified State raises an objection, Article 12 of the Statute provides that "[s]hould the Parties fail to reach *agreement* within the 180 days following the notification referred to in article 11 . . ." (emphasis added), the procedure for the settlement of disputes, in particular, submission of the dispute to the International Court of Justice is to be followed[234].

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3.81. The 1975 Statute lays down requirements that are far more stringent than those provided for in international law[235]. If an objection is raised, then, in addition to referral to CARU and the exchange of information and notification, there is a requirement to consult in order to reach prior agreement with full knowledge of the facts. In meeting that obligation, the requirements of the notified State must be taken into account in order to reach a solution on which both riparian States can agree. The 1971 Argentine-Uruguayan Declaration on Water Resources had already provided for a régime of that nature:

> "In the event that the technical experts should disagree, they shall prepare a report expressing their views for consideration by the Governments. The Governments shall endeavour to find a solution through the diplomatic channel or by any other means they may agree upon, striving always to reach an amicable and just solution."[236]

The Joint Argentine-Uruguayan Declaration of 8 September 1976 — that is to say just a year after the 1975 Statute was adopted — confirms the significance of the mechanism for prior information and consultation under the Statute. In fact, in that Declaration, the two parties

> "note with deep satisfaction that the Statute, which has now entered into force in implementation of the provisions of the 1961 Treaty concerning the Boundary Constituted by the River Uruguay, is imbued with the same fraternal spirit that resulted in the signing of the Treaty concerning the Río de la Plata and the corresponding Maritime Boundary, as Article 1 thereof reiterates the aim of establishing the joint machinery necessary for the optimum and rational utilization of the River Uruguay, and, in addition, at the same time *includes, in the bilateral legal régime it establishes, the principle of prior agreement in relation to any work or*

[234] Art. 60 of the 1975 Statute.

[235] Reflected, *inter alia*, in the decision handed down in the case of the *Use of the Waters of Lac Lanoux* and, subsequently, in the principles codified in Articles 11 to 19 of the 1997 United Nations Convention on the Law of the Non-navigational Uses of International Watercourses.

[236] Paragraph 5 of the 1971 Argentine-Uruguayan Declaration on Water Resources, Anns., Vol. II, Ann. 11.

99 *activity that either of the Parties proposes to carry out in the shared section*, or that the Argentine Republic carries out in the upper section"[237].

3.82. The 1975 Statute gives rise to obligations which are far more rigorous than Uruguay sought to claim before the Court when it merely referred to the obligation to give "reasonable place" to the interests of a riparian State[238]. The form of words Uruguay used is based on the judgment handed down in the case of the *Use of the Waters of Lac Lanoux (France* v. *Spain*)[239].

3.83. In the *Lac Lanoux* case, Spain and France were not linked by a treaty similar in content to the 1975 Statute. The tribunal noted at that time that the existence of a rule requiring prior agreement as between France and Spain "can result only from a treaty"[240], and, in that case, no such instrument existed. In contrast to the legal instruments linking France and Spain, the 1975 Statute lays down specific requirements regarding planned work on and uses of the River Uruguay[241].

3.84. It must, therefore, be established that Uruguay is misconstruing the law applicable in its dispute with Argentina, and it must be stressed that the 1975 Statute provides the decision-taking mechanism for any form of work or utilization that may significantly impair navigation, the régime of the river or the quality of its waters. If an objection is raised, that mechanism precludes any possibility of a unilateral decision.

3.85. The requirement to consult in order to reach prior agreement must be construed in the
100 light of the practice that has evolved in Latin America. That will make it possible to accentuate the special nature of the machinery for consultation contained in the 1975 Statute which operates alongside the efforts of the riparian States to seek a "prior agreement with full knowledge of the facts."

3.86. An early example of this practice is provided by the Convention regarding the Determination of the Legal Status of the Frontier between Brazil and Uruguay of 20 December 1933. Article XX of that Convention stipulates that if the installation of plant for the utilization of the waters may cause an appreciable and permanent alteration of a watercourse running along or intersecting the frontier, the contracting State desirous of such utilization is not to carry out the work necessary for it until it has come to an agreement with the other State[242].

3.87. In their book *El Estatuto del Río Uruguay*, Lapeyre and Flangini comment on that provision as follows:

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[237] Anns., Vol. II, Ann. 34 (emphasis added).

[238] CR 2006/47, para. 27 (Boyle). In its pleadings, Argentina maintained that its "rights under the 1975 Statute are more specific and they are more far-reaching than those in issue in *Lac Lanoux* or, indeed, in general international law" (CR 2006/48, para. 12 (Sands)).

[239] *Use of the Waters of Lac Lanoux (France* v. *Spain*), Award of 16 November 1957, English translation accessible at: www.lfip.org/laws666/lakelanoux.htm.

[240] *Use of the Waters of Lac Lanoux (France* v. *Spain*), *op. cit.*, para. 14.

[241] Arts. 7-13 of the 1975 Statute. According to Professor Condorelli: "[i]t is true that the authorizations of commencement of construction of the plants were given by the Uruguayan authorities without the prior consent of Argentina, that is undeniable" (CR 2006/47, para. 21 (Condorelli)).

[242] Convention regarding the Determination of the Legal Status of the Frontier between Brazil and Uruguay, League of Nations, *Treaty Series,* Vol. CLXXXI, p. 80.

"That rule, which applies to the River Uruguay because it constitutes a frontier between the two States, provides an almost fully effective guarantee.

It actually involves more than just prior consultation, since the consent of the other State is required, and until that consent is obtained, work on the project is suspended.

That is to say that the mere fact that a particular time-limit following consultation expires is not sufficient to permit the State which undertakes the consultation to start work on the project; the agreement and, therefore, the consent of the other contracting party is a prerequisite."[243]

3.88. The Declaration of Montevideo adopted by the Seventh International Conference of American States at its 5th plenary session on 24 December 1933 also sets out the requirement to consult in order to reach prior agreement. It provides that:

101 "no State may, without the consent of the other riparian State, introduce into watercourses of an international character, for the industrial or agricultural exploitation of their waters, any alteration which may prove injurious to the margin of the other interested State"[244].

3.89. The resolution of Asunción on the utilization of international watercourses, adopted by the Ministers for Foreign Affairs of the riparian States of the Río de la Plata at their fourth meeting, which took place from 1 to 3 June 1971, again confirms the need for prior consent and, indeed, in relation to contiguous waters. It states that: "In regard to contiguous international waters, which fall simultaneously under the jurisdiction of two States, a prior bilateral agreement must be concluded between the riparian States before those waters are utilized."[245]

3.90. At its 10th conference, held in Buenos Aires in 1957, the Inter-American Bar Association unanimously adopted a resolution on the utilization of international rivers. After recalling the general principle according to which the States have the right to make use of the waters of a system of international waters "provided such use does not affect adversely the equal right of the States having under their jurisdiction other parts of the system" (para. (1) (1)), the resolution sets out the rule requiring the prior agreement of the other States concerned before there can be any new form of utilization likely to jeopardize the waters of the basin:

"States having under their jurisdiction a part of a system of international waters are under a duty to refrain from making changes in the existing régime that affect adversely the advantageous use by one or more States having a part of the system
102 under their jurisdiction, except in accordance with (i) an agreement with the State or States affected, or (ii) a decision of an international court or arbitral commission."[246]

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[243]E. G. Lapeyre and Y. Flangini, *op. cit.*, p. 79, Anns., Vol. VII, Ann. 1.

[244]See para. 2 of the Declaration of Montevideo concerning the industrial and agricultural uses of rivers, *ILC Yearbook* 1974, Vol. II (Second Part) A/CN.4/SER.A/1974/Add.1 (Second Part), p. 212.

[245]See paras. 1 and 2 of resolution 25 "Declaration of Asunción on the use of international watercourses". In relation to successive international watercourses, paragraph 2 of the Declaration provides that "each State may use the waters in accordance with its needs, provided it does not cause significant damage to any other State of the river basin".

[246]Resolution of the Inter-American Bar Association, *ILC Yearbook 1974*, op. cit., p. 208, para. 3.

3.91. The rule concerning the prior approval of projects on an international watercourse has therefore been overwhelmingly endorsed in Latin America, and the Statute of the River Uruguay continues that tradition.

3.92. Compared with global practice, this is a special feature which must be stressed[247]. The 1997 United Nations Convention on the Law of the Non-navigational Uses of International Watercourses sets out the generally accepted international practice requiring respect for the principles of notification and consultation in relation to proposed activities along an international watercourse, but without going as far as the strict rule on agreement for which the Statute of the River Uruguay provides.

3.93. According to the 1975 Statute, if the parties are unable to reach agreement and the consultations do not make it possible to reach agreement on the planned measures, those measures must be subject to negotiations. The negotiations must, in particular, be conducted in accordance with the principle of good faith[248]. As a last resort, the International Court of Justice may be seised of the matter.

4. Reference to the International Court of Justice in the event of disagreement

3.94. The intervention of the International Court of Justice is an integral part of the
103 co-operation arrangements set in place by the 1975 Statute. By referring the matter to the International Court of Justice, the parties can be assured that any dispute concerning proposed work or a type of use that could pose a threat to the river and its ecosystem may form the subject of a judicial decision to prevent the Statute's integrity being undermined.

3.95. According to the note accompanying the approval of the Statute of the River Uruguay by Uruguay's Council of State:

> "Articles 7 to 13 lay down the procedure to be followed should one of the Contracting Parties be planning to carry out work substantial enough to affect navigation, the régime of the river or the quality of its waters. There must be provision for the intervention of a Commission and a system of notification, control and consultation of the other Party, with sufficient guarantees to ensure that, in the absence of agreement between the Parties, the dispute settlement procedure under Article 12 will come into play, including the possibility of referring the matter to the International Court of Justice (Article 60)"[249].

3.96. Reference to the International Court of Justice helps to achieve the objective of preventing threats to the environment of the River Uruguay. Argentina and Uruguay have accorded the International Court of Justice a key role in their bilateral relations in relation to the use of a natural resource. That role is confirmed by the fact that reference to the International

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[247]For examples of other specific and stringent régimes, see: Art. 5A of the 1995 Mekong Agreement; see also Art. 6 on "Procedures for Notification, Prior Consultation and Agreement." See Art. 4 of the Statute of the Senegal River and Art. 10 of the Senegal River Water Charter.

[248]For instance, Art. 17 (2) of the United Nations Convention on the Law of the Non-navigational Uses of International Watercourses provides that: "[t]he consultations and negotiations shall be conducted on the basis that each State must in good faith pay reasonable regard to the rights and legitimate interests of the other State".

[249]*Diario de sesiónes del Consejo de Estado, op. cit.*, Anns., Vol. II, Ann. 3.

Court of Justice is also provided for where proposed work or a type of use[250] is carried out "outside the section defined as a river and in the areas affected by the two sections"[251]. The key role which the International Court of Justice plays in the context of the 1975 Statute was highlighted by the President of the International Court of Justice as follows:

> "The Statute of the River Uruguay, whose provisions are at the centre of the dispute, should further be of particular interest to the International law Commission. That Treaty, concluded, I remind you, in 1975, was considerably in advance of its time in terms of watercourse law and environmental law. It actually was even ahead of the Convention on the Law of the Non-navigational Uses of International Watercourse adopted in 1997 following the pioneering work of the International Law Commission. In addition to the usual notification and consultation mechanisms provided for in the 1997 Treaty and in most international watercourse treaties, the 1975 Statute addresses
104 indeed the issue of what happens when such mechanism fails, by giving jurisdiction to the International Court of Justice. It establishes furthermore a monitoring body and has very detailed requirements as to information exchanges."[252]

5. Making forms of utilization that fall under the national jurisdiction of a State subject to the co-operation régime

3.97. One of the important aspects of the co-operation régime under the 1975 Statute is that it makes any form of national utilization that is "liable to affect the régime of the river or the quality of its waters" subject to the obligations to refer the matter to CARU, exchange information, notify and consult with a view to reaching prior agreement.

3.98. Article 27 of the 1975 Statute is worded as follows:

> "The right of each Party to use the waters of the river, within its jurisdiction, for domestic, sanitary, industrial and agricultural purposes shall be exercised without prejudice to the application of the procedure laid down in articles 7 to 12 when the use is liable to affect the régime of the river or the quality of its waters."

3.99. National uses of the River Uruguay are thus subject to the same principles as apply to the works *per se*. Neither of the two States may unilaterally decide whether a national use of the waters is liable to affect navigation, the régime of the river or the quality of its waters. Article 29 provides that even planned uses "outside the section defined as a river and in the areas affected by the two sections" (Article 13 of the 1975 Statute) and, therefore, on the upstream section of the
105 River Uruguay at the frontier with Brazil, are subject to the obligations to exchange information, notify and consult with a view to reaching prior agreement. According to Article 29: "The provisions of article 13 shall apply to all developments which are likely to affect the régime of the river or the quality of its waters."

3.100. The requirements pertaining to national use of the waters are a clear illustration of the rigorous nature of the co-operation régime set in place by the 1975 Statute to prevent damage to the régime of the river or the quality of its waters.

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[250] Art. 29 of the 1975 Statute.

[251] *Ibid.*, Art. 13.

[252] Speech given by H. E. Judge Rosalyn Higgins, President of the International Court of Justice, on the occasion of the 58th session of the ILC on 25 July 2006.

6. Practice followed in accordance with Chapter II of the 1975 Statute

3.101. The régime of the Statute of the River Uruguay has been put to the test. It has not remained a "dead letter", as Uruguay may have suggested in its request for the indication of provisional measures[253]. A variety of cases that have emerged in practice will be described below, shedding light on the interpretation of this régime that requires the exchange of information, notification and consultation in order to reach the prior agreement which the 1975 Statute prescribes.

(a) *The case of the Garabi dam*

3.102. Following the signature on 17 May 1980 of the Treaty between Argentina and Brazil for the development of the shared water resources contained in the border reaches of the River Uruguay and its tributary, the Pepiri Guazú River (hereinafter "the 1980 Treaty"), the two countries embarked on studies for the implementation of the Garabi dam project, on the upper River Uruguay[254].

106 3.103. The proposal was discussed within CARU. The Uruguayan delegation first stated that it had received incomplete documentation on the proposal and had not been consulted in a manner compatible with the requirements laid down in Articles 7 to 13 of the 1975 Statute. At the meeting of CARU on 13 November 1981, Mr. Lapeyre, the then President of Uruguay's delegation, drew attention to the obligation to notify CARU, and not the Uruguayan Government, of any works being planned on the River Uruguay[255]. At the November 1981 meeting, Argentina brought to the attention of CARU the *Estudio de factibilidad del proyecto Garabi*. The Commission thus had a maximum of 30 days in which to decide whether the proposal was likely to cause significant damage to Uruguay.

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[253] See CR 2006/49, p. 27 (Reichler).

[254] *Tratado para el aprovechiamento de los recursos hidricos compartidos de los tramos limitrofes del Río Uruguay y de su afluente el Río Pepiri-Guazú*, cited in CARU, Minutes 8/81 of 13 Nov. 1981, para. 2.4, pp. 432-436.

[255] The following is an extract from the Mr. Lapeyre's speech to CARU. Part of that speech was cited at para. 3.66 above. Mr. Lapeyre said:

> "Art. 7 of the Statute is clear when it provides 'shall inform the Commission . . .' The fact that Commodore CURA, Under-Secretary for International Relations at the Ministry of Foreign Affairs, travelled to Montevideo and had a conversation with Uruguay's Under-Secretary for Foreign Affairs, informing him that the Treaty [Treaty for the development of the shared water resources contained in the border reaches of the River Uruguay and its tributary, the Pepiri Guazú River] was to be signed, is of no significance in relation to the effects of the Statute of the River Uruguay. The Statute lays down a procedure under which each country must notify the Administrative Commission and not each other's delegation. That may be considered to be a courtesy, a fraternal gesture of goodwill. However, the procedure is clearly defined. It is for the Administrative Commission of the River Uruguay to review works which either of the parties wishes to carry out."

3.104. On 18 December 1981, CARU decided that the planned works for the construction of the Garabi dam on the northern section of the River Uruguay could significantly affect navigation, the régime of the river and the quality of its waters[256]. Lapeyre expressed his deep satisfaction with
107 the decision which the Commission had taken. He described the decision as "the most transcendent act in the institutional life of the Administrative Commission since its creation — the result of the Commission's interest, concern and sense of responsibility to ensure that work to be carried out on the River Uruguay does not run counter to the interests of the two countries". He congratulated the President on his chairmanship of the meeting and rejoiced in the fact of belonging to the basin of the Río de la Plata, given the sense of understanding which Uruguay's Argentine brothers on the delegation of that great and dear country had displayed[257].

3.105. In 1983, the Uruguayan delegation expressed its concerns to CARU, suggesting that, despite its decision, the Garabi dam might still be built[258]. More specifically, on 29 July 1983, the Uruguayan delegation stressed that in the light of CARU's decision of 18 December 1981 "the work must not be undertaken, given that a bi-national body, which has jurisdiction and includes the vote of the delegation of one of the countries that has proposed the works, has adopted a resolution with which the latter must, of necessity, comply"[259].

108 3.106. Furthermore, the Uruguayan delegation pointed out that, were a dispute to arise between the two States, they should apply a principle of international law whereby the States concerned were required to enter into negotiations. The Uruguayan delegation stressed that the obligation to negotiate is "an obligation established under customary international law to prevent

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[256]CARU concludes that:

> "I. The proposals for the Upper Uruguay, including the Garabi project, constitute in themselves an integrated and interlinked system, a concept that does not apply to the section defined in the Treaty of 7 April 1961, between Argentina and Uruguay, on the boundary constituted by the River Uruguay. That apparent difference between the two sections may imply technical aspects that have not been assessed with the requisite degree of certainty, and, in the final analysis, that could result in significant damage.
>
> II. The requisite priority has not been accorded to navigation. It is possible to see a tendency to refer to this vital element as if it were a secondary issue. And yet, river navigation is a fundamental principle which is safeguarded by all of the treaties for multiple uses in relation to successive international rivers. Two sectors have, for example, been identified, one downstream of the Garabi, of some 50 kilometres, and another of the same order of magnitude, downstream of San Pedro, where navigation is impeded by shallows, a problem that can only be resolved by means of major and expensive demolition and canalization works, which, in turn, could result in changes to the régime of the river. Minimum operational levels and not normal operational levels are significant in terms of navigational effects, and the levels required to meet the premise of longitudinal navigation must be established beyond dams at the minimum water level. In that connection, it is relevant to cite a comment taken from the reference study: 'the San Pedro option would require a navigation channel downstream of questionable effectiveness, since it affects the water levels and draughts upstream, as well as energy production'.
>
> III. The study submitted has analysed many possible locations for the work to be implemented. That situation leads us to assume that the possibility of significant damage must not be ignored.
>
> IV. At the same time, there is deep concern that the project under consideration fails to include provisions on maintaining water quality. In view of the foregoing, the Commission concludes, in brief, that the implementation of the proposed work planned for the Upper Uruguay could result in significant damage to navigation, the régime of the river and the quality of the waters."

[257]*Ibid.*, para. 7, pp. 520-521, Anns., Vol. III., Ann. 9.

[258]Those concerns were based on the statements of Argentina's Minister for Foreign Affairs, Aguirre Lanari, who maintained, at a meeting of the Ministers for Foreign Affairs of the La Plata region, that the Argentine-Brazilian proposals for the upper Uruguay were continuing to move forward, as agreed, and that the work on the Garabi project was suspended until Dec. 1983.

[259]This passage is taken from the above-mentioned speech by E. G. Lapeyre, para. 3.68. CARU, Minutes 6/83 of 29 July 1983, para. 3.2, pp. 397-398, Anns., Vol. III, Ann. 8.

the unilateral implementation" of a project "before the States have exhausted all possible channels for negotiation and the settlement of disputes"[260].

3.107. In 1984, in response to Uruguay's request for information on the Garabi project, Argentina stated that it had supplied Uruguay with the necessary information, being cognizant of the principle of information and prior consultation. It pointed out that a decision had yet to be taken on the project[261]. At the fourth session in 1989, the Uruguayan delegation formally requested notification of the Garabi project to set in motion the procedure laid down in Articles 8 *et seq.* of the 1975 Statute and listed the documents Uruguay wished to consult[262]. On 23 March 1990, the Uruguayan delegation asked for an extension of the original 90-day time limit to study the documents on the Garabi project[263]. That extension was granted at the extraordinary meeting of CARU which took place on 6 April 1990[264].

3.108. In March 2006, the Uruguayan Ministry of Foreign Affairs sent a diplomatic Note to the Argentine Embassy in Montevideo asking Argentina and Brazil to provide the official documentation on the Garabi project pursuant to Article 13 of the 1975 Statute. In its Note, Uruguay relied on a legal argument similar to that advanced by Argentina in the pulp mills case[265].

109 **(b)** ***The Santo Tomé-Sao Borja bridge***

3.109. On 22 August 1989, the Argentine and Brazilian Governments set up a joint commission to consider issues relating to the construction and operation of an international railway bridge on the River Uruguay between the towns of Santo Tomé and Sao Borja. The commission produced a document *(pliego de licitación)* setting out the parameters for the project's implementation. On 26 November 1993, the Argentine delegation communicated the information, within CARU, that it would shortly be producing the documentation concerning the proposed bridge[266]. The documentation was in fact provided on 15 December 1993[267].

3.110. On 23 December 1993, the Uruguayan delegation furnished CARU with Memorandum No. 6 in which it stated that no new bridge on the River Uruguay "should pose obstacles to navigation on a greater scale than the Uruguayan bridge, the *Pasos de los Libres*"[268]. On 28 December 1993, at the meeting of CARU's Sub-committee on Navigation and Works, Ambassador Carasales, the President of the Argentine delegation, stated that he did not share Uruguay's view. According to Mr. Carasales, the planned bridge would affect neither the régime nor the quality of the waters of the River Uruguay. As regards navigation, Argentina maintained that there was very little navigation on that section of the river and that the bridge would not constitute an obstacle to it.

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[260]CARU, Minutes 6/83 of 29 July 1983, para. 3.2, p. 398, Anns., Vol. III, Ann. 8.

[261]CARU, Minutes 10/84 of 7 Dec. 1984, para. 4.1, pp. 853-858, Anns., Vol. III, Ann. 42.

[262]CARU, Minutes 4/89, pp. 542-545. See also CARU, Minutes 1/89, pp. 19-20, and 2/89 which summarize the discussions between the two delegations concerning notification of the Garabi project.

[263]CARU, Minutes 2/90, pp. 178-179.

[264]CARU, Minutes 3/90, extraordinary meeting of 6 April 1990.

[265]Anns., Vol. II, Ann. 35.

[266]CARU, Minutes 10/93, Communication 158 of the Sub-committee on Navigation and Works, p. 1262.

[267]CARU, Minutes 11/93, pp. 1433-1444.

[268]Memorandum No. 6 of 23 Dec. 1993.

3.111. Nonetheless, on 19 May 1995, Argentina informed CARU that it had modified its initial proposal in order to take account of the requirements set out by the Uruguayan delegation in 1993[269].

(c) ***The Casa Blanca canal***

110 3.112. On 22 July 1994, Uruguay submitted to Argentina, within the framework of CARU, the proposal for the Casa Blanca canal. The Argentine delegation stated that it was not in a position to say whether or not the project would cause damage within the meaning of Article 7 of the 1975 Statute[270]. At the meeting, the two delegations set a deadline of 30 days, as provided for by Article 7 of the 1975 Statute, without prejudice to the mandate given to CARU to carry out studies on the project[271]. On 7 April 1995, the experts concluded that "the calculations made confirm the assumption that dredging operations for the Casa Blanca will not affect the beaches at Banco Pelay"[272].

3.113. The Uruguayan delegation was of the view that, pursuant to Article 8 of the Statute, Argentina had a period of 180 days in which to respond to the proposal, starting from the date on which its delegation to the Commission received the notification. Uruguay considered that, in the absence of a response from Argentina and given the results of the experts' calculations, it was authorized to start work on dredging the Casa Blanca canal[273]. Uruguay took the view that the period of 180 days, laid down in Article 8 of the 1975 Statute, had expired in April 1995 at the time when the experts submitted their report, and stated that if the two States were unable to reach an agreement, the procedure for settling disputes under the 1975 Statute could be invoked[274].

3.114. In 1997, CARU again took up the question of dredging the canal. CARU's minutes of 7 February 1997 record that the Argentine delegation stated that the study on the Casa Blanca canal, which had been carried out by the province of Entre Ríos, had established that dredging the canal would not have a negative impact on Argentina's coastline[275]. Argentina nevertheless made the point that it reserved the right to inspect the works being carried out in accordance with the 1975 Statute, and that should Uruguay modify the planned dredging, further consultation would be required.

111 **(d)** ***The proposed Papelera Traspapel pulp mill***

3.115. Between 1995 and 1996, the bodies of CARU discussed the proposal to construct a pulp mill at Fray Bentos, to be called Papelera Traspapel. The company wishing to set up in that location was of Spanish origin.

3.116. In CARU's minutes 6/95 of 20 July 1995, CARU's Sub-committee on Water Quality and Pollution Control noted that it had received resolution 407/95, adopted by the Deliberative

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[269]CARU, Minutes 4/95 of 19 May 1995, pp. 555-556.

[270]CARU, Minutes 5/95 of 23 June 1995, pp. 691-692.

[271]*Ibid*.

[272]*Ibid., p.* 693.

[273]*Ibid.*

[274]*Ibid.,* p.710.

[275]CARU, Minutes 1/97 of 7 Feb. 1997, pp. 14-19.

Council of Concepción del Uruguay *(Honorable Concejo Deliberante de Concepción del Uruguay)*. In that resolution, the Council expressed its concern at the possibility of a pulp mill being established[276]. Consequently, the Sub-committee asked DINAMA to provide CARU with the project documentation as soon as possible[277].

3.117. CARU's minutes record the receipt of a memorandum drawn up by Mr. Amorín, an engineer and official of DINAMA. The memorandum contained information on the steps the company had taken in relation to DINAMA up until 15 August 1995[278]. The memorandum provides information on the manufacturing techniques the proposed factory would use, and concludes that it would have to be subject to very strict conditions in relation to environmental impact, in accordance with the applicable Uruguayan legislation and the rules laid down in CARU's Digest on the Uses of the River Uruguay[279].

112 3.118. In 1996, Mr. Marchessi, a member of the Argentine delegation, asked CARU's Technical Secretariat to gather together all of the relevant documentation concerning the proposed Traspapel pulp mill dating back as far as 1995[280]. At the plenary meeting of 23 August 1996, in his capacity as President of the Uruguayan delegation to CARU, Mr. Lapeyre suggested that the proposal to construct a pulp mill at Fray Bentos "could evolve into a matter of concern that it would be difficult to resolve within the Administrative Commission of the River Uruguay."

And he added that:

> "the Commission's main responsibility — or, at least, one of its main responsibilities — is to preserve the quality of the waters of the River Uruguay and, clearly, when we are speaking of an industrial plant which could affect the quality of the waters, it is necessary to take a very cautious approach to management of the issue and to comply with the requirements laid down in Articles 7 to 13 of the Statute of the River Uruguay."

Mr. Lapeyre also stressed on that occasion that the request for information was "in certain respects a formal procedure"[281]. In his view, the provision of the information requested constituted one of the prerequisites if the consultation required under the 1975 Statute was to be effective and actually take place. The company concerned finally decided not to construct the Traspapel pulp mill.

(e) ***Port M'Bopicuá***

3.119. In 2001 and 2002, CARU considered the proposal for Port M'Bopicuá, situated close to the Uruguayan town of Fray Bentos. Pursuant to Article 7 of the Statute of the River Uruguay, Uruguay had notified CARU of the project. On 12 April 2001, CARU's Sub-committee on
113 Navigation, Works and Erosion adopted a resolution on the proposal[282]. In it, the Sub-committee's

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[276]Report No. 148 of the CARU's Sub-committee on Water Quality and the Pollution Control, CARU, Minutes 6/95 of 21 July 1995, pp. 842-845 and pp. 893-894; CARU, Minutes 7/95, 18 Aug. 1995, p. 946.

[277]CARU, Minutes 6/95 of 21 July 1995, p. 845.

[278]CARU, Minutes 7/95 of 18 Aug. 1995, pp. 1007-1008 and pp. 1027-1028.

[279]*Ibid.*, pp. 1007-1008.

[280]CARU, Minutes 2/96 of 15 March 1996, pp. 202-203.

[281]CARU, Minutes 7/96, p. 1065, Anns., Vol. III, Ann. 4.

[282]Resolution 12/01 of 12 April 2001, CARU, Minutes 4/01, p. 521a, Anns., Vol. III, Ann. 2.

technical experts considered that there was no objection to implementing the project. The 2001 resolution specifically refers to Article 7 of the 1975 Statute.

3.120. CARU discussed the company Thenon S.A.'s proposal for Port M'Bopicuá at its meeting of 8 July 2002. The President of the Argentine delegation stressed the need to obtain all the information needed to enable CARU to undertake a proper review of the project, as well as the need to comply with all international commitments concerning water quality and pollution. The President of the Uruguayan delegation (at the time, the President of CARU) agreed with Argentina's request. Consequently, CARU decided to gather together all the necessary information to enable the relevant subcommittee to evaluate it and submit its report to the full Commission[283]. The steps CARU took in relation to the Port M'Bopicuá project illustrate what must be done before the Commission takes a decision.

(f) ***Cargo terminal at Nueva Palmira***

3.121. At the meeting of 17 February 2006, the President of CARU stated that the Uruguayan delegation had provided information concerning the proposed construction of a cargo terminal at Nueva Palmira. The Uruguayan delegation gave CARU that information in order to comply with the requirements under Articles 7 *et seq.* of the 1975 Statute[284].

3.122. When that project was being discussed, the Argentine delegation pointed out that it was not connected to the proposed construction of pulp mills which are the subject of a dispute between Argentina and Uruguay. Furthermore, the Argentine delegation pointed out that, on the basis of Article 7, CARU must determine, within 30 days, whether the plan proposed by one party might cause significant damage to the other party. With that in mind, the Argentine delegation asked that the Commission should be provided, as rapidly as possible, with all the relevant information concerning that project.

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C. A legal régime for overall *protection*

3.123. The legal régime applicable to the River Uruguay is a legal régime for overall protection which sets out specific obligations in relation to navigation, the protection of the régime of the river and the protection of the quality of the waters and the river's ecosystem[285]. A failure to observe any of those obligations is a failure to observe the principle of the rational and optimum utilization of the river.

1. Ensuring that the River Uruguay remains navigable

3.124. Pursuant to Article 3 of the 1975 Statute: "[t]he Parties shall afford each other the necessary assistance so as to provide the best possible facilities and safety for navigation". As

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[283]CARU, Minutes 15/02 of 8 July 2002, para. 3.2.

[284]CARU, Minutes 2/06 of 17 Feb. 2006, para. 5.2, Anns., Vol. III, Ann. 6.

[285]For an excessively restrictive view of the protection régime, see the statement by Mr. Condorelli, according to which: "the pulp mills we are discussing are not liable to affect navigation or the régime of the river: nor does Argentina so claim. The Statute is thus solely relevant with a view to the 'significant damage' that — according to the opposing Party — these mills risk causing it by impairing the 'quality' of the river waters." (CR 47/2006, para. 8 (Condorelli).)

Lapeyre and Flangini have said: "[t]his rule is programmatic in substance; it conveys a priority obligation that must be observed"[286].

115 3.125 Article 4 of the 1975 Statute establishes that the Parties are to agree jointly on "provisions governing the safety on the river and the use of the main channel." That obligation establishes the principle of common rules for navigation. That is one of the innovative elements in the 1975 Statute as compared with the 1973 Río de la Plata Treaty[287].

3.126. Dredging, buoying and conservation in the sections of the main channel are subject to specific rules highlighted by the régime of co-operation on the River Uruguay. Under Article 5:

> "[t]he Commission shall assign to the Parties, *following joint planning*, such tasks of dredging, buoying and conservation in the sections of the main channel as it may periodically determine on the basis of the use of the channel and the availability of technical facilities"[288].

Argentina and Uruguay have made provision for notification of the projects referred to in Article 5. In point of fact, under Article 6:

> "For the purposes indicated in article 5, each Party shall, within its jurisdiction, permit the competent services of the other Party to carry out the respective tasks, following notification through the Commission."

3.127. The different uses of an international watercourse, including navigation, are closely interlinked. In his first report to the International Law Commission, S. Schwebel, Special Rapporteur on the non-navigational uses of international watercourses (and, later, a judge) stated that:

> "The interrelationships between navigational and non-navigational uses of watercourses are so many that, on any watercourse where navigation is practised or is to be instituted, navigational requirements and effects and the requirements and effects of other water projects cannot be separated by the engineers and administrators entrusted with development of the watercourse . . ."[289]

116 3.128. The 1997 United Nations Convention mentions the relationship between navigation and the other uses of a watercourse, stating that, in some instances, "other uses affect navigation or are affected by navigation"[290].

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[286] E. G. Lapeyre and Y. Flangini, *op. cit.*, p. 73.

[287] According to the 1973 Río de la Plata Treaty, each riparian State "which builds or has built a channel shall likewise draw up the corresponding regulations". The Administrative Commission is responsible for sharing out responsibilities for regulation in the different sections of channels in the waters of common interest. Arts. 12 and 13 of the Treaty.

[288] Emphasis added.

[289] *ILC Yearbook*, 1979, Vol. II (First Part), p. 164.

[290] Art. 1 (2) of the 1997 United Nations Convention.

2. Protecting the régime of the River Uruguay

3.129. According to the Hydrographic Dictionary, the régime of a river refers to all of the elements whose seasonal variations characterize the situation at a given place"[291]. A river's natural régime is determined by the size of the river, the climate, the geology and the vegetation[292]. The Statute of the River Uruguay requires that the régime of its waters should not be affected by works or any other form of utilization.

3.130. Scientific writers have stressed the relationship between changes in the river régime and its impact on the ecosystem. For example: "flow régime is of central importance in sustaining the ecological integrity of flowing water systems . . . Modification of flow has cascading effects on the ecological integrity of rivers."[293]

3.131. A resolution of the Conference of the Parties to the Convention on Wetlands of International Importance especially as Waterfowl Habitat (hereinafter "the Ramsar Convention"), to which both Argentina and Uruguay are parties, stresses the links between protecting wetlands and the natural régime of the water. The resolution containing the "Guidelines for integrating
117 wetland conservation and wise use into river basin management" was adopted in 1999 and explains that:

> "Wetland ecosystems depend on the maintenance of the natural water régimes such as flows, quantity and quality, temperature and timing to maintain their biodiversity, functions and values. The natural flow régime can be considered *the* most important variable that regulates the ecological integrity of riverine wetland ecosystems. The construction of structures that prevent the flow of water, and of channels that carry water out of the floodplain faster than would occur naturally, result in the degradation of natural wetlands and eventual loss of the services they provide. In response to these concerns, a number of countries have introduced legislation and guidelines to ensure adequate allocation of water to maintain natural wetland ecosystems."[294]

The resolution adopted by the States party to the Ramsar Convention demonstrates that the ecosystems of wetlands — such as those bordering on rivers — may be affected by changes to the natural water régime. That illustrates how important it is to maintain the natural régime of a river like the River Uruguay.

3. Protecting the quality of the waters of the River Uruguay

3.132. The 1975 Statute attaches great importance to protecting the river and preventing pollution. Article 40 provides a broad definition of this. It means: "the direct or indirect introduction by man into the aquatic environment of substances or energy which have harmful

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[291] International Hydrographic Organization, *Hydrographic Dictionary*, Part I, 3rd ed., Monaco, 1974, p. 261.

[292] N. Le Roy Poff, J. David Allan, M. B. Bain, J. R. Carr, K. L. Presetegaard, B. D. Richter, R. E. Sparks, J. Cl. Stromberg, "The Natural Flow Regime: A Paradigm for river conservation and restoration", *BioScience*, Vol. 47, 1997, p. 2.

[293] *Ibid*.

[294] Ann. to resolution VII.18.

118 effects". That definition encompasses all sources of pollution, as well as both deliberate and accidental pollution[295].

3.133. Protection of the quality of the waters of the River Uruguay is assured both by the States' adoption of national measures and by CARU, which is responsible for adopting rules and standards in that area. Under Article 41, the parties undertake "[t]o protect and preserve the aquatic environment and, in particular, *to prevent its pollution*, by prescribing appropriate rules and measures . . ." (emphasis added). Article 41 provides further that the rules and measures adopted by the Parties are to be prescribed "in accordance with applicable international agreements and in keeping, where relevant, with the guidelines and recommendations of international technical bodies"[296]. The parties have adopted, for that purpose, the *Digesto sobre el uso y aprovechamiento del Río Uruguay* (hereinafter the "Digest"). Section E3, Title 2, Chapter 4, of the Digest lays down water quality standards[297].

3.134. The 1975 Statute requires the States to adopt national legislation which must be in accordance with their commitments and the standards laid down by appropriate institutions. Argentina and Uruguay are under an obligation not to reduce or disregard in their respective legal systems "[t]he technical requirements in force for preventing water pollution, and the severity of
119 the penalties established for violations"[298]. Furthermore, both parties are under an obligation to "inform one another of any rules which they plan to prescribe with regard to water pollution in order to establish equivalent rules in their respective legal systems"[299].

3.135. It is important to stress that, pursuant to Article 42 of the Statute: "Each Party shall be liable to the other for damage inflicted as a result of pollution caused by its own activities or by those carried out in its territory by individuals or legal entities."

3.136. That provision relates both to State activities that cause pollution and to the activities of private operators within the territory of the State. It thus establishes that each State is liable to the other in respect of the resultant pollution.

3.137. Moreover, Argentina and Uruguay have provided in the 1975 Statute that they are to "agree on rules governing fishing activities in the river with regard to the conservation and preservation of living resources[300]". That provision demonstrates the concern of the riparian States to protect the river and its living resources and confirms the commitment of Argentina and Uruguay to establish a legal régime to prevent pollution in the waters of the River Uruguay.

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[295] The wording of Art. 40 of the 1975 Statute follows in the tradition of the work of the International Law Association at its 1966 meeting in Helsinki, as well as of the documents produced by the 1972 United Nations Conference on the Environment in Stockholm.

[296] Art. 41 *(a)* of the 1975 Statute.

[297] See paras. 3.147-3.152 below.

[298] Art. 41 *(b)* (1) and (2) of the 1975 Statute.

[299] *Ibid.*, Art. 41 *(c)*.

[300] Art. 37 of the 1975 Statute.

4. Protecting the ecosystem of the River Uruguay

3.138. The 1975 Statute provides for protection of the ecosystem. That protection is based on Articles 35 and 36.

120 3.139. The Convention on Biological Diversity, to which both Argentina and Uruguay are parties, defines the ecosystem as "a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit"[301].

3.140. In its commentary on the draft Articles on the Non-navigational Uses of International Watercourses, the International Law Commission explained that the term ecosystem means an:

> "ecological unit consisting of living and non-living components that are interdependent and function as a community. 'In ecosystems, everything depends on everything else and nothing is really wasted.' Thus, '[a]n external impact affecting one component of an ecosystem causes reactions among other components and may disturb the equilibrium of the entire ecosystem'."[302]

3.141. As S. McCaffrey has pointed out: "'ecosystems' of an international watercourse should be understood to include not only flora and fauna in and immediately adjacent to a watercourse, but also the natural features within its catchment that have an influence on, or whose degradation could influence, the watercourse"[303].

3.142. The 1997 United Nations Convention embraces that concept by providing for the protection of watercourse ecosystems[304]. The regional agreements on international watercourses also advocate a similar form of management[305].

121 3.143. The 1975 Statute is clearly innovative in that it stipulates, well before the United Nations Convention was adopted, that Argentina and Uruguay are to co-ordinate "through the Commission, the necessary measures to avoid any change in the ecological balance and to control pests and other harmful factors in the river and the areas affected by it"[306].

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[301] Art. 2 of the Convention on Biological Diversity. Argentina ratified the Convention on 22 Nov. 1994, and Uruguay ratified it on 5 Nov. 1993.

[302] Draft Articles on the Non-navigational Uses of International Watercourses, *op. cit.*, pp. 304-305 (footnotes omitted)

[303] S. McCaffrey, *The Law of International Watercourses. Non-navigational uses*, Oxford University Press, 2001, p. 393.

[304] According to Art. 20 of the 1997 United Nations Convention: "[w]atercourse States shall, individually or, where appropriate, jointly, protect and preserve the ecosystems of international watercourses".

[305] See Art. 3 (1) *(d)* (i) of the 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes, adopted under the auspices of the United Nations Economic Commission for Europe; Art. 4 (2) *(a)* of Protocol 2000 of the Southern African Development Community on Shared Watercourse Systems in Southern Africa; Art. 3 of the 1995 Agreement on Co-operation for the Sustainable Development of the River Mekong; Art. 3 of the 2002 Senegal River Water Charter; and Art. 4 (2) (i) of the 2003 Protocol for the Sustainable Development of Lake Victoria.

[306] Art. 36 of the 1975 Statute.

3.144. Furthermore, the 1975 Statute includes in the joint régime for managing the river the management of the soil and woodland and the use of groundwater and the water of the tributaries of the River Uruguay, providing that

> "[t]he Parties undertake to adopt the necessary measures to ensure that the management of the soil and woodland and the use of groundwater and the waters of the tributaries of the river do not cause changes which may significantly impair the régime of the river or the quality of its waters"[307].

3.145. Those obligations, for which the 1975 Statute provides, demonstrate the desire of both Argentina and Uruguay to advocate and promote an overall protection régime for the River Uruguay and its ecosystem.

5. Instruments designed to secure the protection of the River Uruguay

3.146. Various instruments adopted within CARU or between CARU and Argentine and Uruguayan local authorities have enabled the two States to implement their obligations with regard to the protection of the River Uruguay. Those instruments demonstrate the desire of the two States to develop further the obligations contained in the 1975 Statute.

(a) *Digest on the uses of the waters of the River Uruguay and the setting of standards*

122 3.147. CARU has set standards relating to the water quality and the conservation and preservation of the living resources of the River Uruguay. Those standards are contained in Sections E3 and E4 of the Digest[308]. This instrument constitutes the direct expression of the intention of the parties and the way in which they construe the provisions of the 1975 Statute.

3.148. According to the diplomatic Notes of 1990 concerning the adoption of Section E3, that section was drawn up pursuant to Article 7 *(f)* of the 1961 boundary Treaty and Articles 35, 36, 41 to 45 and 56 *(a)* (4) of the 1975 Statute, and it "determines the basic and substantive principles for preventing pollution of the waters of the river and laying down the quality standards for its waters"[309]. Furthermore, Uruguay recognizes that it is bound by the "Regulations on pollution" which the Commission has drawn up[310].

3.149. In its diplomatic Note to Uruguay of 1995 concerning Section E4, Argentina states that this chapter was drawn up to implement Articles 37, 38 and 39 of the Statute and that the regulations

> "demonstrate once again the desire of both our countries to bring matters of common interest positively to fruition and lay down the rules permitting the conservation, utilization and preservation of the living resources in the shared section of the

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[307] *Ibid.*, Art. 35.

[308] For water quality standards, see para. 3.151 below.

[309] Note of 27 Nov. 1990, Anns., Vol. II, Ann. 14.

[310] *Ibid.*

River Uruguay, thereby constituting an historic point of reference which has few equivalents in today's world"[311].

3.150. The aim and purpose of the Digest is to protect and preserve the aquatic environment and its ecological balance, to guarantee all legitimate uses of the waters, taking account of long-term requirements and, particularly, those pertaining to human consumption. The Digest is
123 further designed to prevent all new forms of pollution and eliminate them where the values and standards adopted in respect of legitimate uses of the river have not been observed[312].

3.151. The Digest establishes the responsibilities of the States and those of CARU in relation to preventing pollution. The States issue authorizations and lay down restrictions or prohibitions concerning the uses of the waters, and notify CARU if those authorizations, restrictions or prohibitions relate to risks to human health[313]. The States jointly assess the quality of the waters of the river in accordance with the standards laid down in Title 2, Chapter 4 of Section E3. Those standards relate, in particular, to substances which could pollute the waters of the river and affect human health.

3.152. The Digest lays down the liability of the States for damage caused as a result of pollution of the river which is consequent on the activities of a State or natural or legal persons falling within its jurisdiction[314]. The Digest refers to Articles 7 to 12 of the 1975 Statute concerning the procedure laid down for the construction of works and for the uses of the waters of the river. Title 2, Chapter 5, contains the rules on the conditions relating to effluents in the River Uruguay and Title 2, Chapter 6, lays down the conditions for discharges and spillage into the river. Title 3 of the Digest is devoted to research into pollution. CARU may encourage and co-ordinate research into pollution that is conducted by the parties, either individually or jointly. Moreover, if CARU considers it relevant, it may conduct, of its own initiative, the studies and research necessary for it to carry out its mandate in relation to pollution[315].

(b) ***The 2002 Environmental Protection Plan for the River Uruguay***

124 3.153. The Regional Agreement on the adoption of an "Environmental Protection Plan" (hereinafter "the Regional Agreement") and the Environmental Protection Plan for the River Uruguay (hereinafter "the 2002 Plan"), concluded at Paysandú on 29 October 2002 between CARU and 15 Argentine and Uruguayan local authorities, specify the obligations set out by the 1975 Statute. They provide a *collective, participative and collaborative* framework for co-operation and co-ordination to protect the River Uruguay "for future generations"[316].

3.154. The 2002 Plan covers the protection of the river and the aquatic environment and contains obligations to take measures that will make it possible to take better account of matters of common interest, such as tourism. The Plan views tourism as one of the growth activities in the region. The preamble to the Regional Agreement refers to "the desire to work for sustainable development of the River Uruguay ecosystem . . ., taking account of the natural resources of the

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[311]Note of 12 Sept. 1995, Anns., Vol. II, Ann. 15.

[312]Title 1, Chap. 2, Art. 1 of the Digest (E3), Anns., Vol. II, Ann. 12.

[313]Title 2, Chap. 1, Art. 1 *(a)* of the Digest (E3), Anns., Vol. II, Ann. 12.

[314]Title 2, Chap. 2, Art. 1 of the Digest (E3), Anns., Vol. II, Ann. 12.

[315]Title 3, Chap. 1, Arts. 4 and 5 of the Digest (E3), Anns., Vol. II, Ann. 12.

[316]Environmental Protection Plan for the River Uruguay, "Introduction", Anns., Vol. II, Ann. 9.

river, its islands, banks and alluvial areas". The 2002 Plan is a further stage in the process set under way by the 1975 Statute, the Digest and the Co-operation Convention of 18 August 2001, signed between the local authorities and CARU.

3.155. The 2002 Regional Agreement is broad in scope. It applies to the River Uruguay, the groundwaters, the aquatic and land-based ecosystems which interact with the river and the drainage basin of the River Uruguay[317]. Furthermore, the Regional Agreement draws on the principles of environmental protection that are recognized by Argentina and Uruguay and set out in the Rio Declaration, adopted at the 1992 United Nations Conference on Environment and Development[318].

3.156. The commitments which the parties have entered into are set out in Article 4. They include further developing the exchange of information and co-operation both between the local
125 authorities and between the local authorities and CARU. The local authorities undertake to take such independent measures as they may deem necessary, within their respective jurisdiction, to ensure that "technical projects with potentially harmful effects on the ecosystem are subject to prior authorization, with due regard to the general regulations and the necessary special requirements".

3.157. In operational terms, the aim of the Regional Agreement is to integrate action by the local authorities with CARU's activities, by ensuring that public and private bodies in both countries play an active role. With that in mind, seven "strategic subject areas" and an operational structure comprising several bodies have been put in place[319].

Section III

The 1975 Statute must be interpreted and applied in the light of the international instruments and the relevant principles and rules of international law

3.158. The negotiators of the 1975 Statute placed it at the heart of the international legal system. They did this first of all by means of the referral clauses contained in Articles 1 and 41 *(a)*. Under those Articles, the States are required to observe "the rights and obligations arising from treaties and other international agreements in force for each of the Parties", and to protect the aquatic environment and prevent pollution "by prescribing appropriate . . . measures in accordance with applicable international agreements and in keeping, where relevant, with the guidelines and recommendations of international technical bodies".

126 3.159. From that perspective, since the Court has jurisdiction in relation to disputes concerning the "*interpretation or application* of the . . . Statute", the question whether one of the two States has observed the rights and obligations arising from other agreements is an issue which may arise in relation to the interpretation or application of the Statute. Since the 1975 Statute itself provides that it is to be implemented taking account of those rules also, it follows that the latter must be numbered among the rights and obligations under the Statute.

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[317] Art. 1 of the Regional Agreement on the Adoption of an "Environmental Protection Plan for the River Uruguay", Anns., Vol. II, Ann. 9.

[318] *Ibid.*, Art. 3.

[319] *Ibid.*, Art. 5.

3.160. In point of fact, the above-mentioned referral clauses[320] make it possible to incorporate and apply the rights and obligations arising from other treaties and international agreements in the relations between Argentina and Uruguay established under the 1975 Statute. Consequently, they must, of necessity, be taken into consideration in order to clarify, organize and define the meaning, substance and scope of the rights and obligations laid down by the 1975 Statute, as well as to supplement those rights and obligations.

3.161. Furthermore, the interpretation of the 1975 Statute gives way to general international law and, in particular, the "principles governing international fluvial law in general". In the case of the *Territorial Jurisdiction of the International Commission of the River Oder*, the parties asked the Permanent Court of International Justice (PCIJ) for an interpretation of Article 331 of the Treaty of Versailles in order to establish the territorial limits of the Commission's internationalization and administration régime. The six governments (Czechoslovakia, Denmark, France, Germany, Sweden and the United Kingdom) and Poland did not agree on how certain terms in Article 331 should be construed[321]. The Permanent Court of International Justice held, in that case, that where "the grammatical analysis of a text" does not lead to definite results, "there are many other methods of interpretation, in particular, reference is properly had to the principles underlying the matter to
127 which the text refers"[322]. On that occasion, the Court referred specifically to "the principles governing international fluvial law in general"[323].

3.162. Generally speaking, it should be noted that it is necessary to adopt a systematic interpretation of the 1975 Statute that takes account of the relevant legal context and of "any relevant rules of international law applicable in the relations between the parties", as specifically laid down in Article 31 (3) *(c)* of the Vienna Convention on the Law of Treaties. That requirement was underlined by the International Court of Justice when it held that "an . . . instrument has to be interpreted and applied within the framework of the entire legal system prevailing at the time of the interpretation"[324]. The 1975 Statute must be interpreted in an evolutive manner, so that proper account may be taken of new environmental norms[325]. The content of the rights and obligations which the 1975 Statute lays down is not static but "by definition, evolutionary"[326].

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[320] As regards the scope of referral clauses generally, see M. Forteau, "Les renvois inter-conventionnels", *Annuaire français de droit international*, 2003, pp. 71-104.

[321] The Court was asked to determine whether "that part of the two tributaries which is above the German frontier may be regarded as providing more than one State with access to the sea, in the sense of Article 331 of the Treaty of Versailles" (*Territorial Jurisdiction of the International Commission of the River Oder* (*Czechoslovakia, Denmark, France, Germany, Sweden and the United Kingdom* v. *Poland), Judgment No. 16, 1929, P.C.I.J., Series A*, *No. 23*, p. 25).

[322] *Ibid*., p. 26.

[323] *Ibid*.

[324] *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 31, para. 53.

[325] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997, Iron Rhine Railway (Belgium* v. *Netherlands)*, Decision of 24 May 2005, accessible at: www.pca-cpa.org, para. 80.

[326] *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), op. cit.,* para. 53.

A. The relevant principles of the law on international watercourses applicable to this dispute

1. The principle of the equitable and reasonable utilization of an international watercourse

3.163. The principle of the optimum and rational utilization of the River Uruguay is linked, in particular, to the principle of equitable and reasonable utilization. The latter principle has been incorporated into Article 5 of the Convention on the Law of the Non-navigational Uses of International Watercourses, which was adopted by the General Assembly of the United Nations on 21 May 1977.

128 3.164. In the case concerning the *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, the International Court of Justice held that:

> "Re-establishment of the joint régime will also reflect in an optimal way the concept of common utilization of shared water resources for the achievement of the several objectives mentioned in the Treaty, in concordance with Article 5, paragraph 2, of the Convention on the Law of the Non-navigational Uses of Watercourses, according to which:
>
> > 'Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the development and protection thereof, as provided in the present Convention.' (General Assembly doc. A/51/869 of 11 April 1997.)"[327]

3.165. Article 5 of the 1997 United Nations Convention indicates that the right to utilize an international watercourse is coupled with the duty to protect it. Special Rapporteur Schwebel made clear in that connection that:

> "the element of 'protection' defined to cover, above all, water quality, the environment, security, water-related disease and conservation, calls for measures or works that may limit to some degree the uses that otherwise might be made of the waters by one or more system States. The well-being of the peoples dependent on the waters of the system, not to mention protection of the marine environment, may give certain measures of protection overriding priority."[328]

3.166. Although each riparian State has the right to use the waters of a river for several purposes, none of those uses enjoys inherent priority. The 1997 United Nations Convention codifies that rule in providing that: "In the absence of agreement or custom to the contrary, no use **129** of an international watercourse enjoys inherent priority over other uses." In its commentary on the draft Article, the International Law Commission stated that: "[t]he reference to an 'inherent priority' likewise indicates that nothing in the nature of a particular type or category of use gives it presumptive or intrinsic priority over other uses"[329].

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[327] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *op. cit*., p. 80, para. 147.

[328] Third Report on the Law of the Non-navigational Uses of International Watercourses, by Special Rapporteur Schwebel, *ILC Yearbook*, Vol. II (First part) 1982, A/CN.4/SER.A/1982/Add.1, p. 104.

[329] Draft Articles on the Non-navigational Uses of International Watercourses, *op. cit.*, p. 110.

3.167. The 1975 Statute reflects that approach. Domestic, sanitary, industrial, agricultural and navigational uses are mentioned, but none enjoys priority over the others[330].

3.168. In the final analysis, interpreting the principle of optimum and rational utilization of the River Uruguay in the light of the principle of equitable and reasonable utilization implies that Argentina and Uruguay must both take account of elements specific to the River Uruguay, as well as of the uses the two riparian States actually make or propose to make of the river. Among the elements to be taken into account, special importance attaches to preserving the quality of the waters of the river. The 1975 Statute and the practice Argentina and Uruguay have adopted within CARU clearly confirm that interpretation.

2. The principle of using an international watercourse in a way that avoids damage

3.169. In addition to that of equitable and reasonable utilization, the principle of optimum and rational utilization draws on the principle of avoiding damaging use of territory[331]. In the context of the 1975 Statute, that principle is put into effect through the rules relating to the assessment of a project and those providing for the uses of the waters of the River Uruguay. If one party is planning works or a form of utilization of the waters that is significant enough to affect navigation, the régime of the river or the quality of its waters, it must notify CARU. CARU then determines whether the works or utilization in question may cause "significant damage to the other Party"[332]. That principle is spelt out in the 1975 Statute in the form of the obligation to avoid causing significant damage.

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3.170. Articles 7 and 11 of the 1975 Statute confer on CARU and the notified party the right to determine whether a project or form of utilization of the waters of the River Uruguay is liable to cause significant damage. In practice, CARU was called upon to give its opinion on the Garabi project and took the view that the project could cause significant damage[333]. Furthermore, in relation to the Canal Casa Blanca project, the Uruguayan delegation took the view that, pursuant to Article 8 of the Statute, Argentina had a period of 180 days to state its view on the damaging effects of the proposed project[334].

3.171. The 1975 Statute also requires the States to adopt legislation to ensure that "the management of the soil and woodland and the use of groundwater and the waters of the tributaries of the river do not cause changes which may *significantly impair* the régime of the river or the quality of its waters"[335]. In that context, the principle of avoiding the harmful use of an international watercourse forms part of an ecosystemic approach which includes management of the soil and woodland and the use of groundwater and the waters of the tributaries of the river.

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[330]See Arts. 3 and 27 of the 1975 Statute, in particular.

[331]On the customary nature of this principle, see: *Corfu Channel* (*United Kingdom* v. *Albania*), *Judgment, I.C.J. Reports 1949*, p. 22; *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996*, p. 242, para. 29, and the *Gabčikovo-Nagymaros Project (Hungary/Slovakia)*, *op. cit*., p. 41, para. 53.

[332]Art. 7 of the 1975 Statute.

[333]See paras. 3.102-3.108 above.

[334]See paras. 3.112-3.114 above.

[335]Art. 35 of the 1975 Statute (emphasis added).

3.172. The principle of avoiding damaging the use of a watercourse also falls within the general context of preventing pollution. According to Article 42 of the 1975 Statute "[e]ach Party shall be liable to the other for *damage* inflicted as a result of pollution caused by its own activities or by those carried out in its territory by individuals or legal entities" (emphasis added).

131

3. The principle of co-operation and reliance on domestic law

3.173. During the procedure in relation to the request for the indication of provisional measures, Uruguay on several occasions referred to its domestic law to demonstrate that it was complying with the requirements for the protection of the environment and prevention of pollution[336]. However, Uruguay must also observe its international commitments.

3.174. The Permanent Court of International Justice drew attention to that principle in the case of the *Free Zones of Upper Savoy and the District of Gex*, taking the view that the principle that the sovereignty of France is to be respected applies "in so far as it is not limited by her international obligations . . ."[337]. Similarly, in the *Lac Lanoux* case, the Arbitral Tribunal held that "[t]erritorial sovereignty plays the part of a presumption. It must bend before all international obligations, whatever their origin . . ."[338] Article 27 of the 1975 Statute makes that principle explicit[339].

3.175. Uruguayan law cannot, in any event, replace international obligations entered into under the 1975 Statute. That Statute is not based on some kind of principle of "subsidiarity" but squarely on the principle of the need to respect the international machinery for co-operation which the Statute has set in place. The domestic legislations of the two States must be compliant with it.

132

B. The principles of international environmental law applicable to this dispute

3.176. Various principles and concepts provide a clearer understanding of the scope of the 1975 Statute in relation to environmental protection. A systematic and evolutive interpretation of the 1975 Statute requires that these principles be taken into account, so that the provisions of the Statute are interpreted and applied in the context of the current legal system[340].

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[336]CR 2006/47, p. 12 (Gros Espiell) paras. 4-17 (Boyle); CR 2006/49, para. 4 (Boyle).

[337]*Series A/B, No. 46*, p. 166.

[338]*Use of the Waters of Lac Lanoux, op. cit.*, p. 99.

[339]Art. 27 of the 1975 Statute reads as follows: "[t]he right of each Party to use the waters of the river, within its jurisdiction, for domestic, sanitary, industrial and agricultural purposes shall be exercised without prejudice to the application of the procedure laid down in Articles 7 to 12 when the use is liable to affect the régime of the river or the quality of its waters".

[340]This link between the 1975 Statute and the relevant principles of international law on the environment was noted by the Argentine delegation to the High-Level Group (GTAN) from the beginning of those direct negotiations (see Chap. II above). Indeed, at the Group's second meeting, on 19 Aug. 2005, the delegation tabled a document listing the environmental rules which it considered material to the dispute (Anns., Vol. IV, Ann. 1, pp. 5 and 6).

The link was further noted by Argentina when it confirmed to Uruguay that a dispute existed in accordance with Art. 60 of the Statute. In point of fact, in its note SEREE 154 of 26 Dec. 2005, Argentina described the prior notification and consultation procedures under the 1975 Statute as being

1. The principle of sustainable development

3.177. Argentina and Uruguay are linked by respect for the principle of sustainable development when the two States undertake activities on the River Uruguay.

3.178. The right to economic development cannot be asserted at the expense of obligations to protect the environment. Those obligations are essential if each State is to achieve its right to develop. The effect of the principle of sustainable development is to make environmental obligations an integral part of the right of each State to economic development.

133 3.179. As the conceptual model underpinning international law on the environment[341], the concept of sustainable development requires an integrated approach to the objectives of economic development and environmental protection. That principle was solemnly declared by Principles 3 and 4 of the 1992 Rio Declaration on Environment and Development.

3.180. One of the key elements of the principle of sustainable development is that meeting the developmental needs of current generations must not jeopardize the well-being of future generations: "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."[342] Principle 4 meanwhile sets out the principle of integration: "In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process."

3.181. The International Court of Justice has stressed that: "This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development."[343]

3.182. The 2005 arbitral decision in the *Iron Rhine Railway* case also stressed the need to integrate the appropriate environmental measures into projects and activities relating to environmental development[344]. The implication of that integration is that "[e]nvironmental law and the law on development stand not as alternatives but as mutually reinforcing concepts"[345].

"firmly rooted in [the] general international law concerning the protection of the environment, as one of the elements necessary to make effective the principle according to which a State must guarantee that the activities carried out within its jurisdiction or under its control do not cause damage to the environment of other States. Both the mechanism and the principle on which it is based . . . are directly or indirectly embodied in the very many international instruments in whose preparation that country [Uruguay] and Argentina participated — in particular, the 1972 Declaration on the Human Environment and the 1992 Declaration on Environment and Development — and in bilateral instruments such as the 1971 Argentine-Uruguayan Declaration on Water Resources." (Anns., Vol. II, Ann. 28.)

[341] P.-M. Dupuy, "Où en est le droit international de l'environnement à la fin du siècle ?", *Revue générale de droit international public*, 1997/4, p. 886.

[342] Principle 3 of the 1992 Rio Declaration on Environment and Development.

[343] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *op. cit*., para. 140.

[344] *Iron Rhine Railway* (*Belgium* v. *Netherlands*), Decision of 24 May 2005, accessible at: www.pca-cpa.org.

[345] *Ibid*., para. 59.

134 3.183. The Institute of International Law highlighted the human dimension of that principle when it stated that "[t]he effective realization of the right to live in a healthy environment should be integrated into the objectives of sustainable development"[346].

3.184. Public participation is one of the crucial elements of the principle of sustainable development. Several legal instruments lay down that principle, as well as the principle of access to information[347]. In order to integrate environmental and developmental issues as well as possible, it is necessary to improve the decision-making process in relation to the use of the natural resources of the River Uruguay. These issues cannot be viewed in isolation.

3.185 Furthermore, there is also a social aspect to sustainable development, and the Johannesburg Summit drew attention to its importance:

> "we assume a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development — economic development, *social development* and environmental protection — at the local, national, regional and global levels"[348].

3.186. Proposed uses of natural resources are having an increasing impact on the ecosystems that are necessary for the well-being of the population and the development of their socio-economic
135 activities[349]. The decision-making process must take account of socio-economic considerations and environmental issues in order to secure development that is economically efficient, socially equitable and responsible, and environmentally sound"[350].

3.187. It is quite clear that planned projects on the River Uruguay must respect all of the elements of sustainable development. None may take priority over any other.

2. The principle of prevention

3.188. The often irreversible character of damage to the environment means that such damage must be prevented[351]. That was the concern of the negotiators of the 1975 Statute. Articles 1 and 41 *(a)* of the 1975 Statute stipulate that the obligation to prevent pollution must be observed, taking account of the rights and obligations arising from treaties and other international agreements in force for each of the Parties, and in keeping with the guidelines and recommendations of international technical bodies.

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[346] According to Art. 3 of the Strasbourg resolution of the Institute of International Law of 4 Sept. 1997: "[t]he effective realization of the right to live in a healthy environment should be integrated into the objectives of sustainable development".

[347] See, for example: Principle 10 of the 1992 Rio Declaration on Environment and Development; Principles 2 and 3 of the Dublin Statement on Water and Sustainable Development, adopted at the 1992 Conference on Water and the Environment; para. 23 (2) of Agenda 21; the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Aarhus, June 1998; Chap. IV: Protecting and Managing the natural resource base of economic and social development, para. 25 *(b)* of the Plan of Implementation of the World Summit on Sustainable Development, 4 Sept. 2002.

[348] Para. 5 of the Johannesburg Declaration on Sustainable Development (2002) (emphasis added).

[349] See para. 4 of Chap. IV: Protecting and Managing the natural resource base of economic and social development, *op. cit.*

[350] Agenda 21, para. 8 (4).

[351] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *op. cit*., para. 140.

3.189. Set out in Principle 21 of the Stockholm Declaration, and adopted by Principle 2 of the Rio Declaration, the obligation to prevent pollution is based on the sovereign right of the States to exploit their own resources and requires them to ensure that "activities within their jurisdiction or control do not cause damage to the environment of other States"[352]. That obligation derives from general international law[353].

136 3.190. Attention has been drawn to the obligation to prevent pollution, *inter alia* by the International Court of Justice in its Advisory Opinion in the case of the *Legality of the Threat or Use of Nuclear Weapons* and by the Arbitral Tribunal which handed down the decision in the *Iron Rhine Railway* case. The obligation to prevent pollution applies to any damage or any threat of damage and harm to the environment.

3.191. The Digest specifies certain aspects of this obligation, as contained in the 1975 Statute. According to Article 1 of Section E3 of the Digest, which deals with "Preventing pollution", its aim is to prevent pollution in accordance with Articles 56 *(a)* and 4 of the 1975 Statute. According to Article 2 of Section E3, preventing pollution of the River Uruguay is governed by the 1975 Statute, the applicable international conventions, the Digest and the national legislations. The Digest provides definitions which are significant in the context of the dispute concerning the pulp mills. Prevention is defined as "all methods which make it possible to prevent pollution of the waters". Pollution means "the direct or indirect introduction, by man, into the aquatic environment of substances or energy with harmful effects", and industrial pollution is caused by "solid, liquid or gaseous emissions which derive from industrial activity, including mining and energy production"[354]. Furthermore, the Digest defines the concept of "harmful effects" as "any change to the quality of the waters which prevents or impedes any legitimate use of the waters, produces harmful effects or damage to the living resources, risks to human health, a threat to water-based activities, including fishing, or the curtailment of recreational activities"[355].

137 3.192. The water quality standards are defined as "[t]he numeric concentration values or specific recommendations on water quality criteria, which are drawn up as a permanent point of reference to permit legitimate uses of the waters and the adoption of measures to prevent pollution"[356].

3.193. A State carrying out or authorizing projects on the River Uruguay must ensure that the obligation to prevent pollution is observed.

3. The precautionary principle

3.194. There is no longer any doubt about the inherent link between the precautionary principle and the principle of sustainable development, and academic writers have stressed the

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[352]Principle 2 of the Rio Declaration on Environment and Development.

[353]*Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996*, p. 242, para. 29; *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *op. cit*., pp. 77-78, para. 140; *Iron Rhine Railway, op. cit.,* para. 59. [See also the speech which the President of the ICJ, H. E. Judge Rosalyn Higgins, gave, on 26 Oct.-2006, to the Sixth Committee of the General Assembly, pointing out that international environmental law is part of international law generally.

[354]Title 1, Chap. 1, Arts. 1 *(a)* and *(b)* and subpara. 1 of Art. 1 *(b)* of the Digest (E3).

[355]*Ibid.*, Arts. 1 *(c)* of the Digest (E3).

[356]*Ibid.*, Arts. 1 *(f)* of the Digest (E3).

relevance of this[357]. Furthermore, the Convention on Persistent Organic Pollutants and the Convention on Biological Diversity both attach importance to the precautionary principle[358]. As a result of the referral clause contained in Articles 1 and 41 *(a)* of the 1975 Statute, those international instruments must be taken into consideration.

3.195. The precautionary principle implies that: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[359]

3.196. The precautionary principle thus places a further obligation on Argentina and Uruguay, in addition to the obligations to exercise "vigilance" and "prevent" pollution: namely, the obligation to take account of the uncertain risks involved in the design, preparation and implementation of any project or form of use relating to the River Uruguay and the areas affected by it.

138 3.197. When it requested the indication of provisional measures, Uruguay clearly indicated that it was committed to respecting that principle[360]. Even if, in certain circumstances, there may appear to be only a potential threat of damage, the precautionary principle requires the adoption of "cost-effective measures to prevent environmental degradation".

4. The principle of conducting an environmental impact assessment

(a) *The immediate corollary of giving notification in good faith of planned measures on the River Uruguay is that an environmental impact assessment should be carried out*

3.198. The 1975 Statute must be interpreted in the light of the principle of conducting an environmental impact assessment (EIA). The EIA process is intrinsic to implementation of the principles of information, consultation and prior agreement, which the 1975 Statute lays down, as well as the provisions of the Statute concerning the protection of the river. As has, in fact, been stressed "without prior assessment there can be no meaningful notification and consultation in most cases of environmental risk"[361].

3.199. It follows that the principle of conducting an environmental impact assessment is an essential facet of the obligation to prevent pollution and underpins the precautionary principle. It is a corollary of the premise that "in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of the damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage"[362].

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[357]P.-M. Dupuy, op. cit., p. 889. See also P. Birnie and A. Boyle, who consider that "the precautionary approach has implications for the sustainable utilization of resources in the same way that it affects environmental pollution risks", *International Law and the Environment*, 2nd ed., Oxford University Press, Oxford 2002, p. 120.

[358]Preamble to the Convention on Biological Diversity; Preamble to and Art. 1 of the Convention on Persistent Organic Pollutants.

[359]Principle 15 of the 1992 Rio Declaration on Environment and Development.

[360]CR 2006/47, para. 17 (Boyle); CR 2006/49, paras. 1 and 14-17 (Boyle).

[361]P. Birnie and A. Boyle, *op. cit.*, p. 133.

[362]*Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *op. cit*., p. 77, para. 140.

3.200. The environmental impact assessment is defined in Principle 17 of the Rio Declaration on Environment and Development. That principle makes it possible to integrate
139 environmental requirements, even at the project planning stage, and to guarantee that they are taken into account when a project is being designed, prepared and carried out.

3.201. In relation to a shared natural resource such as the River Uruguay, conducting an EIA makes it possible to avert transboundary damage that proposed work would have caused in the territory of a riparian State. In its commentary on the draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, the International Law Commission states that carrying out an environmental impact assessment "enables the State to determine the extent and nature of the risk involved in an activity and, consequently, the type of preventive measures it should take"[363].

3.202. Each State adopts the policies it needs to develop its natural resources and decides on the measures required to meet the needs of its population. But, in doing so, the State must ensure that activities carried out in its territory take account of the legally protected interests of other States. The EIA provides a method of assessing both the positive features of a project and the known or potential risks for a riparian State. Here again, the various components of the principle of optimum and rational utilization are apparent, as the *Donauversinkung* case illustrates:

> "[t]he interests of the States in question must be weighed in an equitable manner against one another. One must consider not only the absolute injury caused by the neighbouring State but also the relation of the advantage gained by the one to the injury caused to the other."[364]

(b) ***The criteria for conducting an objective and comprehensive environmental impact assessment must be met***

140 3.203. An environmental impact assessment must be comprehensive and objective: those are two essential aspects of the obligation to carry out the assessment. The substance of an environmental impact assessment determines whether it is, in fact, comprehensive.

3.204 International practice enables us to identify some of the requirements that an environmental impact assessment must meet. For instance, Article 4 of the 1991 Convention on Environmental Impact Assessment in a Transboundary Context (hereinafter "the Espoo Convention") provides that an environmental impact assessment must, at least, contain the information listed in Annex II to the Convention. Annex II ("Content of the environmental impact assessment documentation") sets out the following list:

> "*(a)* a description of the proposed activity and its purpose;
>
> *(b)* a description, where appropriate, of reasonable alternatives (for example, locational or technological) to the proposed activity and also the no-action alternative;

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[363] Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities and commentaries, *ILC Yearbook, 2001*, Vol. II (second part), p. 433.

[364] *Wurttemberg and Prussia* v. *Baden* (*Donauversinkung* case) (1927), in *Annual Digest of Public International Law Cases* (1927-1928), London, 1931, p. 131.

(c) a description of the environment likely to be significantly affected by the proposed activity and its alternatives;

(d) a description of the potential environmental impact of the proposed activity and its alternatives and an estimation of its significance;

(e) a description of mitigation measures to keep adverse environmental impact to a minimum;

(f) an explicit indication of predictive methods and underlying assumptions as well as the relevant environmental data used."

3.205. It is also clear from practice that the impact on the natural environment (air, land and water) and the social impact — on the health and safety of the population, for example — must be taken into account in an integrated fashion[365]. The reports of the World Bank's Inspection Panel highlight the links that must be established between the environmental and social impact. For example, in the *Colombia: Cartagena Water Supply, Sewerage and Environmental Management Project* case, the Panel considered that the social risks — linked to a development project for the installation of water and sewerage services — which that project might have for the local communities had not been taken properly into account when the project was evaluated[366]. When evaluating the proposed construction of a dam in Uganda, the Inspection Panel assessed the project's impact on tourism and concluded that the action plan that was envisaged to protect the interests of the affected communities was not compliant with the Bank's operational policies[367].

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3.206. The provision of the appropriate information and consultation with the States concerned and the affected local population are integral parts of the EIA principle. The Espoo Convention, for instance, requires that the relevant population in the State which may be affected by a project should be able to participate in the process of assessing the impact on the environment[368]. Furthermore, Operational Policy 4.01 on Environmental Assessment of the International Finance Corporation (IFC) provides that "the project sponsor consults project-affected groups and local non-governmental organizations (NGOs) about the project's environmental aspects and takes their views into account". It further provides that "for meaningful consultations

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[365]See: *IFC Operational Policy 4.01 on Environmental Assessment*, para. 3; Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EC on the assessment of the effects of certain public and private projects on the environment, OJ L 73 of 14 March 1997, pp. 5-15, Art. 3. According to Art. 29 of the 2004 Berlin Rules of the International Law Association:

> "1. States shall undertake prior and continuing assessment of the impact of programmes, projects or activities that may have a significant effect on the aquatic environment or the sustainable development of waters. 2. Impacts to be assessed include, among others: *(a)* effects on human health and safety; *(b)* effects on the environment; *(c)* effects on existing or prospective economic activity; *(d)* effects on cultural or socio-economic conditions; and *(e)* effects on the sustainability of the use of waters." (International Law Association, *Revision of the Helsinki and other International Law Association Rules on International Water Resources*, Berlin 2004.)

[366]"Colombia: Cartagena Water Supply, Sewerage and Environmental Management Project", Investigation Report, 24 June 2005, pp. 63-66. Other cases referred to the Inspection Panel have concerned the social impact of displacing people when dams are constructed. "China: A component of the Western Poverty Reduction Project — The Qinghai Project", Investigation Report, 28 April 2000, pp. 136-156.

[367]"Uganda: Third Power Project, the Power IV and the Bujagali Hydropower Project", Investigation Report, May 2002, para. 270.

[368]See Arts. 2 (2), 2 (6), 3 (8) and 4 (2) of the Espoo Convention.

between the project sponsor and the project-affected groups and NGOs . . . the project sponsor supplies relevant material in a timely manner prior to consultation"[369].

142 3.207. The obligation to consult the public is also recognized by the African Commission on Human and Peoples' Rights. In the case of *The Social and Economic Rights Action Center and the Center for Economic and Social Rights* v. *Nigeria*, the Commission concluded that the Government was under an obligation to allow Ogoni communities which might be affected by hazardous activities access to information, and it confirmed that those communities were entitled to participate actively in decisions on economic development[370].

3.208. The reports of the Inter-American Commission on Human Rights shed further light on the issue. Although citing the specific obligation to engage in prior consultation with the indigenous peoples, they nonetheless accentuate the obligation on the States to ensure that the public is able to participate in decision making in relation to economic development measures[371].

3.209. Finally, it must be stressed that an environmental impact assessment must take account of the international commitments of the State in whose territory a project is planned. That principle applies to all projects envisaged on the River Uruguay.

C. The international instruments applicable to the current dispute

3.210. As already explained above, the 1975 Statute contains clauses that refer to international instruments and conventions[372]. The latter apply in relations between Argentina and
143 Uruguay pursuant to the 1975 Statute and enlarge upon and supplement the obligations incumbent on Argentina and Uruguay under that Statute.

1. The international conventions on environmental protection

(a) *The applicable multilateral conventions*

(i) Conventions on nature conservation

3.211. The Convention on Wetlands of International Importance especially as Waterfowl Habitat adopted in Ramsar in 1971 (hereinafter "the Ramsar Convention") and the Convention on International Trade in Endangered Species of Wild Fauna and Flora adopted in Washington in 1973 (hereinafter "the CITES Convention") contain obligations that are important in terms of the protection of the River Uruguay and its resources. Argentina ratified the Ramsar Convention on 4 September 1992 and the CITES Convention on 8 January 1981. Uruguay ratified the Ramsar Convention on 22 September 1984 and the CITES Convention on 2 April 1975.

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[369] Operational Policy 4.01 on Environmental Assessment, paras. 12 and 14.

[370] Communication 155/96, *The Social and Economic Rights Action Center and the Center for Economic and Social Rights* v. *Nigeria*, Decision of 27 May 2002, para. 53.

[371] Chap. X of the *Second Report on the Situation of Human Rights in Peru*, 2 June 2000, paras. 26 and 39 (1), OEA/SER.L/V/II 106, doc. 59 rev. 2, and Chap. IX of the *Report on the Situation of Human Rights in Ecuador*, Recommendations, 24 April 1997, OEA/Ser.L/V/II 96, doc. 10 rev.1. In Chap. VIII of that report, the Commission confirmed the right of all individuals to have access to information and to participate in decision making which could affect them, including the carrying out of environmental impact assessments.

[372] Arts. 1 and 41 *(a)* of the 1975 Statute.

3.212. If a site is entered on the Ramsar List, the national government is required to take all measures necessary to maintain all of its specific ecological characteristics. The Ramsar Convention attaches particular importance to the links between the protection of wetlands and the protection of watercourses and the related aquatic resources[373]. One of the two sites which Uruguay has entered in the Ramsar List is situated on the River Uruguay. This site is called *Esteros de Farrapos e Islas del Río Uruguay*[374].

3.213. The decisions which the Conference of the Parties to the Ramsar Convention has adopted clarify the substance of the obligations under the 1975 Statute. Thus, the meaning of the
144 expression "rational utilization"[375] was clarified at the 3rd Conference of the Parties in 1987, and updated at the 9th Conference of the Parties, held in Kampala in 2005: "Wise use of wetlands is the maintenance of their ecological character, achieved through the implementation of ecosystem approaches within the context of sustainable development."[376]

3.214. That definition takes account of the principle of sustainable development and the concept of ecosystem. In that connection, the 1975 Statute is of major significance in guaranteeing that the site is permanently preserved in accordance with the obligations laid down in the Ramsar Convention.

3.215. The CITES Convention is designed to protect the endangered fauna and flora that are listed in the three annexes to the Convention according to the gravity of the threat of extinction that they face. Protecting a specific environment, such as the River Uruguay, contributes to protecting the fauna and flora listed in the annexes to the CITES Convention.

(ii) The Convention on Biological Diversity

3.216. The 1992 Convention on Biological Diversity plays a key role in terms of the use and permanent protection of the River Uruguay and its resources. Argentina and Uruguay are both parties to the Convention[377].

145 3.217. The Convention defines biological diversity as "the variability among living organisms from all sources, including, *inter alia*, terrestrial, marine and other aquatic ecosystems

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[373]See resolution VI.23 entitled "Ramsar and Water", adopted by the 6th Conference of the Parties in 1996, and the "Guidelines for integrating wetland conservation and wise use into river basin management", annexed to resolution VII.18, 7th Conference of the Parties, San José 10-18 May 1999.

[374]A profile of the site drawn up by the Ministry of Stock-farming, Agriculture and Fisheries is accessible at: http:/www.ramsar.org/wn/w.n.uruguay_farrapos_f.htm.

[375]Art. 3 (1) of the Ramsar Convention provides that: "The Contracting Parties shall formulate and implement their planning so as to promote . . . as far as possible the wise use of wetlands in their territory." [Translator's note: while the 1975 Statute refers to "rational utilization" ("utilisation rationnelle"), the Ramsar Convention refers to "wise use" in the English version but, also, "utilisation rationnelle" in the French.]

[376]Resolution IX.1 and Ann. A thereof on a "Conceptual framework for the wise use of wetlands and the maintenance of their ecological character", 9th Conference of the Parties, Kampala, 8-15 Nov. 2005. To understand how the concept of the principle of the wise use of wetlands has developed, see: recommendation III.3 and its Ann. "Wise Use of Wetlands", 3rd Conference of the Parties, Regina, 27 May to 5 June 1987; recommendation IV.10 and its Ann. "Guidelines for Implementation of the Wise Use Concept of the Convention", 4th Conference of the Parties, Montreux, 27 June-4 July 1990; resolution V.6 and its Ann. "Additional Guidelines for the Implementation of the Wise Use Concept", 5th Conference of the Parties, Kushiro, 6-19 June 1993.

[377]Ratified by Argentina on 22 Nov. 1994, and by Uruguay on 5 Nov. 1993.

and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems"[378].

3.218. The Convention on Biological Diversity lays down the criteria for the sustainable use of any natural resource. According to the Convention, the term "sustainable use" means "the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations"[379].

3.219. Under the Convention on Biological Diversity, Argentina and Uruguay are required to integrate conservation and sustainable use of biological diversity into their domestic policies[380] and to "adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity"[381]. The Convention requires the States to implement the principle of an environmental impact assessment to prevent damage to biological diversity. Article 14 entitled "Impact Assessment and Minimizing Adverse Impacts" requires the States to introduce "appropriate procedures requiring environmental impact assessment of [their] proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects . . ."[382].

3.220. The Conference of the Parties to the Convention on Biological Diversity looked at the relationship between biological diversity and tourism. In that context, it adopted a resolution entitled "Biological diversity and tourism". That resolution acknowledges that "sustainable
146 tourism can provide significant benefits to biodiversity conservation"[383]. Consequently, sustainable tourism — as envisaged by Argentina in the River Uruguay region and compatible with the 1975 Statute — contributes to preserving biological diversity.

(iii) The Stockholm Convention on Persistent Organic Pollutants (POPs)

3.221. The Convention on Persistent Organic Pollutants is crucial. It makes it possible to determine the hazardous and polluting nature of the substances and manufacturing techniques linked to the construction of pulp mills[384]. The Convention contains obligations requiring the States to adopt measures to protect human health and the environment.

3.222. The Convention requires the parties to use the best available techniques for the industrial activities listed in Annex C. That annex lays down the obligation to reduce or "eliminate" the "polychlorinated dibenzo-p-dioxins and dibenzofurans" (PCDDs/PCDFs),

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[378] Art. 2 of the *Convention on Biological Diversity*.

[379] *Ibid*.

[380] Art. 6.

[381] Art. 10 *(b)*.

[382] Art. 14 *(a)*.

[383] Second subpara. of resolution VII/14 and its Ann. "Guidelines on Biodiversity and Tourism Development", 7th Conference of the Parties, Kuala Lumpur, 9-20 Feb. 2004, UNEP/CBD/COP/7/21, pp. 259-282.

[384] The Convention on Persistent Organic Pollutants is not the only instrument to highlight the hazardous nature of pulp mills. See also para. 13 of Ann. I of the Espoo Convention, para. 18 of Ann. I of Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EC on the assessment of the effects of certain public and private projects on the environment, OJ L 73 of 14 March 1997 and Ann. II to the 1994 Convention on Co-operation for the Protection and Sustainable Use of the River Danube.

commonly known as dioxins and furans[385]. The document lists four categories of industrial source which have the potential for comparatively high formation and release of these chemicals into the environment. Pulp manufacturing processes fall into those categories. According to the Annex,
147 "production of pulp using elemental chlorine or chemicals generating chlorine for bleaching" has "the potential for comparatively high formation and release of these chemicals into the environment"[386].

3.223. The Stockholm Convention sets the objective of eliminating dioxins and furans, requiring the development of an action plan within two years of the date of entry into force of the Convention to "promote the application of available, feasible and practical measures that can expeditiously achieve a realistic and meaningful level of release reduction or elimination"[387]. Uruguay adopted its action plan to implement the Stockholm Convention in May 2006. In its action plan, Uruguay identifies the production of pulp as a source of chemical production and states that a significant increase in the production of *"blanqueada"* pulp is anticipated[388]. Although one of the objectives of the Convention is to reduce or eliminate dioxins and furans, Uruguay acknowledges that it has no plans to introduce measures to reduce or eliminate those chemicals. The Plan adds that Uruguay "does not envisage significant changes in emissions in the short term, *except for* the pulp manufacturing sector"[389]!

(b) *Co-operation agreement to prevent and combat incidents of pollution of the aquatic environment caused by hydrocarbons and other harmful substances*

148 3.224. The Co-operation Agreement to Prevent and Combat Incidents of Pollution of the Aquatic Environment caused by Hydrocarbons and other Harmful Substances, which was concluded in Buenos Aires on 16 September 1987 between Argentina and Uruguay, contains obligations designed to prevent incidents of pollution and safeguard the quality of the aquatic environment, as defined in the 1973 Treaty concerning the Río de la Plata and the corresponding Maritime Boundary and the 1961 Treaty concerning the Boundary Constituted by the River Uruguay[390].

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[385]Ann. C, Part I, lists the "Persistent organic pollutants subject to the requirements of Article 5."

[386]Ann. C, Part II "Source categories".

[387]Arts. 5 *(a)* and *(b)* of the Stockholm Convention on Persistent Organic Pollutants.

[388]The document, which is drafted in Spanish, states that the production of paper pulp

"within the industrial category is the only activity identified as a possible source of effluent polluted by dioxins and furans. The only company that currently produces bleached kraft pulp is a medium-sized company, and it intends converting its current production system in the short term from a system based on elemental chlorine to an entirely chlorine-free system. It is planned to set up two further bleached kraft cellulose factories, with a total production volume of 1,410,000 tonnes per annum using chlorine dioxide as a bleaching agent. According to IPPC, that production technology is among the best available.

There are other chlorine-free pulp mills in Uruguay, with recycling playing a critical role in production. In some cases, there is no system for treating effluent and/or the waste generated is not properly treated. Currently, the energy consumption of wood in the paper sector accounts for approximately 18 per cent of total consumption in the industrial sector." (Plan Nacional de Implementación, Uruguay, May 2006, p. 63. Anns., Vol. VII, Ann. 8.)

[389]*Ibid*. pp. 64-65 (emphasis added).

[390]The preamble expresses the desire of the Parties to "maintain and extend co-operation between the two countries to prevent incidents of pollution and combat their effects in the aquatic environment, as defined in the Treaty concerning the Río de la Plata and the corresponding Maritime Boundary and the Treaty concerning the Boundary Constituted by the River Uruguay" (Anns., Vol. II, Ann. 6).

3.225. Article 5 of the Agreement requires the two States to work towards reducing the risk of incidents and to enhance the safety of operations which could pollute the aquatic environment "in accordance with the international instruments in force and the laws, decrees and regulations laid down by each Party". Article 6 requires the Parties to exercise vigilance in relation to the quality of the aquatic environment and its resources. The Agreement also confers responsibilities for combating incidents of pollution on the Administrative Commission of the Río de la Plata, the Joint Technical Committee for the Maritime Boundary and CARU[391].

2. The 1975 Statute and the guidelines and recommendations issued by international technical bodies

3.226. On the basis of the 1975 Statute, Argentina and Uruguay have undertaken to protect the aquatic environment "in keeping . . . with the guidelines and recommendations of international technical bodies"[392]. These instruments to which Article 41 *(a)* refers are those adopted by the international organizations and institutions competent in the areas covered by the 1975 Statute.

3.227. We cited earlier the decisions adopted by the conferences of the parties set up in relation to the various conventions on environmental protection. We may also cite the guidelines and recommendations of certain specialized agencies within the United Nations family, such as the World Health Organization (WHO).

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3.228. The World Health Organization's Guidelines for Drinking-Water Quality, which were updated in 2006, are among the category of instruments to which Article 41 *(a)* refers[393]. Their purpose is to set in place a preventive framework to secure the supply of clean water and work to protect the health of the population.

3.229. The World Health Organization's Guidelines for Drinking-Water Quality contain chapters devoted to the effects of chemicals, stressing that the States must take preventive measures to avert water pollution[394]. According to the Guidelines:

> "Identification of the potential for contamination by chemicals from industrial activities and human dwellings requires assessment of activities in the catchment and of the risk that particular contaminants may reach water sources. The primary approach to addressing these contaminants is prevention of contamination by encouraging good practices."[395]

In addition, the Guidelines lay down standards concerning the use of certain hazardous substances by the pulp industry.

Conclusion

3.230. All of the rights and obligations that have been analysed in this Chapter constitute the law applicable to the present dispute. The 1975 Statute is an instrument that is demanding in

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[391] Art. 11 *(d)* and Ann. of the Agreement concerning definitions, Anns., Vol. II, Ann. 6.

[392] Art. 41 *(a)* of the 1975 Statute.

[393] *Guidelines for Drinking-Water Quality*, 3rd ed., 2006. The first version of the Guidelines was issued in 1984.

[394] Chaps. VIII and XII of the *Guidelines for Drinking-Water Quality*.

[395] *Guidelines for Drinking-Water Quality, op. cit.,* p. 186.

substance and requires close co-operation between the two parties. It is a specific agreement which lays down a clearly regulated procedure.

150 3.231. As well as the rights and obligations under the 1975 Statute, the law applicable to the present dispute includes the principles and rules of international law on international watercourses and the environment, and the international legal instruments that are applicable by virtue of the referral clauses contained in Articles 1 and 41 *(a)* of the Statute. The breaches of law that Uruguay has committed must be viewed in the light of the whole corpus of law applicable to the present dispute.

3.232. Those breaches include, *inter alia*, the infringement of specific international rules: breaches of the obligations to exchange information, to provide notification and to consult with a view to reaching prior agreement, as provided for in Chapter II of the Statute, as well as breaches of the obligations which the Statute of the River Uruguay prescribes in relation to safeguarding the quality of the water, the régime of the river and its ecosystem.

CHAPTER IV

BREACHES BY URUGUAY OF THE PROCEDURAL OBLIGATIONS PRESCRIBED IN CHAPTER II OF THE 1975 STATUTE

153 4.1. In Chapter III Argentina set out the content of the obligations incumbent on the Parties under Chapter II of the 1975 Statute where planned works are liable to affect navigation, the régime of the river or the quality of its waters[396]. The aim of the present chapter is to show that Uruguay has not discharged those obligations, crucial though they are to the overall structure of the Treaty. Indeed, each time Uruguay has authorized such works, it has done so without notifying or informing CARU in advance, and without waiting for CARU and Argentina to give their response to the works. By so doing, it quite simply prevented the procedure provided for under Articles 7 to 12 of the 1975 Statute from being able to be followed in the usual way[397].

4.2. It was against the background of the first contested authorization, which relates to the CMB mill, that Uruguay tried to find a justification for its wrongful conduct. That is why Argentina examines that authorization in great detail below[398]. It should be noted that Uruguay's conduct in relation to subsequent authorizations was similar. Therefore, the analyses of Uruguay's attempts to justify its wrongful conduct with regard to the CMB mill are equally applicable to the other authorizations issued in violation of the 1975 Statute, whether in respect of:

— the initial failure to consult CARU (which led to the total paralysis of any procedure required under Chapter II of the Statute) (Section I),

— the failure to communicate relevant information to CARU and, through the Commission, to Argentina (Section II) or

— the fact that Uruguay pursued its course regardless of opposition from Argentina and despite the absence of a settlement to the dispute (Section III);

as a result of that conduct, Uruguay has committed a material breach of the 1975 Statute and thereby devoided one of its substantive objects of any purpose (Section IV).

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Section I

Uruguay has systematically authorized all plans without consulting CARU (Article 7, first and second paragraphs, of the 1975 Statute)

4.3. There can be no dispute that the Botnia and CMB plans fall within the scope of the provisions of the 1975 Statute. If works of that kind were excluded from their scope, the Statute would be wholly without substance.

4.4. The pulp industry is one of the most polluting of all industries and the size of the planned mills leaves no room for doubt as to the need to submit them to the procedure provided for

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[396] See Chap. III, Sec. II, part B above.

[397] See the flow diagram of the procedure provided for by Arts. 7 to 12 of the 1975 Statute, Chap. III, Sec. II.B, Figs. 1 and 2.

[398] As was explained above (paras. 0.17 and 0.18), the announcement of the relocation of the CMB mill cannot retrospectively wipe out the wrongfulness of Uruguay's conduct.

in Chapter II of the Statute, given their potential effects on the quality of the waters of the River Uruguay, the areas affected by it, and the régime of the river. That observation is confirmed by the very large number of international treaties and national laws which require plans of this type to undergo a mandatory environmental impact assessment and other preventive measures, given the inherent risks they pose to the environment around them[399].

4.5. Various international conventions list large pulp mill plans among projects which have harmful effects on the environment. This is the case with the Stockholm Convention on Persistent Organic Pollutants of 22 May 2001, the objective of which is to protect human health and the environment from the effects of those substances (Art. 1) and which in Article 5 requires parties, including Uruguay, to take at a minimum certain measures to reduce the releases of various categories of chemicals listed in Annex C to the Convention. Part II of that Annex identifies four industrial source categories which are described as likely to have "the potential for comparatively high formation and release of these chemicals to the environment". Among them, the Annex makes reference to: "*(c)* Production of pulp using elemental chlorine or chemicals generating elemental chlorine for bleaching".

155 4.6. Other international conventions set out the dangers to the environment which are inherent in pulp production. Appendix I to the Espoo Convention of 1991 on Environmental Impact Assessment in a Transboundary Context identifies projects which are required to be the subject of a mandatory EIA because they are "likely to cause a significant adverse transboundary impact"[400]. The 17 activities listed in the Appendix include: "13. Pulp and paper manufacturing of 200 air-dried metric tonnes or more per day".

4.7. The same approach is to be found in European Community Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment[401], Annex I of which also includes the industrial production of paper among activities which are required to be the subject of mandatory EIAs because of the risks they pose to the environment. The Annex specifically refers to:

> "18. Industrial plants for the
>
> *(a)* production of pulp from timber or similar fibrous materials;
>
> *(b)* production of paper and board with a production capacity exceeding 200 tonnes per day."

156 4.8. Similarly, international development banks require significant pulp production projects to be the subject of an EIA before funding can be considered. The IBRD and the IFC include large-scale pulp production projects in Category A, the category for which a full EIA is required, as the project may have diverse and significant environmental impacts[402]. Likewise, the environmental policy of the European Bank for Reconstruction and Development (EBRD) divides

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[399] See Chap. III, Sec. III.B (4).

[400] Art. 3 (1). Under Art. 2 (3) of the Espoo Convention "[t]he Party of origin shall ensure that in accordance with the provisions of this Convention an environmental impact assessment is undertaken prior to a decision to authorize or undertake a proposed activity listed in Appendix I that is likely to cause a significant adverse transboundary impact".

[401] OJ L 73, 1997, pp. 5-15.

[402] See World Bank, "Environmental Assessment Sourcebook", 1999, Chap. 1, http://siteresources.worldbank.org/ INTSAFEPOL/1142947-1116495579739/20507372/Chap.1TheEnvironmentalReviewProcess.pdf , para. 12.

projects into three categories, listed in the Annexes as Categories A, B and C. Category A relates to projects deemed to be the most dangerous for the environment (projects which "could result in potentially significant adverse future environmental impacts") and which are required to be the subject of a mandatory EIA:

> "13. Industrial plants for the: *(a)* production of pulp from timber or similar fibrous materials; *(b)* production of paper and board with a production capacity exceeding 200 air-dried metric tonnes per day."[403]

4.9. Moreover, the same is true of Uruguayan law. Article 6 of Law No. 16.466 of 19 January 1994 on the protection of the environment against degradation, destruction or pollution requires an EIA to be performed in advance for "activities, construction work or works, whether public or private", which relate to "industrial complexes . . . or *installations which by their nature or scale may have a serious environmental impact* . . ." (emphasis added)[404].

4.10. There therefore appears to be no question that the pulp mill projects planned or carried out by Uruguay are subject to the obligations entered into by the Parties in the 1975 Statute. They are clearly liable to affect "navigation, the régime of the River or the quality of its waters" and to "cause significant damage to the other Party".

157 4.11. In accordance with Article 7, first paragraph, of the 1975 Statute,

> "If one Party plans to construct new channels, substantially modify or alter existing ones or carry out any other works which are liable to affect navigation, the régime of the River or the quality of its waters, it shall notify the Commission, which shall determine on a preliminary basis and within a maximum period of 30 days whether the plan might cause significant damage to the other Party."

4.12. Uruguay was therefore under the obligation to consult and inform CARU of the planned mills it was thinking of constructing, *prior to* granting authorizations. The above provision clearly refers to consultation and notification *prior* to any action concerning the authorization for construction[405]. The wording of Chapter II of the 1975 Statute leaves no room for ambiguity as regards the mechanism for prior information and consultation prescribed in the 1975 Statute. It states: "If one Party *plans* to construct . . . or carry out . . . works . . . it shall notify the Commission", which will give a response to "the plan" (Art. 7)[406]. CARU has 30 days to "determine on a preliminary basis . . . whether the plan might cause significant damage to the other Party". Only if CARU determines that the plan will not cause significant damage can the Party concerned carry out or *authorize the planned works*. The first paragraph of Article 7 clearly refers to a requirement to provide notification prior to any action relating to the construction of works by either party[407] and, where the party will not be carrying out the work itself, prior to the

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[403]See EBRD "Environmental Policy", July 2003, p. 16.

[404]See http://www.parlamento.gub.uy/Leyes/Ley16466.htm.

[405]See CR 2006/46, p. 17, para. 7 (Cerutti).

[406]See also Art. 13: "The rules laid down in articles 7 to 12 shall apply to all works referred to in article 7 . . . which either Party *plans* to carry out within its jurisdiction in the River Uruguay . . ."

[407]This analysis is confirmed by the English and Spanish versions of other provisions of the Statute: in the English version, Arts. 27 and 29 refer to the procedure laid down in Arts. 7 to 12 where the use of the waters of the River "*is liable to affect* the régime of the River or the quality of its waters". It is also confirmed by the Joint Declaration of 18 Sept. 1976 in which the Presidents of Argentina and Uruguay

authorization to proceed with construction which it is to grant to a private person or undertaking.
158 The latter situation is the one which has arisen in the present case. It involves authorizations granted by Uruguay to the ENCE and Botnia undertakings.

4.13. None of the authorizations to proceed with construction issued by Uruguay complied with the obligation to hold prior consultations with or provide prior notification to CARU for it to determine whether Uruguay was able to carry out or authorize the works concerned.

A. The authorization of 9 October 2003 concerning the CMB mill

4.14. On 9 October 2003, the Government of Uruguay authorized the Spanish company ENCE to construct a pulp mill on the outskirts of the town of Fray Bentos (Río Negro Department), the project name being "Celulosa de M'Bopicuá"[408]. That authorization was granted despite the fact that CARU had already requested information on the project, and in spite of Uruguayan promises to forward to CARU the information prescribed under Article 7 of the Statute[409].

(i) Uruguay has expressly acknowledged that it failed to comply with the obligation to consult CARU

4.15. Uruguay itself has acknowledged on several occasions that it has not followed the procedure prescribed in Article 7 of the 1975 Statute.

4.16. Initially the Uruguayan explanation consisted in stating that the obligation to notify CARU, in accordance with Article 7 of the 1975 Statute, exists only where works are "liable to
159 affect navigation, the régime of the River or the quality of its waters" and that since that was not the case where the CMB mill was concerned, Uruguay did not have to discharge that obligation.

4.17. That position is implicit in the Uruguayan Note of 27 October 2003 and explicit in the explanation given by the Uruguayan Minister for Foreign Affairs, Didier Opertti, to the Uruguayan Senate on 26 November 2003. In the former case, Uruguay tries to justify the forwarding of documentation to Argentina — which was very fragmented and in any event late in coming and, moreover, was not sent via CARU — concerning the authorization to proceed with the construction of CMB simply on the basis of "the spirit and framework of cooperation and good neighbourly relations which we are glad to say is characteristic of relations between Uruguay and Argentina"[410].

"note with deep satisfaction that the Statute, which has now entered into force in implementation of the provisions of the 1961 Treaty concerning the Boundary Constituted by the River Uruguay, is imbued with the same fraternal spirit that resulted in the signing of the Treaty concerning the Río de la Plata and the corresponding Maritime Boundary, as Article 1 thereof reiterates the aim of establishing the joint machinery necessary for the optimum and rational utilization of the River Uruguay, and, in addition, at the same time *includes, in the bilateral legal regime it establishes, the principle of prior agreement in relation to any work or activity that either of the Parties proposes to carry out in the shared section*, or that the Argentine Republic carries out in the upper section" (Anns., Vol. II, Ann. 34, see also para. 3.81 above).

[408]See para. 2.17.

[409]See paras. 2.5-2.16.

[410]Note 05/2003 from the Ministry of Foreign Affairs of the Eastern Republic of Uruguay (27 Oct. 2003) to the Argentine Embassy in Uruguay, Anns., Vol. II, Ann. 21.

4.18. It should be noted that at that point, Argentina had already indicated to CARU that it was of the view that Article 7 of the 1975 Statute was applicable, a point which was not disputed by the Uruguayan delegation to CARU[411]. The same Uruguayan Note of 27 October 2003 sets out the internal procedure followed and considers that that procedure "leads to the conclusion that all precautions were taken"[412]. It is clear that Uruguay was acting at that point as if there was no need to follow the procedure prescribed in the 1975 Statute before granting an authorization to proceed with construction of the CMB mill, despite all the promises to the contrary made previously by the State authorities at the highest level[413] and CARU's insistence that the prescribed information should be communicated to it.

4.19. The statement by the Minister for Foreign Affairs, Mr. Opertti, to the Uruguayan Senate on 26 November 2003 is a perfect illustration of the Uruguayan position set out one month previously in the Note from his Ministry. The Minister stated first that the works in question were
160 entirely national works and therefore "subject solely to the Uruguayan legal order"[414]. He infers as a result that Uruguay was not under an obligation to follow the procedure prescribed in Articles 7 and 8 of the 1975 Statute: "it is natural that the Government of Uruguay should not be obliged to refer this matter to the Commission. That would be abandoning our responsibilities, which the Government of Uruguay does not intend to do; it is as simple as that"[415].

4.20. Foreign Minister Opertti said in the same statement that industrial projects have been carried out on the Argentine side without any reaction or protest from Uruguay. Mr. Opertti offered no clearer explanation, although he let it be understood that Argentina had not consulted CARU in similar cases. Nothing could be further from the truth. First, because no works on such a scale have ever been constructed on the Argentine bank. Secondly, because Argentina has always fulfilled its obligations arising under Articles 7 *et seq.* of the Statute. As pointed out in Chapter III, not only has Argentina not hesitated to forward information prescribed under Article 7 of the Statute, it even abandoned one project and did not grant an authorization to proceed with the construction of works in one case — even though the works concerned were upstream of the Argentine-Uruguayan section of the River Uruguay — when CARU ruled that they might cause significant damage[416].

4.21. The position taken by Uruguay in an attempt to justify non-consultation of CARU on the grounds that the works were not going to cause significant damage to the river was subsequently reiterated by the current President of the Uruguayan Delegation to CARU, Ms Petrocelli, in her statement to the Environment Committee of the Uruguayan Senate on
161 12 September 2005. The Chairman of the Senate Committee asked the following question:

> "Article 7 refers to the need for CARU to be consulted and for the two delegations to give their consent to the plan in question. The legal interpretation is to

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[411]CARU, Minutes 11/03 of the extraordinary meeting of 17 Oct. 2003 called by the Argentine delegation, especially p. 10. Anns., Vol. III, Ann. 5.

[412]*Ibid.*

[413]See above, para. 2.17.

[414]Official record, statement by the Minister for Foreign Affairs, Mr. Didier Opertti, to the Uruguayan Senate (Nov. 2003), Anns., Vol. VII, Ann. 4. For the full text of the statement see para. 2.26 above.

[415]Official record, statement by the Minister for Foreign Affairs, Mr. Didier Opertti, to the Uruguayan Senate (Nov. 2003), Anns., Vol. VII, Ann. 4.

[416]See above, paras. 3.102-3.108.

the effect that since there was no element that could cause contamination, this prior consent was not necessary. Is that the right interpretation?"[417]

4.22. Ms Petrocelli's reply was in the affirmative[418].

4.23. However, under the arrangement of 2 March 2004 with his Argentine colleague Mr. Bielsa, Foreign Minister Opertti declared his agreement to submitting the CMB plan to CARU, thereby affirming the applicability of the 1975 Statute to the plan and CARU's competence to make a determination on it. Unfortunately, Uruguay failed to honour the arrangement[419].

4.24. The hearings on the request for the indication of provisional measures submitted by Argentina were another occasion where Uruguay acknowledged its obligation to consult CARU on the CMB project: in a line of argument which was wholly inconsistent with its previous contention, Uruguay contended this time that it had "discharged the obligations imposed upon it by Articles 7 *et seq*. in good faith"[420].

(ii) Attempts by Uruguay to justify its failure to discharge its obligations are inconsistent and without foundation

4.25. Thus, after having argued that pursuant to Article 7 it was under no obligation to submit the CMB project to CARU, Uruguay came to the view that it had complied with the obligations incumbent on it under Articles 7 *et seq.* in respect of the plan. This strange U-turn in its position speaks volumes on the seriousness of Uruguay's attempts to justify its conduct.

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4.26. The explanations given by Uruguay prior to the request for the indication of provisional measures as to why CARU was not consulted over the CMB plan openly conflict with the wording of Article 7, are contrary to plain common sense and are refuted by the description of the plan given by the competent Uruguayan authorities themselves.

4.27. Argentina has already explained in detail the meaning and scope of Article 7 of the 1975 Statute[421] and there is no need to go back over that ground: the fact that one of the Parties is of the view that a set of significant works will not cause any damage does not mean that there is no requirement to consult and notify CARU in advance. As Mr. González Lapeyre and Mr. Flangini (both Uruguayan negotiators of the Statute and former CARU delegates) have clearly explained in their commentary on the 1975 Statute, "in order for a riparian State to be able to assess whether the works to be carried out by another such State on a shared watercourse might cause significant damage to the latter, it must be informed about the plan concerned in advance"[422].

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[417]Anns., Vol. VII, Ann. 5. See also para. 2.27 above.

[418]*Ibid*.

[419]See above, paras. 2.40-2.41.

[420]CR 2006/47, 8 June 2006, p. 38, para. 15 (Condorelli).

[421]See Chap. III, Sec. III.

[422]Lapeyre and Flangini, *El Estatuto del Río Uruguay* (Montevideo, ed. Jurídicas A.M. Fernández, 1983), Chapt. III, p. 74. Anns., Vol. VII, Ann. 2.

4.28. The alleged Uruguayan justification, if that is what it was, would render Chapter II of the 1975 Statute meaningless, because it would mean that the State wishing to carry out works would take a decision which in the first instance — i.e., before any assessment is made, if necessary, by the other Party — lies with the Commission. Moreover, under Article 7, second paragraph, of the 1975 Statute, if CARU does not give a response, the effect of its non-decision is exactly the same as the effect produced where it finds that a plan might cause significant damage to the other Party. In other words, only where CARU decides that the plan cannot cause such damage does the procedure stop at that point, without there being any need for the Party concerned to notify and inform the other Party, through CARU, prior to carrying out or authorizing the works.

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4.29. The practice referred to in Chapter III of this Memorial shows that works much smaller in scale than those of the CMB and Orion mills complied with the procedure prescribed in the 1975 Statute[423]. It is sufficient to state here that the construction of Port M'Bopicuá, the property of ENCE, was carried out once CARU had authorized the works in 2001[424]. Mr. Opertti, the Minister for Foreign Affairs of Uruguay, also noted this point in his statement to the Uruguayan Senate of 26 November 2003:

> "I would like to supply one further detail. During construction of Port M'Bopicuá and once the appropriate decision had been reached in that regard, work was carried out in order to determine whether a natural condition or the navigability of the River may possibly be at risk."[425]

The construction of a pulp mill on the scale of the CMB mill is clearly a work whose importance far exceeds that of Port M'Bopicuá as regards the likelihood of affecting the régime of the river or the quality of its waters.

4.30. The requirement to consult CARU under the machinery for prior notification and consultation prescribed in the 1975 Statute is an international obligation and exists independently of the extent of any precautions, impact studies, legislative and regulatory measures and so on, whether taken by Uruguay or not. The response to the question whether the works at issue "are liable to affect navigation, the régime of the River or the quality of its waters" is a matter for CARU ("which shall determine on a preliminary basis and within a maximum period of 30 days whether the plan might cause significant damage to the other Party"). The matter does not, therefore, lie within the discretionary power of the Party concerned.

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4.31. In that regard, it is very significant that DINAMA itself classified the CMB plan under the relevant Uruguayan legislation in category "C", in other words the category which includes "activities, constructions or works, the execution of which may produce negative environmental impacts of qualitative and quantitative significance, whether or not preventive or mitigating measures are foreseen"[426].

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[423]See Chap. III, Sec. II.A (6).

[424]CARU resolution 12/2001, Anns., Vol. III, Ann. 2.

[425]Senate of the Eastern Republic of Uruguay, Foreign Affairs Committee, sitting of 26 Nov. 2003, statement by the Minister for Foreign Affairs, Mr. Didier Opertti, Anns., Vol. VII, Ann. 4.

[426]Decree 435/994 of 21 Sept. 1994, Environmental Impact Assessment Regulation, Art. 5 (Observations of Uruguay, 2 June 2006, Exhibit 1, DINAMA Ann. 4), Anns., Vol. V, Ann. 13. For the classification in this category by DINAMA of the CMB and Orion projects, see the initial environmental authorizations issued by the Ministry of Housing, Land Use Planning and Environmental Affairs on 9 Oct. 2003 and 14 Feb. 2005 respectively, Anns., Vol. VII, Anns. 9 and 10.

4.32. The Uruguayan Government was fully aware that projects of that nature were required to comply with the procedure prescribed in Chapter II of the 1975 Statute and deliberately decided not to follow it. That is a breach of the obligation to consult CARU. Uruguay's first attempt at an explanation, namely that the works would not cause significant damage to the river, which implicitly acknowledges that the procedure prescribed in Article 7 was not followed, must be set aside.

4.33. Similarly, it is clear that the second argument put forward by Uruguay, namely that the authorization to construct the CMB plant was granted in accordance with its internal law, cannot release Uruguay from the international obligations arising under Article 7 of the 1975 Statute. As noted in Article 3 of the Articles of the International Law Commission on Responsibility of States for Internationally Wrongful Acts:

> "The characterization of an act of a State as internationally wrongful is governed by international law. Such characterization is not affected by the characterization of the same act as lawful by internal law."[427]

165 The ILC commentary states in that regard that: "a State cannot, by pleading that its conduct conforms to the provisions of its internal law, escape the characterization of that conduct as wrongful by international law"[428].

4.34. The case law of the Court is consistent as regards the relationship between the existence of an international obligation and the provisions of internal law. The Permanent Court has consistently held that:

> "it is a generally accepted principle of international law that in the relations between Powers who are contracting Parties to a treaty, the provisions of municipal law cannot prevail over those of the treaty"[429].

4.35. The Court has also ruled that:

> "Compliance with municipal law and compliance with the provisions of a treaty are different questions. What is a breach of treaty may be lawful in the municipal law and what is unlawful in the municipal law may be wholly innocent of violation of a treaty provision."[430]

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[427] General Assembly of the United Nations, resolution A/RES/56/83, 12 Dec. 2001, Ann.

[428] International Law Commission, Report on the work of its fifty-third session (23 April-1 June and 2 July-10 Aug. 2001) *General Assembly Official Records, Fifty-Sixth Session, Supplement No. 10* (A/56/10), p. 74, para. 1) of the commentary.

[429] *Greco-Bulgarian "Communities", Advisory Opinion, 1930, P.C.I.J., Series B, No. 17*, p. 32. See also: *S.S. "Wimbledon", Judgments, 1923, (Judgment of 17 August 1923) P.C.I.J., Series A, No. 1*, pp. 29-30; *Free Zones of Upper Savoy and the District of Gex, Order of 6 December 1930, P.C.I.J., Series A, No. 24*, p. 12; *Free Zones of Upper Savoy and the District of Gex, Judgment, 1932, P.C.I.J., Series A/B, No. 46*, p. 167; *Treatment of Polish Nationals and Other Persons of Polish Origin or Speech in the Danzig Territory, Advisory Opinion, 1932, P.C.I.J., Series A/B, No. 44*, p. 24.

[430] *Elettronica Sicula S.p.A. (ELSI) (United States of America* v. *Italy), Judgment, I.C.J. Reports 1989*, p. 51, para. 73. See also: *Fisheries (United Kingdom* v. *Norway), Judgment, I.C.J. Reports 1951*, p. 123; *Application of the Convention of 1902 Governing the Guardianship of Infants (Netherlands* v. *Sweden), Judgment, I.C.J. Reports 1958*, p. 67; *Applicability of the Obligation to Arbitrate under Section 21 of the United Nations Headquarters Agreement of 26 June 1947, Advisory Opinion, I.C.J. Reports 1988*, pp. 34 and 35, para. 57.

4.36. Having become convinced of the inherent weakness of the position it had maintained until the hearings before the Court on 8 and 9 June 2006, Uruguay performed a spectacular U-turn in its arguments at those hearings. Uruguay is now of the view that the project for the CMB mill
166 "was formally brought to the attention of CARU . . . on 8 July 2002, when representatives of the mill supplied CARU with the relevant information"[431]. All that there is as "evidence" for that statement is a letter from ENCE of 24 August 2004 addressed to the President of CARU which states: "As you will recall, in July 2002 we visited your offices with the purpose of informing the Commission which you preside over about the project of installing a pulp mill in M'Bopicuá."[432]

4.37. It is obvious that these so-called private dealings do not constitute performance of the obligation incumbent on the Contracting Parties under Article 7 of the Statute. CARU naturally has contacts with public and private entities. It regularly receives mail and visits from natural persons, trading companies, NGOs, associations in general, State bodies and bodies from international organizations. Such correspondence and visits relate to activities linked to CARU's powers. In no way can they supplant the requirement to supply information which is incumbent on the Parties pursuant to Article 7 of the Statute and they have never been interpreted as fulfilling the condition prescribed in that provision. The wording of Articles 7 *et seq.* is clear: they read "if one Party plans to construct", "the Party concerned", the "Party [which] may carry out or authorize the work planned". That point is corroborated by the fact that CARU requested information on the project after the visits referred to took place.

4.38. The President of the Uruguayan delegation to CARU, Ms Petrocelli, acknowledged in the clearest of terms in her presentation to the Uruguayan Senate of 12 December 2005 that:

> "raising issues is a matter for the State. This particular case was introduced out of the blue. In diplomatic terms, the Party is the body which should introduce the matter and give
> **167** notification that it is going to carry out works, whether public or private, and give sufficient notice thereof."[433]

4.39. That represents a further acknowledgment that Uruguay has failed to comply with the first stage prescribed in Article 7 of the Statute. In no circumstances can a mere initial contact by a private company supplant formal consultation of CARU by the Party concerned when the mechanism for prior notification and consultation prescribed in the Statute had not even been set in train.

4.40. Uruguay also stated in its pleadings that "on 10 October 2003 CARU approved a plan for monitoring and studying construction of the mill"[434]. No reference is given. That statement is, quite simply, false. On the contrary, the minutes for that meeting of CARU state very clearly that:

> "once the material is available, and we hope DINAMA will forward it to us as soon as possible, the relevant technical meetings *will be held* for the purposes of carrying out

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[431]CR 2006/47, p. 38, para. 16 (Condorelli), citing the statement given on oath by Ms Petrocelli, President of the Uruguayan delegation to CARU, as set out in the Observations of Uruguay submitted to the Court on 2 June 2006 (Vol. II, Exhibit 1).

[432]Documents submitted by Uruguay on 2 June 2006, Vol. II, Exhibit 2, CARU Ann. I.

[433]Senate of the Eastern Republic of Uruguay, Environment Committee, sitting of 12 Dec. 2005. Presentation by Uruguayan delegates to CARU, p. 4, Anns., Vol. VII, Ann. 5.

[434]CR 2006/47, p. 39, para. 16 (Condorelli).

the analyses and assessments necessary for the plan, *in accordance with the procedure prescribed in Article 7*"[435].

4.41. That statement was made one day after the authorization issued by DINAMA and in ignorance of the fact that that authorization even existed. Clearly, on 10 October 2003, Uruguay had not discharged its obligations pursuant to Chapter II of the Statute.

4.42. During the same pleadings, Uruguay also claimed that: "On the same day, Uruguay gave its prior environmental authorization for the mill and notified the President of the Argentine delegation to CARU, who was the President of CARU at the time."[436] That is not so:

168 — first, the initial environmental authorization was granted for CMB on 9 October 2003, not 10 October, in other words one day before the CARU meeting, without CARU even being aware of the authorization;

— secondly, no notification whatever was given to the President of the Argentine delegation;

— thirdly, not only was no notification whatever given either to CARU or Argentina, but it was Argentina which had to call an extraordinary meeting of CARU one week later, on 17 October 2003, to discuss this serious matter.

4.43. Indeed, it is apparent from the minutes of that extraordinary meeting[437] that the President of CARU had ascertained from the Argentine Ambassador to Montevideo that the Uruguayan Ministry of Housing, Land Use Planning and Environmental Affairs (MOVOTMA) had authorized CMB to be built without consulting CARU. He left no room for doubt that this was incompatible with Article 7 of the Statute. Furthermore, the President of CARU referred expressly to Article 12 (the trigger for recourse to the International Court of Justice) "in the event of a difference of opinion" and clearly noted that "the MOVOTMA decision ought to have been declared after the prescribed mechanism had been applied"[438].

4.44. The Uruguayan delegation did not dispute what the President of the Argentine delegation said. The Uruguayan delegation appeared, according to its President, to be unaware of the authorization. Indeed he stated "as a delegation we are not in a position to put forward or formulate other types of consideration since we do not have all the facts, including facts that we could forward by way of background information to the Commission"[439]. A strange way indeed for Uruguay to "discharge its obligations pursuant to Article 7": the Uruguayan delegation to CARU itself admits it does not have all the facts, even where they would be indispensable pieces of information for the Commission.

169 4.45. There can be no clearer basis for establishing that Uruguay failed to submit the CMB plan to CARU than the words of the President of the Uruguayan delegation. After stating that she was unaware of the Ministry's decision and that her delegation was of the belief that that decision

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[435]CARU, Minutes 10/03 of 8 Oct. 2003, pp. 1912-1913, Anns., Vol. III, Ann. 23 (emphasis added).

[436]CR 2006/47, p. 39 (Condorelli).

[437]CARU, Minutes 11/03, extraordinary meeting of 17 Oct. 2003 called by Argentina. Anns., Vol. III, Ann. 5.

[438]*Ibid.*, p. 6.

[439]*Ibid.*

referred only to one project, she concluded by saying: "That project has not got this far [to CARU]."[440]

4.46. If it were true that Uruguay was of the view that its prior dealings fulfilled the obligations prescribed in Article 7, the Uruguayan delegation would not have failed to say as much. There is not the slightest trace in the CARU minutes of a claim by Uruguay that the procedure prescribed in the Statute was complied with. On the contrary, Uruguay has once again expressly acknowledged that it failed to follow the directions set out in Article 7 of the Statute.

4.47. In conclusion, by authorizing the construction of the CMB mill without consulting CARU, Uruguay violated the obligation incumbent on it pursuant to Article 7 of the 1975 Statute. There is no justification for that breach, nor are there any grounds to excuse its wrongfulness. It not only constitutes in and of itself a wrongful international act against Argentina but also precludes any possibility of the subsequent articles being implemented.

B. The authorization of 14 February 2005 concerning the Orion mill

4.48. On 14 February 2005 the Government of Uruguay authorized the Finnish company Botnia to construct a pulp mill, the project name being "Orion", on the outskirts of the town of Fray Bentos (Río Negro Department) on the left bank of the River Uruguay, less than 7 km from the CMB mill. Once again, the authorization was granted despite the fact that CARU had
170 requested information on the project without having been officially notified of it, and without the information required under Article 7 having been forwarded[441].

4.49. It is difficult to imagine how a project on such a scale[442], the largest industrial project ever planned for the shared section of the River Uruguay, can have been regarded by Uruguay as not falling within the scope of Article 7 of the Statute. Even the report drawn up by DINAMA, which classified the CMB plan under the relevant Uruguayan legislation in category "C" ("Activities, constructions or works, the execution of which may produce negative environmental impacts of qualitative and quantitative significance, whether or not preventive or mitigating measures are foreseen"), is evidence of the incomplete and unsatisfactory nature of the environmental impact assessment supplied by Botnia. Particular attention is drawn to "gaps in information, contradictions (even within the document) and vague and unsatisfactory replies"[443]. Despite the belief expressed by the Uruguayan authorities that the works are likely to cause serious damage to the environment and therefore fall within the scope of Article 7, first paragraph, of the Statute, they decided not to discharge their obligation to submit the project for examination by CARU, the only body with competence to deal with the matter.

4.50. The Uruguayan actions were exactly the same as for the CMB project. The Environment Ministry (MOVOTMA) authorized the construction of Orion without first going through CARU as Article 7 requires; Argentina, which had learned of the authorization through

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[440] *Ibid.*

[441] See paras. 2.54-2.55 above.

[442] See para. 0.16 above and Chap. VII, Sec. IV below.

[443] Department of the Environment (DINAMA), Environmental Impact Assessment Division, *Construction of a pulp mill and associated works*, file 2004/14001/1/01177, Montevideo, 11 Feb. 2005, Anns., Vol. V, Ann. 8.

the media, tried to consult CARU through its delegation in order to ensure compliance with the obligations arising under Chapter II of the Statute[444].

171 4.51. This behaviour on the part of Uruguay is all the more serious since Uruguay could not have been unaware either of the dispute already caused by the authorization of the CMB project or of its promise to return to CARU. Nor could it have been ignorant of the clear position taken by Argentina on the need to comply with the procedure prescribed in Chapter II of the 1975 Statute. Thus, when the issue of a meeting with representatives of Botnia was raised in CARU, "the Argentine delegation stressed the importance of the consultation mechanism provided for by the Statute of the River Uruguay"[445]. The outgoing Uruguayan Government, just a few days before the handover of power to President Vázquez, was fully aware that by granting Botnia authorization for the Orion project on 14 February 2005, without going through CARU, it would aggravate the dispute.

4.52. The position within CARU in that regard was manifestly clear: during the meeting of 11 March 2005, the President of the Argentine delegation aired his concerns at the fact that he had learned through the media that Uruguay had apparently authorized Botnia to construct another pulp mill on the River Uruguay without going through CARU, despite a request for information from the Commission to that end. Indeed, in a letter to DINAMA of 16 November 2004, CARU had made it known that it had learned of the steps taken by Botnia to obtain an authorization to proceed with construction and requested more information[446]. The President of the Uruguayan delegation personally confirmed at the meeting of 11 March 2005 that, for his part, his delegation did not know about the authorization, but that it was aware of the media articles about the plan referred to by his Argentine colleague[447].

4.53. On 6 May 2005 at CARU, the President of the Argentine delegation noted once more that the mechanism for prior consultation (Articles 7 *et seq.*) prescribed in the Statute had not been complied with for either the CMB or the Orion project. If the situation continued, he said,
172 Argentina would reserve the right to set in train the procedures provided for in the Statute for the settlement of disputes[448], namely conciliation or judicial settlement. The response from the President of the Uruguayan delegation confirms the Argentine position; "the facts were as stated by H.E. the Ambassador [García Moritán, President of the Argentine Delegation]"[449]. This is a further instance of Uruguay's clear acknowledgment that it had failed to follow the mechanism prescribed in Chapter II of the Statute.

4.54. To this day, despite repeated requests by Argentina both before and after the authorization was granted to Botnia, CARU has still not been consulted on the project and Uruguay still refuses to consult it in that regard.

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[444]See para. 2.55 above.

[445]CARU, Minutes 03/04 of 8 June 2004, Anns., Vol. III, Ann. 26.

[446]Note SET-11037-UR of 16 Nov. 2004, Anns., Vol. III, Ann. 36.

[447]CARU, Minutes 03/05 of 11 March 2005, p. 9, Anns., Vol. III, Ann. 31.

[448]CARU, Minutes 05/05 of 6 May 2005, p. 4, Anns., Vol. III, Ann. 32.

[449]*Ibid.*

C. The authorization for Botnia to construct the port terminal (5 July 2005)

4.55. When giving the Botnia company authorization on 5 July 2005 to utilize the riverbed and construct a port for the exclusive use of the Orion mill, without consulting CARU, the Uruguayan Government behaved exactly as for the CMB and Orion mills. Once again Argentina learned of the project through the Uruguayan media and formally requested the Uruguayan Government to comply with the obligation prescribed in Article 7 of the 1975 Statute by a Note dated 27 June 2005, in other words before Uruguay had issued the authorization[450]. Once that authorization had been granted, the Argentine request was officially reiterated at CARU on two occasions, accompanied by a request to suspend work until CARU had made a determination on the project[451].

4.56. The Uruguayan authorization of 5 July 2005 includes utilization by Botnia of the
173 riverbed and the right to fill the bed, construct and operate the port terminal and carry out dredging work "essential to the port installations in order to allow ships to come alongside and manoeuvre, and to maintain and keep the access channel to the terminal open"[452]. Clearly, works with such features are among the various kinds referred to in Article 7 of the 1975 Statute, in particular the construction of new channels or any other works which are liable to affect navigation, the régime of the river or the quality of its waters.

4.57. Uruguay authorized the construction of the works, the utilization and filling of the riverbed its filling and the construction and maintenance of a new channel before consulting CARU in accordance with the mechanism for prior notification and consultation provided for in the Statute. This is not only flagrantly in conflict with the provisions of the 1975 Statute but also with the procedure followed for Port M'Bopicuá, where construction commenced after CARU had taken the decision that the works would not cause significant damage[453]. For that reason, the Argentine delegation requested that the works on the Botnia port should be suspended pending a decision by CARU, a request which Uruguay declined[454].

4.58. By authorizing Botnia to construct the Orion port, to utilize and fill the riverbed and construct and maintain a channel before even consulting CARU, Uruguay violated the obligation prescribed in Article 7 of the 1975 Statute.

D. The authorization for commissioning of the Botnia port terminal (24 August 2006)

4.59. The authorization for commissioning of the Botnia port terminal was given on 24 August 2006 by a resolution of DINAMA. Uruguay informed the Argentine delegation to
174 CARU of that authorization after the event; the President of the Uruguayan delegation merely stated that she was "at the disposal of the Argentine delegation to explain any points of uncertainty or forward any additional information it may consider relevant"[455]. The port terminal is now

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[450]Note MREU 168/05 of 27 June 2005 from the Argentine Embassy in Uruguay to the Uruguayan Ministry of Foreign Affairs, Anns., Vol. II, Ann. 7.

[451]CARU, Minutes 8/05 and 9/05, Anns., Vol. III, Anns. 34 and 35.

[452]Uruguay, Ministry of Transport and Public Works, resolution of 5 July 2005, Anns., Vol. VII, Ann. 6.

[453]See Chap. III, Sec. II.B (6) above.

[454]CARU, Minutes 9/05 of 14 Oct. 2005, Anns., Vol. III, Ann. 35.

[455]Note CARU-ROU 023/06 of 4 Sept. 2006, Anns., Vol. III, Ann. 37.

operational[456]. Argentina protested at its commissioning, stating that this conflicted with the provisions of the 1975 Statute, and asked Uruguay to suspend the commissioning of the terminal[457].

4.60. Since the authorization for commissioning of the Botnia port terminal was issued without CARU being consulted, it constitutes a breach of Article 7 of the 1975 Statute on the grounds that it relates to an activity which is liable to affect navigation of the river.

E. The authorization for Botnia to extract and use water from the River Uruguay (12 September 2006)

4.61. Continuing with its systematic policy of unilateral authorizations, on 12 September 2006 Uruguay authorized Botnia to extract and use the waters of the River Uruguay for industrial purposes, namely the production of pulp[458]. On 17 October 2006, the Uruguayan delegation forwarded the text of the resolution to CARU.

4.62. Article 27 of the 1975 Statute states in that regard:

> "The right of each Party to use the waters of the river, within its jurisdiction, for domestic, sanitary, industrial and agricultural purposes shall be exercised without prejudice to the application of the procedure laid down in articles 7 to 12 when the use is liable to affect the régime of the river or the quality of its waters."

175 It is clear from the wording of Article 27 that that Article is not a "licence to pollute", and that it in no way precludes the Parties from following "the procedure laid down in Articles 7 to 12" before every first use.

4.63. The authorization granted (until 30 June 2011) provides for the extraction and use of a maximum of 60,000,000 m^3 of water per annum or at a flow rate of 1,900 litres per second without exceeding the maximum volume[459]. This is indisputably a use which is liable to affect the régime of the river or the quality of its waters[460]. Uruguay was required to follow the procedure prescribed in Articles 7 to 12 of the 1975 Statute and did not do so.

4.64. On a more general point, it should be noted that Uruguay can in no way rely on Article 27 in order to exonerate itself from its obligations under the 1975 Statute, as it did during the hearings on the provisional measures requested by Argentina. On that occasion it claimed, for example, that Article 27 of the Statute "expressly permits both Uruguay and Argentina to use the river for industrial purposes"[461] and that that Article "recognizes the right of each Party to exploit the waters of the river for domestic, sanitary, industrial and agricultural purposes"[462]. Neither of those statements is, of course, disputed; but it is unacceptable to infer as a result, as Uruguay has

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[456]The terminal now even has customs facilities, which Uruguay also authorized unilaterally by Decree No. 143358 of the President of Uruguay (2 October 2006).

[457]Anns., Vol. III, Ann. 41. See also para. 2.85.

[458]Resolution of the Ministry of Transport and Public Works of 12 Sept. 2006, Anns, Vol. VII, Ann. 16.

[459]*Ibid*.

[460]See in this regard the Note of 1 Nov. 2006 from the Minister for Foreign Affairs of Argentina to his Uruguayan counterpart, Ann., Vol. II, Ann. 33.

[461]CR 2006/47, p. 44, para. 9 (Reichler).

[462]CR 2006/47, p. 29, para. 39 (Boyle).

done, that Article 27 could have the effect of exonerating it from performing obligations that are imposed by other provisions of the Statute.

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Section II

Uruguay has failed to notify projects through CARU (Article 7, second and third paragraphs)

4.65. After being consulted by the party which plans to carry out or authorize the construction of works liable to affect the navigation, the régime of the River or the quality of its waters, CARU has 30 days to respond. If it finds that the plan might cause significant damage to the other party or if no decision can be reached, the party concerned is to notify the plan to the other party through CARU. The third paragraph of Article 7 reads: "Such notification shall describe the main aspects of the work and, where appropriate, how it is to be carried out and shall include any other technical data that will enable the notified Party to assess the probable impact of such works on navigation, the régime of the river or the quality of its waters."

4.66. Evidently the fact that Uruguay failed to submit the pulp mill plans to CARU does not mean it has the right to release itself from this second obligation, otherwise commission of the first breach described would enable a party to exonerate itself at little cost from all subsequent obligations prescribed in Articles 7 *et seq.* of the Statute, and that cannot be allowed. Uruguay authorized the construction of the contested mills without discharging the subsequent obligation to notify the other party through CARU and to supply it with the information required under Articles 7 and 8 of the 1975 Statute.

A. Information on the CMB plan

4.67. At the hearing of 8 June 2006, Uruguay pleaded that it had discharged the obligation to inform CARU, which had asked for and received "substantial and detailed additional information regarding the mill"[463]. The truth of the situation is that on 17 October 2002, once it had
177 unofficially learned of the CMB plan, CARU sought information from Uruguay's Ministry of Housing, Land Use Planning and Environmental Affairs (MOVOTMA), and received no reply. CARU reiterated its request on 21 April 2003. The information forwarded by DINAMA to CARU on 14 May 2003 related only to information already available on its internet site, and nothing more[464]. On 15 August 2003 the President of CARU, Mr. Belvisi (Uruguay), wrote to his Minister to inform him of the need for further information[465]. Despite these repeated requests, instead of sending the information sought, DINAMA directly granted the initial environmental authorization on 9 October 2003, without going through CARU.

4.68. Uruguay also referred to a public hearing held in Fray Bentos, during which it claims to have "officially disclosed the information on the project"[466]. Nonetheless, contrary to the claims submitted by Uruguay, no delegate from CARU was involved in those meetings; only its technical secretary and a "consultant" from CARU were present, and they reported on the discussions which

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[463]CR 2006/47, p. 38, para. 16 (Condorelli).

[464]Notes SET-10413-UR of 17 Oct. 2002, SET-10617-UR of 21 April 2003 and SET 10706-UR of 15 Aug. 2003. Anns., Vol. III, Anns. 12, 16 and 18.

[465]Note SET-10706-UR of 15 Aug. 2003, Anns., Vol. III, Ann. 18.

[466]CR 2006/47, p. 39, para. 16 (Condorelli).

took place there[467]. Moreover, even if some CARU delegates had been present and had subsequently informed CARU, that would still not be what the Statute requires. CARU members participate regularly in meetings of a very diverse nature to which they are invited, whether in their capacity as CARU members or otherwise. Uruguay cannot seriously claim that the fact that two members of CARU may have been involved in a public information meeting on the plan, which was not the case, amounts to performance of the obligation incumbent on a State to inform CARU in accordance with Article 7, or even that it can in any way be linked to the mechanism for prior notification and consultation provided for in Chapter II of the 1975 Statute.

4.69. The explanation put forward by Uruguay to the Court during the hearings of 8 and 9 June 2006 in support of its claim that it complied with the obligation to forward CARU information concerning CMB is, moreover, clearly inconsistent with the position it adopted earlier:
178 to show that in its eyes, the authorization to construct the CMB mill did not fall within the scope of CARU, Uruguay supposedly chose to forward information directly to Argentina through its Embassy in Montevideo. The fact that it was Argentina rather than Uruguay that forwarded that information to CARU in February 2004 was due precisely to the refusal by Uruguay to discharge its obligation. Similarly the fact that, in the light of Uruguay's breach of its obligation, Argentina had to forward the file to CARU in no way excuses that breach by Uruguay, nor does it imply any agreement whatever on a change in procedure. On the contrary, the situation, which is remarkable to say the least, is proof of Uruguay's flagrant breach of its obligation to provide information through CARU. Furthermore, in his letter accompanying the file supplied by Uruguay, the President of the Argentine delegation asks for the relevant information to be sent to the Sub-Committee on Water Quality, so that an assessment can be made of the extent to which the planned works and their operation may affect the quality of the waters of the River Uruguay, *"without prejudice to the considerations formulated in relation to Article 7 of the Statute of the River Uruguay by the Argentine delegation at the extraordinary plenary meeting of 17 October 2003"*[468].

4.70. Indeed, as practice shows, referral to the relevant sub-committee is the preliminary step to decision making at plenary meetings of the Commission[469]. Clearly, Argentina reserved its position with regard both to Uruguay's breach of the obligations to provide information and give notification under Articles 7 and 8 of the Statute and to the duty on Uruguay, which still stands, to comply with those obligations.

179 **B. Information on the Orion mill**

4.71. During the hearing of 8 June 2006, Uruguay went through the same exercise as for the CMB plan by explaining that it had also complied with its obligations in respect of the Orion mill. In so doing, Uruguay stated that representatives of the Botnia company met CARU and provided information, that members of CARU travelled to Finland and Spain to visit Botnia and ENCE mills, and that CARU "organized a meeting" with representatives of Botnia on 19 October 2004[470]. In point of fact, although there were contacts between the companies and CARU, the only thing this shows is that CARU regarded itself as competent to deal with the plans in question. However, those contacts were purely preliminary in nature and could in no way whatever supplant the procedure set out in Chapter II of the 1975 Statute. On the contrary, these communications with

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[467]See paras. 2.11-2.13.

[468]CARU, Minutes 1/04, extraordinary meeting of 15 May 2004 called by Argentina, p. 5, Anns., Vol. III, Ann. 24.

[469]See Chap. III.

[470]CR 2006/47, pp. 39-40, para. 18 (Condorelli).

CARU constitute additional evidence of the need to submit those plans to the Commission, in contrast to the conduct of Uruguay and its pleadings.

4.72. Uruguay has never given the required information to CARU. The information subsequently forwarded to Argentina concerning Orion was communicated solely in the context of the High-Level Group (GTAN) proceedings and proved to be manifestly incomplete[471].

C. Uruguay has expressly acknowledged that it failed to supply information to CARU in accordance with the 1975 Statute

4.73. During the official presentation of the Uruguayan position by the Presidency of
180 Uruguay on 29 May 2006, it fell to Ambassador Felipe Paolillo to set out the legal aspects of the dispute with Argentina. He explained that:

> "Uruguay informed the Argentine authorities of the projects and the construction of works and on several occasions furnished the information requested by the Argentine authorities. *However, it did not do so through the procedure established in the Statute of the River Uruguay*. Why was this? Because authorities at the highest level in both nations, namely the Ministers for Foreign Affairs in the one case and the Presidents of the two countries in the other, had reached an agreement on other alternative procedures."[472]

4.74. At the end of that official presentation, the Uruguayan Minister for Foreign Affairs stated that the speakers "had summarized the exact Uruguayan position in 40 minutes"[473].

4.75. Ambassador Paolillo's explanation calls for comment on several counts. *First,* it includes an express acknowledgment, devoid of any ambiguity, that Uruguay did not forward the information requested "through the procedure established in the Statute of the River Uruguay". *Secondly*, the Parties never reached an agreement to follow procedures which were not those established in the 1975 Statute, much less decide to suspend the application of Chapter II thereof. *Thirdly*, the statement that Uruguay forwarded all information requested to Argentina is clearly refuted by the facts.

D. The information forwarded by Uruguay was and remains incomplete

4.76. The obligation incumbent on the Parties under the Statute is to forward all relevant
181 information. The distinguishing feature of the obligation concerning prior notification and consultation is its purpose, which is to allow the other Party concerned "to assess the probable impact of such works on navigation, the régime of the River or the quality of its waters" (Art. 7, third para.). It is therefore necessary to supply not just a few pieces of information, but full and exhaustive details which enable such an assessment to be made in an effective way.

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[471]GTAN, Minutes No. 1 of 3 Aug. 2005; report of the Argentine delegation of 3 Feb. 2006, Anns., Vol. IV, Anns. 4 and 1.

[472]Presidency of the Eastern Republic of Uruguay, "Uruguay gave information on construction of pulp mills", 29 May 2006. Anns., Vol. VI, Ann. 13 (emphasis added).

[473]Presidency of the Eastern Republic of Uruguay, "Implications: widespread satisfaction produces national unity", 29 May 2006. Available at http://www.presidencia.gub.uy/_web/noticias/2006/05/2006052911.htm

4.77. It is not correct to state, as Ambassador Paolillo did, that Uruguay forwarded Argentina all the information it requested. The minutes of the first meeting of the GTAN and the final report of the Argentine delegation to that Group provide a specific summary of the information requested by Argentina which Uruguay failed to forward[474].

4.78. The Hatfield Report of 27 March 2006 recognized that the information on the CMB and Orion mills was insufficient: "Assertions that the CIS, Botnia and CMB have not provided sufficient information on the proposed design, operating procedures and environmental monitoring for the mills are generally valid"[475]; moreover, this comes over two years after the authorization granted for the CMB mill and more than one year after the authorization for Botnia. Nothing that has happened subsequently has changed that situation.

4.79. By failing to forward to CARU the information needed for CARU and Argentina to be able to make an assessment of the impact of the planned works on the river and the areas affected by it, Uruguay was in breach of the international obligation incumbent on it under Articles 7 and 8 of the 1975 Statute.

182

Section III

The contested authorizations were issued by Uruguay despite opposition from Argentina and despite the absence of a settlement to the dispute (Article 9)

4.80. Uruguay has failed both to consult CARU on all the disputed plans for works or uses of the river (construction of the CMB and Orion mills and the Botnia port, commissioning of that port and extraction and use of river water by Botnia) and to forward the necessary information on the two mills, but furthermore it authorized those works and uses of the river despite Argentine objections and despite the absence of a settlement of the dispute between the two countries. This is blatantly inconsistent with the procedure prescribed in Chapter II of the 1975 Statute, which provides that the Party concerned may carry out or authorize the work planned *if* CARU expressly decides that the works will not cause significant damage to the other Party (Art. 7, first and second paragraphs), or if the latter Party reaches the same conclusion or does not respond after receiving the relevant information (Art. 9). In the event of a dispute arising between the Parties in that regard which cannot be resolved, it is for the Court to resolve it (Art. 12). As was explained in Chapter III of the Memorial, as long as no decision in favour of the construction or the authorization to proceed with the construction is made, the Party concerned may not take unilateral action to that effect.

4.81. If Uruguay is to be believed, the Statute places the Parties under an obligation merely to provide information, and the Parties are in sole control of their decisions. Chapter II is clear, however: first, CARU, as a bi-national body, must be consulted on the matter; then the Party concerned must first supply CARU — and where necessary the other Party, through CARU — with
183 information in accordance with the provisions of the Statute. Finally, the Party which has been

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[474]GTAN, Minutes of the first meeting, Montevideo, 3 Aug. 2005, Anns. Vol. IV, Ann. 4; GTAN, report of the Argentine delegation, Buenos Aires, 3 Feb. 2006, Anns., Vol. IV, Ann. 1.

[475]Re: Cumulative Impact Study — Uruguay Pulp Mills, 27 March 2006, p. 2. It also states: "there is a lack of supporting information in their documents *[Botnia and CMB's environmental impact assessments]* to show that the mills would actually use BAT in all aspects of their design and operations" *(ibid.)* and continues as follows: "Both EIAs are replete with generic descriptions of modern mill features [much of Orion EIA text is copied from IPPC 2001], with little information on what the company is actually intending to install." (P. 5, A.3.) The report lists a significant number of shortcomings in impact studies assessed by experts. Available at

http://www.ifc.org/ifcext/lac.nsf/Content/Uruguay_Pulp_Mills_TOR , Anns., Vol. V, Ann. 9.

notified and duly informed has the right to assess the plan and to respond through CARU on its compatibility with the Statute. As was explained in Chapter III of the Memorial[476], the other Party's point of view is not simply an opinion: either there is agreement between the Parties, whether in CARU or directly, and the plan can be authorized and the works carried out; or there is a dispute which must be resolved either by direct negotiations or by a judicial settlement through the International Court of Justice.

4.82. This breach of Article 9 goes hand in hand with and is the consequence of the breach of the first paragraph of Article 7, but is nonetheless distinct from it: Uruguay should not only have informed CARU first — and if necessary Argentina, through CARU — of the plans, but should also have refrained from authorizing the works for as long as the procedure had not reached a conclusion and until such time as all the competent bodies had responded to the plan. This is an obligation of result[477].

4.83. Having regard to the conduct of Uruguay and the information available, Argentina has consistently expressed its disagreement with the construction of the CMB and Orion mills and the Orion port, the commissioning of that port and the extraction and use of river water by Botnia[478]. Despite those protests, despite the fact that the Parties had entered into direct negotiations with a view to resolving the dispute, and despite its submission to the Court by Argentina in accordance with the 1975 Statute, Uruguay has issued the authorizations to carry out the works and utilize the waters and the riverbed without waiting for a decision from CARU, a direct settlement, or settlement by the Court, as provided for in the 1975 Statute. Thus Uruguay has committed a number of internationally wrongful acts.

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Section IV

The conduct of Uruguay constitutes a material breach of the 1975 Statute

4.84. Uruguay's repeated conduct is evidence of a systematic repudiation of the Statute of the River Uruguay. Indeed, from October 2003 to date, each time Uruguay has found itself in a situation where it was required to apply the procedure prescribed in Chapter II of the 1975 Statute, it has systematically chosen not to do so. That conduct constitutes a material breach of the 1975 Statute within the meaning of Article 60 of the Vienna Convention on the Law of Treaties which sets out the situation with regard to customary law on the subject[479].

4.85. Indeed, pursuant to Article 60 (3) of that Convention,

> "A material breach of a treaty, for the purposes of this article, consists in:
>
> *(a)* a repudiation of the treaty not sanctioned by the present Convention; or
>
> *(b)* the violation of a provision essential to the accomplishment of the object or purpose of the treaty."

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[476] See Chap. III, Sec. II.B.(3).

[477] See CR 2006/46 (Pellet), p. 60, para. 12 (2nd indent).

[478] See above, paras. 4.55-4.59, 4.60-4.61, 4.62-4.65.

[479] *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 47, para. 94; *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997,* p. 38, para. 46 and p. 62, para. 99.

4.86. In the present case, each of these forms of a material breach has occurred. Firstly, Uruguay's ongoing conduct and the explanations of the Minister for Foreign Affairs, Mr. Opertti, and the President of the Uruguayan delegation to CARU, Ms Petrocelli, to the Uruguayan Senate are clear evidence of a repudiation of the treaty concerned[480]. They embody a stance the purpose of
185 which is to release Uruguay from the obligations arising under the 1975 Statute for reasons which are not recognized either in the Statute itself or in the law of treaties[481].

4.87. Secondly, the procedure prescribed in Chapter II unquestionably constitutes a provision essential to the accomplishment of the object and purpose of the 1975 Statute. Without a procedure for notification and consultation, that treaty would lose its essential thrust[482]. As the Court has noted, "the procedural mechanism put in place under the 1975 Statute constitutes a very important part of that treaty régime"[483]. By its conduct, Uruguay has systematically committed a serious material breach of provisions essential to the accomplishment of the object and purpose of the 1975 Statute.

4.88. Argentina wishes to point out that although the breaches committed by Uruguay of the provisions of the 1975 Statute are "material" within the meaning of Article 60 of the Vienna Convention on the Law of Treaties, the Statute has in no way been terminated and its operation has not been suspended. Those breaches, which fall within the law of responsibility and not the law of treaties[484], entail the international responsibility of Uruguay with all the consequences that implies.

4.89. *In conclusion*, it would appear that:

(a) By authorizing the construction of CMB on 9 October 2003, Uruguay violated the obligation incumbent on it to comply with the procedure prescribed in Chapter II of the 1975 Statute, in particular:

(i) the obligation to consult CARU;

(ii) the obligation to provide CARU with the information requested;

186 (iii) the obligation to notify Argentina of the project through CARU;

(iv) the obligation to reach an agreement with the other Party or to await settlement of the dispute in accordance with the procedure prescribed in Chapter II of the 1975 Statute, before authorizing the construction of the CMB mill.

(b) By authorizing the construction of Orion on 14 February 2005, Uruguay violated the obligation incumbent on it to comply with the procedure prescribed in Chapter II of the 1975 Statute, in particular:

(i) the obligation to consult CARU;

(ii) the obligation to provide CARU with the information requested;

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[480]See paras. 2.26-2.27 above.

[481]Cf. Bruno Simma and Christian Tams, "Article 60", in: Olivier Corten and Pierre Klein (ed.), *Les Conventions de Vienne sur le droit des traités. Commentaire article par article* (Brussels: Bruylant, 2006), pp. 2140-2141, para. 16.

[482]See Chap. III, Sec. II.B.

[483]Order of 13 July 2006, para. 81.

[484]*Gabčíkovo-Nagymaros Project (Hungary/Slovakia), op. cit.*, para. 47.

(iii) the obligation to notify Argentina of the project through CARU;

(iv) the obligation to reach an agreement with the other Party or to await settlement of the dispute in accordance with the procedure prescribed in Chapter II of the 1975 Statute, before authorizing the construction of the Orion mill.

(c) By authorizing the construction of the Orion port on 5 July 2005 and its commissioning on 24 August 2006, Uruguay violated the obligation incumbent on it to comply with the procedure prescribed in Chapter II of the 1975 Statute, in particular:

(i) the obligation to consult CARU;

(ii) the obligation to provide CARU with the information requested;

(iii) the obligation to notify Argentina of the project through CARU;

(iv) the obligation to reach an agreement with the other Party or to await settlement of the dispute in accordance with the procedure prescribed in Chapter II of the 1975 Statute, before authorizing the construction and commissioning of the Orion port.

187 *(d)* By authorizing Botnia to extract and use 60,000,000 m^3 of water per annum or at a flow rate of 1,900 litres per second from the River Uruguay for its Orion mill on 14 September 2006, Uruguay violated the obligation incumbent on it to comply with the procedure prescribed in Chapter II of the 1975 Statute, in particular:

(i) the obligation to consult CARU;

(ii) the obligation to provide CARU with the information requested;

(iii) the obligation to notify Argentina of the project through CARU;

(iv) the obligation to reach an agreement with the other Party or to await settlement of the dispute in accordance with the procedure prescribed in Chapter II of the 1975 Statute, before granting that authorization.

(e) All those authorizations, and the obstinate refusal on the part of Uruguay to submit to the procedure prescribed in Chapter II of the 1975 Statute, constitute a material breach of that Statute, which entails the responsibility of Uruguay.

CHAPTER V

BREACHES BY URUGUAY OF MATERIAL OBLIGATIONS

191 5.1. The previous Chapter described the breaches by Uruguay of the obligations incumbent upon it pursuant to Chapter II of the 1975 Statute. This Chapter describes the breaches by Uruguay of the other obligations incumbent on it pursuant to the 1975 Statute. The two categories of breach are closely linked.

5.2. The 1975 Statute neither provides for nor implies any hierarchy among the rules and the obligations it lays down. The obligations are often interlinked, even though breaches of them constitute distinct internationally wrongful acts. The same is true of the two categories of obligation imposed on the Parties by the Statute: material obligations to prevent pollution and other damage to the River Uruguay (which can be regarded as obligations of result) on the one hand; procedural obligations of co-operation, prior notification and consultation (which have similarities to obligations of conduct) on the other, the latter constituting the means of achieving the results envisaged by the former. These are integrated obligations which together contribute to achieving the objective of the Statute as set out in Article 1, namely "to establish the joint machinery" — which relates to procedural obligations — "necessary for the optimum and rational utilization of the River Uruguay, in strict observance of the rights and obligations arising from treaties and other international agreements in force for each of the Parties" — which relates to "material" obligations.

5.3. In this chapter, we will show that Uruguay has systematically violated the obligations incumbent on it pursuant to the 1975 Statute in order to authorize construction and future commissioning[485]. The breaching by Uruguay of the obligation to prevent pollution and to protect the quality of the waters of the River Uruguay and its ecosystem will first be established by demonstrating: that Uruguay has systematically failed to take the measures necessary to protect the quality of the waters of the River Uruguay and its ecosystem; that Uruguay decided not to ensure
192 that a complete environmental impact assessment was produced; and that it neglected to take appropriate measures to prevent pollution, firstly by failing to comply with the obligations of prior notification and consultation incumbent on it under Chapter II of the 1975 Statute, and secondly by authorizing the construction of the Orion mill at an inappropriate site and neglecting to make it a requirement that the mill should employ the best available techniques and follow the best international practice. It will then be demonstrated that Uruguay has failed to comply with its obligation to take the measures necessary to prevent any significant damage to the régime of the River Uruguay or the quality of its waters, and that Uruguay has violated its obligation to avoid any change in the ecological balance in the river and the areas affected by it, as well as the obligation not to cause a significant adverse transboundary impact.

Section I

Introductory remarks

5.4. By way of introduction, Argentina would like to make it clear that the principle of sustainable development applies as part of the 1975 Statute and that it does not in any circumstance allow Uruguay not to comply with the provisions of the 1975 Statute. Argentina notes also that the principle of permanent sovereignty over natural resources, in the case of a shared resource such as

[485] As regards the CMB plan, see paras. 0.17 and 4.2 above.

the River Uruguay, must be applied in keeping with the obligations prescribed in the 1975 Statute, and that the Statute must be interpreted and implemented in accordance with the rules and principles of international law that are applicable to the present case, including the precautionary principle.

A. The principle of "sustainable development" applies to the 1975 Statute and does not allow Uruguay not to comply with its obligations

5.5. The concept of "sustainable development" requires Uruguay and Argentina to deal with the objectives of environmental protection and economic development in an integrated fashion. That approach is reflected in many international instruments, including several provisions of the
193 Rio Declaration on Environment and Development of 1992. Principle 3 thereof states that "the *right to development* must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations" (emphasis added). Principle 4 of the declaration adds that: "in order to achieve sustainable development, *environmental protection shall constitute an integral part of the development process* and cannot be considered in isolation from it" (emphasis added).

5.6. Under the principle of sustainable development, States fulfil their right to development while complying with the obligations incumbent on them as regards the promotion and protection of the environment. This includes the obligations arising out of the 1975 Statute and the obligations to which that Statute refers. In its Judgment in the case concerning the *Gabčíkovo-Nagymaros Project*, the International Court of Justice noted the need for reconciliation:

> "Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind — for present and future generations — of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past. *This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.*"[486]

5.7. The concept of "sustainable development" cannot be relied upon to justify giving the objectives of economic development any priority over essential environmental needs. Uruguay has acknowledged that its "sovereign right to implement a sustainable economic development project in its own territory" must not violate "obligations under the Statute, or the anti-pollution standards
194 of the CARU, which were jointly developed by Uruguay and Argentina"[487]. The 1975 Statute is closely bound up with the principle of sustainable development, and Uruguay cannot properly rely on that principle as a ground for not complying with the obligations incumbent on it under the Statute.

5.8. In practice, this means that the two objectives of environmental protection and economic development must be implemented in a balanced way, with neither having supremacy over the other. That principle was reaffirmed by the Arbitral Tribunal in the "Iron Rhine" Arbitration:

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[486] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), op. cit.*, p. 78, para. 140; emphasis added.

[487] CR 2006/47, para. 51 (Reichler).

> "Since the Stockholm Conference on the Environment in 1972 there has been a marked development of international law relating to the protection of the environment. Today, both international and EC law require the integration of appropriate environmental measures in the design and implementation of economic development activities. Principle 4 of the Rio Declaration on Environment and Development, adopted in 1992 (31 I.L.M. p. 874, at p. 877), which reflects this trend, provides that 'environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it'. Importantly, these emerging principles now integrate environmental protection into the development process. Environmental law and the law on development stand not as alternatives but as mutually reinforcing, integral concepts, which require that where development may cause significant harm to the environment there is a duty to prevent, or at least mitigate, such harm (see paragraph 222). This duty, in the opinion of the Tribunal, has now become a principle of general international law. This principle applies not only in autonomous activities but also in activities undertaken in implementation of specific treaties between the Parties."[488]

The Arbitral Tribunal recognized that "[t]he mere invocation of such matters does not, of course, provide the answers in this arbitration to what may or may not be done, where, by whom and at whose costs"[489]. The Tribunal therefore analysed in detail the manner by which those principles were to be applied to the case submitted to it, and stated in paragraphs 222 and 223 of its award:

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> "The use of the Iron Rhine railway started some 120 years ago and it is now envisaged and requested by Belgium at a substantially increased and intensified level. Such new use is susceptible of having an adverse impact on the environment and causing harm to it. Today, in international environmental law, a growing emphasis is being put on the duty of prevention. Much of international environmental law has been formulated by reference to the impact that activities in one territory may have on the territory of another. The International Court of Justice expressed the view that '[*t*]he existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment' (*Legality of the Threat or Use of Nuclear Weapons*, *Advisory Opinion*, *I.C.J. Reports 1996 (I)*, p. 226 at pp. 241–242, para. 29).
>
> Applying the principles of international environmental law, the Tribunal observes that it is faced, in the instant case, not with a situation of a transboundary effect of the economic activity in the territory of one state on the territory of another state, but with the effect of the exercise of a treaty-guaranteed right of one state in the territory of another state and a possible impact of such exercise on the territory of the latter state. The Tribunal is of the view that, by analogy, where a state exercises a right under international law within the territory of another state, considerations of environmental protection also apply. The exercise of Belgium's right of transit, as it has formulated its request, thus may well necessitate measures by the Netherlands to protect the environment to which Belgium will have to contribute as an integral element of its request. The reactivation of the Iron Rhine railway cannot be viewed in isolation from the environmental protection measures necessitated by the intended use of the railway line. These measures are to be fully integrated into the project and its costs."

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[488] *Iron Rhine Arbitration (Belgium* v. *Netherlands)*, Award of 24 May 2005, available on www.pca-cpa.org, para. 59.

[489] *Ibid.*, para. 60.

5.9. The Tribunal's approach to the application of the principles of international environmental law, especially the principle of sustainable development, is relevant to the present case: indeed it relates to the issue of "a transboundary effect of the economic activity in the territory of one state on the territory of another state". In such a situation, measures to protect the environment must, in the words of the Tribunal, "be fully integrated into the project and its costs".
196 In the present case, the solution means that the environmental considerations needed to form an integral part of Uruguay's decision-making process in respect of the launching of the Orion project and that such considerations were not to arise after the event. In accordance with the principle of sustainable development, no decision relating to the Orion project[490] (or the CMB project) could or should have been taken by Uruguay before all the environmental consequences had been studied and taken into consideration. Argentina has shown in Chapters II and IV[491] that it was nothing of the sort: Uruguay authorized the project, not only in violation of the 1975 Statute, but also before all the environmental consequences of the project had been established. That approach is incompatible with the standards associated with the concept of sustainable development, a crucial element of the framework put in place by the 1975 Statute governing a shared natural resource.

B. The principle of permanent sovereignty over natural resources must be applied in keeping with the obligations prescribed in the 1975 Statute

5.10. The same approach must be applied to the principle of permanent sovereignty over natural resources. That principle must be interpreted in the context of general international law, particularly in view of the limits to the exercise of sovereignty arising from the international principles of environmental protection and sustainable development. The general restriction imposed by environmental standards is reflected by Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration of 1992. It is clear from both those declarations that, especially by reason of the nature of the River Uruguay as a shared natural resource, Uruguay's right to exploit that resource cannot be fulfilled to the detriment of the obligation not to cause environmental damage to Argentina. In its Advisory Opinion on the lawfulness of the threat or use
197 of nuclear weapons, the International Court of Justice noted the customary nature of that obligation (also referred to by the Arbitral Tribunal in the Iron Rhine Arbitration)[492].

5.11. The 1975 Statute takes the obligations on Uruguay beyond customary law. The principle of permanent sovereignty over natural resources must be interpreted in the light of the treaty-based obligations subscribed to by Uruguay in the 1975 Statute. The principle of permanent sovereignty over natural resources cannot be relied upon to modify rights and obligations which are clearly prescribed in the 1975 Statute, whether in respect of the nature and extent of the obligations to co-operate or the obligation to prevent pollution pursuant to the Statute. The 1975 Statute "organizes" the exercise of permanent sovereignty over natural resources, in particular shared resources such as the River Uruguay, in accordance with the general principle of sovereignty. There is hardly any need to recall the words of the Permanent Court of International Justice:

> "The Court declines to see in the conclusion of any Treaty by which a State undertakes to perform or refrain from performing a particular act an abandonment of its sovereignty. No doubt any convention creating an obligation of this kind places a restriction upon the exercise of the sovereign rights of the State, in the sense that it

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[490] Where the CMB project is concerned, see paras. 0.17 and 4.2.

[491] See in particular Chap. IV, paras. 4.3-4.10.

[492] See para. 5.8. above. See also Chap. III, paras. 3.189-3.192.

> requires them to be exercised in a certain way. But the right of entering into international engagements is an attribute of State sovereignty."[493]

5.12. Uruguay cannot properly rely, in support of its argument concerning the principle of permanent sovereignty over natural resources, on paragraph 3 of resolution 2995 of 15 December 1972 of the General Assembly of the United Nations on Co-operation between States in the field of the environment. In the initial proceedings on provisional measures, Uruguay relied on paragraph 3 of that resolution to support the argument that the 1975 Statute was to be read in the
198 light of the principle of permanent sovereignty over natural resources, thus restricting the rights held by Argentina under the 1975 Statute. Uruguay's reference to United Nations General Assembly resolution 2995 is, however, devoid of substance. The resolution states that the General Assembly

> "2. Recognizes that co-operation between States in the field of the environment . . . will be effectively achieved if official and public knowledge is provided of the technical data relating to the work to be carried out by States within their national jurisdiction, with a view to avoiding significant harm that may occur in the environment of the adjacent area;
>
> 3. Further recognizes that the technical data referred to in paragraph 2 above will be given and received in the best spirit of co-operation and good-neighbourliness, without this being construed as enabling each State to delay or impede the programmes and projects of exploration, exploitation and development of the natural resources of the States in whose territories such programmes and projects are carried out."

Paragraph 3 concerns only the supply of technical data voluntarily shared in the spirit of paragraph 2. It does not relate to circumstances such as those in the present case, in which a State has entered into a treaty-based obligation to co-operate in a specific way with a neighbouring State, which includes *inter alia* a mechanism for prior consultation and exchange of information. Paragraph 3 cannot be relied upon separately as a basis for interpreting the provisions of the 1975 Statute. The fact that its adoption occurred three years prior to that of the 1975 Statute clearly shows that it can be of no relevance in the interpretation of the Statute, whose provisions are more recent and must in any event be construed and applied in accordance both with subsequent developments in international law and with the rule of specificity, whereby a specific rule must take precedence over a general rule.

199 C. The 1975 Statute must be interpreted and implemented in accordance with the precautionary principle

5.13. The Parties recognize that the 1975 Statute must be interpreted and applied in the light of the precautionary principle as a rule of international law[494]. It was also established in Chapter III that the precautionary principle applies pursuant to Articles 1 and 41 *(a)* of the 1975 Statute, which allow the obligations arising from international conventions that are applicable to the present case to be incorporated and applied[495]. In that regard, two international instruments are of particular significance: the Convention on Biological Diversity of 1992 and the POPs Convention of 2001;

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[493] *S.S. "Wimbledon", Judgments, 1923, P.C.I.J., Series A, No. 1*, p. 25.

[494] See CR 2006/47, para. 17; and CR 2006/49, paras. 14-17.

[495] See Chap. III, paras. 3.193-3.196.

both require Uruguay to apply the precautionary principle[496]. The precautionary principle is in addition to the general requirements of "vigilance and prevention" referred to by the International Court of Justice in the case concerning the *Gabčíkovo-Nagymaros Project*[497].

5.14. The precautionary principle applies to environmental protection where there are "threats of serious or irreversible damage"[498]. It provides that "lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation". In the present case the precautionary principle, alongside the obligation to prevent any damage to the environment, means that the parties to the 1975 Statute are required to notify each other of all the probable environmental consequences of their actions which may cause serious or irreversible damage *before* such actions are authorized or undertaken. The fact of authorizing the construction or operation of a pulp mill before the procedure prescribed in an international treaty (the 1975 Statute) has been completed, including the prior environmental impact assessment, is incompatible with an approach based on the precautionary principle (and the existing obligation to prevent pollution). A precautionary approach therefore requires the parties to the 1975 Statute to
200 comply with their obligations of notification and consultation before authorizing the construction or commissioning of works.

5.15. The precautionary principle may also have an impact on the burden of proof. In the words of a most eminent writer, "there are examples where application of the precautionary principle has reversed the burden of proof of risk. Exceptionally in this form it becomes impermissible to carry out an activity unless it can be shown that it will *not* cause unacceptable harm to the environment."[499] Argentina is therefore of the view that the 1975 Statute, like the POPs Convention of 2001 (the preamble to which acknowledges that "precaution . . . is embedded within this Convention"), adopts an approach in terms of precaution whereby the burden of proof is placed on Uruguay for it to establish that the Orion pulp mill will not cause significant damage to the environment. Uruguay failed to establish the environmental consequences of its actions prior to authorizing the Orion mill. It is shown in Chapter VII that Uruguay has still not assessed the impact of the construction and operation of the Orion mill on the quality of the waters of the River Uruguay. In particular, Uruguay has failed to carry out the appropriate studies, or to have such studies carried out, in order properly to understand the régime of the River Uruguay, the impact of the phenomenon of reverse flow and the consequences of climate change. Uruguay authorized the construction of the Orion mill without having established in advance whether the River Uruguay was capable of absorbing all the new pollutants which would be emitted over the estimated 40-year lifetime of the mill. The same is true of the impact on the atmosphere. Furthermore, Uruguay has wholly failed to study the consequences for air and water quality of a possible accidental discharge of pollutants[500].

201 5.16. During the public hearings on the request for the indication of provisional measures, Professor Boyle, on behalf of Uruguay, criticized the use by Argentina of the precautionary principle in the dispute[501]. The arguments put forward on that occasion display a complete misunderstanding of the application of the precautionary principle in a case such as the present one.

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[496]See the preamble to the 1992 Convention on Biological Diversity; also see the preamble to and Art. 1 of the POPs Convention of 2001.

[497]*Gabčíkovo-Nagymaros Project (Hungary/Slovakia), op. cit.*, para. 140.

[498]Rio Declaration of 1992, Principle 15.

[499]P. Birnie and A. Boyle, *International Law and the Environment*, 2nd ed., 2002, p. 118.

[500]See Chap. VII, Sec. V.

[501]CR 2006/49, paras. 14 *et seq*. (Boyle).

5.17. Uruguay argued, first, that the precautionary principle did not apply, claiming that there was no uncertainty about the environmental effects of the kraft technology, and that the environmental impact studies were comprehensive and precise about the likely consequences of each of the projects. Argentina contests that statement and refers to Chapter VII as a whole, where the issue of the environmental impact of the Orion mill (and the shortcomings in the impact study) is discussed. Chapter VII refers to a number of areas of uncertainty, such as the implications of reverse flow for the concentration of pollutants, wind direction, changes in climate and the likely impact of the presence of pollutants on the fish in the river. Moreover, the impact of a project is largely determined by the peculiar features of the environment which must experience the consequences of that project, and it cannot therefore be seriously contended that the use of a particular technology at other sites (kraft technology, in the present case) means that all uncertainty is forever laid to rest as far as its effects on the river environment are concerned. That basic principle is present in many international instruments concerning environmental impact assessments, for example those of the World Bank or the European Union[502]. Argentina refuses to accept that the environmental impact assessment submitted by Botnia is sufficiently specific and detailed. And the position was not clarified in the Cumulative Impact Study (CIS), as confirmed by the Hatfield report.

202 5.18. It is not, moreover (contrary to what Uruguay would seem to suggest), for Argentina to state how the risks posed by the pulp mill are to be managed or for it to determine what the socially acceptable level of risk would be. The 1975 Statute and other relevant international instruments provide a detailed legal framework for determining the steps Uruguay is (or is not) authorized to take when there is scientific uncertainty as to the likely impact of the project on the environment of the river and the environment in general, particularly the areas affected by the river in Argentine territory. That legal framework, especially Articles 7, 13, 27, 29 and 40 of the Statute, has been referred to previously. Those provisions, taken together, confirm that the objectives of the Statute, in material as well as procedural terms, must be implemented as part of an approach aimed at *preventing* any deterioration in the quality of the River Uruguay or in its régime. It is therefore for Uruguay to demonstrate that its actions do not prejudice either the régime of the river or its waters inside and outside its jurisdiction, and the Statute clearly provides that Uruguay does not have the right to impose its views on Argentina or to take it upon itself to make a decision in respect of which machinery has been provided for in a treaty.

5.19. Finally, Uruguay refers to the fact that the POPs Convention of 2001 (to which the precautionary principle expressly applies)[503] does not entirely prohibit persistent organic pollutants, but merely regulates their use. In fact, the Convention prohibits the production, use and trading of certain substances listed in Annex A to the Convention (subject to possible exemptions) and significantly restricts the production and use of other substances listed in Annex B. The overall objective of the Convention, which is set out in Article 1, is to protect human health and the environment from persistent organic pollutants. The fact that a given substance has not been completely prohibited does not therefore mean, contrary to the argument put forward by Uruguay, that its production or emission in a given situation automatically fulfils the requirements of the precautionary principle. Furthermore, one of the objectives of the POPs Convention is to reduce

[502]The prime importance of taking the host environment of the project into consideration is clear from World Bank Operational Policy No. 4.01 (Ann. B). The text states that environmental impact studies specific to each project must deal with the initial environmental conditions as they are at the time. European Union Council Directive 97/11/EC of 3 March 1997 amending Directive 85/337/EEC requires the Member States to "adopt all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue, *inter alia*, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects" (Art. 2 (1)).

[503]See the eighth para. of the preamble to the Convention.

203 and eliminate the dioxins and furans used in the production of pulp, and Uruguay accepts that it has not provided for any means of reducing, let alone eliminating, those two substances[504].

Section II

Uruguay has violated its obligations to prevent pollution and protect the quality of the waters of the River Uruguay and its ecosystem

5.20. Chapter X of the 1975 Statute is entitled "Pollution". It contains four articles, two of which are relevant for our purposes. Article 40 defines pollution and Article 41 *(a)* lays down obligations to protect and preserve the aquatic environment and prevent its pollution.

5.21. As stated in Chapter III, the concept of pollution as set out in the 1975 Statute is very broad. The two parties recognize that it excludes *de minimis* pollution, but dispute whether the envisaged pulp production constitutes pollution within the meaning of the Statute.

5.22. Argentina's position is clear. The definition of pollution contained in Article 40 is along the lines set out in many international agreements and in keeping with international practice. It sets a very low threshold and Argentina is of the view that all discharges other than those of minimal volume are covered.

5.23. The objective of the 1975 Statute is to prevent any activity which is "liable to affect the quality of [the] waters" of the River Uruguay. In its study of the impact of discharges from the Orion mill, Uruguay is therefore required to prove, *inter alia*, that those discharges, whether intentional or accidental, (1) do not constitute pollution and (2) will not be "liable to affect the quality of [the] waters" of the River Uruguay. Uruguay has hitherto been unable to do this. Its inability in particular to take account of the effects of low flow rates in the river, the impact of increased levels of nutrients (especially phosphorus) on levels of eutrophication and the risks to
204 human health from bioaccumulation and bioamplification of pollutants in fish stocks constitutes a clear failure by Uruguay to fulfil its obligation to prevent pollution.

5.24. The anticipated discharges from the Orion mill therefore constitute "pollution" within the meaning of Articles 40 and 41 and on that basis are "liable to affect the quality of [the] waters". This latter point is clear from the experts' reports referred to in Chapter VII, especially the Wheater and Latinoconsult reports[505].

5.25. Moreover, the obligation to prevent pollution of the River Uruguay does not relate solely to protecting the aquatic environment *per se* but also extends to any other reasonable and legitimate use of the waters of the river. Pollution of the river will harm tourism and other activities, whether recreational in nature or of other kinds. The scope of the 1975 Statute is broad, and covers all harmful situations indirectly resulting from pollution of the River Uruguay. Uruguay has clearly taken an excessively bureaucratic and narrow view of what the Statute is seeking to protect. Uruguay claims that the Statute concerns only pollution of the river and that consequently that issue alone falls within the jurisdiction of the Court[506]. The intention behind the resulting approach appears to be to exclude from consideration by the Court all the economic and

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[504]See Chap. III, paras. 3.220-3.222.

[505]See the list of the main reports referred to in Chap. VII, para. 7.5.

[506]CR 2006/49, paras. 3-4 (Boyle), and paras. 7-8 (Condorelli).

social consequences (including tourism-related activities) which the pollution of the river would entail. Argentina reaffirms that that argument is wholly without foundation. It is, moreover, incompatible with the approach prevailing in general international law: the draft Articles of the International Law Commission on Prevention of Transboundary Harm from Hazardous Activities state that "harm" means "harm caused to persons, property or the environment" (Art. 2 *(b)*). Tourism is a particularly telling example in this regard. Tourism-related activity on the Argentine bank of the River Uruguay occurs there precisely because that is where the river is. Without the river, there would no longer be any beaches, fishing or pleasure sailing. Actual pollution of bathing areas and the (justified) fear of river pollution will in all likelihood result in the decline or

205 disappearance of tourism[507]. The link between clean water and tourism is well established, as is shown in the Berlin Declaration on Biological Diversity and Sustainable Tourism adopted in 1997 at an international conference of Ministers for the Environment[508]. Article 42 of the 1975 Statute sets out the principle of responsibility for damage caused by pollution. It follows from recognized principles of international law that responsibility for harm linked to the pollution of a river includes indirect harm which adversely affects economic activities — especially tourism-related activities — which are directly affected by the pollution of the river.

5.26. In short, discharges from the mill do indeed constitute pollution within the meaning of Articles 40 and 41 of the Statute. They are "liable to affect . . . the quality of its waters". The authorization of discharges by Uruguay must be assessed in the light not only of their direct effects on the aquatic environment but also their impact on all legitimate uses of the river, especially tourism[509]. The quality of the waters includes the river's ecosystem and the areas affected by it as a whole, including wetlands and other biological diversity, and covers all areas likely to be affected by the phenomenon of reverse flow[510].

5.27. Article 41 *(a)* of the Statute commits the parties to: "protect and preserve the aquatic environment and, in particular, to prevent its pollution, by prescribing appropriate rules and measures in accordance with applicable international agreements and in keeping, where relevant, with the guidelines and recommendations of international technical bodies".

5.28. It was shown in Chapter III that the provisions of Article 41 *(a)* point to a twofold

206 operation: *firstly*, the text places the parties under a general obligation to "protect and preserve the aquatic environment"; *secondly,* it places the parties under a special obligation "to prevent [the] pollution [of the River Uruguay]". These measures must also be in accordance with applicable international agreements and in keeping with the guidelines and recommendations of the international technical bodies, also identified in Chapter III.

5.29. Article 41 *(a)* places Uruguay under obligations which are directly applicable to the decisions on the Orion mill. In the event that Uruguay fails to prescribe all the appropriate measures to prevent pollution of the River Uruguay by the pulp mill, it puts itself in clear breach of the obligations incumbent on it under Article 41 *(a)*. Argentina reaffirms that Uruguay has not adopted the appropriate measures. In particular, Uruguay has failed to prescribe measures to:

(i) protect the quality of the waters of the River Uruguay and the areas affected by it;

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[507] See paras. 7.195-7.204.

[508] Http://www.gdrc.org/uem/eco-tour/berlin.html.

[509] See for example the arguments set out in Chap. VII, paras. 7.195-7.196 (tourism) and paras. 7.202-7.204 (navigation).

[510] See in particular Chap. VII, paras. 7.50-7.65 (aquatic life and biological diversity) and paras. 7.46-7.61.

(ii) protect and preserve the biological diversity of the River Uruguay and the areas affected by it and the biological diversity dependent on it;

(iii) have a full and objective environmental impact assessment carried out before making the decision to authorize the mill;

(iv) ensure the participation of Argentina, as provided for in the 1975 Statute, by means including the exchange of information, prior notification and consultation;

(v) authorize the project only if sited in an appropriate location from an environmental point of view;

(vi) require the mill project to employ "the best available techniques" and "the best environmental practices" for the purposes of its assessment.

A. Uruguay has failed to adopt all measures to protect the quality of the waters of the River Uruguay and the areas affected by it

5.30. Protection of water quality is at the heart of this case. It is shown in Chapter VII that even though the waters of the River Uruguay post good results today in certain fields, they already
207 have high levels of pollutant concentration (e.g. of phosphorus). This means that Argentina and Uruguay have a particularly important joint responsibility in maintaining protection of the quality of these waters.

5.31. Moreover, that responsibility is acute. In view of this, Argentina was extremely concerned to see Uruguay deciding to authorize, unilaterally, in breach of the 1975 Statute, the construction of the Orion mill, which is designed to discharge large quantities of liquid effluent directly into the River Uruguay over a period of at least 40 years, particularly since there are no other pulp mills on the River Uruguay, and no other industrial installation discharges even a fraction of the volume of the liquid pollutants anticipated for the Orion mill. The mill therefore represents a unique and serious threat to the river waters. Uruguay's decisions threaten to change radically the quality of the waters of the river. Argentina was therefore entitled to expect that Uruguay would conduct the appropriate studies to ensure that the quality of the waters would be maintained despite the anticipated discharges and, moreover, that Uruguay would do so before performing its procedural obligations under the 1975 Statute and before authorizing the construction of the mills. If it had wished to fulfil the obligations incumbent on it under the Statute, especially Article 41 *(a)*, Uruguay should have taken three steps to comply with the requirements of due diligence and its obligation to prevent damage to the environment, namely[511]: (1) establish the initial quality of the waters receiving the pollutants, (2) identify as clearly as possible the volume and characteristics of the pollutants which the mill will have to discharge into the river and (3) establish that the waters receiving the anticipated polluting discharges are able to receive them and then disperse them in such a way as to prevent any harm. Uruguay has not pursued any of those measures in a way which would have enabled it to establish that water quality would be protected.

5.32. As regards *the initial quality of the waters*, it is perfectly clear that a certain number of pollutants are already present at very high levels. It is shown in Chapter VII that there is already a
208 relatively high level of phosphorus (P) in the River Uruguay. That situation is of great concern and poses a potential risk of both eutrophication and an increase in the proliferation of aquatic flora, as

[511] See Chap. VII, paras. 7.189-7.194.

well as massive development of cyanobacteria, especially in the shallow sections of the river with a low flowrate such as the bays of Yaguareté (Uruguay) and Ñandubaysal[512].

5.33. As regards *the volume and characteristics of the anticipated discharges*, it is striking to note that the decision-making process followed by Uruguay at no point required the promoters of the project to supply clear and detailed information as to the volume of liquid effluent to be discharged into the river. Such information ought, however, to have been included in the statements on the environment made by the project's proponents. That was not the case. The Wheater report specifically criticizes the Cumulative Impact Study (CIS, carried out by the IFC), and consequently the Orion environmental impact assessment on which it is based, because it failed to deal with the uncertainties relating to effluent loadings, contaminant concentrations and ecological response. The report notes, for example, that the issue of uncertainty could be critical as regards estimates of metals emissions and that "instead of being neglected, [it] warrants explicit attention in effluent load calculations and predictions of water quality"[513].

5.34. The Hatfield report criticizes the environmental impact assessments supplied to the IFC on several grounds, particularly because: they do not define the mill designs in sufficient detail to determine whether the mills will indeed use the best available technologies; they do not provide a complete listing of discharges into the environment in the vicinity of the mills; the data presented overestimate the quantities of many pollutants that will actually be discharged (the report adds that
209 excessively conservative estimates distort the evaluation process and lead to unnecessary concerns on the part of the public, while underestimating similarly distorts the analysis)[514]. The Hatfield report is particularly critical of the environmental impact assessment carried out for the Orion project and notes that it does not provide details of the water quality downstream of the Orion mill or of the aquatic resources (fauna and flora) present in the area on a temporary or permanent basis[515]. The absence of bioassay tests on local fish species was also criticized[516].

5.35. Since the report was drawn up, the promoters of the project and/or the Uruguayan Government have supplied additional information, but nonetheless some crucial information is still unknown, as is noted in Chapter VII[517]. The Latinoconsult report identified five areas of uncertainty which continue to exist because of:

1. inadequate delineation of the plume, meaning that it is not possible to characterize the potential exposure concentrations that will be experienced by biological receptors;

2. the lack of information on the residency periods, seasonal reproductive cycles, and critical periods of development of exposed biota, which means it is difficult to predict impacts of exposure;

3. the lack of baseline data on contaminant levels in fish, meaning it will be impossible to separate out the mill's contribution to contaminant burdens from other sources;

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[512]See Chap. VI, para. 6.41, and Chap. VII, paras. 7.44, 7.185-7.186 and 7.189-7.190. See also paras. 31-34 of the Executive Summary of the Latinoconsult report (effect of nutrient enrichment), p. 8, Sec. 6.3, pp. 33-35 (levels of phosphorus and effects on plankton) and Sec. 6.7 (role of phosphorus in nutrient enrichment).

[513]See the Wheater report, Sec. 3, p. 3, Anns., Vol. V, Ann. 5.

[514]See the summary on pp. 3 and 4 of the Hatfield report, Anns., Vol. V, Ann. 9.

[515]See the Hatfield report, Sec. A12, p. 14, Anns., Vol. V, Ann. 9.

[516]*Ibid*., Sec. B4, p. 19.

[517]See in particular paras. 7.128-7.132 and the references to the Latinoconsult report which they contain.

4. the absence of a clear description of the detailed plans for post-operational monitoring, meaning it is not possible to determine whether the mill will in fact perform as expected;

210 5. the possibility of unanticipated effects of pulp mill effluents has not been tackled at any stage[518].

Nor can there be any dispute that the Orion mill was authorized on the basis of insufficient information and that no sort of information supplied *ex post facto* can remedy the breach of the obligation prescribed in the 1975 Statute to take all the measures necessary to protect the river and the areas affected by it.

5.36. Almost two years after the Orion mill authorization, Argentina is therefore still in a situation where it is impossible to determine the total volume of polluting effluent to be discharged into the river each year or even the exact nature of the discharges. Over more than 40 years, the volume of discharges will in any event be very high, but it cannot be quantified on the basis of the information available today whether the river is capable of receiving that effluent. Uruguay's inability to take these basic measures is in itself a breach of the provisions of Article 41 *(a)* of the 1975 Statute. Uruguay cannot properly argue that it has complied with the obligation incumbent on it under Article 41 *(a)* to take appropriate measures to prevent any pollution of the river, since it has not carried out the actions necessary to be well informed about the volume of pollution to be discharged into the river.

5.37. The question of *the capacity of the river to receive and disperse polluting effluent* is another subject on which Uruguay has completely failed to ensure that sufficient information was obtained. This point is discussed in Chapter VII below, in the context of an assessment of the ecosystem of the river as a whole[519]. In particular, the following questions have not been dealt with satisfactorily: the frequency of reverse flow; plume dispersion; possible changes in the weather cycle; and the role of sediments and geomorphology. As a result, the frequency of reverse flow
211 has been greatly underestimated. Flow reversal has a major impact on the plume of pollutants, because when it occurs, the contaminants which had been diluted are carried back to the point of discharge and the concentration of toxins there is then increased[520]. As regards plume dispersion, the impact studies carried out are based on an inaccurate model of the behaviour of the plume, which makes the levels of dilution on which it is based incorrect[521]. The possibility of a change in the weather cycle has quite simply not been taken into account, with the consequence that the extension of the estuarine area and the weakening of the flow which would occur as a result are neither identified nor taken into account[522]. Finally, the role of sediments and geomorphology has not been examined satisfactorily. The River Uruguay is a dynamic sedimentary environment with fairly high sediment deposition rates which have an effect on the future trend of flow and pollution transport[523].

5.38. The information available on the Orion mill project is therefore wholly insufficient to determine the capacity of the river to receive and disperse liquid effluent pollutants. The lack of information is particularly serious when viewed in the light of the genuine possibility of an

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[518]See Sec. 4.6 of the Latinoconsult report, Anns., Vol. V, Ann. 3.

[519]See in particular paras. 7.13-7.18.

[520]See paras. 7.15-7.20.

[521]See paras. 7.23-7.25.

[522]See paras. 7.26-7.30.

[523]See paras. 7.31-7.36.

alteration in the flow of the River Uruguay as a result of climate change, particularly in conditions which have not been anticipated or assessed at all[524].

5.39. The Hatfield report has already noted these shortcomings clearly and convincingly. It states that "the documents in the public domain do not provide sufficient information for stakeholders outside Botnia and ENCE to form reasoned opinions on many issues"[525].

212 5.40. The final CIS report has not dispelled these concerns, as is shown by the reports commissioned by Argentina which are described in Chapter VII. As stated in Part I of Chapter VII, the River Uruguay is characterized by its shallowness, the presence of sandbars and very slow flow, which means that pollution transport will in turn be slow. It is also subject to the phenomenon of reverse flow, whereby under certain conditions the river changes direction and transports pollutants upstream. These features mean that significant quantities of pollutants discharged by the Orion mill will not be transported downstream and out towards the sea. On the contrary, significant quantities of these pollutants will remain in the area where they were initially discharged and will be deposited in the sand and mud of the riverbed. They will also be transported in large quantities upstream, where they are likely to reach sensitive areas, including protected wetlands such as the Ramsar site Esteros de Farrapos, and thereby to produce effects which Uruguay has utterly failed to assess[526]. Moreover, the Latinoconsult report notes that Botnia's ornithological study recorded very low biological diversity because of the extremely short duration of the sampling period, as recognized in the CIS report. Only two of the ten species listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (hereinafter "the CITES Convention") were taken into account in the CIS report[527].

5.41. Argentina's independent reports concluded that there was considerable uncertainty as to the environmental impacts of polluting discharges from the Orion mill in the River Uruguay, and that these uncertainties had not been dealt with in the environmental impact assessment process (see for example Sec. 3 of the Wheater report (analysis of the uncertainty in predictions of effluent loadings, contaminant concentrations, and ecological response) and also Sec. 7 (hydrodynamic and water quality modelling)). Moreover, both the Wheater report (Sec. 2) and the Latinoconsult report
213 (Sec. 4.2) criticize the unjustified use of dilution ratios that were developed for the Canadian Environmental Effects Monitoring Programme in order to focus experimental resources and avoid the need to sample in difficult and unsafe circumstances. The Wheater report is particularly critical of the modelling approach used in the IFC's CIS report, which it describes as "poorly presented" and "inadequately detailed", concluding that the confidence placed in the models is unjustified and misleading[528]. The marked lack of analysis of a wide range of scientific uncertainties is discussed in Chapter VII. As noted in the reports referred to by Argentina, there are serious, pervasive shortcomings in the entire assessment process. The failure to take account of the key issues of scientific uncertainty renders utterly irrelevant the conclusion of the CIS that no adverse effects are to be anticipated for the environment or human health.

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[524]See the Wheater report, Sec. 4, p. 4, Anns., Vol. V, Ann. 5, and para. 7.21 below.

[525]See the Hatfield report, Sec. A1, p. 5, Anns., Vol. V, Ann. 9.

[526]See Chap. VII, para. 7.129.

[527]See the Latinoconsult report, Sec. 6.5, p. 37, Anns., Vol. V, Ann. 3.

[528]See the Wheater report, Sec. 7, Anns., Vol. V, Ann. 5.

5.42. It is also clear that the concentration limits for phosphorus set out in the CARU documentation will be reached in a short period of time (see the arguments put forward in Sec. 6 of the Wheater report (nutrients) and Chap. VII)[529].

5.43. Discharges from the Orion mill will create very serious risks of eutrophication and the proliferation of algae, particularly in Ñandubaysal Bay[530].

5.44. It is therefore clear that Uruguay has not taken all measures to prevent pollution of the River Uruguay and the areas affected by it. These failures to fulfil its obligations, taken together, constitute a clear breach of the provisions of Article 41 *(a)* of the 1975 Statute, and other provisions thereof. Among other things, a number of species protected under the CITES Convention are recognized to be at risk.

B. Uruguay has failed tov take all measures to protect and preserve the biological diversity of the River Uruguay and the areas affected by it

5.45. The obligation "to protect and preserve the aquatic environment" does not relate solely to an obligation to protect the quality of the waters of the River Uruguay, but also to an obligation to protect the biological diversity of and associated with the river. The biological diversity in question includes habitats as well as species of flora and fauna.

5.46. It will be shown in Chapters VI and VII[531] that the waters of the River Uruguay are unquestionably home to a wide range of biological diversity: over 100 species of fish (some of which are regarded as in critical danger of extinction by the International Union for the Conservation of Nature); amphibian and benthic species, including tolerant and sensitive organisms; a variety of bird species, including ten that are subject to threats of varying degree, including *Xanthopsar flavus* (endangered, or vulnerable), *Sporophila zelichi* (critically endangered) and *Sporophila palustris* (endangered)[532]. Something which has not been mentioned in any of the impact studies is that the Ramsar site Esteros de Farrapos is only a few kilometres upstream of the Orion mill. It will be shown below that flow reversal means that the upstream limit of the dispersion model is only 2.5 km south of the Ramsar site. It is estimated that for 1 per cent of the time, dilution at the upstream limit of the dispersion model will be lower than 1:1000. The minimum simulated dilution for this upstream limit was 1:200. It is anticipated that under certain conditions, the plume may extend beyond the upstream limit in the dispersion model, reaching the southern part of the Ramsar site[533]. The CIS report states that reverse flow will not affect this important site. The expert report commissioned by Argentina sets out why the CIS report is incorrect: the frequency of reverse flow has been greatly underestimated and the consequences of changes in climate have not been taken into account[534].

[529]See Chap. VI, para. 6.41, and Chap. VII, paras. 7.41, 7.43-7.44, 7.185-7.186 and 7.189-7.190.

[530]See the Wheater report, Sec. 6, and more generally Sec. 6.7 of the Latinoconsult report, as well as paras. 7.189-7.190.

[531]See in particular Chap. VI, Sec. I and Chap. VII, paras. 7.46-7.61.

[532]See Chap. VII, para. 7.60.

[533]See Chap. VII, para. 7.179.

[534]See Chap. VII, paras. 7.179 and 7.21.

5.47. Chapter III refers to a number of international conventions on the protection of biological diversity which apply in the present case[535]. Article 41 *(a)* of the Statute requires Uruguay to have regard to and implement the obligations prescribed by such conventions. In this context, the CITES Convention and the Convention on Biological Diversity require Uruguay to comply with the obligations deriving from them in respect of activities undertaken on the River Uruguay and the areas affected by it.

5.48. As with the protection of water quality, Argentina was entitled to expect that Uruguay would carry out the studies required to ensure that the protection of biological diversity, especially fishery resources, was secured. Uruguay should have taken the following measures to protect biological diversity: (1) determine its state or situation in the River Uruguay and the areas affected by it, (2) identify the volume and characteristics of the pollutants to be discharged into the river and the surrounding area and (3) determine the impact of the pollutants on the biological diversity, based *inter alia* on the requirements prescribed in the RAMSAR Convention on Wetlands of International Importance especially as Waterfowl Habitat and the Convention on Biological Diversity, and having regard to the existing scientific uncertainties. Instead, as happened for protection of water quality, Uruguay has not taken the appropriate and necessary measures to protect biological diversity.

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5.49. The question of *the volume and characteristics of the anticipated discharges* is studied in Chapter VII as part of the discussion of water quality. The conclusions set out above are applicable here, namely that Uruguay failed to ensure the availability of the information needed in order to determine the quantity or the characteristics of the pollutants to be discharged into the river and the areas affected by it. As a result it is impossible to determine, on the basis of the available information, what the likely impact on biological diversity might be, particularly as regards species of fish such as sabalo, boga and dorado, and other species used for human consumption[537]. That omission also constitutes a breach by Uruguay of the obligations incumbent on it under Article 41 *(a)* of the 1975 Statute. Uruguay cannot properly contend that it has complied with the obligation to protect biological diversity, since it has not even tried to find out what level of pollution would be likely to affect it. These failures to act also constitute breaches of other provisions of the Statute, especially Articles 35, 36 and 37, which will be referred to later.

5.50. The information available from Uruguay is therefore utterly inadequate and does not allow a determination to be made as to the capacity of the river to receive and disperse polluting effluents in such a way as to ensure the protection of biological diversity.

5.51. The reports commissioned by Argentina, by contrast, identify the impact which discharges of pollution will or, in certain instances, could have.

5.52. The independent reports presented by Argentina conclude that there is a very strong likelihood that fish stocks will be affected, as will the diversity of the ecosystem, and that we are

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[535]See Chap. VII, paras. 3.210-3.219.

[537]See the Latinoconsult report, Executive Summary, para. 29, Anns., Vol. V, Ann. 3, which notes that the bays are a feeding ground for the sabalo (among other species), described as a detritivorous, migratory fish, and states that there is a potential risk of persistent pollutant biomagnification through the detritus food chain.

witnessing increased frequency of toxic algae bloom as a result of eutrophication[538]. Furthermore, the Latinoconsult report concludes that there is an increased risk of pollution when the mill shuts down and resumes operation (a risk which was not referred to in the CIS in a quantitative and substantive manner), notes the unsatisfactory size of the emergency basin and criticizes the
217 unacceptable absence of a tertiary treatment facility[539]. All these factors increase the risk of harmful effects on biological diversity. The wide-ranging environmental impacts that will produce significant damage include: the accumulation of sediments and associated contaminants, particularly in Yaguareté Bay; an increase in eutrophication owing to higher levels of phosphorus and other nutrients; the emission of unpleasant odours over an extended area; and an increase in the risk of chemical spillages from river vessels. As regards odour, the IAEST team notes that it is not just a matter of discomfort and poor quality of life. All total reduced sulphur (TRS) compounds which give off an odour are toxic for the respiratory system. An epidemiological study of the effects on health of TRS emissions from pulp mills has shown that eye and nose symptoms and coughing were more frequent in individuals exposed to levels above 0.07 ppm (as a daily average) than in individuals not exposed to TRS emissions[540].

5.53. In these circumstances, there can be no question that Uruguay has failed to take measures to prevent pollution of the River Uruguay. Its failures to act constitute a breach of the provisions of Article 41 *(a)* (as well as other provisions) of the 1975 Statute, on grounds including its inability to fulfil the conditions laid down in Articles 3 and 5 of the Convention on Wetlands of International Importance especially as Waterfowl Habitat, and Articles 3, 5, 8 and 14 of the 1992 Convention on Biological Diversity.

C. Uruguay has failed to ensure that a full environmental impact assessment was produced

5.54. As was shown in Chapter III, it is well established in international law that the carrying out of any activity which is inherently harmful to the environment is required to be the subject of
218 an appropriate environmental impact assessment (EIA) from the time a project is conceived[541]. The objective of such EIAs is to prevent both harm to the environment and pollution. The lack of an EIA (or the production of an inadequate EIA) prevents appropriate action being taken to prevent environmental damage or pollution. Any EIA involves drawing up an environmental assessment which must include a minimum level of certain types of information in order to comply with international rules and standards[542]. Where an assessment does not cover this minimum information, as in the present case, the State in question cannot be regarded as having taken all appropriate measures to prevent pollution.

5.55. There can be no dispute whatever that Article 41 *(a)* requires Uruguay to obtain a satisfactory environmental impact assessment, and that obtaining such an assessment is a necessary and appropriate measure. Any State which has failed to ensure that a satisfactory environmental impact assessment has been carried out into an inherently harmful activity such as pulp production has not complied with the obligation to take the appropriate measures to prevent pollution.

5.56. The obligation to carry out a satisfactory environmental impact assessment arises from the obligations laid down under Articles 7 *et seq.* and Articles 27 *et seq.* of the Statute. Uruguay

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[538]See the Latinoconsult report, Anns., Vol. V, Ann. 3.

[539]See Secs. 7, 8 and 9, discussed in Chap. VII, paras. 7.180-7.188.

[540]See Chap. VII, para. 7.162.

[541]See Chap. III, paras. 3.197-3.208.

[542]See Chap. III, paras. 3.202-3.203.

has infringed Article 41 *(a)* and other provisions of the Statute by authorizing the construction of the Orion mill on the basis of an inadequate environmental impact assessment. The assessment produced for the Orion mill was manifestly inadequate. It lacked, *inter alia*, an assessment of all the possible impacts, a list of accurate initial data on the quality of the water in the river and its ecosystem, and an explanation of the reasons which led to the choice of the site and the rejection of other possible sites for the mill. International practice requires such data to be provided before an environmental impact assessment can be regarded as containing sufficient elements for it to be
219 endorsed. In its report on the environmental impact assessment for the Orion mill, DINAMA noted, however, that:

> "[i]n the documents provided by BOTNIA during the assessment process for the EIA information gaps, contradictions (even within the same document) and vague, rather unsatisfactory replies were identified. The information received was also voluminous but rather unclear, reiterative and, on occasion, superfluous and of low quality."[543]

Nevertheless, DINAMA authorized the Orion project without appropriately assessing in advance the impacts of the operation of the mill on the River Uruguay. The failure to do so is made even more serious by the fact that DINAMA had also authorized the construction of another pulp mill (the CMB project) located only 7 km away[544].

5.57. In June 2005 — *after* Uruguay had approved the Orion project and authorized the construction of the mill to begin — the IFC decided that the environmental impact assessment was not satisfactory and that "further study was required of the cumulative social and environmental impacts of the pulp mills projects, beyond those attributable to each plant's operation"[545]. The IFC decision came in the wake of the complaint to its Compliance Adviser/Ombudsman by Argentine and Uruguayan groups which regarded the impact assessment as incomplete[546].

5.58. The IFC appointed two independent experts and asked them to draw up a cumulative impact study[547]. The study process came to an end in December 2005 and a draft report was submitted based on the assessments carried out by the ENCE and Botnia undertakings. This draft was subsequently subjected to further scrutiny by an independent group appointed by the IFC. The
220 result was the Hatfield report[548], several of whose recommendations noted the inadequacies of the environmental assessments. Among their many shortcomings, the report drew attention to:

1. the scarcity of data regarding Uruguay River water quality and its biological diversity[549];

2. incomplete identification and listing of discharges in the natural environment in the vicinity of the mill[550];

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[543]See the DINAMA report on the environmental impact assessment from Botnia, p. 6, Anns., Vol. V, Ann. 8.

[544]See Chap. II, paras. 2.4 ff.

[545]Cumulative Impact Study, Dec. 2005, p. 5, http://www.ifc.org/ifcext/lac.nsf/Content/Uruguay_Pulp_Mills_CIS_Final, Anns., Vol. V, Ann. 6.

[546]See Anns., Vol. V, Ann. 10.

[547]See Chap. 6, para. 7.7

[548]Hatfield Consultants, Cumulative Impact Study — Uruguay Pulp Mills, April 2006 (Ann. XXIII to the Application), Anns., Vol. V, Ann. 9.

[549]See the Hatfield report, Preamble, p. 4, para. 7, Anns., Vol. V, Ann. 9.

[550]*Ibid*, p. 3, para. 4.

3. absence of any independent review of the estimates of pollutant discharges presented by the companies[551];

4. cavalier handling of the effects of discharges of dioxins and furans[552];

5. the fact that the CIS did not provide a clear explanation of the site selection process employed in respect of the Orion mill[553].

5.59. The final CIS report by Ecometrix did not address these difficulties. In particular, Argentina maintains that, in the light of the reports by experts who have examined the assessment process, the following shortcomings (which are directly linked to those referred to above) still remain:

— the final CIS does not take satisfactory account of the impacts of the mills on the invertebrate species which inhabit the river and its surroundings. The potential impacts of the projects on the invertebrates to the south of the planned mill are not assessed and the discussion of the risks peculiar to amphibian species is insufficient[554];

221 — the final CIS concluded that: "[i]n general, the quality of [the] water . . . is considered good but there are localized issues and exceedances of water quality criteria such as near Bella Unión, Salto" etc.[555]; but it makes no reference to any localized issues or any exceedance of water quality levels on the Argentine bank[556];

— the issue of chlorophenolics in Yaguareté Bay is given cursory treatment[557];

— the recommendation in the Hatfield report that detailed reasons and a decision-tree should be supplied has not been acted upon[558].

It should also be noted that the expert reports to which Argentina refers in Chapter VII, especially the Latinoconsult and Wheater reports, also provided updates on a number of *other gaps and weaknesses* in the CIS which were not noted (or not fully noted) in the Hatfield report and were not rectified in the final version of the CIS. Those points are set out in detail in Chapter VII, but as a whole they point to an inability to take account of scientific uncertainty, particularly as regards the following issues: use of computer modelling to measure impacts on water quality; the effects of dilution; and the impact of low concentrations of contaminants on the ecology. The reports also note unsatisfactory assessment of the following aspects: plume dispersion, the impact of flow reversal and the effect of a change in the weather cycle on the dispersion of pollutants. Similarly, note was made of a failure to assess the risk of chemical spills associated in particular with the increase in river traffic.

5.60. Against this background, the position maintained by Uruguay whereby "potential
222 impacts on the river and on Argentina have been fully considered by DINAMA"[559] is quite simply

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[551] *Ibid*, p. 3, para. 5.

[552] *Ibid*, p. 3, para. 6.

[553] See the Hatfield report, Issue A23, p. 18, Anns., Vol. V, Ann. 9.

[554] See Chap. VII, para. 7.56-7.57.

[555] See the CIS, p. ES.xi, Anns., Vol. V, Ann. 6.

[556] See Chap. VII, para. 7.42.

[557] See Wheater report, Sec. 5, p. 6, Anns., Vol. V, Ann. 5, and the arguments in Chap. VII, para. 7.40.

[558] See Chap. VII, paras. 7.108-7.109.

untenable. Claims that the environmental assessments submitted by Botnia were "extensive and detailed"[560] are completely in the realms of fantasy. In short, in addition to the fact that they were carried out unilaterally in breach of a bilateral treaty (the 1975 Statute), the environmental assessments are not complete and are inadequate in a number of respects. They are not, therefore, satisfactory in the light of the standards of good practice and international law on the matter.

5.61. Nor did Uruguay ensure that appropriate consultation took place with the affected communities, to allow those communities to participate in the process of assessing the environmental impacts. The CARU minutes point to this absence of consultation with project-affected communities[564].

5.62. The lack of information and consultation was highlighted by the Compliance Adviser/Ombudsman (CAO) of the International Finance Corporation and the Multilateral Investment Guarantee Agency[565]. Following a complaint lodged with the CAO on 23 September 2005 by a non-governmental organization, the *Centro de derechos humanos y ambiente*[566], the preliminary CAO report of November 2005 stated that:

> "The consultation and disclosure processes related to approvals for these projects give the impression of being rushed, and presented as a *fait accompli* to those being consulted. Too little emphasis has been placed on the trans-boundary nature of the possible impacts of these developments and there has not been sufficient acknowledgement of the legitimacy of concerns and fears of communities that are local to the project.
>
> Further technical information and scientific facts will not be sufficient to address the lack of trust that currently exists amongst those who are concerned about the projects. Specific efforts must be implemented in order to ensure that people who believe that they will be impacted are able to have trust in the process as well as outcome of any additional studies."[567]

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5.63. Uruguay therefore failed to ensure that full environmental assessments were produced prior to its decisions to authorize the construction of the Orion and CMB mills. Uruguay's decisions are not only unilateral and in breach of international law, but are also based on unsatisfactory environmental assessments. This represents a further failure by Uruguay to comply with its general obligation to take all measures to prevent pollution of the River Uruguay.

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[559]CR 2006/47, para. 23 (Boyle).

[560]*Ibid*, para. 21.

[564]See Chap. II and CARU, Minutes 08/03 of 15 Aug. 2003, pp. 1400-1401. Anns., Vol. III, Ann. 20.

[565]See the CAO website, www.cao-ombudsman.org for a description of the CAO's role.

[566]The complaint alleged that the two pulp mill projects are likely to adversely affect the health of the people living on both banks of the River Uruguay as well as the environment (particularly as a result of air and water pollution, acid rain and unpleasant odours). Centro de derechos humanos y ambiente, *Complaint, Compliance Advisor/Ombudsman (CAO),* 23 Sept. 2005: www.cao-ombudsman.org .

[567]Office of the Compliance Adviser/Ombudsman, International Finance Corporation/Multilateral Investment Guarantee Agency, Preliminary Assessment Report, *Complaint Regarding IFC's Proposed Investment in Celulosas de M'Bopicuá and Orion Projects, Uruguay*, 11 Nov. 2005, p. 10, Anns., Vol. V, Ann. 10.

D. By failing to fulfil its obligations under Chapter II of the 1975 Statute, Uruguay has not taken all measures to prevent pollution

5.64. Chapter III has already referred to the situation whereby a decision falling under the jurisdiction of one State might have damaging consequences for the natural resources shared with another State, as well as for the territory of that other State. It has been noted that recent developments in international law seek to ensure that the neighbouring State is involved in the decision-making process[568]. The aim of such an approach is *inter alia* to ensure that pollution is prevented. Chapter II of the 1975 Statute (Arts. 7 *et seq.*) prescribes mechanisms for prior consultation, exchange of information and co-operation which go beyond those provided for in general international law. The breach of those obligations was examined in Chapter IV[569]. Those obligations are closely linked to the obligation prescribed in Article 41 *(a)* of the Statute to prevent pollution. They contribute to performance of the latter obligation. Uruguay has therefore also failed to fulfil its obligation to take all appropriate measures to prevent pollution by failing to comply with its obligations to consult CARU, forward information to CARU — or, where appropriate, to Argentina through CARU — and to hold consultations prior to authorizing the Orion and CMB mills; in so doing, it has violated the obligations incumbent on it under the 1975 Statute.

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E. Uruguay has failed to take all measures to prevent pollution in authorizing the construction of the Orion mill at an inappropriate site

5.65. In Chapters VI and VII of this Memorial, Argentina explains the significance of the site chosen for the Orion mill. Chapter III sets out the way in which international law required the choice of site and the rejection of alternatives to be justified. In addition to the water quality and biodiversity protection aspects which must be taken into account, it should be noted that the site chosen is an important area for tourism and is significant in other economic respects[570]. Gualeguaychú, in Argentina, is an important tourist centre where visitors come to enjoy the beaches and the annual carnival, a popular traditional festival held each Saturday between 7 January and the first weekend in March[571]. People come from all over Argentina and abroad to see the carnival. It is a key tourist asset for the country and contributes to the growth of other tourism-related activities in the region, including beach resorts, ecotourism and sports, cultural and spa tourism (there are a number of thermal spas). Finally, it is located precisely in the most populated area of this section of the river. The issue of the location of the Orion mill site has in no way been handled satisfactorily, if at all, in the environmental assessment for the mill. The assessment does not state that other sites were considered, nor does it give the reasons why they were discarded; it does not describe current environmental conditions satisfactorily and does not go into the potential impacts on the environment. The choice of the site for the Orion mill is at the heart of the dispute between Argentina and Uruguay.

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5.66. Uruguay claims that the sites "are environmentally an excellent choice"[573]. However, it offers no scientific references and no evidence in support of that statement, and nor has it explained why those sites had been chosen, or why other less environmentally and economically

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[568]See Chap. III, para. 3.207.

[569]See Chap. IV, especially Sec. III.

[570]See Chap. VII, paras. 7.64-7.66 and 7.195-7.196.

[571]See the Latinoconsult report, which notes that the amphitheatre constructed for the carnival is the second largest in Latin America, after the one in Rio de Janeiro, Anns., Vol. V, Ann. 3, p. 46.

[573]See CR 2006/47, para. 3 (Boyle).

sensitive sites were not selected. As stated in Chapter II, Uruguay has not even agreed to discuss these issues with Argentina[574].

5.67. During the public hearings on the request for the indication of provisional measures, Uruguay made several errors of fact with regard to the sites. *First*, it claimed that there were "no ecologically sensitive areas close by"[575]. That statement is incorrect for the reasons set out in Chapter VII[576]. The Esteros de Farrapos site is only 7 km away from Orion — it is protected as Ramsar site No. 1433 in the List of Wetlands of International Importance under the Ramsar Convention of 1971[577], to which Argentina and Uruguay are parties and to which Article 41 of the 1975 Statute refers. *Secondly*, Uruguay has argued that the sites were located at a point where the
226 river is fully navigable and "deep", thereby suggesting that pollutants would disperse easily. That assertion is also false for the reasons set out in Chapter VII. There is indeed a navigation channel at the site but it has to be maintained by regular dredging, and outside the channel the river is less than 1 m deep in places[578]. *Thirdly*, Uruguay has argued that the flow of the river would quickly disperse the effluent discharges[579]. That assertion is also false. The speed of the current sometimes does not exceed 0.6 m per second, and this has a significant effect on the capacity of the waters to disperse the liquid effluents they will receive, as is shown in the independent reports commissioned by Argentina[580]. Flow reversal means that significant quantities of pollution will be swept upstream and may travel as far as the Ramsar site[581].

5.68. Uruguay has also failed to provide sufficient information on sedimentation. River sediment is not examined in detail in the CIS and the issue of geomorphological change is not tackled at all. The River Uruguay is a dynamic sedimentary environment featuring high rates of local sediment deposition. On certain sections of the river, such as Ñandubaysal Bay, recent measurements on the ground have shown rates in the order of 0.015-0.02 m/year, a relatively high rate which is indicative of an extremely dynamic system. To illustrate the dynamic nature of this process, satellite images show that there is a small island some 10 km to the south of Ñandubaysal Bay which was not visible on river charts 30 years before. Sedimentation has an impact on future flow and the transport of pollutants[582].

5.69. By using a lower sedimentation rate, the CIS fails to take account of geomorphological
227 changes which are closely linked to the deposition and accumulation of contaminants. Professor Howard Wheater describes this as a serious omission which is a matter of concern in view of the significant changes observed over a few decades. This issue must be resolved before any impact assessment can be regarded as complete.

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[574]See Chap. II, especially para. 2.65.

[575]See CR 2006/47, para. 3 (Boyle). [Translator's note: The FR and EN versions of this document actually read "downstream" rather than "close by" as stated in the Memorial here.]

[576]Para. 7.60.

[577]See http://www.ramsar.org/wn/w.n.uruguay_farrapos.htm.

[578]*Atlas Cartográfico del Río Uruguay*, maps 705 and 801, 2002.

[579]See CR 2006/47, para. 3 (Boyle).

[580]See in particular the Latinoconsult report, Sec. 2.2, which notes that the actual flows are rarely above 4,000 m^3/s, in other words much less than the arithmetic mean of 6,230 m^3/s used in the CIS. Anns., Vol. V, Ann. 3. Lower flows occur more frequently than allowed for in the CIS.

[581]See the arguments in Chap. VII, paras. 7.15-7.20.

[582]See the Wheater report, Sec. 5, Anns., Vol. V, Ann. 5.

5.70. Because of the increase in the level of eutrophication, particularly in Ñandubaysal Bay, cyanobacteria and cyanotoxins will appear more frequently. The risks posed by cyanobacteria and cyanotoxins are set out in detail in Section 6.7.2 of the Latinoconsult report[583]. The report examines the toxicity of microcystin and its implications for humans and animals. The report notes that in temperate climates such as in South America, bloom may occur for six to ten months[584] in bodies of water where the genus *Microcystis* is dominant. Where the concentration of phosphorus is high (referred to above), hepatotoxic strains produce more toxins. Ejection into the surrounding water produces dissolved toxins (principally during senescence, death and lysis of a cell) and poses a danger to health.

5.71. The issues related to the location of the site have not been dealt with, as is confirmed in the Hatfield report, which categorically states that Uruguay did not provide any satisfactory explanation for the choice of the site for the Orion mill.

5.72. The final CIS report does not rectify these anomalies. As stated in Chapter VII, the chosen location is not appropriate for the following reasons:

1. There is already *a relatively high level of phosphorus (P) in the River Uruguay*. That situation is of great concern and poses a potential risk of eutrophication and proliferation of aquatic flora, especially in the shallow sections of the river with a low flow-rate such as the bays of Yaguareté and Ñandubaysal[585]. The situation could have harmful effects on public health.

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2. The area chosen is *a fragile aquatic ecosystem* of a quality which can and must be protected[586]. The bays of Ñandubaysal and Bellaco along with Inés Lagoon constitute a very productive coastal area containing a wide variety of refuges for aquatic organisms and should as a result be declared a natural sanctuary[587]. Experts have confirmed a strong likelihood that fish stocks and the diversity of the ecosystem will be affected by the pulp mills.

3. *Flow reversal* increases the likelihood of contaminants extending to sensitive areas[588].

4. Over 90 per cent of fishery production from the shared section of the river, or 4,500 tonnes per year, comes from the area of the Orion mill site[589]. There are concerns as to the *bioaccumulation of contaminants in species such as the sabalo* which are used for human consumption[590].

5. *Gualeguaychú in Argentina is an important centre for tourism* which attracts visitors because of its beaches and the annual carnival. The beach resort of Ñandubaysal in Gualeguaychú is thriving and welcomes almost 450,000 people each year. The resort's great assets are its beaches' clear water and other aesthetic considerations. Eutrophication, which leads to unpleasant odours, health risks and unattractive water colour, together with the visual impact of

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[583]See the Latinoconsult report, pp. 40-47, Anns., Vol. V, Ann. 3.

[584]*Ibid.*, p. 43.

[585]See the Wheater report, Sec. 6, Anns., Vol. V, Ann. 5.

[586]See the Argentine report to the GTAN, p. 2, Sec. 5, Anns., Vol. IV, Ann. 1.

[587]See the Latinoconsult report, p. 28, Anns., Vol. V, Ann. 3.

[588]See Chap. VII, para. 7.15.

[589]See the Argentine report to the GTAN, Anns., Vol. IV, Ann. 1.

[590]See the Latinoconsult report, para. 29 *(b)* of the Executive Summary, Anns., Vol. V, Ann. 3.

the Orion mill installations on the opposite bank, will have very significant negative consequences for tourism[591].

5.73. Uruguay has chosen to locate the Orion mill in an area close to the CMB mill, the plans for which have since been abandoned. Because of the nature of the waters which will receive the pollution, the propensity of the site to sedimentation and eutrophication, the phenomenon of reverse flow and the proximity of the largest settlement on the River Uruguay, this location is not ideal for the dispersion of the quantities of pollution which are to be discharged into the river. Therefore, by failing to take the measures necessary to determine the appropriateness of the chosen sites, Uruguay has committed a further breach of the obligation incumbent on it under Article 41 *(a)* of the Statute to take appropriate measures to prevent pollution.

F. By not requiring the mill to employ the "best available techniques" Uruguay has failed to take all measures to prevent pollution

5.74. Uruguay acknowledges that Article 41 of the 1975 Statute "has the effect of incorporating standards set by the 2001 Stockholm Convention on Persistent Organic Pollutants"[592]. Uruguay accepts that it is required to employ "the best available techniques" and "the best environmental practices" as laid down in Article 5 *(d)* of the POPs Convention of 2001.

5.75. The Wheater and Latinoconsult reports confirm that the Orion mill will not satisfy all the BAT standards. The European Union BREF document on the pulp and paper industry states that *tertiary treatment* of effluent is necessary in some cases[593]. These cases are where the nutrient concentrations in the effluent have to be lowered if the mill discharges to very sensitive receptors. The technique is mainly applied to reduce nutrient, especially phosphorus[594]. The location of the Orion pulp mill means that discharges will be made into sensitive waters, making tertiary treatment necessary if BAT standards[595] are to be complied with; this has not happened in respect of the Orion project.

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5.76. Another breach of BAT standards has also been noted and is linked to the *lack of an empty emergency basin* to cope with a large spill or significant changes in effluents. BAT standards require almost all spillages to be collected[596] and sufficiently large buffer tanks for storage of concentrated or hot liquids from the process to be used[597]. These related standards are a response to environmental and safety requirements, according to the European Union BREF document. Orion states that the design of the mill includes

> "three 8-h retention time basins (equalization/emergency) that operate in a semi-continuous manner, i.e. they are filled continuously, and then the effluent quality in the basin is checked prior to discharge into the AST. In the event that a spill has occurred in the mill, the basin contents would have a high COD and would be discharged into the AST in a manner that does not overload the system."

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[591] See Chap. VII, paras. 7.64 -7.66 and 7.199-7.201.

[592] See CR 2006/47, para. 37 (Boyle).

[593] See the European Union BREF document, Sec. 2.3.14, p. 85-86, Anns., Vol. V, Ann. 15.

[594] *Ibid*.

[595] See Chap. VII, paras. 7.180-7.188.

[596] See the European Union BREF document, Sec. 2.3.9, p. 75-77, Anns., Vol. V, Ann. 15.

[597] *Ibid*, Sec. 2.3.12, pp. 80-82, Anns., Vol. V, Ann. 15.

However, equalization of the effluents takes place in two of the basins, which each have an 8-h capacity and operate alternately (2 x 25,000 m^3). The third basin, which also corresponds to eight hours of normal output, will remain empty (25,000 m^3). As the IAEST notes, the extra basin cannot be seen as an emergency basin in case of spillages or operating problems, since it is in fact an operational facility and will be too small in the event of an emergency[598].

231 5.77. Uruguay's failure to require the "best available techniques" and "best environmental practices" to be employed therefore constitutes another breach of its obligation to take all measures to prevent pollution.

G. By not applying CARU standards, Uruguay has failed to take all measures to prevent pollution

5.78. The Latinoconsult report notes that the level of phosphorus (P) in the River Uruguay is already high. That situation is of great concern and poses a potential risk of eutrophication and proliferation, especially in the shallow sections of the river with a low flow-rate such as the bays of Yaguareté and Ñandubaysal. The DINAMA norm for surface water quality is 0.025 mg/L for phosphorus[599]. Various samples taken by CARU in 1999 and 2001 on the right bank of the River Uruguay near Gualeguaychú (in the bay and the channel) range from 0.04 mg/L to 0.2 mg/L (on average 0.097 mg/L) of total phosphorus: these results are well above the DINAMA norm of 0.025 mg/L. It follows that, even if the production process at the Orion mill complies with BAT standards, the receiving water is not able to absorb more phosphorus without serious levels of eutrophication occurring as a result. The consequences for human and animal health are set out in Chapter VII[600].

Section III

Uruguay has violated its obligation to prevent changes in the ecological balance of the River Uruguay and the areas affected by it, in particular by significantly impairing the River Uruguay and the areas affected by it

232 5.79. Article 35 of the 1975 Statute places Uruguay under the obligation "to adopt the necessary measures to ensure that the management of the soil and woodland and the use of groundwater and the waters of the tributaries of the river do not cause changes which may significantly impair the régime of the river or the quality of its waters". That crucial provision affirms the importance which the parties to the Statute attach to protecting the quality of the waters of the River Uruguay and its régime, and the existence of a clear obligation to avoid "significantly impair[ing]" [the quality of] its waters.

5.80. Uruguay's decision to carry out major eucalyptus-planting operations to supply the raw material for the Orion mill is an activity which has impacts on soil management and Uruguayan woodland. This decision also has major consequences for the quality of the waters of the River Uruguay: the existence of the eucalyptus plantations, which are of significant size, is being used today to justify the operation of the Orion mill, and the use made of them will directly contribute to the pollution of the river waters. Article 35 places Uruguay under an obligation to

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[598] At the Gunns mill, the emergency basin has a 25-hour capacity and the one at the Valdivia de Arauco mill has enough capacity for 48 hours of operation.

[599] See Art. 5 of Decree 253/79 for Class 1 (drinking water supplies), Class 2 *(a)* (irrigation), Class 2 *(b)* (recreational purposes) and Class 3 (preservation of water flora and fauna), for total phosphorus).

[600] See Chap. VII, paras. 7.43-7.44 and 7.195-7.196.

adopt "the necessary measures". That includes an obligation to assess all the direct and indirect consequences for the river of the decision to plant eucalyptus. In taking that decision, Uruguay has not taken account of the indirect impacts of the use of eucalyptus pulp as a raw material by the future pulp mill. At the very least, this means that it cannot impose its decision by presenting it as a fait accompli: the fact that Uruguay took the decision as an economic development matter several years ago, but after the adoption of the 1975 Statute, does not mean it can evade the environmental obligations incumbent on it under that Statute concerning the protection of the River Uruguay and the areas affected by it.

233 5.81. Article 36 establishes that the parties "shall co-ordinate, through the Commission, the necessary measures to avoid any change in the ecological balance and to control pests and other harmful factors in the river and the areas affected by it". That provision is equally important, for four reasons. First, it confirms the fact that the Statute has a comprehensive approach to protection of the River Uruguay and its ecosystem. Secondly, it clearly states that the Parties are to co-ordinate the measures they are to take, and that they are to take them "through the Commission": they are not entitled to determine on a unilateral basis which measures are necessary to avoid "any change" in the ecological balance of the river. Thirdly, it lays down an obligation which is extremely broad in scope, namely to avoid "any change in the ecological balance". Fourthly and finally, the protected area encompasses the river and the areas affected by it.

5.82. Uruguay has violated that obligation. It acted unilaterally when it authorized the Orion mill without forwarding information to CARU — or, where appropriate, to Argentina through CARU — pursuant to Chapter II of the 1975 Statute, and did not notify CARU in advance — or, where appropriate, Argentina through CARU — of the measures which would be necessary to avoid any change in the ecological balance. Moreover, it will be shown in Chapter VII that the measures taken by Uruguay will not be sufficient to avoid changes in the ecological balance of the river. Over a period in excess of 40 years, the further sedimentation, toxic algae and eutrophication which the project will result in, especially in Ñandubaysal Bay, will together produce a change in that balance. The impact on biological diversity will also lead to a change in the ecological balance unilaterally imposed by Uruguay on Argentina in breach of the 1975 Statute.

5.83. In conclusion, it would appear that Uruguay has violated its obligations to:

(a) adopt all measures to protect the quality of the waters of the River Uruguay and the areas affected by it;

234 *(b)* take all measures to protect and preserve the biological diversity of the River Uruguay and the areas affected by it;

(c) ensure that a full environmental impact assessment was produced;

(d) take all measures to prevent pollution by failing to fulfil its obligations under Chapter II of the 1975 Statute;

(e) take all measures to prevent pollution in authorizing the construction of the Orion mill at an inappropriate site;

(f) take all measures to prevent pollution by not requiring the mill to employ the "best available techniques";

(g) prevent changes in the ecological balance of the River Uruguay and the areas affected by it, in particular by significantly impairing the River Uruguay and the areas affected by it.

CHAPTER VI

THE ENVIRONMENT AFFECTED BY THE PLANNED PULP MILLS AND THEIR ASSOCIATED FACILITIES

Section I

The River Uruguay and the areas affected by it as an environmental ecosystem[601]

237 6.1. On the Argentine side, the waters of the River Uruguay bathe Mesopotamia, a biogeographical region of almost 200,000 km^2 formed by the provinces of Corrientes, Entre Ríos and Misiones. This is a dynamic region influenced in particular by the hydrological changes stemming from the upper basins of the major rivers Paraná and Uruguay and, to some extent, by the action of the maritime front on the Río de la Plata system. The region has its own geomorphological, hydrological and limnological features, and contains a wealth and wide variety of species as well as a great diversity of ecological types. The taxa are spread across the different habitats, interacting with the region's aquatic and terrestrial communities as they adapt to them.

6.2. The upper basin of the River Uruguay flows through several strata of tropical forest which changes abruptly into semi-deciduous woodland dominated by the *paraná* pine, currently under threat from deforestation and replacement by species introduced into the ecosystem. On the lower reaches, there is a predominance of herbaceous vegetation. The aquatic and riparian vegetation is abundant, even though the mainstream current is variable because of the changes in water level, the steep banks and rocky substrata, with grassland dominating in the more sheltered areas. Reed beds are also common, encouraging the presence of other floating plants.

6.3. The riparian woodland follows the course of the water, forming a narrow strip which is
238 nonetheless densely populated with species of medium height. Towards the lower reaches, there is almost total dominance of the *sarandí blanco* in the region along the Argentine bank, on the islands and around the bays, as for example at Ñandubaysal and in the neighbouring areas.

6.4. The type of riparian vegetation is a major factor in terms of incorporating into the system deposited coarse particulate of the kind used by the benthic invertebrates inhabiting the banks of the River Uruguay, which determines the characteristic fauna in these environments.

6.5. Along a substantial section of the River Uruguay there is a wide range of molluscs in the different habitats, both gastropods and bivalves. Clams and sponges have also been identified.

6.6. The River Uruguay has a variety of characteristic indigenous benthic species. Thirty-three species of meso- and macro-invertebrates have been identified, which may be seen as a high number in comparison with other bodies of water in South America. In the coastal area,

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[601] For the references concerning this section, see Chap. VII below and the Latinoconsult report ("Assessment of the fluvial environment of the proposed Botnia pulp mill on Río Uruguay"), in particular Anns. E, F and G, at http://www.ecopaedia.com.ar/publico/ea_report/ (username: ea_annex; password: ea_annex). See also Anns., Vol. V, Ann. 3, Vol. VII, Ann. 7 and Vol. VIII, Ann. 6.

there is a wider range of environments, resulting in particular in the presence of macrophytes. These have a direct effect on increases in diversity.

6.7. Among the organisms which have medium tolerance of pollution are some belonging to the group of molluscs. These inhabit the hard substrata of the bank and assume great importance because they represent the main food source for many bottom-feeding fish.

6.8. The presence and abundance of benthic organisms is mainly determined by the nature of the physical habitat (variety of habitats available), the quality of the water and the availability and quality of food sources. There is consequently a difference between a riverbank benthos (more
239 habitats available, greater diversity, coarse organic particulate, etc.) and a deep benthos (moderate diversity, deposited fine organic particulate, etc.).

6.9. As a result, it may be concluded from a variety of biotic indicators that the present ecological quality of the River Uruguay can be categorized as good to very good. This is demonstrated in particular by the presence of sensitive organisms in the River Uruguay, such as Trichoptera and Odonata.

6.10. The ecological and economic importance of the benthos is significant, since the organisms in these communities, especially in the coastal area, are either a resource in themselves or the main food source for other species of commercial importance (bottom-feeding fish, birds). Likewise, they play a role in recycling organic and polluting substances, with the resulting downstream effects on the trophic system of the neritic community.

6.11. Several sections of the River Uruguay include wetlands featuring on the List of Wetlands of International Importance recognized by the Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1969 (the Ramsar Convention). Wetlands are ecosystems with higher productivity than terrestrial areas and support a substantial biodiversity of fauna, birds being the group with the highest concentration among vertebrates. However, the very fact of being concentrated where there is water makes them especially vulnerable to any changes in their environment.

6.12. On the River Uruguay, aquatic birds are strongly represented by the Ardeidae, Ciconiidae and Anatidae families.

6.13. Attention should be drawn to the value of the area in question for the conservation of
240 species, which has led to the designation of AICAs (Areas of Importance for the Conservation of Birds) and areas coded ER02 ER03, including the one close to Gualeguaychú. This area is characterized by a broad diversity of grassland birds, including populations of at least ten species that are at risk of extinction, such as the saffron-cowled blackbird, Narosky's seedeater, marsh seedeater, chestnut seedeater, black-and-white monjita (Tyrannidae), dark-throated seedeater (Emberizidae), grey-and-chestnut seedeater, bearded tachuri, bay-capped wren-spinetail and greater rhea (Rheidae). Other threatened species present in the area are the yellow cardinal and the sickle-winged nightjar. This latter species appears in fragmented populations and is therefore more prone to local extinction.

6.14. Certain species of tern (Sternidae), skimmers (Rynchopidae) and plovers (Charadriidae) nest on the large sandbanks close to the River Uruguay. These sites are also

considered to be of major importance because of their environmental features, as a permanent or interim habitat for numerous aquatic species, including the migratory Nearctic birds, some of whose numbers are in decline.

6.15. Within the aquatic bird fauna of the River Uruguay and the areas affected by it, a series of functional groups can be identified, according to the patterns of use of the available resources and based on the feeding and habitat of each species: (i) birds that look for food while walking on the shores and in the shallows (herons, sandpipers, gulls, white-faced and buff-necked ibis, etc.), whose main source of food is aquatic invertebrates, in particular molluscs, crustaceans and insects which they find along the beaches, in or out of water and with or without vegetation; (ii) birds that swim and dive for food, such as rails (Rallidae), grebes (Podicipedidae) and cormorants, whose main source of food is fish; (iii) birds that look for food on the wing or from perches (kingfishers and terns, seagulls and raptors), most of which eat insects and generally catch their prey in flight;
241 and (iv) birds that seek food in the emerging vegetation (Passeriformes, Furnariidae and some Tyrannidae).

6.16. Among the species that feed on animal organisms (aquatic macro-invertebrates, insects, crustaceans, fish, amphibians and other small vertebrates), herons and giant wood-rail are distinguished by their height. Some of these birds wade through the shallows, while others watch for their prey from a perch on the water. The osprey takes its prey from the surface on the wing. This is a migratory species from the northern hemisphere. Sometimes less obvious in terms of size, but with significant numbers and biomass in the warmer months, the sandpipers, gulls, white-faced ibis and other shore birds that wade in the river shallows to feed on insects, crustaceans and molluscs are consequently more prone to bioaccumulation of toxic substances. Coots and ducks are among the omnivores and herbivores that find their food in the water.

6.17. In terms of birds nesting in the sector concerned, there are a substantial number of aquatic species that nest by forming colonies in the region, for example herons, cormorants, white-faced ibis, spoonbills, grebes, etc.

6.18. The mammalian fauna in the aquatic environments in the region of the River Uruguay consists of some 26 indigenous species, allowing for those whose population status is currently unknown but which have not been signalled as extinct in the region.

6.19. The composition of this fauna, which is linked to the aquatic environment, includes species of the Didelphimorphia, Chiroptera, Cingulata, Rodentia, Odontoceti and Carnivora, some of which have a commercial value for the fur industry or for human consumption. Among these
242 species are some that eat almost only insects, carnivores that prefer fish, general carnivores, omnivores and herbivores.

6.20. In terms of ichthyofauna, it should be pointed out that this sector of the River Uruguay belongs to the Paranoplatense province, even though it is situated in the ecoregion of Lower Uruguay. This province has the greatest diversity of ichthyofauna in Argentina, since most families in the dominant Cypriniformes order of the Ostariophysi are found there (sabalo, bream, boga, pacu, catfish, vieja, armado, surubi, mojarra, etc.) as well as groups of marine origin (rays, clupeids, anchovy, pejerrey, corbina, mullet and sole).

6.21. The River Uruguay, together with the Paraguay and Paraná, acts as a corridor for ichthyofauna, facilitating the entry of tropical and subtropical elements of aquatic fauna. This river

and the areas affected by it also comprise a specific area of endemicity which is expanding further on its upper reaches, in Brazilian territory.

6.22. All the fish species, except those that are endemic, are widely distributed in the Río de la Plata basin, and their biological cycle takes place wholly or partly in the various areas of the region.

Section II

The specific features of the River Uruguay where the planned pulp mills and associated facilities have been unilaterally authorized[602]

6.23. Four phytogeographical provinces meet in the region of Gualeguaychú: the herbaceous
243 grassland of the Pampas, the Espinal region, the district of Ñandubay and the riparian woodland, which together with its aquatic habitats forms a complex and diversified ecosystem, rich in a variety of natural resources. The area of interest is dominated by the riparian woodland, with species of trees and shrubs that form a dense and relatively low mass of growth.

6.24. The area affected in Gualeguaychú includes, within a relatively small surface area, a range of different environments that account for a substantial proportion of the variety of vegetation in Mesopotamia. Within a radius of 50 km of the city of Gualeguaychú, it is possible to identify five different natural regions determined by their distinct geological and geomorphological features: the Pampas of the Entre Ríos region, the former coastal plain now joined with the valley of the River Paraná, the valley of the River Gualeguaychú, the valley of the River Uruguay and the plain of the eastern bank of the Uruguay. Each of these natural regions has vegetation which is largely characteristic, formed by different plant communities that typify the phytogeographical provinces of the Paraná, the Chaco and Espinal regions and the Pampas.

6.25. The Pampas area of the Entre Ríos region extends across most of the province of Entre Ríos, covering the north west of the area of interest and including its highest points. It has an undulating landscape shaped by the action of tributaries of the Rivers Uruguay, Gualeguay and Gualeguaychú on Quaternary sediments from the Hernandarias Formation of the Middle Pleistocene that are very rich in montmorillonitic clays. The natural vegetation of the region consists of pasture, dominated by mesophyte grassland in terms of coverage of the upland areas of the undulating landscape.

6.26. These grasslands are distributed across the entire phytogeographical province of the Pampas. Those of Entre Ríos are marked by the dominance of grass species of the type *Mammillaria elongata* and by the common occurrence of grass types with subtropical distribution.
244 Also commonly found on these grasslands are composites, legumes, native species, Umbelliferae, various types of Verbenaceae, etc. and others that can be used as fodder. This type of vegetation has often been replaced by perennial crops of grass and fodder species (pastures) and annual crops such as wheat, soya or sunflowers. In the lower areas of the undulating landscape where there are streams and valleys, this type of vegetation gives way to three other kinds, the halophyte steppes, the hydrophyte grasslands and the savannahs or xerophyte woodland.

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[602]For the references concerning this section, see Chap. VII below and the Latinoconsult report ("Assessment of the fluvial environment of the proposed Botnia pulp mill on Río Uruguay"), in particular Annexes C, D and F, at http://www.ecopaedia.com.ar/publico/ea_report/ (username: ea_annex; password: ea_annex). See also Anns., Vol. V, Ann. 3, Vol. VII, Ann. 7 and Vol. VIII, Ann. 6.

6.27. There is also the former coastal plain, a region covering the south-west portion of the area of interest and consisting of a plain which lies at much lower levels than the Pampas of the Entre Ríos region, based on Holocene sediments. This plain was formed in relatively recent times by a combination of geomorphological processes of the sea coast and wind and river action. The result is a complex patchwork including permanently swamped depressions, often associated with former tidal channels, and vast flatlands with a succession of flooded areas, rises and sandy deposits similar to coastal dunes. This diversity is reflected in a wide range of plant communities: hygrophyte shrubs, humid mesophyte grasslands, the *espinillo* and *ñandubay* savannahs, and the psamophyte steppes.

6.28. The River Uruguay runs through a deep valley that is 10 km wide in the area of interest. The environmental conditions in the valley are strongly influenced by the morphogenetic action of the river, which has deposited most of the substratum, and by the effect of this mass of water on the patterns of temperature and humidity (night and morning mists, for example). As a result of these environmental features and the action of the river in transporting propagules from the north, flora from the Paraná province is found in the Uruguay valley, though in the form of very
245 few species. This region therefore harbours the most southerly populations of many species. The characteristic plant types in this area of the Uruguay valley are mainly marsh plants and riparian trees and shrubs.

6.29. The River Gualeguaychú, the main tributary of the River Uruguay, which crosses the Pampas of Entre Ríos, has cut through the sediment pile of the Hernandarias Formation and exposed the sand and alluvial clay from the Ituzaingó Formation of the Lower Pleistocene. In this valley, the woodland communities that typify the Chaco and Espinal phytogeographical provinces are best represented; they are also present in the valleys of streams in the Pampas of Entre Ríos and in parts of the valley of the River Uruguay. As in the rest of the region, the primary wooded vegetation in Espinal has been much damaged and destroyed. The main types of woodland present are xerophyte woodland and savannah, and riparian trees.

6.30 The aquatic organisms in the region are of different types. Among the benthic organisms are a number of sensitive species: Trichoptera and Odonata, as well as Ephemeroptera, certain bivalves and ancillids.

6.31. The highest densities of species occur in environments characterized by vegetation that consists of reed beds in particular, pointing to the major role played by riparian vegetation. It offers both the refuge and the food source needed for the community of benthic invertebrates associated with the vegetation to develop.

6.32. The small bays are characterized by mean values of organic matter (OM) in the sediment that vary between 2 per cent and 7.3 per cent, due to the continuous accumulation encouraged by the lentic features of the site and the abundant plant cover. High OM values have also been recorded in the centre of Ñandubaysal Bay, probably due to the proximity to the mouth of
246 the River Gualeguaychú, which carries nutrients and OM to the River Uruguay. Lower OM content was found in the stations on the main bed (OM<1 per cent), where the greater depth and hydraulic energy do not allow it to be accumulated, except in areas of deposition on the banks.

6.33. As has been indicated, there are 33 sensitive species in the area, compared with an average of between six and 16 for other similar bodies of water in South America. The highest

values are those for groups associated with the riparian vegetation in the main course of the River Uruguay and Ñandubaysal Bay.

6.34. A number of biotic indices, both national and international, allow the ecological quality of the River Uruguay to be categorized as good to very good. Particular attention should be drawn to the presence in macrophytes of a wide range of benthic organisms, some highly sensitive, which have a positive effect on these indices. Organisms sensitive to the highest environmental quality in terms of these biotic indices have been identified in the bulrushes of Ñandubaysal and the reeds of the main course of the River Uruguay. Among the Odonata, it is worth highlighting *Phyllocycla argentina*, for example, a species found around the watermark or in areas of low current velocity, with mainly sand, clear water and a high dissolved oxygen content.

6.35. There is a wide diversity of birds, including some 170 species associated with the aquatic environments and more than 100 in other habitats.

6.36. It is not possible to describe in this Memorial all the different elements of landscape within the geographical area consisting of the south-eastern part of Entre Ríos and the river bank. Those elements that are jeopardized in visual terms are in particular the views from the resort of Ñandubaysal or from the "General San Martín" international bridge.

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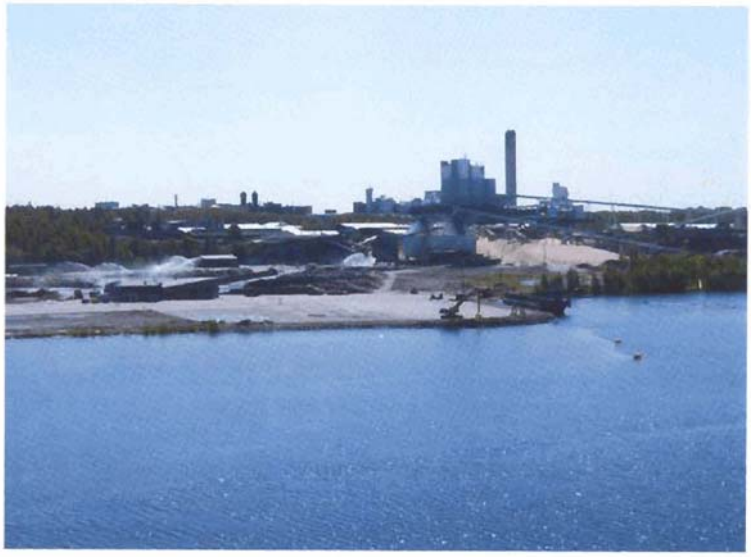
The resort of Ñandubaysal on the River Uruguay

6.37. The landscape within the geographical area of the south-eastern part of Entre Ríos is rural in nature, with a wealth of biological diversity. Very close to the "Libertador General San Martín" bridge, which links Fray Bentos and Puerto Unzué, is the Inés Lagoon, a shallow river inlet which is a breeding site for several migratory species of fish. Five kilometres to the south is the mouth of the River Gualeguaychú, a tributary of the River Uruguay which is subject to the latter's high and low water periods.

6.38. The main focus of tourism in the area is Ñandubaysal Bay, whose environment has natural features in the riverside areas and a landscape enclosed by planted woodland, together with wooded parks and a wide beach on the river front.

248 6.39. The landscape along the section of the River Uruguay under review is a very fragile one in visual terms, given its lack of contours and the dense but low riparian vegetation. This suggests that it is not an environment in which large objects or structures can easily be concealed.



The planned Orion pulp mill

6.40. In biogeochemical terms, the River Uruguay has fairly homogeneous characteristics: low turbidity (~30-35 mg/L), a generally stable downstream current, a shallow depth (8 to 10 m) and mainly sandy bottoms, reducing sharply towards the Argentine bank with an accompanying increase in the proportion of fine sediments. Below are some specific features of the area in which the planned pulp mills and associated facilities have been unilaterally authorized:

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— *River Uruguay*: depth of some 8 m, deposition of coarse materials, sandy bottoms with low organic matter, lower concentrations of suspended material and chlorophyll A with abundant degraded pigments and high nutrients. Corresponds to a system of low to moderate productivity (oligo-mesotrophic) with potential to increase its trophic status.

— *Bellaco and Ñandubaysal Bays*: semi-closed shallow bays (1.5-2 m) with weak circulation based on circular models, higher amount of suspended solids, deposition of fine materials, clayey-silty bottoms, high concentrations of chlorophyll A with little degraded pigment and low nutrients. Constitutes a meso-eutrophic environment with strong vertical fluxes of fresh phytoplanktonic matter which acts as a feeding and breeding area for various aquatic species. Inside the bays, there is mainly clayey-silty sediment and abundant biological productivity (plankton).

— *Inés Lagoon*: very shallow lagoon (0.3-0.5 m), rapidly filling up with sediment and acting as a trap for fine materials, with 20-50 cm of water at the time of sampling, high turbidity (~160 mg/L), fine to very fine sediment, streams and refuges with abundant aquatic vegetation. High amount of suspended solids, clayey-silty bottoms with frequent re-suspension, intermediate values of chlorophyll A with degraded pigments and low nutrients. Corresponds to a transitional wetland, with abundant paludal vegetation and a diversity of refuges. Connected to the River Uruguay by the Arroyo Pereyra to the north and to Ñandubaysal Bay by a coastal channel and a marshy area to the south.

6.41. The area presents an optimal environmental condition with a very low background of anthropogenic contaminants, mostly derived during the last 15-20 years. Trace levels of PCBs,

250 petrogenic aliphatic hydrocarbons, pyrogenic aromatic compounds and chlorinated pesticides have been detected in both sediments and biota, well below the recommended guidelines. The heavy metals occurring in the area are predominantly of natural origin.

6.42. The bays and the Inés Lagoon form a very productive ecological unit with a diversity of refuges for various aquatic species which might be protected as a natural sanctuary.

6.43. Summarized below are the most significant features of the area in which the planned pulp mills and associated facilities have been unilaterally authorized:

— The area has optimal environmental conditions with low anthropic impact. The organisms found there present very low levels of all contaminants.

— The River Uruguay presents a lower trophic status with lower chlorophyll A concentrations, a higher proportion of degraded pigments and higher nutrients.

— Bellaco and Ñandubaysal Bays are a high-productivity, meso-eutrophic environment exporting fresh organic matter to bottom sediments and to the River Uruguay, where it is consumed by benthic and detritivorous organisms. The bays present the highest chlorophyll A concentrations, low degraded pigments, nutrients reduced by biological consumption, and large vertical fluxes (sedimentation rate ~1.55 cm/year) including fresh algal material, with net accumulation of organic-rich fine sediments.

— Inés Lagoon is a filling-up transitional wetland with abundant aquatic vegetation and a diversity of refuges.

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Section III

The River Uruguay as a focus for sustainable development and the health and well-being of the neighbouring communities[603]

6.44. The Geographical Gross Product (GGP) of Entre Ríos reached 2 per cent of national GDP in 2003. Within the GGP, the tertiary sector has the highest importance with more than 65 per cent of the total, including tourism in particular, followed by the secondary sector with almost 20 per cent; lastly there is the primary sector, representing 15 per cent of the provincial product.

6.45. The Department of Gualeguaychú covers nearly 10,000 km^2. It has a population of over 100,000, nearly 75 per cent of whom live in its capital, the city of Gualeguaychú. More than half of this population is aged between 14 and 64, representing a large proportion of the economically active sector. In 2001, 97.7 per cent of the population aged over 10 was literate.

6.46. In 2003, the Department of Gualeguaychú accounted for some 10 per cent of the provincial product.

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[603]For the references concerning this section, see Chap. VII below and the Latinoconsult report ("Assessment of the fluvial environment of the proposed Botnia pulp mill on Río Uruguay"), in particular Ann. M, at http://www.ecopaedia.com.ar/publico/ea_report/ (username: ea_annex; password: ea_annex). See also Anns., Vol. V, Ann. 3, Vol. VII, Ann. 7 and Vol. VIII, Ann. 6.

6.47. Historically, the main basis of the economy of the Department of Gualeguaychú has been agriculture and stock-farming. The region has many livestock, dairy and poultry farms. The main crops grown in the Department are rice, maize, soya and wheat.

252 6.48. The population of the Department of Gualeguaychú has better access to mains water than the provincial average. There is a drinking water plant in the northern area of the city of Gualeguaychú. Work on this plant has made it possible to improve considerably the quantity and quality of its output, which has been combined with an increase in reserve capacity and the boring of wells at different points in the city, serving to reinforce the system. This was in response to the extension of the mains network, with more than 10,000 additional connections in the northern, eastern and southern sectors. The plant has an output capacity of 950 m^3 per hour. The city currently has almost 22,000 sites where service is available, and 87 per cent of the urban area is connected to the mains network.

6.49. A combined water and sewerage plan is currently under way, a project developed and managed by the Public Works Department, which is also responsible for the service as a whole. This is intended to expand and renew the mains network in order to serve the entire population.

6.50. The treatment plant for domestic wastewater (from homes, businesses and public institutions) has a surface area of 22 hectares. It consists of three parallel sets of aerated stabilization and sedimentation basins with accompanying facilities (pumping station, sand trap, outflow measuring chamber, chlorination chamber, landfill site for solids dredged from the basins), its purpose being to remove contaminants through the process of natural stabilization.

6.51. The treatment plant was designed for a population of 112,000 inhabitants served by the drainage system, that being the estimated population 20 years after its commissioning.

6.52. The urban area of Gualeguaychú has 8.5 km of drains for rainwater, which otherwise is surface run-off.

253 6.53. The tree population is generally in good condition. In one part of the city of Gualeguaychú alone, there are more than 10,000 trees and space to plant almost 8,000 others. In the rest of the city, there are between 5,000 and 7,000 further trees.

6.54. Tourism is now the most dynamic sector in the region. Tourist activity is developing mainly around the "Country Carnival", which takes place annually and attracts visitors from Argentina and abroad. Other attractions are the thermal spas and activities linked to the river and its beaches, e.g., general recreation, watersports and fishing.

6.55. Natural resources play a major role in the economy of the province. Many species of mammalian fauna associated with the aquatic environments have a commercial value for the fur industry or for human consumption.

6.56. Tourist activity in the Gualeguaychú region is very significant. It underpins other related economic activities, such as travel agencies, accommodation, restaurants, transport, car hire, shops, and cultural and leisure services.

6.57. The main tourist products offered by the Department of Gualeguaychú are: the carnival, the beaches, nature, sports, recreation, cultural activities and the thermal spas. Of these, the best developed are the carnival of Gualeguaychú and riverside tourism, the latter being directly linked to nature.

(i) *Carnival of Gualeguaychú*. This is a traditional local festival held every Saturday from 7 January until the first weekend of March. To stage it, the city has a special amphitheatre
254 holding 40,000 people. This venue is the second largest of its kind in Latin America, after the one in Río de Janeiro. There is a competitive parade of four processions, with hand-crafted displays that take more than 2,000 people to produce. Carnival spectators engage in other activities during the day, mainly those linked to sun and beach recreation. This is without doubt the main tourist asset, which has boosted other market segments.

(ii) *Sun and beach*. This product is represented on the one hand by the resorts along the River Gualeguaychú and on the other by the beaches of Ñandubaysal. These are among the largest in the area, situated 15 km from the city of Gualeguaychú on a bay in the River Uruguay, and are popular with tourists because of their quality and size.

Leisure activities on the River Uruguay

(iii) *Nature*. Ecotourism is being developed through activities linked to rural areas and in the
255 parks close to the city, such as the Parque Unzué. Included in this segment are visits to the private municipal reservation of Las Piedras for bird watching and guided walks.

(iv) *Sports tourism*. This is based on watersports, the services offered by marinas, and boating on the river. It also includes fishing, mainly for pejerrey in winter.

(v) *Recreation and cultural tourism*. The former includes the casino, theatres, discothèques and cafés; the latter covers visits to museums and historical and religious buildings. This activity supplements the two main products mentioned above, the casino being especially worthy of note.

(vi) *Spa tourism*. Gualeguaychú is the nearest spa centre to the capital, Buenos Aires. The largest complex has saltwater pools with temperatures of 38˚ to 40˚C, two of which are covered. This is a product that is currently being developed through new investment.

6.58. The main indicator of tourist activity in the area is the substantial number of tourists visiting the city of Gualeguaychú, especially for the beaches and nearby nature attractions. There are more than 400,000 in the high season and 90,000 in low season, leaving aside the fact that the average number of days per stay has increased.

6.59. A second indicator is the number of establishments providing accommodation for tourists.

256 6.60. A third indicator which shows the scale of the activity is the workforce employed, even if there is some seasonal fluctuation as regards the riverside activities.

6.61. A fourth indicator is investment in the sector: in addition to the investment in hotels, the first themed casino in Latin America has been opened, the motor-racing track has been extended, the amphitheatre that stages the carnival processions has been renovated, and a new convention hall and second thermal spa complex have been built.

6.62. Activities geared to active tourism and health are also an important factor during weekends throughout the year. Spa tourism is particularly in demand for health, relaxation or simply enjoyment.

6.63. More than 80 per cent of the tourists arriving in Gualeguaychú are engaged in riverside tourism; this is focused on the resort of Ñandubaysal, which has become the major market attraction and remains a preferred destination because of the quality of its gently sloping beaches and very white sand. Near the resort, archeological sites have been discovered relating to various aboriginal ethnic groups that once lived there.

6.64. "Aves Argentinas" (Birds of Argentina) and the World Council of Birdlife International, with the support of the Ministry of Foreign Affairs, International Trade and Religious Worship, have publicly and officially announced the first six "Areas of Importance for the Conservation of Birds" in Argentina, including the area of Ñandubaysal.

6.65. In conclusion, the part of the River Uruguay and the areas affected by it where the planned pulp mills and associated facilities have been unilaterally authorized is an especially
257 sensitive one from the environmental point of view. This is in particular because of its enormous biological diversity and the purity of its ecosystem. These characteristics have enabled the region of Gualeguaychú and the resort of Ñandubaysal and its neighbouring areas to be significantly developed for tourism, which has thus become a source of revenue for the more than 100,000 people living in Gualeguaychú and the other communities nearby. For these inhabitants, the conservation of the River Uruguay and the areas affected by it is closely linked to their own quality of life.

CHAPTER VII

THE ENVIRONMENTAL IMPACTS OF THE ORION PULP MILL

Section I

Introduction

261 7.1. This chapter deals with the environmental consequences of the planned Orion pulp mill, in the light of the information derived from the national and international environmental impact studies and the reports by independent experts commissioned for the purposes of this case. The mill has been planned by a Finnish company, OY Metsä Botnia AB (Botnia), and is to be built near Fray Bentos in Uruguay. The documents referred to in this chapter sometimes use the term "Orion mill" for this proposed pulp mill.

7.2. The factual and legal background to the authorization of the Orion mill by Uruguay has been set out in Chapters II and III. Those chapters show that what lies behind the adverse effects of the planned mill on the River Uruguay and the areas affected by it is the breaching by Uruguay, to the detriment of Argentina, of an international treaty, the Statute of the River Uruguay of 1975, which regulates a shared resource by means of specific norms that comply with the universally recognized rules and principles of international law on protecting the environment.

7.3. This chapter is divided into five parts. Section II describes the present environmental situation and quality of the River Uruguay and the nearby areas affected by it. Section III describes the operation of mills such as the one planned and assesses the typical environmental impacts of this kind of pulp mill, including a number of intrinsic environmental risks. It deals in particular with the effects of water abstraction and of discharges and emissions into the river and its environment, including the atmosphere. Section IV describes in some detail the planned operating **262** modes for the Orion mill and the types of discharges it would produce. Section V describes the effects on the environment of the River Uruguay and the areas affected by it resulting from the construction and operation of the pulp mill, on the basis of the reports that are available. These include, in particular, the effects on air and water quality, noise pollution, visual and general nuisance and risks to human and animal health, for example from the appearance and spread of algae. The specific impact on the tourism sector is also mentioned. Section VI concludes by drawing together all the elements of this chapter in order to show how, in breach of the 1975 Statute, Uruguay granted authorization for a mill on the River Uruguay that is "liable to affect . . . the quality of its waters" without being able to demonstrate that it had taken all necessary measures to protect and preserve the aquatic environment of the River Uruguay and to prevent its pollution.

7.4. In general terms, this chapter will show that no detailed and exhaustive study has yet really been produced of all the possible risks to the environment presented by this pulp mill. The uncertainties inherent in the assessment of the risks posed by the Orion mill are key to any assessment of this project, especially in view of the serious consequences for water quality, aquatic life and human health, not least through the bioaccumulation of pollutants in the food chain or other forms of exposure to toxic chemical substances. These uncertainties have not been dealt with in any satisfactory way at all during the impact assessment procedure. The conclusions are set out in Section VI of this chapter.

7.5. The principal documents referred to in this chapter are as follows:

(a) "Assessment of the Fluvial Environment of the Proposed Botnia Pulp Mill on Río Uruguay at
263 Fray Bentos, Uruguay", a report prepared by Latinoconsult S.A. for the Argentine Secretary for the Environment, dated 5 December 2006 ("the Latinoconsult report")[604]. The report also refers to the work of the Independent Argentinian Environmental Scientific Team (IAEST), which developed an assessment of the environmental characteristics of the River Uruguay and considered the effects of the proposed project[605].

(b) "Review of the IFC Cumulative Impacts Study for Botnia's Uruguay Pulp Mill", released on 4 December 2006 ("the Wheater report")[606]. This report was prepared by Professor Howard Wheater and Dr. Neil McIntyre of the Department of Civil and Environmental Engineering, Imperial College of Science, Technology and Medicine, London. Commissioned by Argentina, it focuses on those aspects of the environmental impact of the planned Orion mill that are linked to air and water quality.

(c) "Cumulative Impact Study" ("the CIS"): the final version of the CIS on the Uruguay pulp mills[607] was revised by consultants from EcoMetrix Incorporated, SENES and Processys and published in September 2006[608].

The CIS was commissioned by the International Finance Corporation (IFC), a subsidiary of the World Bank[609]. Unless otherwise indicated, all references to the CIS are to this final version[610].

264 *(d) Report of the Argentine delegation to the Argentina-Uruguay High-Level Group* ("Argentine report to the GTAN"): this report, dated 3 February 2006, sets out the conclusions of the Argentine delegation to the GTAN, which were presented separately because of the failure of this negotiating body[611].

(e) The environmental impact assessment produced by Botnia for the planned pulp mill. Botnia presented its original environmental impact assessment (EIA) on 31 March 2004[612].

(f) The *Hatfield report*: this examination of the draft CIS was commissioned by the IFC and published on 27 March 2006 ("the Hatfield report"). The analysis was prepared by two experts, Mr. Neil McCubbin and Mr. L. Wayne Dwernycjuk of Hatfield Consultants. The

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[604]See Anns., Vol. V, Ann. 3.

[605]The conditions for the appointment and work of members of the IAEST are set out in the Latinoconsult report, Sec. 1, p. 12. Anns., Vol. V, Ann. 3.

[606]See Anns., Vol. V, Ann. 5.

[607]The CIS presents a joint assessment of the potential effects of the planned Orion mill and a second plant which Empresa Nacional de Celulosa España (ENCE) was proposing to construct upstream from the Botnia site. ENCE announced that it intended to change the location of its proposed plant after work had started on the final CIS (FCIS).

[608]A summary of the process of drafting and revising the CIS is contained in Secs. 4.1.1-4.1.2 of the CIS, pp. 4.2-4.7.

[609]Following publication of the environmental assessment carried out by the ENCE and Botnia companies, the IFC asked independent experts to conduct a cumulative impact study (CIS) in July 2005. This overall study was defined as "a study of the cumulative social and environmental impacts likely to occur with the development of these two pulp mill projects in Uruguay. It focuses specifically on the cumulative impacts, although information on the direct impacts of each specific operation is included where necessary." *Cumulative Impact Study — Uruguay Pulp Mills*, 19 Dec. 2005, p. 5.

[610]See Anns., Vol. V, Ann. 6.

[611]See Anns., Vol. IV, Ann. 1. The GTAN was set up as a forum for direct negotiations between the two countries and met 12 times between Aug. 2005 and Jan. 2006 — see the Argentine report to the GTAN, p. 3.

[612]See Anns., Vol. V, Ann. 7.

study identifies major weaknesses in the draft CIS (and the environmental impact assessments (EIAs) on which it is based), representing "a lack of information, rather than environmentally deficient factors in the proposed mill designs and operations"[613].

(g) The reports entitled *Summary of the environmental effects of the pulp mills and forestry system in Uruguay*, prepared by the University of the Republic and published in June 2006, and
265 *Consultancy report on pulp mills*, prepared by a team of experts co-ordinated by Professor Marcelo Conti of the University of Rome "La Sapienza"[614].

7.6. Botnia prepared an EIA and submitted it to the Uruguayan Government's Department for the Environment (DINAMA)[615]. The company first presented its original EIA (without annexes) on 31 March 2004 and then its final version on 7 April 2004, when several annexes were submitted[616]. Botnia also supplied a number of further versions of its environmental report during 2004 which were not accepted by DINAMA. Eventually, a version dated 2 December 2004 was accepted and declared final by DINAMA, which treated the Orion mill as a Category C project, i.e. one that is potentially highly polluting.

7.7. Botnia contacted the IFC to obtain its support. In order to meet the conditions of its Environmental Assessment Policy (OP 4.01), the IFC decided in June 2005 that a further study of the cumulative social and environmental effects was necessary[617], and commissioned the CIS in August 2005. This was to consider the impact of the Orion mill and the pulp mill planned by Empresa Nacional de Celulosa España (ENCE), and how each of these was to be supplied with raw materials. The first draft CIS was published in December 2005 and was then the subject of a public enquiry. It was also examined by independent experts. The report of these independent experts was published in April 2006 as the Hatfield report, which identified major weaknesses in the draft
266 CIS. The CIS was consequently revised to take account of the recommendations in the Hatfield report and the final version published on 12 October 2006.

7.8. Argentina commissioned a report on the effects of the Orion mill on the environment of the River Uruguay. This report was prepared by Latinoconsult S.A.[618] and submitted to the Argentine Government on 5 December 2006. It summarizes the key findings from a review of the environmental impact statements produced in order to examine the effects of the planned Orion pulp mill. The report by Professor Howard Wheater of Imperial College, London was published on 4 December 2006.

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[613]See Anns., Vol. V, Ann. 9. See p. 2 of the study.

[614]See Anns., Vol. V, Anns. 1 and 4.

[615]Dirección Nacional de Medio Ambiente (DINAMA).

[616]A series of requests for further information were made by DINAMA's Environmental Impact Assessment Division during 2004, and Botnia provided complementary documentation which DINAMA described in its report of 11 Feb. 2005 as being "presented in a very vague fashion" and responding unsatisfactorily to the questions posed. See p. 1 of the DINAMA report, Anns., Vol. V, Ann. 8.

[617]The CIS states that the cumulative impact assessments include the potential effects associated with existing projects and conditions, those of the proposed projects, and those of other developments that are realistically defined at the time the assessment is prepared and would impact directly on the project area. See Sec. 4.0 of the CIS, p. 4.1, Anns., Vol. V, Ann. 6.

[618]Latinoconsult S.A. was the lead company in producing the report, but the work was carried out by a consortium of three consultancies, the others being IATASA (Argentina) and ESSA Technologies Ltd. (Canada).

7.9. Lastly, Argentina would refer to Chapter I of this Memorial for its comments on the proposal for a second pulp mill by the Spanish company Empresa Nacional de Celulosa España (ENCE) and on the subsequent withdrawal of this project.

Section II

The present quality of the River Uruguay and the areas affected by it

7.10. The planned site for the Orion mill is on the left bank of the River Uruguay, near the town of Fray Bentos in the Uruguayan Department of Río Negro. The mill is less than 700 m from the international frontier (formed by the line of the principal channel); the nearest Argentine territory is the island of Santa Inés, some 1,600 m away. The River Uruguay represents the international frontier between Argentina and Uruguay in this region[619].

267 7.11. Most of the land near the project sites is used for agriculture and forestry. The river is used for water consumption, fishing and recreation by the inhabitants of the region and tourists. There are also beach areas of various sizes along both the Argentine and Uruguayan banks, which are used for recreation and tourism. The beach resort of Ñandubaysal is situated to the east-south-east on the Argentine bank, only 11 km from the site where the Botnia project is planned. The treated effluent from the Orion mill will be discharged directly into the River Uruguay.

7.12. The River Uruguay is, after the River Paraná, the most important river draining to the Río de la Plata[620]. Its watershed covers a surface area of approximately 365,000 km^2, of which 51 per cent is in Brazil, 33.5 per cent is in Argentina and 15.5 per cent is in Uruguay. Its lower reaches, where the Orion mill will be located, have been described in the CIS as estuarine environments with a relatively wide (1.8 km near Fray Bentos) and flat channel with numerous islands. The river widens steadily, from 6 km near Las Cañas to a maximum of 12 km at Nueva Palmira. The upper and middle reaches of the river, above the Salto Grande dam, have a relatively narrow channel width, with a steep channel slope and various rapids.

7.13. The River Uruguay has a number of characteristics that demand special attention when it comes to authorizing a project which may significantly affect its quality. These include:

(i) the very shallow depth of major sections of the river;

(ii) the sandbars that are a feature of its bed;

(iii) its relatively slow current, which means that transportation (i.e., dispersion and advection) of pollutants will be slow; and

268 (iv) the phenomenon of reverse flow, which means that pollutants may be transported upstream and remain near the area where they were initially discharged into the river.

These characteristics are particularly marked around the site chosen for the Orion mill. The fact that they have not been taken into account by Uruguay, and that the siting of the Orion mill has not been subject to assessment or appropriate prior examination, in accordance with the 1975 Statute, is one of the central elements of the dispute.

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[619] Anns., Vol. VIII, Anns. 1-5.

[620] See the CIS, p. ES.x, Anns., Vol. V, Ann. 6.

7.14. The environmental and social setting of the Orion mill project is described in Section 3 of the CIS. Argentina wishes to stress that there are many important aspects of the environmental characteristics of the River Uruguay which have not been dealt with fully in the CIS, or have been dealt with erroneously[621]. The deficiencies in the CIS are as follows:

(a) the occurrence of reverse flow is much more frequent in the vicinity of the Orion mill than the CIS acknowledges;

(b) the analysis of plume dispersion in the CIS is incorrect, because it is not based on typical or critical scenarios[622]. The concentrations of effluent in the plume are likely to be different from those in the discharges from the mill;

(c) the recent hydrological data are representative of a wet weather cycle, and in future the project may operate in dry weather cycle conditions in which the average flows are lower than those used in the CIS.

The remainder of this Section draws attention to further shortcomings in the CIS analysis of the environmental context of the Orion mill, as identified in the Latinoconsult and Wheater reports:

269 *(d)* failure to consider the potential role of river sediments and geomorphology;

(e) inadequate consideration of the environmental quality and vulnerability of the River Uruguay;

(f) failure to consider the full range of aquatic life forms in the River Uruguay;

(g) failure to consider the full range of other forms of biological diversity in the area;

(h) failure to address the effects of tree plantations on the water cycle;

(i) poor assessment of the socio-economic impact of the project.

7.15. *(a) Reverse flow and other aspects*: the River Uruguay is subject to a phenomenon variously described as reverse flow or, more generally, tidal conditions. This occurs when the river current changes direction and flows upstream for greater or lesser periods of time. Attention was drawn to the phenomenon of reverse flow in the River Uruguay and its implications for the environmental impact of the pulp mills by the Argentine delegation to the GTAN[623]. However, and despite the fact that the issue was raised at a very early stage, Uruguay has consistently refused to take it into account.

7.16. The CIS recognizes the existence of this phenomenon[624]. However, it claims that it only occurs "a few times per year or less frequently"[625]. This is a considerable error.

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[621]See Sec. 2 of the Latinoconsult report, pp. 13-18, Anns., Vol. V, Ann. 3.

[622]According to an expert from the IAEST, in general terms, the analysis of plume dispersion in the CIS does not underestimate, but on the contrary overestimates the concentrations of plume effluents in the receptors. It probably only overestimates this concentration along or close to the plume axis, in so far as the CIS model uses dispersion coefficients higher than those used by the Latinoconsult report.

[623]See the Argentine report to the GTAN, Sec. III, p. 7, note 13. Anns., Vol. IV, Ann. 1.

[624]See the CIS, Sec. 3.2.1. Anns., Vol. V, Ann. 6,

[625]*Ibid*., p. 3.4.

7.17. The frequency of this phenomenon of reverse flow has been greatly underestimated by
270 the CIS, as confirmed by the findings of the Latinoconsult report[626]. This bears out the fact that reverse flow occurs in total for around 23 per cent of the time (an average of 84 days per year). For 22 per cent of the time, these reversals are the result of tides (of up to 20 cm) and wind conditions (winds aligned with the river). This type of reversal occurs on an average of 80 days per year, during which the flow reverses once or several times during the day. For the remaining 1 per cent (3 or 4 days per year), these reversals are the result of storm surges (and are referred to as "pure flow reversals"). This type of reversal causes the river to flow backwards for at least 24 hours.

7.18. The frequency of these reverse flows has major implications for the dispersion of the effluent plume, which was not acknowledged by the CIS. This is because when the flow reverses, the contaminants which had been diluted are carried back to the point of discharge and the concentration of toxins there is then increased. As the Wheater report notes: "The frequency of flow reversals seems to have been understated in the CIS. This point is well covered by Latinoconsult (2006). If their analysis is accurate then this is an obvious and potentially important deficiency in the CIS."[627]

7.19. During such periods, the dilution in some "far fields" will be lower than the 1:1000 average value reported in the CIS[628]. Effluent dilution values of the order of 1:693 in Ñandubaysal Bay and 1:516 in Yaguareté Bay (in Uruguay) will be more frequent than is acknowledged by the CIS[629].

7.20. Such levels of dilution several kilometres away were considered worrying by the IAEST. The Wheater report confirms that the CIS used a period which does not appear to be representative. The report states that it is questionable whether the 10-year flow estimate used by
271 the CIS is sufficient. It points out that the sensitive nature of many of the receptors and the potential hazards to the aquatic environment and human health mean that risks from less frequent events may be unacceptable[630]. The report concludes, on the one hand, that the lack of consideration of more extreme low flow events is a deficiency of the CIS, given the potentially unacceptable risks, and on the other hand that the statistical uncertainty in the 5-year (or 10-year) low flow from a 20-year record is high and should be reported so that some judgment can be made about accuracy.

7.21. The Wheater report also identifies another major area of uncertainty, namely the effect of climate change on flow variability. It describes as an important deficiency the fact that climate change is not considered at all in the low flow analysis (or in other aspects of the CIS)[631].

7.22. The other sources of uncertainty identified by the Wheater report are in particular the following: (1) the flow régime and hence the 5-year low flow is mostly controlled by Salto Grande dam operation. The CIS implicitly assumes that the flow distribution is not sensitive to any future changes in the dam operation, noting that it is generally operated to maintain a natural flow régime

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[626]See the Latinoconsult report, Sec. 2 (A). Anns., Vol. V, Ann. 3.

[627]See the Wheater report, Sec. 4, p. 4. Anns., Vol. V, Ann. 5.

[628]See the Latinoconsult report, Sec. 2.2, p. 16. Anns., Vol. V, Ann. 3.

[629]See Table D6.2-1 in Ann. D of the CIS. Anns., Vol. V, Ann. 6.

[630]See the Wheater report, Sec. 4, p. 4, and the discussion that follows of the chances of low flows occurring. Anns., Vol. V, Ann. 5.

[631]See the Wheater report, Sec. 4, p. 4. Anns., Vol. V, Ann. 5.

and that the reservoirs' storage capacity is limited. (2) The CIS has estimated tributary inflows below Salto Grande based on catchment area. This may be of poor accuracy due to spatial differences in rainfall, hydrology and abstractions[632].

272 7.23. *(b) Plume dispersion*: the CIS has not taken account of the relatively frequent reverse flow conditions, and for this reason the levels of dilution on which it is based are incorrect.

7.24. The Latinoconsult report analysed plume behaviour under different flow conditions, using a 2Ddispersion model (the MIKE 21 model of the Danish Hydraulic Laboratory)[633]. The results of a unidimensional model (MIKE 11) used to gauge and predict the currents of the River Uruguay provided input to the plume dispersion analysis. The simulation of effluent transport was carried out for the same scenarios presented in the CIS.

7.25. When the MIKE 21 and MIKE 11 models are used and the real frequency of reverse flow is taken into account, effluent flows towards the Argentine side of the river clearly appear much more likely than under the average flows assessed in the CIS. The Latinoconsult report also confirms that concentrations reach higher values in Uruguay's waters, near the Uruguayan bank[634]. The model likewise shows that large-scale eddies can occur, especially in open areas such as Ñandubaysal Bay.

7.26. *(c) Possible change in the weather cycle*: Argentina recognizes that it is difficult to predict the future trend of the alternation between dry and wet cycles in the River Uruguay, as this will be influenced by many factors, including global warming. However, it can be anticipated, as confirmed in Section 2.3 of the Latinoconsult report, that the river is approaching a dry period, or is even at the beginning of it. The CIS does not allow for the possibility of this change in the weather
273 cycle, which would have the effect of increasing reverse flow and other tidal phenomena, and the weakening of the current that would result from such a shift is not taken into account in any way or even contemplated in the CIS. For its part, Argentina maintains that any analysis of likely impact should study the sensitivity to changes in the flow régime.

7.27. The shift to a dry cycle would affect low flows, which might be 440 m^3/s rather than the estimated 500 m^3/s used in the CIS. Reverse flow, which at present occurs about 23 per cent of the time, would be expected to be in the order of 30 per cent (assuming the tides of the Río de la Plata remain the same)[635].

7.28. To understand how future conditions in the River Uruguay may be further affected by global warming would require explicit consideration of predictions from regional climate models. This has not been taken into account by the CIS or by Uruguay. That is a significant shortcoming: it is possible that low flows will decrease in volume and become more regular, which, if it were to occur, would make the effects of reverse flow and tidal conditions even more serious, especially as regards the dispersion and dilution of pollutants.

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[632]See the Wheater report, Sec. 4, p. 4. Anns., Vol. V, Ann. 5.

[633]See the Latinoconsult report, p. 15. Anns., Vol. V, Ann. 3.

[634]See the Latinoconsult report, Sec. 2.2, p. 16. Anns., Vol. V, Ann. 3.

[635]See the Latinoconsult report, Sec. 2.3, p. 18. Anns., Vol. V, Ann. 3.

7.29. Furthermore, the future trend of weather cycles could also be affected by the use of the river and its watershed, including the building of dams. Land use will also be important, because the gradual felling of forests will increase erosion. These elements have not been satisfactorily or appropriately taken into account by the CIS.

274 7.30. These factors have a bearing on the reliability of the predictions of plume dynamics and dilution levels in the "far field" beyond the immediate mixing zone. Predictions based on an analysis of average equilibrium river conditions in the recent past may not appropriately characterize the future conditions. As the Latinoconsult report team notes: "Consequently, it is likely that within the lifetime of this project, the exposure of receptor sites to effluent from the mill may be greater than predicted in the FCIS analysis."[636]

7.31. *(d) Sediments and geomorphology*: the CIS does not consider the river sediments in detail and the question of geomorphological changes is not addressed at all. The River Uruguay is a dynamic sedimentary environment characterized by high rates of local sediment deposition. In some sections of the river, such as the Ñandubaysal Bay area, recent on-site measurements have shown sedimentation rates of the order of 0.015-0.02 m/year, a relatively high rate pointing to an extremely dynamic system. To illustrate the dynamism of this process, satellite images show the existence of a small island around 10 km south of Ñandubaysal Bay which was not visible on river charts 30 years before. This has implications for future flows and transport of pollutants[637].

7.32. By assuming a much lower sedimentation rate, the CIS takes no account of the geomorphological changes that are closely linked to the deposition and accumulation of contaminants. Professor Howard Wheater sees this as a serious omission, and as a matter of concern in the light of the significant changes observed over a few decades. This issue must be dealt with before any impact study can be regarded as completed.

275 7.33. The concentrations in water, which are taken into account by the CIS, do not reflect the potential role in this respect of the accumulation of contaminants in sediment, nor the effects of this on the food chain. The CIS does not address the question of the contaminants associated with sediment or what becomes of them. As the Wheater report points out:

> "Although accumulation of contaminants in the bays near the Botnia discharge will probably be less than in a lake, due to smaller hydraulic and sediment residence times, the significant discharge of AOX and other organics means there is significant potential for accumulation. The CIS provides no evidence that this potential has been reasonably explored through literature review and/or integrated hydrodynamic-sediment-contaminant modelling."[638]

7.34. The Wheater report goes on to state that the CIS gives "an unsatisfactory justification" for neglecting accumulation of sediment and associated contaminants in Yaguareté Bay. The port development may increase the sedimentation rate by approximately 50 per cent, but the CIS merely states that "other factors are expected to prevent accumulation of sediment within the embayment" and that "net sedimentation in the bay is not expected to change". The Wheater report rightly

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[636] *Ibid*.

[637] See the Wheater report, Sec. 5. Anns., Vol. V, Ann. 5.

[638] See the Wheater report, Sec. 5, p. 5. Anns., Vol. V, Ann. 5.

points out that this statement is counter-intuitive and that no convincing reasons are given as to why the estimate of 50 per cent should be ignored[639].

7.35. Lastly, the Wheater report criticizes the CIS for its "cursory treatment" of chlorophenolics in Yaguareté Bay. It points out that the estimated increase in the Yaguareté Bay concentration under low flows (0.0003 mg/L) is not marginal when compared to background values
276 of 0.0001-0.0014 mg/L, especially considering the scope for uncertainty in this estimated value, and the coincident increase of suspended solids[640].

7.36. Argentina maintains that it is essential for the questions concerning sediment quality to be studied in more detail before the impact study can be regarded as completed. As the Latinoconsult report points out, there is a risk of persistent contaminant build-up in the form of fine, organic-rich particulates accumulating in inner sites. Moreover, the possible formation of eutrophic zones in the River Uruguay with an increased load of dissolved and particulate organic material derived from the plume would increase the sedimentation of organic-rich particulates to the bottom. Such organic hotspots may act as attractors for detritus-feeding fish, favouring the bioaccumulation of persistent pollutants[641]. Summing up, the Wheater report states that the attention given to sediments and accumulation of sediment contamination "is very disappointing and may be regarded as one of the CIS's weakest elements"[642].

7.37. *(e) Water quality*: the dilution levels adopted by the CIS only take account of normal flow régime conditions, without allowing for reverse flows. As a result, the CIS has seriously underestimated the dilution of effluents from the Orion mill in Ñandubaysal Bay, Santa Inés lagoon and near the island of Santa Inés (on the Argentine side). The IAEST's calculations show that the probability of dilution falling below 1:1000 is around 10 per cent. Moreover, since this level of dilution occurs on about 80 days per year, it is clear that the water quality, in terms of levels of exposure and effluent concentrations, has not been presented realistically by the CIS.

277 7.38. As pointed out by the Argentine report to the GTAN, the waters of the River Uruguay that will receive the effluents are generally clean, with low levels of COD and BOD_5. Their pH values are in the middle of the range recommended by the CARU Digest (5.6-8.9) and the dissolved oxygen rate is 8.3 mg/L with 76.8 per cent saturation. However, it also appears that the level of nutrients, in particular phosphorus[643], is such that any changes may produce an effect of eutrophication, especially in summer[644]. This means that the area in question is a fragile aquatic ecosystem maintaining a degree of quality which can and must be protected[645].

7.39. The Latinoconsult report notes that Ñandubaysal and Bellaco Bays, together with the Inés lagoon, form a very productive coastal area with a large diversity of refuges for aquatic

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[639] *Ibid.*

[640] See the Wheater report, Sec. 5, p. 6. Anns., Vol. V, Ann. 5.

[641] See the Latinoconsult report, Sec. 6.1, p. 31. Anns., Vol. V, Ann. 3.

[642] See the Wheater report, Sec. 5, p. 6. Anns., Vol. V, Ann. 5.

[643] The phosphorus concentrations in the area (average value: 0.093 mg/L) far exceed the maximum laid down by the Uruguayan Decree 253/79 as amended — see p. 12 of the Argentine report to the GTAN, Anns., Vol. IV, Ann. 1.

[644] This effect occurred recently in summer 2005 - see p. 12 of the Argentine report to the GTAN, Anns., Vol. IV, Ann. 1.

[645] See the Argentine report to the GTAN, p. 2, para. 5. Anns., Vol. IV, Ann. 1.

organisms which would benefit from being declared a natural sanctuary[646]. A summary of the initial baseline analysis is contained in Section 6.1 of the Latinoconsult report.

7.40. The Wheater report criticizes the CIS for providing insufficient information to support its statement that, despite the existing high nutrient levels, the increase in these levels due to mill discharges will be insignificant. The report considers the consequences of the pulp mill treating Fray Bentos municipal sewage, and states that while this solution would represent an overall improvement in water quality, that may not be the case at Yaguareté Bay and the site for drinking water abstraction (both of which would become downstream of the municipal wastewater discharge, whereas they were previously upstream). An improvement at these sites would depend on the performance of the activated sludge reactor (ASR) treatment system, particularly in
278 removing nutrients. But ASRs are not designed to remove nutrients, as reflected in the description of the best available techniques for pulp mills in Europe (IPPC-BAT). Typical nutrient removal by an ASR is 30-35 per cent, compared to about 90 per cent for BOD_5. Additional removal would require tertiary treatment. Furthermore, the wastewater treatment requires extra nutrients to be added in the form of urea and phosphoric acid; whether or not these extra nutrients are passed to the receiving water, or are exported as sludge, depends on the performance of the ASR. However, the added nutrients would not be needed if the municipal sewage is imported. Pointing out that "Botnia has not yet specified a nutrient control strategy for its Orion WWTP", the Wheater report therefore states that the conclusion of the CIS "no adverse effect on human health or aquatic life" is premature[647].

7.41. The Latinoconsult report indicates that the level of phosphorus (P) in the River Uruguay is already high, which is a serious concern and represents a source of eutrophication and the increased spreading of aquatic flora, particularly in the shallow sections of the river where the flow is low, such as Yaguareté Bay (Uruguay) and Ñandubaysal Bay. The DINAMA norm for surface water quality is 0.025 mg/L for phosphorus[648]. However, various samples taken by CARU in 1999 and 2001 on the right bank of the River Uruguay, near Gualeguaychú (in the bay and the channel), range from 0.04 mg/L to 0.2 mg/L (on average 0.097 mg/L) of total phosphorus; these readings are well above the DINAMA norm of 0.025 mg/L. It follows that, even if the Orion Mill operates in accordance with the best available techniques (BAT), the receiving water is not capable of absorbing more phosphorus without this giving rise to serious levels of eutrophication. The
279 consequences of this for human health are considered in Section V.

7.42. The Hatfield report had also criticized the draft CIS for the scarcity of data regarding water quality and biological resources, particularly related to the bay area downstream of the proposed Orion effluent discharge[649]. However, these concerns were only partially dealt with in the final CIS — see below. Argentina therefore notes that the final CIS concluded that, "[i]n general, the quality of water in the Río Uruguay is considered good but there are localized issues and exceedances of water quality criteria such as near Bella Unión, Salto, etc. . . ."[650], but points out that this same CIS makes no reference to local issues or the exceeding of water quality criteria on the Argentine side of the river.

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[646]See the Latinoconsult report, p. 28. Anns., Vol. V, Ann. 3.

[647]See the Wheater report, Sec. 6, pp. 6-7. Anns., Vol. V, Ann. 5.

[648]Art. 5 of Decree 253/79 for Class 1 (drinking water supplies), Class 2 *(a)* (irrigation), Class 2 *(b)* (recreational purposes) and Class 3 (preservation of water flora and fauna), for total phosphorus.

[649]See the Hatfield report of 27 March 2006, p. 4, para. 7 and A11. Anns., Vol. V, Ann. 9.

[650]See the CIS, p. ES.xi. Anns., Vol. V, Ann. 6.

7.43. The CIS also mentions the existence of run-off from agricultural areas and discharge from urban centres and industries with inadequate effluent treatment. Sediment quality is likewise considered good, but "some nutrients and metals have been found to be elevated"[651]. The concentrations of phosphorus and nitrogen are described as "somewhat higher in the fall". The CIS points out that monitoring data for the vast majority of constituents shows compliance with applicable water quality standards, with the possible exception of faecal coliforms, dissolved oxygen, ammonia, phosphorus, chromium, iron and zinc. It states that these exceedances may pose a risk to human health and aquatic life and affect the aesthetic quality of recreational waters. The levels of phenolics were found to frequently exceed the water quality criteria, with the highest
280 values on the Argentine side of the river. It thus emerges clearly from the CIS that a number of pollutants, including phosphorus, are already present at high levels in the River Uruguay.

7.44. Nonetheless, the CIS seems to draw no conclusions from this finding, and fails to underline the risk of eutrophication represented by any intentional increase in this already high level of phosphorus in the river.

7.45. The CIS also notes that some chemical parameters relevant to pulp mill operations do not have water quality criteria, and recognizes that these parameters have not been routinely measured in the River Uruguay. They include adsorbable organic halides (AOX), chlorophenolics, resin and fatty acids, dioxins and furans, and phytosterols. The CIS refers to the special studies commissioned by Botnia which documented baseline levels of these constituents in the river: this indicates that the impact study has not been based on appropriate, independent measurements of the baseline levels as regards the capacity of the river to absorb the emissions and effluents from the mill.

7.46. *(f) Aquatic life — fish*: the River Uruguay contains a wide variety of aquatic life forms, in particular fish and amphibians, as well as other forms of biological diversity. The fish populations include both dominant species and others that are dependent on them. The Argentine report to the GTAN notes that the final stretch of the River Uruguay, downstream from Fray Bentos, is an area of high diversity of fish species — more than 125 species are cited — including some which are critically threatened, according to the World Conservation Union (IUCN)[652]. The report also describes this as the zone of greatest productivity and biomass,
281 with density values among the highest recorded in river environments anywhere in the world[653]. This diversity is mentioned by the CIS, which states that the lower River Uruguay supports more than 100 fish species, of which 17 are caught regularly, in particular sabalo, boga, mullet, dorado and catfish[654].

7.47. The CIS nevertheless states that no major migratory fish species or species important to the fishery are known to spawn in the vicinity of the proposed mills[655]. However, the effluents from the pulp mills will be discharged into the river and contaminate the migration routes of fish arriving to repopulate the river, which will have an effect on both subsistence and recreational fishing.

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[651]See the CIS, p. ES.xi and generally in Sec. 3.2. Anns., Vol. V, Ann. 6.

[652]The report to the GTAN notes that this point is recognized by the environmental impact study presented by Botnia, p. 12. Anns., Vol. IV, Ann. 1.

[653]See the Argentine report to the GTAN, p. 12. Anns., Vol. IV, Ann.

[654]See the CIS, p. ES.xi. Anns., Vol. V, Ann. 6.

[655]See the CIS, p. 3.7. Anns., Vol. V, Ann. 6.

7.48. According to the Argentine report to the GTAN, more than 90 per cent of fish production from the shared stretch of the river, i.e. over 4,500 tonnes per year, comes from the area in the vicinity of the Orion mill. This zone is also a breeding area for stocks of migratory fish in the River Uruguay, with routes for drifting larvae which pass the effluent discharge points of the two planned pulp mills. The aquatic life forms in this area may suffer the impact of discharges with high concentrations of contaminating substances, such as AOX, COD and BOD_5. The GTAN report also pointed out that the accumulation of dioxins and furans in the biota and the aquatic environment needed to be measured[656].

7.49. The Wheater report, for its part, notes that recent scientific literature on impacts on aquatic life indicates that uncertainty about effects is high, and points out that the CIS fails to recognize this uncertainty in its conclusions[657]. The report draws attention to the following
282 uncertainties: (1) bioactive substances continue to be released and detrimental effects on aquatic life are still observed at some sites and may be present at others but undetectable with current resources and technology; (2) the range of chemicals in mill wastewater and their interaction with chemicals naturally present in freshwaters are too complex to reach conclusions; almost all available literature on pulp mill effluent impacts is based on studies in the northern hemisphere; (3) the Canadian studies which the CIS cites pertain to a different pulp type, climate and aquatic environment from the Botnia site[658]. The report notes that, on the contrary, discharges and impacts are recognized as site specific, and concludes that: "Given the limited knowledge about extrapolation between sites and environment types, the CIS statements should be more cautious, and any associated conclusions and recommendations should be more precautionary."[659]

7.50. The Wheater report notes further that, under European law, the important aquatic ecosystems near the site would probably be protected. It is therefore unlikely that this project would be permitted to proceed under European law, and hence the implication that the plant would be welcome in Europe is misleading in this context[660].

7.51. The Latinoconsult report points out that the migratory fish populations of the River Paraná are the basic element for the recovery of the fish populations above the Salto Grande dam, and that these populations have to cross the area of the effluent of the pulp mill[661]. This
283 illustrates how the CIS systematically underestimates the potential vulnerability of the biological diversity of the River Uruguay in view of the pollution emanating from the mill. Furthermore, the report goes on to note that the lower reach of the River Uruguay is an area of reproduction of the sardine *Lycengraulis grossidens*, as well as a marine catfish *(Genidens barbus)*, and that the sector downstream, near the cities of Fray Bentos and Gualeguaychú, is considered to be one of the most important areas for migratory fish populations that feed in autumn and winter or use the area as a refuge at periods of low flow[662].

7.52. The IAEST developed a model to evaluate the long-term impacts of pulp mills on the state and productivity of the sabalo population of the River Uruguay (for details, see Sec. 6.6 of the

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[656]See the Argentine report to the GTAN, p. 2, paras. 5-6. Anns., Vol. IV, Ann. 1.

[657]See the Wheater report, Sec. 1, p. 1. Anns., Vol. V, Ann. 5.

[658]See the Wheater report, Sec. 1, pp. 1-2. Anns., Vol. V, Ann. 5.

[659]*Ibid*., p. 2.

[660]*Ibid*.

[661]See the Latinoconsult report, Sec. 6.6, p. 37. Anns., Vol. V, Ann. 3.

[662]*Ibid*., pp. 37-38.

Latinoconsult report). The effects on post-recruitment mortality are potentially significant, especially in so far as natural mortality is lower and the fish have a greater fidelity to the River Uruguay. The findings of the IAEST therefore confirm the very strong possibility of the fish populations deteriorating because of the effluents from the Orion mill — this is discussed in more detail in Section V.

7.53. The CIS refers to low concentrations of contaminants in fish tissues in the vicinity of Fray Bentos, including dioxins and furans, PCBs and organochlorine pesticides, but states that these are "all . . . below levels of concern for fish consumption"[663]. However, as will be explained in Section V, the phenomena of bioaccumulation and bioamplification of contaminants in fish have not been dealt with satisfactorily by the CIS, a deficiency which is all the more glaring in view of the fact that the frequency of reverse flows has been underestimated, as described above.

284 7.54. *Other aquatic life forms*: it should be noted that the CIS does not consider the full range of biological diversity which exists in the river and that, as a result, its assessment of this diversity is substantially weakened. The range and size of the biological diversity of the river and its surroundings are clearly confirmed by Annexes D and H of the Latinoconsult report.

7.55. In particular, the CIS fails to take appropriate account of the impacts of the mills on vertebrate species other than fish inhabiting the river and the areas affected by it. There is no discussion of the potential impacts of the projects on vertebrates other than fish to the south of the proposed mill site.

7.56. The potential impacts on amphibian species are not properly analysed[664], whereas these could be exposed to xenobiotics in the environment in various ways, for example through their permeable skin, as well as through egg or larval development taking place in water[665].

7.57. The CIS also refers to the benthic invertebrate community, including the presence of tubificid worms that are indicative of nutrient-enriched, low oxygen conditions that other species do not tolerate. The IAEST carried out sampling at a total of 20 sites and determined that the ecological quality of the river water was between good and very good, as indicated by the presence of particularly sensitive invertebrate taxa. Both sensitive organisms and others that are more tolerant were found to be present[666].

285 7.58. According to the CIS, the phytoplankton community is limited by the turbidity of the river, blue-green algae comprising a significant portion of it, particularly in the summer months when algal blooms can occur. Argentina would point out that the Latinoconsult report concludes in the light of its analyses (described in Ann. E) that: "nutrient concentration would not be a limiting factor for phytoplankton growth, and any increase in the nutrients concentration in the area will enhance algal growth, especially in the shores and bays" (p. 33 of the report).

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[663]See the CIS, p. ES.xi and p. 3.8. Anns., Vol. V, Ann. 6.

[664]The Latinoconsult report states in Sec. 6.4 that there are 26 species of amphibians in the area of interest, whereas the CIS only mentions 13 species. Anns., Vol. V, Ann. 3.

[665]See the Latinoconsult report, Sec. 6.4, p. 36. Anns., Vol. V, Ann. 3.

[666]See the Latinoconsult report, Anns., Vol. V, Ann. 3.

Among the findings of the Latinoconsult report regarding plankton, the following should also be noted:

> "The Lower Uruguay River, and particularly the studied area, gathers optimal growth conditions (pH, temperature, irradiance, nutrient concentration) not only for *Microcystis aeruginosa*, but for other cyanobacteria as well. Nutrient concentrations should be monitored thoroughly, since any increase in their levels could induce bloom formation. The Argentinean shore of the river is a highly vulnerable zone due to the geomorphological characteristics of its coasts. These circumstances affect not only the dynamics of the ecosystem, but might also have serious implications on human health for the local populations, and their economies as well." (P. 34 of the report.)

This is a further illustration of the shortcomings of the CIS in dealing with the vulnerability of the River Uruguay as a receiving environment.

7.59. *(g) Other forms of biological diversity*: the area around the proposed mill supports a wide diversity of aquatic birds and endangered species. The CIS does not deal with the effects of the effluents on these birds, nor does it describe the full range of species that are potentially concerned. For example, the CIS does not mention the presence in the area of ten bird species that
286 are endangered to various degrees, including *Xanthopsar flavus* — endangered (or vulnerable), *Sporophila zelichi* — critically endangered, and *Sporophila palustris* — endangered[667]. The survey offered by the CIS is limited and misleading. Argentina is basing itself on the analyses described in Annex G of the Latinoconsult report, and on other information set out here, in order to show the vital importance of the sector in question for a whole swathe of biological diversity in the region.

7.60. Uruguay has designated Esteros de Farrapos e Islas del Río Uruguay, 7 km from the site of the Orion mill, as a wetland of international importance within the meaning of the Ramsar Convention, to which both Argentina and Uruguay are parties[668]. Esteros de Farrapos is site No. 1433 on the list of wetlands of international importance under the Ramsar Convention. It is situated in the lower Section of the River Uruguay, downstream from the Salto Grande dam and on the frontier with Argentina. The site consists of alluvial areas on the eastern bank of the river and 24 islands which are submerged at high water and exposed when the waters are low. This régime is important to control flooding and the erosion of the river banks. Raised sandbanks along the islands and the alluvial plain have forest growth and, in this dynamic environment, allow both temporary and permanent pools of freshwater to be formed[669]. There have been sightings of the near-threatened species *Chrysocyon brachyurus* and of several species of endangered birds: the saffron-cowled blackbird, *Xanthopsar flavus*, and the seedeaters *Sporophila cinnamomea*, *S. palustris* and *S. zelichi*, the last of these being critically endangered. Most of the area is owned by the State and used principally for extensive cattle farming during the summer, although there is
287 also horticulture, lemon-growing and coal production. The site's main problem is that of soil erosion, linked to poor farming practice in the adjacent areas.

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[667]The full list is contained in the letter of 13 Nov. 2006 from Dr. Romina Picolotti, the Argentine Secretary for Environmental Issues and Sustainable Development, to Mr. Declan Duff, Vice-President of the IFC. See para. 4 of the response to point 1, Anns., Vol. II, Ann. 18.

[668]Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971 (the Ramsar Convention).

[669]The most abundant vegetation in the flooded areas consists of reeds *Scirpus sp.*, water lettuce *Pistia stratiotes*, eared watermoss *Salvinia rotundifolia*, ferns *Azolla filiculoides*, willows *Salix sp.*, *Zizianopsis bonariensis*, *Panicum spp.*, southern cat-tail *Typha domingensis*, *Eryngium pandanifolium* and water hyacinth *Eichhornia spp.* See the report "Uruguay designates its second Ramsar site along the Uruguay River" by Ivan Dario Valencia, available at www.ramsar.org/wn/w.n.uruguay.

7.61. There are also protected wetlands on the Argentine shore and on the islands in the River Uruguay (the wetlands of the Departments of Río Negro, Paysandú and Soriano in Uruguay, and Gualeguaychú and the Ibicuy islands in Argentina)[670]. The other designated sites in the region are those of Potrero del Burro (or Rincón de Gallinas), about 14 km south-west of Fray Bentos, and Bosque Nacional Islas del Río Negro, to the south of Fray Bentos. The Islas Fiscales del Río Uruguay are situated further upstream from the location of the projects[671]. For Argentina, the key question regarding these sites is that of reverse flow, the consequences of which are unknown and have not been assessed, especially as regards the transport of pollutants to these protected wetlands.

7.62. *(h) Failure to address the effects of tree plantations on water balance*: international studies have shown eucalyptus plantations to cause a reduction in river levels of around 25 per cent on average. One major study, combining the results of more than 600 observations, has demonstrated substantial loss of flow and an increase in the salt content and acidity of soils, where afforestation has taken place. Overall, the plantations reduced flow by 227 mm per year (covering 52 per cent of cases), while in 13 per cent of cases, the watercourses dried up completely for at least a year[672]. No account has been taken, no comment made nor any action proposed with regard to this possible reduction of flow, which would directly affect the abundant wetlands of the River Uruguay. The Latinoconsult report confirms that the phenomenon could certainly have
288 significant effects on the local water régime[673]. The Wheater report considers the issue in Section 9, pointing out that: "The Section of the CIS . . . dealing with hydrological effects of forestry, including groundwater interactions, is confused and misleading and does not draw on the substantial body of relevant literature."

7.63. The Wheater report goes on to discuss the findings of the CIS and notes that, while the overall conclusion from the statement that there is greater evapotranspiration from trees than grass is correct, its consequences — in particular the reduction in water available for run-off and groundwater recharge — are not considered at all. The report points out that the relative effects can be large, and that the environmental implications of this can be very significant, depending on the local hydrology and hydrogeology, and require proper assessment[674].

7.64. *(i) Economic and social aspects*: the river waters are used, amongst other things, for consumption, recreation and fishing. Tourism is also important in the region. The Playa Ubici beach, in the eastern part of Fray Bentos, can be seen from the Botnia site; the beach resort of Ñandubaysal lies to the west-north-west, on the Argentine side, about 11 km from the area of the Botnia project.

7.65. Gualeguaychú, in Argentina, is a major tourist centre, attracting visitors to the local beaches and the annual carnival, a popular traditional festival held every Saturday from 7 January until the first weekend in March[675]. Spectators come to the carnival from all over Argentina and

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[670]The wetlands are protected by Law No. 9718 of the Province of Entre Ríos. The present law was adopted in June 2006, but follows on from the previous Law No. 8967, dating from 1955.

[671]See the CIS, Sec. 3.1, p. 3.1. Anns., Vol. V, Ann. 6.

[672]R. B. Jackson, E. G. Jobbágy, R. Avissar, S. B. Roy, D. J. Barrett, C. W. Cook, K. A. Farley, D. C. le Maitre, B. A. McCarl and B. C. Murray. 2005. Trading Water for Carbon with Biological Carbon Sequestration. Science 310: 1944-1947.

[673]See the Latinoconsult report, Anns., Vol. V, Ann. 3.

[674]See the Wheater report, Sec. 9, p. 10. Anns., Vol. V, Ann. 5.

[675]See the Latinoconsult report, p. 46, which notes that the amphitheatre built for the carnival is the second largest of its kind in Latin America, after that of Río de Janeiro.

abroad. It is a key tourism asset for the country, which is encouraging the growth of other tourist
289 activities in the region, in particular the beach resorts, ecotourism, and sports, cultural and spa tourism (thermal spas). This growth is illustrated by the increase of 39 per cent in the number of tourist accommodation facilities in the period between the start of 2004 and the first half of 2006[676]. The economic importance of tourism for Gualeguaychú is described in detail in Section 7 of the Latinoconsult report[677].

7.66. The beach resort of Ñandubaysal is in the area of Gualeguaychú. The Ñandubaysal Bay resort is flourishing, with nearly 45,000 visitors each year. Its main assets are the clear waters of its beaches and other aesthetic factors. Eutrophication, which produces foul smells, public health risks and unattractively coloured water, together with the visual nuisance created by the Botnia facilities on the opposite bank, will have a major negative effect on tourism. This fact, as well as the economic implications of a decline in tourism, is discussed in further detail in Section V below. From the first meeting of the GTAN, the Argentine delegation voiced its particular concern at the damaging consequences that the siting of the mills could bring to Gualeguaychú[678]. And in its first contact with Uruguay on the subject of the CMB mill, CARU itself highlighted the problem of the mill's impact on tourism, a point referred to in Chapter II.

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Section III

Typical environmental impacts of this kind of pulp mill

7.67. World pulp production is currently estimated at around 175 million tonnes per year. The mills involved are mostly situated in North America and Europe, but in recent years, producers have sought to establish new mills in the southern hemisphere and in developing countries.

7.68. The proposed mill will use the bleached eucalyptus kraft pulp (BEKP or kraft) process. This Section analyses the environmental impacts of using this type of process.

7.69. According to the CIS, the most widely accepted definition of "best available techniques" (BAT), and the basic standard that has been used for the design of the Botnia-Orion mill, is that of the European Union, IPPC-BAT (2001)[679]. The other reference standards used in the CIS were the Tasmanian-AMT and USEPA Cluster Rule requirements. The relevance of these standards in terms of the best available techniques in IPPC-BAT (2001) is discussed in further detail in Section V below.

Inputs and outputs

7.70. The pulp mill's main inputs are its wood supply, chemical products and water.

7.71. The mill's main outputs are the wood pulp, energy, liquid effluents, discharges into the atmosphere, solid waste and hazardous waste.

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[676]See the Latinoconsult report, p. 46. Anns., Vol. V, Ann. 3.

[677]See the Latinoconsult report, pp. 44-48. Anns., Vol. V, Ann. 3.

[678]See the Argentine report to the GTAN, Sec. III, p. 7. Anns., Vol. IV, Ann.1.

[679]See the summary in Sec. 2.7 of the CIS, p. 2.30. Anns., Vol. V, Ann. 6.

Production methods

7.72. *The kraft process*: the CIS states that the kraft or sulphate process is the dominant pulping process worldwide, due to superior pulp strength properties, its applicability for most wood species and its ability to comply with rigorous environmental standards[680]. **291**

7.73. The kraft pulping process consists of five stages: (1) wood handling; (2) pulping; (3) chemical recovery; (4) bleaching; and (5) drying.

Figure 2.1 gives an overview of the processes of a kraft pulp mill [SEPA-Report 4713-2, 1997]

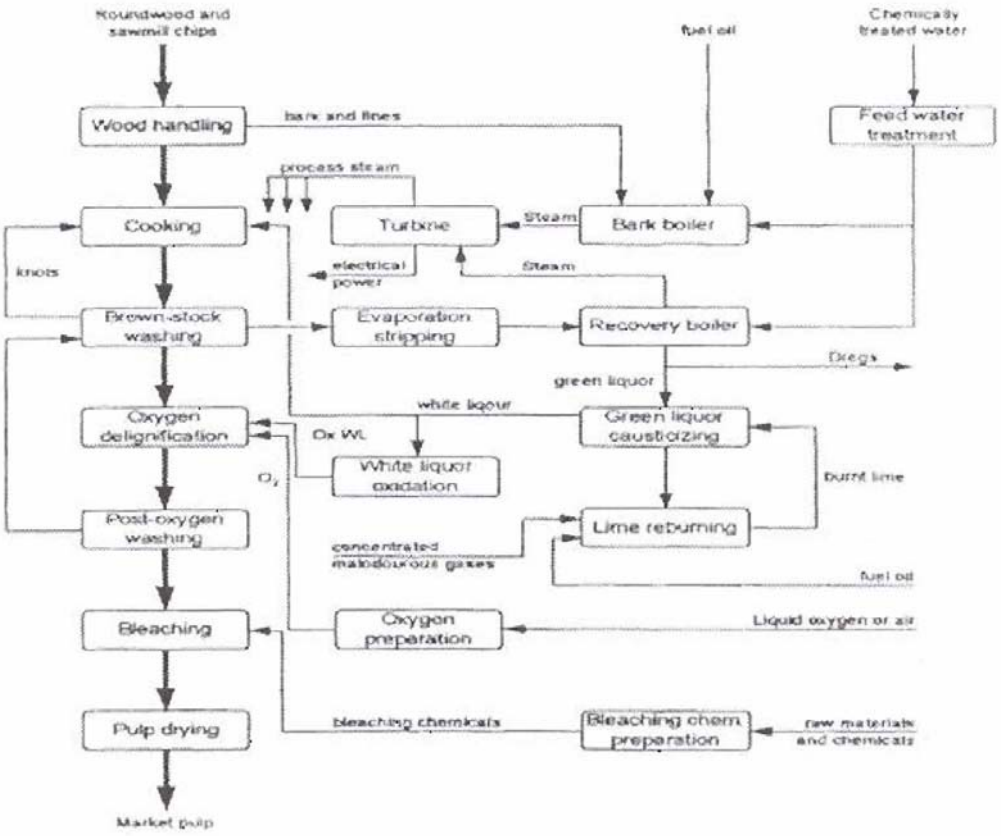

Figure 2.1 Overview of the processes of a kraft pulp mill
[SEPA-Report 4713-2, 1997]. Often there is a screening after bleaching, too

7.74. In *wood handling*, the logs are debarked and cut into manageable sizes. In the *pulping* stage, the wood chips are broken down into papermaking fibres in a cooking operation with white liquor (sodium hydroxide and sodium sulphide). The white liquor is used to extract the lignin from the wood fibre, in large high-pressure vessels known as digesters. The unbleached pulp (brown stock) is then washed. In the *chemical recovery* stage, after separation, the spent cooking liquor (black liquor) is concentrated by evaporation and burned in the recovery boiler, generating steam at high pressure to power the pulping process. The inorganic components of the black liquor are then treated to regenerate sodium hydroxide and sodium sulphide for use in pulping. The chemical substances are recovered in the form of smelt, which is dissolved in weak liquor to form green liquor. This is then clarified to remove contaminated solids, known as dregs. These dregs are then **292**

[680]See the CIS, Sec. 2.5, and the European Union's BREF document of 2001 on best available techniques in the pulp and paper industry, Chap. 2, p. 17. Anns., Vol. V, Ann. 6.

washed, and the resulting weak liquor is used for dissolving the smelt. White liquor is produced in a recausticizing plant and returned to the digesters. The clarified green liquor is passed through a slaker where sodium carbonate is converted into sodium hydroxide using lime. The white liquor is clarified to remove precipitated lime mud. The lime mud is converted into lime through calcination in the lime kiln and reused back in the slaker. The pulp is *bleached* in a process consisting of three to five stages which form a bleaching sequence (delignification and brightening) — see below — and then *dried* and baled before being shipped.

7.75. *Bleaching process*: the choice of bleaching process is dependent on the type of pulp involved and the destined end use[681]. For a BEKP mill, the liquid effluents from the bleaching process typically contribute half the effluent discharge and most of the organic load (CIS, Sec. 2.6).

293 7.76. In the past, elemental chlorine (Cl_2) was used as an acidic medium to bleach the pulp, but this process results in a wide range of chlorinated hydrocarbons being produced, some of which (in particular dioxins and furans) are toxic and carcinogenic. Faced with public concern as to the effects of the dioxins, the paper industry adopted two alternative processes: ECF (elemental chlorine free) bleaching, which uses chlorine dioxide instead of elemental chlorine, and TCF (totally chlorine free) bleaching, using only oxygen-based chemicals and not products based on chlorine[682]. It is also possible to use the properties of both techniques, in a process known as ECF-Light. The CIS describes Botnia as a leader in the adoption of TCF technologies (Sec. 2.6)[683]. It also states that pulp from the TCF process has lower yields and poorer final quality than the ECF and ECF-Light pulps. The choice of bleaching process is an important question, and no alternative has been considered.

7.77. According to the CIS, which refers in this context to a study carried out in 2006 by a government agency in the Australian state of Tasmania, neither the TCF process nor the ECF process emits dioxins at environmentally significant levels[684]. This study concluded that TCF pulp and ECF pulp had similar environmental impacts from air and water emissions. Both technologies are described by the CIS as acceptable under the Stockholm Convention, IPPC-BAT, USEPA and all significant permitting authorities.

294 *Water abstraction*

7.78. The methods of treating pulp, including the kraft method, use very large amounts of water. This has substantial environmental impacts, because of (1) the quantities of water that are abstracted and (2) the possible damage caused to the adjacent environment. The consequences typically include increased sedimentation and turbidity, increased water temperature, loss of habitat diversity, possible concentration of toxic material and lowering of water tables[685].

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[681]See Friends of the Earth Briefing on the Environmental Consequences of Pulp and Paper Manufacture, Alan Stanley, Oct. 1996 (updated in Dec. 2001), Sec. 1.2. Anns., Vol. V, Ann. 15.

[682]*Ibid*., Sec. 1.2 *(b)* and note 52. The Briefing points out that industry opinion is divided as to the relative merits of the two processes — see Sec. 1.2 *(d)*.

[683]The CIS states that 21 per cent of Botnia's overall production is manufactured using the TCF process.

[684]The Tasmanian study is mentioned on p. ES.ix and in Sec. 2.6, p. 2.25. Anns., Vol. V, Ann. 6.

[685]See the Friends of the Earth Briefing, Sec. 1.6 *(b)*. Anns., Vol. V, Ann. 15.

Emissions and effluents

7.79. Kraft pulp mill emissions to the atmosphere may originate from: chip storage; the cooking process; pulp washing; the bleach plant; bleaching chemical preparation; chemicals recovery; evaporation; the bark furnace; the recovery boiler; white liquor preparation; the lime kiln; tanks and pulp drying. The emissions consist mainly of products of combustion, including particulate matter, nitrogen oxides (NO_x), sulphur dioxide (SO_2) and malodorous reduced sulphur compounds, commonly referred to as total reduced sulphur (TRS). Nitrogen oxides are emitted from furnaces, as well as small amounts of dust (solid particulates) as fly ash. From the bleach plants and preparation of bleaching chemicals, chlorine compounds may escape to the atmosphere.

(1) Liquid effluent discharges

7.80. *General organic pollution and suspended solids*: the main effluents from kraft pulp processes are oxygen-consuming organic substances, such as lost cellulose fibre, starch,
295 carbohydrate and hemi-cellulose (or the organic acids resulting from their breakdown), levels of which are measured by COD (chemical oxygen demand) and BOD (biological oxygen demand)[686]. This demand for oxygen depletes that available to fauna and flora, thus damaging wildlife near to and downstream from the effluent discharges[687].

7.81. High levels of suspended solids can also cause problems of both water opacity and blanketing of river or lake beds. Severe blanketing may result in anaerobic decomposition under the blanket releasing hydrogen sulphide into the aquatic ecosystem. Organic solids can also absorb many of the toxins present in mill effluents, such as resin and fatty acids and heavy metals. This can have long-term effects over a wider area as a result of bioaccumulation and transportation through the food chain[688].

7.82. The treated effluent from kraft pulp mills contains principally dissolved inorganic solids or salts of sodium and calcium, and low concentrations of residual organic compounds.

7.83. *Acidic compounds*: these are predominantly natural resin acids. They may be chlorinated in bleached kraft pulp effluent. They are readily biodegradable and do not bioaccumulate[689].

296 7.84. *Organochlorine compounds*: effluent from the bleach plant, where chlorine-containing chemicals are used, contains organically-bound chlorine compounds, commonly measured as AOX. AOX is a measure of a wide range of chlorinated organic compounds. The AOX measurement may also include polychlorinated, persistent compounds, some of which may be toxic at low concentrations.

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[686]BOD is a measure of the amount of organic matter requiring oxygen for decomposition used in the context of organic pollution of water bodies. COD is a measure of the amount of organic matter and chemical compounds requiring oxygen for oxidation, similar to BOD. COD is more widely used as it is a simpler procedure and includes the effects of non-biodegradable organic matter which can account for up to half the material discharged. See the Friends of the Earth Briefing, Glossary.

[687]See the Friends of the Earth Briefing, Sec. 1.4 *(a)* (i). Anns., Vol. V, Ann. 15.

[688]*Ibid*., Sec. 1.4 *(a)* (i). Anns., Vol. V, Ann. 15.

[689]*Ibid*., Sec. 1.4 *(a)* (ii). Anns., Vol. V, Ann. 15.

7.85. Chlorophenolics are formed in chlorine-bleached chemical pulping processes. They are toxic, persistent and bioaccumulative, and can also transform into other compounds which are even more so. This is probably the most hazardous chemical group in pulp mill effluents, being present in higher concentrations than more toxic compounds such as dioxins[690]. Substituting chlorine dioxide for elemental chlorine in the bleaching process significantly increases chlorophenolic production[691].

7.86. Dioxins are extremely toxic, persistent and carcinogenic. Furans are chemically similar but an order of magnitude less toxic and less persistent. Dioxins are known to be present in flue gases, pulp and effluent. The known effects on fish and mammals are wide ranging. In humans, they are suspected of causing miscarriages, birth defects, skin complaints, liver damage and behavioural and neurological problems. Their bioconcentration through the food chain, via fish, is a major concern[692].

7.87. Chloroform and other neutral chlorinated compounds are formed during the bleaching
297 process but in lower concentrations than chlorophenolics. Compounds in this group are generally non-persistent and non-bioaccumulative, but some may be moderately toxic, mutagenic and/or suspected carcinogens. The major concern is the likely effect of human exposure to chloroform via drinking water and air[693].

7.88. Use of chlorine dioxide, the basis of ECF bleaching, may lead to production of chlorate. Chlorate is a powerful herbicide which can severely affect waterborne algae[694].

7.89. *Other problems*: some non-chlorinated chemical substances discharged from pulp mills may also have toxic effects on aquatic organisms unless treated appropriately before discharge. Emissions of coloured substances may affect aquatic ecosystems through decreased transparency of water. Emissions of nutrients (nitrogen and phosphorus) can result in eutrophication of water bodies. Individual metals extracted from the wood can also be detected in low concentrations in effluents[695].

7.90. *Effluent treatment*: there are three possible levels of effluent waste treatment in pulp mills. *Primary treatment involves the mechanical removal of suspended solids by settlement or other means.* The effectiveness of any secondary or tertiary treatment depends upon efficient primary treatment, which itself reduces BOD and AOX. *Secondary treatment* uses micro-organisms to accelerate the natural decomposition of organic waste. The two main methods used are aerated stabilization and activated sludge treatment (AST). These are both aerobic treatments. The efficiency of these two systems varies widely, depending on climate, influent quality, pulp type, fibre source and mill practice. In ideal conditions, AST performs better at
298 reducing BOD and removing suspended solids. Disadvantages of both methods include high energy consumption and production of sludge waste. However, newer anaerobic treatments are

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[690] *Ibid*.

[691] *Ibid*., Sec. 1.4 *(a)* (iii). Anns., Vol. V, Ann. 15.

[692] *Ibid*.

[693] *Ibid*.

[694] *Ibid*., Sec. 1.4 *(a)* (iv). Anns., Vol. V, Ann. 15.

[695] See the CIS, Sec. 2.7, p. 2.27. Anns., Vol. V, Ann. 6.

now coming into use[696]. As pointed out in the Wheater report, AST is not designed to remove nutrients, which requires tertiary treatment[697].

7.91. *Tertiary* or non-biological chemical treatments involve the use of aluminium oxide, ferric oxide and polyelectrolytes to assist coagulation of waste in the effluents, which are then sand filtered.

(2) Air emissions

7.92. Air emissions from chemical pulp mills are made up of particulates, hydrogen sulphide, oxides of sulphur and oxides of nitrogen. Micro-pollutants include chloroform, dioxins and furans, other organochlorines and other volatile organics. As with liquid effluents, the levels of emissions are highly dependent upon the type of process technology employed[698].

The odour of hydrogen sulphide (rotten egg smell) can be a specific problem, as described below. Argentina notes that the kraft pulp process was banned for several years in Germany in the 1990s. In view of the emergence of new technologies for bleaching, recycling and odour control, the process is now authorized in Germany. But these developments do not mean that odour is no longer an issue as regards the kraft pulp process.

299 *(3) Solid waste*

7.93. Solid waste is produced, with disposal usually to landfill, although incineration and composting are becoming increasingly widespread. Dioxins and heavy metals may be disseminated in the course of solid waste disposal[699].

Intrinsic environmental risks of kraft pulp mills

7.94 The main environmental problems caused by use of the kraft pulping method are linked to the following issues (see also above): the impact of wastewater effluents (in particular the presence of chlorophenolics and dioxins, and effluent colour); air emissions, especially of dioxins and malodorous gases; the management of solid waste residues, and energy consumption. All these elements have an impact on biological diversity, water quality and human health. As stated in the European Union's BREF document of 2001: "In Kraft pulping the wastewater effluents, the emissions to air including malodorous gases and the energy consumption are the centres of interest. In some countries also waste is expected to become an environmental issue of concern."[700]

7.95. The CIS maintains that because of rapid developments in pulping technology, environmental protection equipment and mill operating practices through the 1990s, the characteristics of the industry's discharges have changed significantly too. The environmental issues that remain are therefore said to differ significantly from those of the past. But new
300 difficulties have appeared, and other problems still remain, as discussed in Section V below.

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[696]See the Friends of the Earth Briefing, Sec. 1.5. Anns., Vol. V, Ann. 15.

[697]See the Wheater report, Sec. 6, p. 6. Anns., Vol. V, Ann. 5.

[698]See the Friends of the Earth Briefing, Sec. 1.4 *(b)*. Anns., Vol. V, Ann. 15.

[699]See the Friends of the Earth Briefing, Sec. 1.4 *(c)*. Anns., Vol. V, Ann. 15.

[700]See the Executive Summary of the document, p. (iii). Anns., Vol. V, Ann. 15.

7.96. Among the problems posed by pulp mills, the risk frequently described as the most dangerous for the environment is the emission of dioxins and furans. This is of the utmost importance. The Hatfield report describes these compounds as being "of significant concern to the general public"[701]. Kraft pulp mills which use chlorinated compounds in the bleaching process (including ECF treatment) discharge organochlorine compounds, such as dioxins and furans, both in the form of air emissions and liquid effluents. As indicated above, organochlorine compounds are extremely toxic, persistent, mutagenic and carcinogenic, and may cause birth defects, liver damage, skin complaints and neurological and immunological diseases.

7.97. In the light of these risks, the "World Bank Pollution Prevention and Abatement Handbook: Pulp and Paper Mills" of 1998 states that "the trend is to avoid the use of any kind of chlorine chemicals and employ [TCF] bleaching . . . Only ECF processes are acceptable and from an environmental perspective, TCF processes are preferred."[702]

7.98. Another key issue regarding discharges from state-of-the-art kraft pulp mills concerns the collection and management of malodorous gases containing total reduced sulphur (TRS). According to the CIS, TRS management is being addressed to a great extent by the implementation of modern non-condensable gas (NCG) collection systems at both mills. However, the very low odour threshold for these gases (5-10 ppb) makes it extremely difficult to eliminate the odours completely. The CIS does not state that these odours will not occur regularly.

301 7.99. Another issue is that of effluent colouration, which, according to the CIS, is being addressed by selection of modern pulping and bleaching technologies and an extensive spills collection system (CIS, Sec. 2.7, p. 2.28).

7.100. The multilateral development banks have long recognized the variety of adverse impacts which pulp mills can have on the environment. Institutions such as the European Bank for Reconstruction and Development (EBRD)[703], the Inter-American Development Bank, the World Bank and the IFC all require large-scale pulp mill construction projects to be subjected to mandatory environmental impact assessments. Pulp mills are also subject to this type of procedure under European law[704]. The Espoo Convention of 1991 of the United Nations Economic Commission for Europe on environmental impact assessment in a transboundary context also lists pulp and paper manufacturing of 200 air-dried metric tonnes or more per day among the activities

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[701]See the Hatfield report, p. 3, para. 6. Anns., Vol. V, Ann. 9.

[702]See the Handbook, pp. 395-396, http://www.worldbank.org.

[703]Industrial plants for the: *(a)* production of pulp from timber or similar fibrous materials; *(b)* production of paper and board with a production capacity exceeding 200 air-dried metric tonnes per day are listed as Category A projects in Ann. 1 to the EBRD's Environmental Policy document (approved on 29 April 2003). Projects are classified as Category A when the project receiving EBRD funding could result in potentially significant adverse future environmental impacts which, at the time of screening, cannot readily be identified or assessed. An environmental impact assessment (EIA) is therefore required to identify and assess the future environmental impacts associated with the proposed project, identify potential environmental improvement opportunities, and recommend any measures needed to prevent, minimize and mitigate adverse impacts (see Sec. 16 of the Environmental Policy document).

[704]See Council Directive 85/337/EC, as amended by Council Directive 97/11/EC and by Directive 2003/35/EC of the European Parliament and of the Council. Ann. I to the Directive lists the projects which must be subjected to an assessment, and para. 18 of Ann. I refers to industrial plants for the production of pulp from timber or similar fibrous materials.

requiring notification of affected States parties, where this manufacturing is likely to cause a significant adverse transboundary impact[705].

302 7.101. Industrial plants for the production of pulp from timber or other fibrous materials are also covered by the European Union's rules on integrated pollution prevention and control (IPPC)[706].

Section IV

The operating method and discharges planned for the Orion mill

7.102. The general features of the proposed mill are summarized in Table 2.2-1 of the CIS. The table shows that the production of air-dried pulp from the Orion mill will be 1,000,000 tonnes per year. This figure demonstrates the scale of the project, since the average production from a European pulp mill is 180,000 tonnes per year[707]. The table also indicates that production from the Orion mill is due to start in 2007 and has a projected 40-year lifetime.

7.103. The same table states that the River Uruguay will provide the water supply and receive the effluent from the industrial operations.

7.104. The Orion mill will be constructed on a greenfield site to produce bleached eucalyptus kraft pulp (BEKP). Botnia is the second-largest pulp producer in Europe. The mill will be supplied with wood by Botnia's partner, Forestal Oriental S.A., which is using plantations in the Paysandú region, around 200 km north-west of the mill site[708]. The effects of eucalyptus plantations on the water balance have been discussed in Section II above.

303 7.105. The project proposed by Botnia involves the construction, commissioning and operation of a cellulose production plant and a port terminal in a free zone near the port of Fray Bentos, on the River Uruguay. Each of these components is subject to prior environmental authorization under Uruguayan law, which was granted by Uruguay in breach of the 1975 Statute (see Chaps. IV and V above). A number of elements associated with the project also require prior environmental authorization, which must likewise be in accordance with the 1975 Statute. This applies to: an effluent discharge station on the River Uruguay; a site for the final disposal of potentially hazardous industrial solid waste; a large-scale effluent treatment plant (73,000 m^3/day); an electricity generating plant, and other complementary plants for the production of chemical inputs (hydrogen peroxide and sodium chlorate)[709]. Uruguay's inability to carry out an appropriate assessment of the "chemical island" that will form the core of the project is discussed in Section V below. The central fact remains that on 14 February 2005, when it unilaterally authorized the Orion project, Uruguay did not possess all the necessary information.

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[705]Pulp and paper manufacturing of 200 air-dried metric tonnes or more per day is listed in App. I to the Convention, para. 13.

[706]See Council Directive 96/61/EC as amended, Ann. I, para. 6.1.

[707]See the European Union BREF document, Sec. 1.2, p. 4. Anns., Vol. V, Ann. 15.

[708]Anns., Vol. VIII, Anns. 3 and 5.

[709]The project is summarized in the DINAMA report of Feb. 2005, p. 1. Anns., Vol. V, Ann. 8.

7.106. Several factors indicate the scale of the Orion project. Should the plant begin operating, some 150,000 tonnes per year of chemical inputs will be received for industrial production, solids and liquids, as well as possibly heavy fuel oil. The final products, 900,000 tonnes per year of pulp bales, will be loaded onto barges destined for a transhipment terminal in Nueva Palmira. The new port will consist of two wharves for vessels, with their corresponding operating areas and three dolphins to facilitate mooring of large vessels, together with an area reclaimed from the river for the collection and circulation of loads[710]. The mill will
304 have an annual production capacity of around 1,000,000 tonnes of air-dried pulp (ADt/a). The projected consumption of water from the River Uruguay, which will be subject to physico-chemical treatment before being used in the production process, is 1,000 L/s.

7.107. *Site selection*: the Orion mill is to be constructed at Fray Bentos. Argentina has received no satisfactory explanation of the criteria used to select the project site, in particular the environmental criteria. This information was requested by Argentina through CARU and the GTAN, but was never communicated to it before the publication of the final CIS — a document whose serious shortcomings are discussed below. Neither the environmental impact assessment supplied by Botnia nor the report published by DINAMA addressed this question. The Uruguayan Government simply refused to discuss the matter when it was raised by Argentina in CARU and the GTAN. Argentina asked several times about alternatives to the site selected, pointing out that the failure to discuss the choice of site in the two environmental impact studies was a breach of the international standards for environmental assessment[711]. The Hatfield report also refers to the inadequate discussion of the issue of site selection in the CIS:

> "The CIS does not provide a clear understanding of the site selection process employed by Orion . . . Many stakeholders have commented on this oversight. There is a desire on the part of the stakeholders to have an unambiguous 'roadmap' of the decision process that governed elimination/selection of potential mill sites."[712]

The Hatfield report goes on to recommend that Botnia should outline the detailed rationale and "decision tree" used when scrutinizing a given site for acceptance as a pulp mill location. This has still not been done to date.

305 7.108. The question is only dealt with at last in Section 2.3 of the final CIS, where it is addressed in a very unsatisfactory way, using an approach which is not objective. The terms of reference of the CIS team[713] merely state that Uruguay is one of very few locations in the world where already existing plantations can supply the raw material for a new pulp mill of this scale. Argentina notes that these plantations are areas which have been planted, and in no case woodland areas existing in a natural state. Throughout the CIS, Botnia's statements are simply accepted at face value, and there is no discussion aimed at comparing the environmental relevance of the site(s) chosen with that of other alternatives (including abandoning the mill project). The recommendations of the Hatfield report calling for the reasons for the choice and a "decision tree" to be provided have not been followed. That is a major shortcoming attributable to Uruguay.

7.109. The CIS states that Botnia (and ENCE) decided to develop their pulp mills in Uruguay because of its forestry policy, natural resources, trained human resources, and social,

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[710] *Ibid*.

[711] See the Argentine report to the GTAN, p. 7. Anns., Vol. IV, Ann. 1.

[712] See the Hatfield report, Issue A23, p. 18. Anns., Vol. V, Ann. 9.

[713] See Ann. H of the CIS. Anns., Vol. V, Ann. 6.

political and economic stability[714]. Proximity to existing plantation operations and deep navigable waters are described as having been the most important factors in the decision, in terms of infrastructure and logistics. The CIS deals with a number of environmental aspects of the project — such as water supply, waste management, aesthetic drawbacks, air emissions, sensitive natural or cultural areas and acceptance of industry — but does not examine at any point how these environmental aspects influenced the decision to locate the mill at the proposed site. The report merely states that Botnia took account of the cultural importance of Ñandubaysal, in Argentina, and
306 Las Cañas, in Uruguay, in its site selection procedure. However, Botnia's final decision only took account of the proximity of recreational areas situated in Uruguay, and clearly underestimated (or simply ignored) the importance of the Argentine part of the region affected by the project[715].

7.110. The procedure for selecting the site for the pulp mill was based on a subjective methodology, and no criteria relating to the natural environment (aquatic or terrestrial) were explicitly applied. The micro-scale site selection process (i.e., at detailed local level) was carried out with priority being given solely to economic, logistic and construction criteria, so as to reduce the cost of the project and facilitate industrial operation.

7.111. The SWOT analysis method was used in the site evaluation procedure, but its application was clearly skewed by the eight criteria applied, seven of which were economic or logistic and focused on the concept of industrial development (wood supply, energy and water inputs, transport and proximity to towns), the last one being social (Table 2.3-1 of the CIS). It was only after the location for the project had been chosen, solely on the basis of these criteria, that a justification of the choice of site was attempted on environmental grounds. While social considerations may have been taken into account, the environmental criteria were mentioned in passing but never analysed explicitly or in detail. The appropriate method of site selection should have been to quantify the variations between sites in terms of the most important social and environmental factors, to determine the most sensitive areas (sensitivity maps, ruling out certain areas) and to identify alternative sites, allowing an acceptable final selection to be made on the basis of strict environmental criteria combined with economic and social considerations. All this simply did not happen. The site selection procedure was completely inappropriate, since it was not based satisfactorily — if at all — on environmental criteria. In particular, no account appears to
307 have been taken of the effects of discharging pollutants into the River Uruguay at this point, or of the socio-economic implications of the project for the Argentine side, for example in terms of tourist and recreational activities.

7.112. *The pulp mill and production methods*: the Orion proposal is for a bleached kraft pulp mill with an ECF-type bleaching plant[716]; it will operate using kraft pulp processing methods as described in Section III above. This means that the mill will use chlorine dioxide as a bleaching agent rather than elemental chlorine. It will also use caustic soda, oxygen, hydrogen peroxide and sulphuric acid as chemical agents in the bleaching operations.

7.113. The Orion mill project also includes the construction of two chemical input production plants: one will produce around 70-80 tonnes per day of hydrogen peroxide, the other

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[714]See the CIS, Sec. 2.3, p. 2.7. Anns., Vol. V, Ann. 6.

[715]See the CIS, p. 2.11. Anns., Vol. V, Ann. 6.

[716]See the CIS, p. ES.i. Anns., Vol. V, Ann. 6.

sodium chlorate from brine. The two plants will produce more chemicals than are needed for the operation of the mill[717].

7.114. The electricity generating plant for the Orion mill will consist of two steam turbines supplied by a line with steam produced by the heat obtained in the recovery boiler, principally through the combustion of black liquor and odorous gases. The plant will produce a surplus of energy.

308 7.115. The mill will recycle filtrates within the bleaching plant, which is seen as reducing water consumption and effluent flow, and thus reuse chemical residues within the plant[718].

Waste and discharges

7.116. The mill will produce large quantities of industrial effluent and waste. Details of the effluents produced and how they will be treated, together with the proposed treatment methods, are set out in the initial environmental impact assessment for the mills[719]. This Section indicates the scale of the discharges and emissions from the mill, as these are described by the company behind the project. The nature of the discharges and the environmental impact of the mill are discussed in detail in Section V, in the light of the criticisms of the initial environmental impact assessments and the provisional version of the CIS. A critical analysis of the impacts identified in the final CIS is also contained in Section V.

7.117. In order to dispose of the solid waste, proposals have been drawn up for a landfill at Cañada de los Perros. The initial environmental impact assessment states that this will be constructed in accordance with European Union guidelines. It is estimated that some 49,500 tonnes of solid waste will be sent there every year[720]. Over a 40-year period, this means that approximately 2,000,000 tonnes of solid waste will be generated and require disposal. No environmental impact assessment appears to have been produced for this waste disposal facility.

309 7.118. The effluent treatment plant which forms part of the project will have the capacity to treat some 73,000 m^3 per day, most of which will be the result of pulp bleaching[721]. The mill will use the activated sludge treatment (AST) process, which will treat an average discharge flow of approximately 73,000 m^3 per day.

7.119. According to the CIS, effluent will be discharged into the river through an outfall pipe lying at an average depth of 8.25 m at low water. The outfall pipe will end in a 200 m diffuser with 80 nozzles (DN250), aligned perpendicular to the shore. The discharge area is located upstream from the port terminal on the eastern edge of the project site. At and around the mouth of the Yaguareté, on the western edge of the Orion premises, there is an area of shallow water (less than two metres in depth) with a system of currents that tends to favour the deposition of sediments.

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[717]See the DINAMA report of Feb. 2005, p. 3. Anns., Vol. V, Ann. 8.

[718]See the CIS, Sec. 2.6, p. 2.25. Anns., Vol. V, Ann. 6.

[719]See the table in the Argentine report to the GTAN, p. 13.

[720]According to Botnia's report, 29,500 t/yr will go to landfill. The rest will be sent to the plantations (7,800 t/yr) and the municipal dump (3,150 t/yr), and third parties will deal with the treatment of hazardous waste (150 t/yr). See the EIA by Botnia.

[721]See the DINAMA report of Feb. 2005, p. 4. Anns., Vol. V, Ann. 8.

7.120. The initial environmental impact assessment produced by Botnia indicated that the impact of the accumulation of sediments as a consequence of the port structures would be limited and relatively small, but DINAMA has pointed out that the EIA contradicts itself as to the impact that the terminal will have on the fish in this area[722]. The questions of sedimentation and the contamination of fish are discussed in Sections II and V.

Section V

The effects of the construction and operation of the proposed mill on the environment of the river and the areas affected by it

General assessment

310 7.121. This Section deals with the environmental and related impacts of the mill by carrying out a critical analysis of the conclusions of the final CIS and other relevant sources of information, in the light of independent expert opinions which Argentina has received. A point which all the issues discussed in this Section have in common is the general question of establishing precisely what impact the project will have on the present users of the river, taking account of the environmental consequences that are being analysed here. This question stems directly from the requirements laid down by the 1975 Statute, in particular the procedures that are required for plans "which are liable to affect . . . [of the river or] the quality of its waters" (Art. 7), and the obligation "to protect and preserve the aquatic environment" and "prevent its pollution" (Art. 41 *(a)*). It is also directly linked to the terms of IFC Operational Policy 7.50, which requires that projects should not cause "appreciable harm" to other riparians. Lastly, as will be shown below, the risks associated with the transporting of chemicals by barge have not been dealt with appropriately by Uruguay.

7.122. The Orion mill is large enough to affect the River Uruguay. It also clearly follows from the obvious shortcomings of the authorization procedure that Uruguay has not fulfilled its obligations to ensure that the Orion mill would cause no damage to the River Uruguay and the areas affected by it, and in particular to the people living around the site — which was selected unilaterally, in breach of the 1975 Statute — especially those engaged in tourist activities or fishing (whether recreational or for subsistence). The Latinoconsult report confirms that it is highly probable that the fish populations and the diversity of the ecosystems will be degraded, and that algae produced by eutrophication will appear and spread more frequently[723]. Argentina regards this as significant damage, resulting from harm caused to the ecosystems in the areas around the mill.

311 Furthermore, the Latinoconsult report concludes that there is an increased risk of pollution when the mill shuts down and restarts (a risk which has not been assessed quantitatively by the CIS), that an emergency basin is not of the appropriate size, and that the lack of a tertiary treatment plant is unacceptable[724]. The major environmental impacts that will lead to appreciable damage include in particular: the accumulation of sediments and associated contaminants in Yaguareté Bay, with implications for the food chain and trophic status; an increase in eutrophication and the appearance and spread of algae, due to the higher levels of phosphorus and other nutrients; the generation of unpleasant odours over an extensive area; and an increased risk of chemical spills, especially involving river barges.

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[722] See the DINAMA report of Feb. 2005, p. 5. Anns., Vol. V, Ann. 8.

[723] See the report, Anns., Vol. V, Ann. 3.

[724] *Ibid.*

7.123. The detailed grounds for this general assessment of the substantial adverse impacts of the project will be set out in the remainder of this section.

Methodology of the CIS: the reference to BAT (best available techniques)

7.124. The CIS concluded that the pulp mill implements the recommendations of the best available techniques (BAT)[725]. However the project complies with BAT in other respects, it is quite clear, as explained below, that the mill does not comply with BAT as regards the lack of tertiary treatment and of appropriate emergency basins. In any event, Argentina rejects the conclusion which the CIS appears to draw from this, namely that compliance with BAT standards
312 means that the mill will have no significant impact on the environment[726]. As the Latinoconsult report points out:

> "Any responsible environmental analysis must, as the FCIS has done, consider the current regulatory requirements such as standards for discharge and ambient water quality, and standards for BAT. However, adherence to such standards does not in itself guarantee that there will be no environmental effects. Standards for BAT are set to provide the best possible level of environmental protection that is commercially feasible and as such do not necessarily reflect the absolute best protection that is technically feasible (European Union Council Directive 96/61/EC — Article 16, Section 2). While emission and ambient environmental standards are usually set conservatively and based on the best available information, they are from time to time revised to reflect knowledge about the significance of environmental effects."[727]

7.125. It is important to note from the outset that the European BAT standards do not cover all the environmental problems associated with pulp mill operation. The BREF 2001 document thus states that:

> "Neither environmentally relevant upstream processes like forestry management, production of process chemicals off-site and transport of raw materials to the mill nor downstream activities like paper converting or printing are included in this document. Environmental aspects which do not specifically relate to pulp and paper production such as storage and handling of chemicals, occupational safety and hazard risk, heat and power plants, cooling and vacuum systems and raw water treatment are not or only briefly treated."[728]

313 7.126. The Latinoconsult report rightly insists on the fact that, even if they are implemented, the modern techniques advocated by BAT do not eliminate all the effects on the environment. The specific issues to which the report draws attention are as follows[729]:

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[725]See the CIS, p. ES.iv. Overall, the CIS states that Botnia has developed fibreline (and complete mill) configurations "that would be welcomed in Canada, the USA or Europe", and which are likely to perform better than any of their existing mills with respect to environmental performance. The selection of two-stage oxygen delignification, ECF-Light bleaching and the cautious approach to alkaline filtrate recycling is said to be consistent with BAT. It is claimed that the expected performance with respect to bleaching effluent flow, COD content and colour will be among the best in the world. See the summary of Sec. 2.6 of the CIS, p. 2.26. Anns., Vol. V, Ann. 6.

[726]See the discussion of this issue in Sec. 4 of the Latinoconsult report, pp. 20-25. Anns., Vol. V, Ann. 3.

[727]*Ibid.*, Sec. 4.5, p. 23. Anns., Vol. V, Ann. 3.

[728]See the European Union BREF document, Executive Summary, p. 3. Anns., Vol. V, Ann. 15.

[729]See the Latinoconsult report, Sec. 4.3, pp. 21-22. Anns., Vol. V, Ann. 3.

— while modernization of pulp mills has made important advances in reducing the discharge of highly toxic chemicals such as dioxins and furans, these improvements have in some situations led to new problems;

— in light of the current scientific evidence, while secondary treatment and ECF technology have helped to reduce the effects of pulp mill effluents, these improvements are not sufficient to alleviate other problems such as the reproductive responses observed in fish[730];

— there is growing concern in the scientific community that secondary treatment may cause formation of more biologically active substances;

— there is a growing body of evidence that dominant reproductive effects may be related to natural or generated compounds in cooking liquors and digester condensates that are not due to the use of chlorine in the bleaching process;

— Munkittrick (2004) indicates several reasons why it is not advisable to consider that current technologies have completely solved the problem with pulp mill effluents. These include the fact that some effects have persisted at sites where modernization of mills has taken place, and
314 that environmental impacts have been seen at mills with modern bleaching processes[731].

7.127. Even if BAT were used, their limitations as standards which allow the potential environmental impact of pulp mills to be assessed must be considered alongside a number of specific uncertainties identified by the Latinoconsult report, which should now be discussed.

The failure to take account of scientific uncertainties as regards the environmental impact of the pulp mill

7.128. The CIS has not taken sufficient account of scientific uncertainties in carrying out its assessment of the impact of the Orion mill. In many cases, it has not taken them into account at all. This conflicts with the precautionary principle, which must be applied here both as an international standard and by way of good practice in carrying out environmental impact assessments. This skewed approach removes all credibility from the general conclusion of the report, namely that the mill will have no significant impact on the environment. Both the Wheater and Latinoconsult reports criticize the failure of the CIS to deal appropriately, or sometimes at all, with scientific uncertainties. The Wheater report finds that the CIS is not consistent with international good practice in this respect[732], pointing out that explicit recognition and analysis of uncertainty is now standard practice in environmental risk assessment. Wheater thus identifies key uncertainties
315 which need explicit treatment, such as: (1) pollutant loads in waste streams; (2) wastewater treatment plant performance variability; (3) low flow conditions; (4) the near-field dispersion model; (5) the far-field dispersion model; (6) the fate of contaminants; (7) ecological effects.

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[730]See Munkittrick *et al.*, 1997 and Munkittrick *et al.*, 2003.

[731]The other reasons mentioned by the Latinoconsult report are as follows: new sites with new impacts are being reported; reductions in effluent toxicity mean that fish can inhabit areas with higher effluent concentrations leading to increased effluent exposure; improvements in technology that reduce some compounds that earlier masked the effects of others can allow these effects to be expressed; and some new studies suggest that some effluents can exert new or more potent effects once secondary treatment has been introduced (despite its benefits in reducing other effects). Anns., Vol. V, Ann. 3.

[732]See the Wheater report, Sec. 3, p. 3. Anns., Vol. V, Ann. 5.

7.129. The Latinoconsult report, for its part, draws attention to a number of basic issues that seriously threaten confident prediction of the effects of the construction and operation of the pulp mill[733]:

(1) inadequate delineation of the plume means that it is not yet possible to characterize the potential exposure concentrations that will be experienced by biological receptors;

(2) without information on the residency periods, seasonal reproductive cycles and critical periods of development of exposed biota, which is currently lacking, it is difficult to predict impacts of exposure;

(3) without baseline data on contaminant levels in fish, which is also currently lacking, it will not be possible to separate out the mill's contribution to contaminant burdens from other sources. Without this critical information, a confident prediction of risk cannot be made;

(4) prior experience shows that pulp mill effluents may have unanticipated effects. For example, the submerged vascular plant *Egeria densa* and black-necked swans have been severely impacted at (extirpated from) the Carlos Anwandter Sanctuary, a site protected by the Ramsar
316 Convention downstream of a new pulp mill on the Río Cruces in Chile (Mulsow and Grandjean, 2006)[734].

7.130. The Latinoconsult report goes on to discuss the uncertainty regarding the standards for effluent discharge that are needed to ensure environmental protection[735]. To explore the question of what level of effluent dilution might be needed to ensure protection of 95 per cent of potentially affected species at a 95 per cent confidence level, the IAEST used the Kooijman (1987) method called "hazardous concentration for sensitive species" (HCS)[736].

7.131. Since there are currently no studies of toxicity of pulp mill effluents that are specific to the River Uruguay, this analysis has been done using toxicity estimates for values reported in the literature for effluents from mills with technology similar to that proposed for the Botnia mill at Fray Bentos (Ann. C). The results of this analysis indicate that this level of protection would be achieved at effluent concentrations of approximately 0.01 per cent (equivalent to a dilution of 1:10,000). This analysis, like those presented in the FCIS, is also hampered by a relative lack of data on the chemical properties of eucalyptus effluents.

7.132. It thus becomes clear, once these uncertainties are taken into account as required by the precautionary principle, that the conclusions of the CIS cannot legitimately be defended.

The CIS has not dealt with all the existing risks

317 7.133. Section 3 of the Latinoconsult report discusses a number of significant risks which have not been addressed in the CIS. These hidden risks include in particular:

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[733]See the Latinoconsult report, Sec. 4.6. Anns., Vol. V, Ann. 3.

[734]Another example concerns the reported impacts on brown algae in the Baltic Sea, which appeared as a result of chlorate discharge only *after* ClO_2 was substituted for elemental chlorine in older technology mills. See the Latinoconsult report, p. 24.

[735]See the Latinoconsult report, Sec. 4.7. Anns., Vol. V, Ann. 3.

[736]This method has been developed by researchers of the National Institute of Public Health and Environmental Protection of the Netherlands (i.e. C. J. van Leeuwen, W. Slooff, T. Aldenberg, P. C. Okkerman, E.J.V.D. Plassche, H.J.B. Emans, J. H. Canton and others; see van Leeuwen, 1990).

— the risk of chemical accidents during transport of supplies on the River Uruguay, given the increase in traffic and cargo on the river;

— the risks associated with on-site chemical manufacture.

7.134. This deficiency is further proof, alongside the failure to take account of scientific uncertainties and undue confidence in meeting BAT requirements, that the conclusions of the CIS can in no way be seen as based on sound foundations.

7.135. As regards the risk of chemical accidents in the form of spills during transport of supplies on the River Uruguay, the CIS indicates that chemical and other supplies will be transported by barge to the pulp mill[737]. The Latinoconsult report notes in this respect that it is fairly common practice in environmental assessment to deal with some related activities separately, although this is not always desirable[738]. The movement of chemical supplies on the River Uruguay could, in the event of an accident, have serious consequences for water quality in the river. The Wheater report criticizes this shortcoming of the CIS, which does not fully address the risks of accidental pollution, pointing out that accidental chemical spills from barges or road transport have
318 not been considered[739]. The report also criticizes the fact that no attention has been given to chemical accidents resulting from flooding of the wastewater plant.

7.136. As regards the risks associated with on-site chemical manufacture, Botnia states that, in addition to the production of ClO_2, it will have three chemical production plants: for sodium chlorate, concentrated sulphuric acid and methanol. These plants are presented as the ones that will furnish the pulp mill with the necessary chemicals[740]. However, the production capacity of the plants will be much greater: 15,000 tonnes/year of hydrogen peroxide, 60,000 tonnes/year of sodium chlorate and 65,000 tonnes/year of oxygen. These figures show that most of this output will be exported, so that the production and storage of these chemicals fall under the concept of "chemical island", i.e., a separate production and business unit, particularly because the operator will probably be a third party (Kemira). In any event, however, Botnia retains its responsibility in relation to emissions and discharges from this "chemical island".

7.137. There is no separate environmental impact analysis of the "chemical island"; nor is its environmental impact discussed in the general environmental impact assessment. The worst aspect of this omission is that, besides the very serious environmental issues raised by these chemical production plants, there is no separate risk evaluation for them (for discharges and dispersions, inflammable products, fire risks, etc.), nor are there any contingency or emergency plans. No consideration has been given to possible preventive measures aimed at containing a
319 chemical accident or reducing the seriousness of the damage that might be caused. Flooding or seismic risks have also not been considered. In short, the chemical risks have not been properly assessed.

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[737]See Sec. F.6 of "Annex F — Transportation" of the CIS.

[738]See the Latinoconsult report, Sec. 3.1, p. 18. Anns., Vol. V, Ann. 3.

[739]See the Wheater report, Sec. 8, p. 9. Anns., Vol. V, Ann. 5.

[740]These supplies are given as 7,000 tonnes/year of hydrogen peroxide, 12,000 tonnes/year of sodium chlorate and 20,000 tonnes/year of oxygen.

7.138. Moreover, Botnia's proposal claims to apply BAT standards for the pulp mill processes, but in contrast no reference is made to BAT standards for the management, handling or internal transportation of stocks of the various input products[741].

7.139. Argentina would point out that some pulp mills, for example the Gunns mill in Australia, which the CIS refers to frequently as a model, also manage large amounts of chlorine, solutions of chlorine dioxide, hydrogen peroxide, oxygen, sodium chlorate, acetylene, etc. These mills apply an emergency and risk management system for these production units. In these systems, discharges and dispersions, inflammable products, fire risks and other impacts are subjected to risk identification, and particular attention is paid to dangerous substances, assigning higher significance to those that may potentially impact away from the process site. Models are used to evaluate the possible toxic effects of releases, discharges, dispersions, possible fires and explosions. There is no similar approach to the Orion mill's "chemical island" in the CIS[742].

7.140. Argentina also notes that, as pointed out by the Latinoconsult report, there are special risk management requirements for industries that fall under USEPA's Progam 3 processes, the
320 most potentially dangerous of industries. In these cases, the owner or operator must submit a single risk management plan that includes the required information for all the processes in use at that facility. The risk management plan should therefore contain relevant information about each process.

Methodology of the CIS: the use of computer modelling

7.141. The CIS refers to the fact that it uses "sophisticated, internationally accepted computer modelling techniques for the analysis of air emissions and effluents to water"[743]. However, the modelling techniques on which the CIS relies, especially with regard to plume dispersion, have not been able to paint a full picture of the likely environmental impacts of the construction and operation of the Orion mill. The general conclusion of the Wheater report on the hydrodynamic and water quality modelling is that: "The modelling is poorly presented, inadequately detailed, not transparent, not sufficiently supported by experimental data, and the confidence placed in the models is unjustified and misleading."[744] And the Wheater report goes on to level a series of criticisms at the approach to modelling in the CIS, as set out below.

7.142. *Water quality*: the methodology used to assess water quality is described in Section 4.1.3.2 of the CIS. The assessment of water quality and related impacts of pulp mill effluents on the River Uruguay involved modelling of effluent dispersion in the river to determine
321 resulting concentrations of each effluent constituent, for comparison to water quality guidelines and existing baseline concentrations[745]. Two types of mathematical models were used by the CIS: *near-field models*, which predict water quality changes near to the point of effluent discharge, and *far-field models*, which predict these changes farther from the point of discharge.

7.143. Argentina has already pointed out that the methodology used by the CIS is seriously skewed in several ways: the frequency of reverse flow is substantially underestimated; the plume

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[741]See the Latinoconsult report, Sec. 3.2, p. 19. Anns., Vol. V, Ann. 3.

[742]*Ibid.*

[743]See the CIS, Sec. 4.1.3, p. 4.7. Anns., Vol. V, Ann. 6.

[744]See the Wheater report, Sec. 7, p. 7. Anns., Vol. V, Ann. 5.

[745]See the CIS, p. 4.9. Anns., Vol. V, Ann. 6.

dispersion model is plausible, but the description of the modelling is too vague. There is no explanation of the use made of 2D and 3D models, and the consequences of a possible shift to a dry weather cycle are not dealt with. The significance of these shortcomings for the environmental risk assessment has been discussed above.

7.144. The baseline water quality conditions, which were taken from Algoritmos (2006), are described as average concentrations of key water quality parameters based on five water samples collected at each of ten river locations in 2005, under near average flow conditions. It is stated that these locations ranged from upstream of the proposed CMB discharge to Balneario Las Cañas.

7.145. The CIS utilized two near-field models. The Cormix model, developed by Cornell University, was used as the primary modelling tool. The VPlume model, distributed by the USEPA, was used to provide a cross-check on the Cormix model results "to ensure that the analysis was valid and conservative".

322 7.146. The Wheater report points out that the Cormix model "although well-used and previously proven to be useful in many circumstances, has limitations for complex channels and tidal-flow interactions, and caution must be used when interpreting results". The report refers to the World Bank, which has noted on several occasions the need to be cautious about using model results in general[746]. The Bank has also noted that significant programmes of data collection are generally required to support modelling, especially when complex models are used, like those employed within the CIS. In this context, the data collection within the CIS is clearly inadequate to support the models used[747]. The report goes on to state that the near-field modelling has employed two different, well-recognized models, Cormix and Visual Plume, but that the CIS has not reported the differences in results between models and is not explicit about the assumptions employed. The far-field modelling (see below) should also include model intercomparison[748].

7.147. The far-field modelling was performed using the TABS-MD series of models, available from the US Army Corps of Engineers. Specifically, RMA-2 and RMA-10 and their implementation are described in Annex D of the CIS.

7.148. The calibration of the far-field hydrodynamic model is described by the CIS as being based on water elevation data during two different periods and under different flow conditions. It was concluded that the hydrodynamic model accurately predicted flow dynamics along the River Uruguay below the Salto Grande dam (p. 4.10 of the CIS).

323 7.149. The Wheater report notes that the far-field model has been calibrated and verified to water levels at a few locations for a limited duration, pointing out that this does not verify the 2-D hydrodynamics, which can only be done satisfactorily using surveys of river velocity (magnitude and direction) as well as depths. The report states that the technology for surveying river velocity is available, and that it is not clear why this technology was not employed as part of the impacts analysis. It also states that ADCPs should at least have been used to verify the currents for the near-field simulations, which was done for the dispersion analysis in the environmental

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[746] See the Wheater report, Sec. 7, p. 7. Anns., Vol. V, Ann. 5.

[747] *Ibid.*

[748] *Ibid.*, p. 8.

impact statement for the proposed Gunns pulp mill in Tasmania, and has been used to support hydrodynamic analysis of various rivers and estuaries[749].

7.150. Likewise, the Wheater report points out that, while an internationally recognized set of models has been used for both near-field and far-field modelling of pollutant dispersion, "this type of model and this type of application are recognized as being limited by the assumptions used about parameters, physical processes and boundary conditions". It goes on to say that a particular issue arises here with the effects of flow reversal in the estuary, and the effect of wind in enhancing those effects. The modelling of these effects is difficult; the associated uncertainty should be recognized and the sensitivity of plume behaviour should be assessed[750]. However, the CIS has not seen fit to meet these requirements.

324 7.151. The Wheater report makes a series of further criticisms of the approach to modelling in the CIS, for example: the mistake of not commissioning an up-to-date bathymetric survey; the erroneous assumption that Manning's coefficient was uniform in the whole lower reach of the river, whereas the channel roughness is potentially variable over the length and width of this reach; the use of dispersion coefficients taken from an unpublished study of bacteria concentrations which have not been verified or properly justified; no information is provided on the finite element grid; no transient modelling has been done, which would have allowed a fuller analysis of tidal dynamics, including reverse flow events; no tracer tests have been carried out prior to the start of mill operation.

7.152. Taken together, these criticisms and the other points raised above lead to the general conclusion that the approach to modelling in the CIS is seriously deficient. Yet this is a key element in assessing the impact of effluents and discharges of pollutants.

7.153. The CIS states that the physical and chemical characteristics of the effluent discharges were provided by Botnia[751] and multiplied by 1,000,000 AD tonnes/year for the Orion mill. It also indicates that the modelling was completed for different river flow and effluent discharge scenarios, including river flow reversal (described as "rare"). For each of these scenarios, water quality results were considered at specific "river locations of interest", two of which were in Argentina (Receptor 10, River Uruguay on the Argentina side, and Receptor 11, beach area at Ñandubaysal, Argentina). Argentina takes the view that other locations in Ñandubaysal Bay, the Inés lagoon and on the Santa Inés islands should have been included, given the sensitivity of these sites.

Air quality/emissions

325 7.154. As recognized in the draft CIS, air emissions and air quality are of significant concern across a broad area because gas emissions from a pulp mill have the potential to be spread most widely in the geographical area of the project[752].

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[749] *Ibid.*, p. 7.

[750] See the Wheater report, Sec. 3, pp. 3-4. Anns., Vol. V, Ann. 5.

[751] See Tables 4.1-3 and 4.1-4 of the CIS, pp. 4.24-4.25. Anns., Vol. V, Ann. 6.

[752] See the draft CIS, Sec. 4.4, p. 42. Anns., Vol. V, Ann. 6.

7.155. In February 2006, the Argentine report to the GTAN noted that DINAMA had been highly critical of the environmental impact assessment provided by Botnia, especially with regard to gas emissions[753]. Among the cases where the information in this assessment was found to be inadequate were the absence of data on volatile organic compounds (VOCs), the lack of detail on the type of particulate material emitted, and the failure to address the question of the opacity of the discharges. The environmental impact assessment also did not explain precisely how the estimates had been produced, how the emission factors had been obtained, or how the mill had been designed in order to achieve the projected levels[754].

7.156. *Ambient air quality*: the CIS indicates that the one-hour concentrations it refers to represent the highest concentration predicted during the one-year simulation, while the annual average concentrations represent the average for that year (see the CIS, p. 4.34). It states that for normal operating conditions, variability is dependent on meteorological conditions only, whereas for upset conditions, variability is also dependent upon the occurrence of the upset event relative to the meteorological conditions (see p. 4.34).

7.157. The findings of the final version of the CIS were that air quality remained in compliance with ambient air quality criteria under all meteorological conditions and operating
326 conditions, and at all receptor locations. It infers from this that there is no "potential for human health effects associated with mill emissions"[755]. Hence the CIS concludes that there is no possibility of effects on human health as a result of mill emissions at any of the ten receptor sites, including the three in Argentina (see Sections 4.4.1-4.4.10). It concedes that it is possible that odour may be detected on occasion (less than ten times per year) within the areas adjacent to each mill and possibly within the city of Fray Bentos and at the international bridge (see Section 4.4.11), and under upset conditions, as discussed below.

7.158. Argentina expressed its concern to the GTAN at the fact that the impacts of emission peaks that might occur through unexpected incidents or programmed maintenance stoppages had not been taken into account in the assessment process[756].

7.159. The IAEST took the view that, while it was possible to state that these impacts could be expected to remain within the limits set for daily effluent discharges, the CIS did not address this particular issue in a quantitative way, and that it also failed to indicate the time of year when these stoppages would be most likely to take place.

7.160. *Dioxins and furans*: the Argentine report to the GTAN also expressed Argentina's concerns at the high levels of dioxin and furan emissions authorized by DINAMA[757], and at the lack of provision for monitoring. The Argentine delegation likewise voiced its concern in view of their power of bioaccumulation, which could lead to increased concentrations in the longer term[758].

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[753]See the Argentine report to the GTAN, p. 18. Anns., Vol. IV, Ann. 1.

[754]*Ibid.*, p. 19.

[755]See the CIS, p. ES.xvi. Anns., Vol. V, Ann. 6.

[756]See the Argentine report to the GTAN, p. 11. Anns., Vol. IV, Ann. 1.

[757]*Ibid.*, p. 19.

[758]See Chap. V.

327 7.161. *Odour*: the emission of unpleasant odours by pulp mills is a widely recognized problem and a source of concern for public opinion. The CIS found that nowhere in the area, in particular at Gualeguaychú and Ñandubaysal, would any odour generally be detected during normal mill operations[759]. However, odours might be detected at locations near to the mills during what are termed "upset conditions", on initial start-up and at times of poor air dispersion. According to the CIS, operating experience at other mills indicates that these occurrences will be limited to less than ten times per year, lasting for minutes to hours during the first year of operation and for seconds to minutes thereafter. The report states that:

> "During these limited events, the odour at the nearest receptors . . . may be considered objectionable at times to someone with a sensitive sense of smell. At . . . beach resorts . . . odour, if detectable during these limited events, may not be distinguishable from odours experienced in daily life."[760]

7.162. The question of odour is not just a matter of discomfort or poor quality of life. All the total reduced sulphur (TRS) compounds responsible for the odour are toxic for the respiratory system. An epidemiological study of the public health effects of TRS emissions from pulp mills has shown that eye and nose symptoms and coughing were more frequent in individuals exposed to levels above 0.07 ppm (as a daily average) than in individuals not exposed to TRS emissions[761]. These symptoms are similar to those reported from exposure to hydrogen sulphide (H_2S). Other epidemiological studies carried out in Finland in populations exposed to high levels of TRS
328 emissions have demonstrated similar results[762]. The South Karelia air pollution study, distributed in the form of a questionnaire for self-completion, found that individuals in the populations exposed to TRS presented more symptoms of coughing, respiratory infections and headaches than the non-exposed populations. In particular, the relative risk of headache was significantly greater in the exposed populations. A 1992 study by Haahtela *et al*[763] found that cases of ocular and respiratory symptoms were more numerous during periods of exposure to levels above 0.025 ppm (as a daily average) than in a reference period.

7.163. *Ozone*: the CIS has simply not deemed it relevant to mention the likely emissions of ozone. The United States Environmental Protection Agency (USEPA) requires ozone emissions to be documented systematically when pulp and paper industries produce 100 tonnes per year or more, an approach which has proved economically beneficial in terms of protecting the environment. Given the planned production volumes, the Orion mill should therefore also be obliged to account for its emissions of ozone.

7.164. The CIS states that the Botnia mill will meet and exceed IPPC-BAT (2001) and Tasmanian-AMT (2004) measures to control odorous gases from the recovery boiler and kiln, including efficient combustion control and CO measurements in the recovery boiler and control of excess oxygen and residual sodium sulphide in the lime kiln. The mill is described as having "an

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[759]See the CIS, Sec. 4.4. Anns., Vol. V, Ann. 6.

[760]See the CIS, p. ES.xvi. Anns., Vol. V, Ann. 6.

[761]See Jaakkola J.J.K., Vilkka V., Marttila O., Jappinen P., Haahtela T. (1990) "The South Karelia air pollution study: the effects of malodorous sulphur compounds from pulp mills on respiratory and other symptoms", pp. 1344-1350.

[762]See Partti-Pellinen (Partti-Pellinen K., Jaakkola J.J.K., Vilkka V., Marttila O., Jappinen P., Haahtela T. (1996) "The South Karelia air pollution study: effects of low-level exposure to malodorous sulphur compounds on symptoms." *Archives of Environmental Health* 51, pp. 315-329.

[763]See Haahtela T., Marttila O., Vilkka V., Jappinen P., Jaakkola J.J.K. (1992) "The South Karelia air pollution study: acute health effects of malodorous sulphur air pollutants released by a pulp mill." *American Journal of Public Health* 82, pp. 603-605.

extensive and comprehensive dilute gas collection system" and as using the recovery boiler as the primary point of incineration. According to the CIS, the provision of a back-up for the dilute gas
329 system and also the inclusion of white liquor preparation sources goes significantly beyond the IPPC-BAT (2001), Tasmanian-AMT (2004) and USEPA (MACT) requirements[764].

7.165. Argentina's general comments on the relevance of using BAT have been set out in paragraphs 130-133 above. With regard to odour, the CIS seems to deliberately try to play down the impact that odours will have on people in the surrounding areas, assuming that the odours released will be no more disturbing than those encountered in everyday life. Argentina believes, and would maintain, that the CIS assessment in this respect is based on subjective assumptions and unfounded statements which ignore the established impact of odours in the vicinity of other areas that have been affected by pulp mills.

Water quality

7.166. Baseline data and parameters for effluents: Argentina would point out that there is currently no other pulp mill on the banks of the River Uruguay, and that no other industrial facility discharges into its waters even a fraction of the volumes of liquid pollutants that are planned. Argentina maintains that Uruguay has neglected to obtain appropriate baseline data on water quality, and failed to make a satisfactory assessment of the capacity of the river waters to receive and disperse the planned discharges of pollutants.

7.167. It should also be noted in this context that the final version of the CIS changes the values for most of the technological parameters (expressed in dried tonnes per year), which has reduced the values for effluents to almost half of the figures announced initially in the first CIS. No account has been given of the reasons for this change. However, if the CIS is using particularly
330 conservative estimates, this should be expressly stated. In the absence of clarification, this unexplained difference can only call into question once again the validity and reliability of the findings of the CIS.

7.168. *The concerns of Argentina*: the Argentine report to the GTAN raised a series of concerns regarding the damage to the watercourse that might be caused by discharges from the two proposed mills[765], and these may usefully be summarized below.

7.169. With regard to *COD*, while noting that the USEPA is actively encouraging the authorities that grant discharge permits to set discharge limits on COD in the sub-categories kraft and caustic soda, the Argentine delegation declares that it is essential for these limits to be established, because sub-lethal toxic effects resulting from the discharge of treated effluents from kraft pulp factories have been found[766]. For *AOX*, the principal damage is associated with the evident presence of toxic chlorinated compounds. The report points out that a relationship has been observed between AOX and specific pollutants, including dioxins, furans and chlorinated phenolic compounds. The potential formation of such pollutants will exist in the pulp and paper industry as long as it uses any compound containing chlorine — including chlorine dioxide — in the bleaching process[767]. The report notes that the River Uruguay is an ecosystem which is free of AOX at

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[764]See the CIS, p. ES.vi. Anns., Vol. V, Ann. 6.

[765]See the Argentine report to the GTAN, pp. 14-16. Anns., Vol. IV, Ann. 1.

[766]See the Argentine report to the GTAN, p. 14. Anns., Vol. IV, Ann. 1.

[767]*Ibid.*

present, or with AOX values below the detection limit, and that these compounds will either accumulate in the ecosystem (fish) or will dilute in it. With regard to *phosphorus* nutrients, the damage is associated with the appearance and spread of blue-green algae (eutrophication) in areas of the river near the Argentine shore. Botnia's environmental impact assessment recognizes that there will be an increase in the current concentration of phosphorus at the site, and the report notes
331 that the problem of eutrophication will thus become worse[768]. The report also deals with the impact of *total suspended solids* (TSS) coming from leaks in the sedimentation unit associated with the biological treatment of activated sludge. It refers to the biological risks linked to the presence of coliform bacteria in the ECF bleaching effluents, amongst other risk factors, and the specific risk for iliophagous fish and detritus feeders. The report sets out the concerns regarding *discharge temperatures* in relation to those of the river and the effect on the plume, which will rise towards the surface. This question was simply not addressed in the dilution models presented by the Uruguayan delegation[769]. The information on effluent treatment provided in Botnia's environmental impact assessment is also described as inadequate by the Argentine report to the GTAN, since no information was supplied on the secondary or tertiary treatment of the liquid waste[770]. The Argentine report also criticizes the proposed treatment system as consisting merely of "moving easily sedimented solids in suspension and biodegradable organic matter".

7.170. Argentina would also point out that neither Botnia nor the CIS has carried out studies of acute or chronic toxicity with three species, as recommended by the USEPA (Argentine report to the GTAN, p. 17). Nor did the CIS see fit to discuss the difference in temperature between the discharges and the river water, and its effect on the plume.

7.171. *The methodology of the CIS and its conclusions on water quality*: there are many serious deficiencies in the method used by the CIS to evaluate water quality: as indicated in the Wheater report (see below), the CIS is not justified in its emphasis on the 1:100 dilution envelope[771]; it appears to take the view that there are no effects at dilution levels greater than
332 1:1000; it neglects the potential impact on sensitive areas where, according to the work of the IAEST, the dilution levels will in any event be less than 1:1000; and it fails to address the issue of bioaccumulation and bioamplification in fish, which nevertheless has major implications for the entry of contaminants into the food chain. On this last point, it is also interesting to note that the Argentine report to the GTAN had stressed the importance of taking account of the known and declared uses of the waters receiving the pollutants, namely provision for human consumption with conventional treatment, protection of aquatic life, and recreational use involving direct contact[772].

7.172. In the CIS, modelling of effluent flows and loadings was undertaken to determine the impacts at 11 selected locations. The results were then compared to applicable standards and guidelines and used to estimate potential impacts on human health, aesthetics, sediment quality, fish communities and aquatic invertebrates. Since water quality is shown to remain in compliance with these standards at all receptor locations, the CIS team concludes that "there is no potential for human health, aesthetic or environmental effects associated with the mill discharges"[773]. However, Argentina maintains that this finding is no guarantee of safety, as there are differences in sensitivity to exposure to some environmental factors within the general population. Among the sensitive

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[768] *Ibid.*, p. 15.

[769] *Ibid.*, p. 16.

[770] *Ibid.*, p. 13.

[771] See the Wheater report, Sec. 2, p. 3. Anns., Vol. V, Ann. 5.

[772] See the Argentine report to the GTAN, p. 16. Anns., Vol. IV, Ann. 1.

[773] See the CIS, p. ES.xix. Anns., Vol. V, Ann. 6.

population, children and embryos are the categories most at risk, even with very low but permanent levels of exposure to pollutants and their mixtures. According to the CIS, the potential effects are limited to the area where the effluent initially mixes with the river water, and "beyond this small area, the water quality standards are achieved with the exception of those parameters which exceed the standards under present conditions due to the discharge of untreated municipal wastewater and agricultural run-off".

333 7.173. In its assessment of exposure to effluents in the River Uruguay, the CIS has applied monitoring standards developed for the Canadian paper industry by Environment Canada (see Section 4.6.1 of the CIS). The CIS notes that Environment Canada defines areas beyond 1:1000 dilution as reference areas and considers them representative of background conditions. Environment Canada also takes the view that environmental effects are not anticipated in areas where the concentration of effluent in the river is less than 1 per cent (1:100 dilution). It is wrong to imply, as the CIS does, that no effect on the environment can occur at such dilution levels. In any event, there are sensitive areas in which the dilution level will be less than 1:1000, as shown by the findings of the IAEST (see below).

7.174. These criticisms are confirmed by the Wheater report, which states that in parts of the CIS, there is too much emphasis placed on dilution ratios[774]. It goes on to explain that the 1:100 trigger used by the Canadian Environmental Effects Monitoring Programme, to which the CIS refers, has not been interpreted correctly by the latter. This trigger was primarily designed to focus experimental resources and to avoid the need to sample in difficult and unsafe conditions. The report also criticizes the CIS for using scientific articles on the Canadian experience as the basis for assertions which are not made in the articles themselves[775].

7.175. Yaguareté Bay (Uruguay) and Ñandubaysal Bay (Argentina), several kilometres away from the discharge outfall, will have dilution ratios of less than 1:1000 (1:516 and 1:693 respectively). The Canadian Environmental Effects Monitoring Programme recommends rigorous
334 monitoring of areas where dilution levels are between 1:1000 and 1:100 — a recognition of the risks inherent in such pollution. No proper system of sampling has been put in place, however. Moreover, it is the BACIPS (Before-After-Control-Impact Paired Series) programme which should be used, as this is the system most widely recommended by the international literature to determine impacts on the environment[776].

7.176. *Effects on fish*: on the basis of the work of the IAEST, Argentina believes that, contrary to the claims made by the CIS, there is a very high probability that the fish populations of the river will be affected by the effluents discharged by the mill. The IAEST's estimate of the risk of impacts on the fish populations, with the bare minimum of protection for the fauna and flora (complete mixing of the effluents in the river current), shows the values of the Lowest Observed Effect Concentration (LOEC) being exceeded. The LOEC threshold was exceeded at dilution ratios of between 1:100 and 1:1000 for various levels of the final parameters measured (from molecular and physiological level up to population level). This result would have been even more pronounced for those sections of the river or bays with dilution ratios below the final dilution (Yaguareté or Ñandubaysal Bays). Professor Howard Wheater confirms that indicators such as endocrine disruptors (one of the final parameters measured) are significant if they can be

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[774]See the Wheater report, Sec. 2, p. 2. Anns., Vol. V, Ann. 5.

[775]*Ibid.*

[776]See the Latinoconsult report. Anns., Vol. V, Ann. 3.

demonstrated, and that there are effects which may appear at the actual concentration values obtained after dilution of the effluents in the river.

335 7.177. These results conflict with those of the CIS, which concludes that although fish may be attracted to areas of exposure in the receiving waters because of the warmer temperatures and higher velocity at the diffusers, th size of this area of exposure is so small relative to the home range for most fish species that, by reference to the Canadian experience, "the potential for effects on fish is considered minimal"[777].

7.178. The CIS has not carried out any reasoned assessment of possible bioaccumulation or bioamplification in the food of fish near the discharge sites. The report confines itself to recommending that monitoring should be put in place.

7.179. With regard to the Ramsar site of Esteros de Farrapos, the CIS concludes that, even in reverse flow conditions, it is practically impossible for mill effluents to affect the area of the river delta and its islands. This conclusion of the CIS is incorrect. The 17,500 hectares of Esteros de Farrapos extend from the 119.5 km point to around the 166 km point of the navigation channel of the River Uruguay, thus covering a section 46.5 km in length. The plume dispersion model used in the Latinoconsult report has the plume extending from the 70 km point to the 117 km point of the channel. Hence the upstream boundary of the dispersion model is only 2.5 km south of the Ramsar site. At this upstream boundary, a dilution of less than 1:1000 is expected 1 per cent of the time. The minimum dilution simulated at the boundary was 1:200. It is predicted that, in certain conditions, the plume could move beyond the upstream boundary defined by the dispersion model, thereby reaching the southern part of the Ramsar site[778].

7.180. *Wastewater treatment*: it has already been explained in Section III that there are three possible levels of effluent waste treatment in pulp mills. The European Union BREF document (2001) on the pulp and paper industry states that tertiary treatment is necessary in some cases[779]. However, the Botnia proposal only provides for two levels of treatment.

336 7.181. The CIS refers to the AST process as a secondary treatment and claims that the mill will do better than the IPPC-BAT (2001) guideline. It also maintains that effluent flows from the Orion mill will compare favourably with pulp mills around the world[780]. The CIS report states that the mill will implement the IPPC-BAT recommendations for biological treatment, as it will use state-of-the-art methods for treatment and discharge into the River Uruguay, and that the impact from marginal additional reduction in colour and nutrients "is likely to be insignificant". Tertiary treatment was therefore not considered necessary[781].

7.182. Argentina absolutely contests this finding of the CIS. As confirmed by the IAEST's conclusions, and given the present situation of the river in terms of contamination (regarding

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[777]See the CIS, p. 4.49. Anns., Vol. V, Ann. 6.

[778]See the Latinoconsult report. Anns., Vol. V, Ann. 3.

[779]See the European Union BREF document, Sec. 2.3.14, pp. 85-86. Anns., Vol. V, Ann. 15.

[780]See the CIS, p. ES.ix. Anns., Vol. V, Ann. 6.

[781]The first CIS recommended (in Ann. D, p. ES-4) that the wastewater treatment facilities design for the mill should include the provision for a tertiary treatment upgrade to meet potential future DINAMA or IFC requirements, or if monitoring shows additional treatment would be needed to meet current or future water quality standards. This recommendation was not included in the final version of the CIS.

phosphorus, for example) and DINAMA's surface water quality requirements, it is unacceptable for the proposed secondary treatment to be the final treatment stage for mill effluent and for no tertiary treatment to be put in place. The arguments of the CIS against the construction of a tertiary treatment plant are quite simply unconvincing.

7.183. The BREF IPPC document confirms that, in some cases, tertiary treatment is necessary, when the concentration of nutrients in the effluent has to be reduced because of the sensitivity of the waters receiving the mill discharges. The location of the Orion mill means that discharges will take place into waters of this kind, and that tertiary treatment is therefore required.

337 7.184. The CIS is therefore wrong to conclude that the construction of a tertiary treatment plant is not necessary in the case of the Orion mill. It is also wrong to conclude that tertiary treatment is not needed to meet water quality standards. The fact is that, given the present degree of contamination in terms of total phosphorus content, which is four times higher than the level permitted by Uruguayan Decree 253/79, the total phosphorus in the River Uruguay needs to be reduced and any further discharges of total phosphorus must absolutely be prevented[782].

7.185. It appears that Botnia is "considering" the option of treating the municipal wastewater from Fray Bentos at its own treatment plant, which would effectively eliminate, according to the CIS, a significant source of biological oxygen demand (BOD), phosphorus and bacteria for the beach area of Arroyo Fray Bentos, thereby improving the overall quality of the resource[783]. The CIS describes this possibility as a "significant benefit" that should be considered further by DINAMA.

7.186. However, while the treatment of wastewater from Fray Bentos by the Orion mill may help to reduce the problem of excess phosphorus, tertiary treatment remains necessary to deal with the significant additional volume of discharges associated with the mill itself, particularly in view of its location. The Wheater report points out that secondary treatment using the activated sludge reactor (ASR) system is not designed to remove nutrients, which requires tertiary treatment. It also criticizes the CIS for indicating that "special attention has been made in this study regarding the control and minimum discharge of nutrients" and describes this statement as misleading, as there are no design specifications for the ASR or other details of how nutrient discharges will be
338 minimized. Elsewhere in the CIS, it is recognized that the nutrient control at the Orion mill will not be amongst the best in the world, nor are the emission standards. The Wheater report concludes that overall "the strategy for assessing and controlling nutrient impacts is not developed to a stage which allows a rigorous impact assessment"[784].

7.187. A further problem is the unsuitable dimensions of the emergency basin. The best available techniques (BAT) specify the collection of almost all spillages[785] and the use of sufficiently large buffer tanks for storage of concentrated or hot liquids from the production process[786]. Botnia states that the mill design includes

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[782]See the discussion in Ann. A of the Latinoconsult report.

[783]See the CIS, p. ES.xix. Anns., Vol. V, Ann. 6.

[784]See the Wheater report, Sec. 6, p. 6. Anns., Vol. V, Ann. 5.

[785]See the European Union BREF document, Sec. 2.3.9, pp. 75-77. Anns., Vol. V, Ann. 15.

[786]See the European Union BREF document, Sec. 2.3.12, pp. 80-82. Anns., Vol. V, Ann. 15.

"three 8-hour retention time basins (equalization/emergency) that operate in a semi-continuous manner, i.e. they are filled continuously, and then the effluent quality in the basin is checked prior to discharge into the AST. In the event that a spill has occurred in the mill, the basin contents would have a high COD and would be discharged into the AST in a manner that does not overload the system."

7.188. However, equalization of the effluents takes place in two of the basins, which each have an 8-hour capacity and operate alternately (2 x 25,000 m^3). The third basin, which also corresponds to eight hours of normal output, will remain empty (25,000 m^3). As the IAEST points out, this extra basin cannot be seen as an emergency basin in case of spillages or operating problems, since it is in fact an operational facility and will be too small in the event of an emergency[787]. There ought to be a permanently empty emergency basin to cope with any major spillage or significant changes in the effluent.

339 7.189. *Proliferation of potentially toxic algae*: because of the increased level of eutrophication, especially in Ñandubaysal Bay, cyanobacteria and cyanotoxins will occur more frequently. The risks associated with cyanobacteria and cyanotoxins are discussed in detail in Section 6.7.2 of the Latinoconsult report[788]. The report examines the toxicity of microcystin and its implications for humans and animals. It notes that in temperate climates such as those of South America, water bodies dominated by the genus *Microcystis* may exhibit a bloom season of six to ten months[789].

7.190. The studies carried out on the ground by the IAEST confirmed the presence of a species of cyanobacteria (*Microcystis aeruginosa*) which produces the toxin microcystin (primarily a hepatotoxin), causing disease when ingested through water but posing a risk in the event of recreational exposure. In conditions of high phosphorus concentration (see above), the hepatotoxic strains produce greater amounts of toxin. Breakdown into the ambient water produces dissolved toxins (essentially through the ageing, death and lysis of the cells) and represents a danger to health.

Management of solid waste

7.191. According to the CIS, the solid waste produced by the mill operations will include wood preparation waste; raw water treatment sludge; green liquor dregs, grit and lime mud; effluent treatment sludge; ash/sands; municipal solid waste; and hazardous waste[790].

340 7.192. The Argentine report to the GTAN criticized the assessment of the treatment of solid waste in the draft CIS and in the environmental impact studies provided by the company, because it lacked precision on basic aspects such as the classification, quantification and destination of the

[787]At the Gunns mill, the emergency basin has a 25-hour capacity, and the one at the Valdivia de Arauco mill has enough capacity for 48 hours of operation.

[788]See the Latinoconsult report, pp. 39-44. Anns., Vol. V, Ann. 3.

[789]See the Latinoconsult report, p. 41. Anns., Vol. V, Ann. 3.

[790]See the CIS, p. ES.xxii. There is also a diagram showing all the solid waste that will be produced — see Fig. 4.7-1, p. 4.66. Anns., Vol. V, Ann. 6.

generated waste, the location of the potential landfills, and any other waste management planning. The report also noted the risk of possible toxic leaching into the river[791].

7.193. The final CIS states that the Orion mill will meet BAT standards and that no cumulative impacts are expected from the management and disposal of hazardous waste. The report adds that the project proposes to construct an on-site landfill for disposal of non-hazardous solid waste, and that the landfill design is consistent with state-of-the-art practice[792]. Collection systems will divert leachate to the effluent treatment plants[793]. The CIS indicates that the Botnia landfill has a design capacity of 19 years and notes that there is sufficient space at the site to expand the landfill if necessary. The only potential organic waste is the sludge from Botnia's river water treatment system, and the volume of this is relatively small compared to the amount of inorganic waste going to the industrial landfill. Landfill gas venting systems can be installed to allow decomposition gases to vent to the atmosphere, or these gases could be collected for combustion. A groundwater monitoring system will be installed.

7.194. The final CIS also points out that hazardous waste will be produced. Botnia estimates that between 100 and 150 tonnes of hazardous materials will be generated by the mill each year. These will include small quantities of used oils, solvents, detergents, laboratory wastes, etc.[794]

341 *Tourism*

7.195. The CIS recognizes that tourism is well established in and around the area where it has unilaterally been decided to locate the Orion mill, and notes that Gualeguaychú, in Argentina, is also an important centre of tourist activity, famous for its beaches and its annual carnival (described in Section II above)[795]. However, Argentina must point out that the CIS draws no conclusions from its findings and, in its analysis, totally underestimates the environmental impacts of the pulp mill on tourism in the region.

7.196. The Argentine report to the GTAN of February 2006 emphasized that the operation of the mill would have a negative impact on the province of Entre Ríos, especially affecting tourism, the values of properties, public health and the ecology. It referred in particular to the beach resort of Ñandubaysal, from which a giant smoke-emitting chimney would be seen as a backdrop (whereas this would not be visible from the Uruguayan resort of Las Cañas).

7.197. *Water quality*: with regard to the beach area of Ñandubaysal (Water Receptor 11 in the water quality study), the CIS recognizes that "on rare occasions" the flow of the river may reverse direction and move trace levels of wastewater across the River Uruguay towards Ñandubaysal; however, it states that a dilution of 1:700 is sufficient to reduce the concentration of wastewater to non-measurable levels, and that the predicted contribution from the mill is not considered problematic for drinking water or protection of human health or aquatic life[796].

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[791]See the Argentine report to the GTAN, p. 3. Anns., Vol. IV, Ann. 1.

[792]See the CIS, p. 4.70. Anns., Vol. V, Ann. 6.

[793]*Ibid.*, p. ES.xxii. Anns., Vol. V, Ann. 6.

[794]*Ibid.*, p. ES.xxiii. Anns., Vol. V, Ann. 6.

[795]*Ibid.*, Sec. 4.9, pp. 4.82-83 and p. ES.xxv. Anns., Vol. V, Ann. 6.

[796]See the CIS, p. 4.57. Anns., Vol. V, Ann. 6.

342 7.198. Argentina has already several times had occasion to criticize the systematic underestimating by the CIS of the frequency of reverse flow. This underestimation has significant implications for assessing the risk of wastewater contamination around Ñandubaysal, which may also therefore be much greater than is recognized by the CIS.

7.199. *Air quality and odour*: the conclusion of the final version of the CIS is based on the results of the air quality analysis and states that there will be no significant impact on tourism from odour, cumulative or otherwise[797]. The report maintains that visitors to the Ñandubaysal beach resort in Gualeguaychú will not experience air quality, odour or water pollution impacts as a result of the pulp mill[798]. Odour, which is the main air quality parameter of concern with regard to tourism, will not be detectable under normal conditions, according to the CIS, although it may be detected under upset conditions at Fray Bentos and the international bridge. Likewise, it will not be detectable in the tourism areas of Las Cañas or Ñandubaysal under normal conditions, but only during upset conditions and at times of poor air dispersion: "the odour effect level is predicted to be above the detection threshold for a person with a sensitive sense of smell"[799]. The CIS thus states that, during an upset, someone at the beach resorts may detect an odour similar to those experienced in daily life (such as garbage or a sewer), and that this occurrence is most likely during pre-dawn when air dispersion is poor. Hence the CIS plays down the scale of the impact in terms of odour, on the basis of statements that are vague, unfounded and subjective.

343 7.200. *Visual nuisance*: Botnia has denied that there will be any visual nuisance, but on the contrary this will be significant at several places on the Argentine side that are used for recreation. The nuisance lies in the fact that Botnia's pulp mill will form the backdrop to a magnificent beachside panorama, an element seen by tourists as an undesirable addition to the natural landscape.

7.201. As regards Argentina, the CIS points out that the Orion mill will be the most visible industrial site from the Argentine shore, located 13 km across and upriver from the beach resort of Ñandubaysal. The report then turns to case studies of mills in British Columbia, which are said to co-exist with tourist activities without difficulty[800]. Argentine wishes to emphasize that this is a fallacious approach, since the beach areas of British Columbia and Ñandubaysal are not at all comparable. What is taking place in British Columbia is industrial tourism, which is not linked to sun and beach activities. It must also be borne in mind that tourism accounts for almost 20 per cent of the volume of economic activity in Gualeguaychú.

Navigation

7.202. The transportation network will be affected by the construction and operation of the Botnia mill[801]. The two most important flows of traffic will be wood and other supplies delivered to the mills and pulp exported from the mills. In addition, there will be transport of personnel to and from the mills, and transport of domestic and hazardous waste to appropriate landfills.

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[797] See the CIS, p. 4.85. Anns., Vol. V, Ann. 6.

[798] *Ibid.*, p. ES.xxv. Anns., Vol. V, Ann. 6.

[799] *Ibid.*, p. 4.85. Anns., Vol. V, Ann. 6.

[800] See the Berlin Declaration on Biological Diversity and Sustainable Tourism.

[801] See the CIS, p. ES.xxvi. Anns., Vol. V, Ann. 6.

7.203. The main modes of transport will be truck, barge or ship for wood and other supplies, and barge or ship for pulp. The increase in river traffic compared to 2004 "will not be significant
344 because the pulp export traffic will replace the current logs and wood chip volumes being exported or moved in river transport"[802], according to the CIS. However, the CIS states that the Botnia operation will result in an increase in barge round trips from 5.3 to 6.3 per day[803]. It is therefore clear from the figures quoted in the CIS that there will be an increase in traffic.

7.204. During construction, the environmental impacts will be greatest in the immediate vicinity of the mill, and will include increases in road accidents, gas emissions from vehicles and the need for road maintenance. Plans to manage these impacts are being drawn up by the company. ENCE has clearly stated that one of the key factors in its decision to withdraw from Fray Bentos was the volume of road transport needed for the two projects. It quoted the figure of 400,000 trucks per year for the operating lifetime of the mill[804]. That is more than 1,000 movements per day, a clear indication of the consequences of the presence of such mills for the environment. ENCE did not refer to river transport, but the figures are comparable.

Objective reasons for doubting Botnia's ability to meet the proposed standards

7.205. A number of factors seriously call into question the ability of the operators of the Orion mill to meet the standards laid down for the mill's operation. These factors are as follows:

(1) the deterioration in the performance of sister pulp mills in Finland in the period 2004-2005;

(2) documents showing that damages and compensatory interest have had to be paid in Finland to a number of groups affected by the mills, in particular fishermen;

345 (3) Botnia's obvious reluctance to provide public access to information (as opposed to distributing it proactively);

(4) the repeated and unexplained changes in the estimates of effluent (see above);

(5) the proposals for toxicity testing, including the present capacity restrictions in Uruguay.

7.206. In short, Argentina maintains that Uruguay has not demonstrated that the Orion mill would meet the standards required by the authorization that was granted, moreover in breach of the 1975 Statute.

Section VI

Conclusions

7.207. This chapter has dealt with the consequences for the River Uruguay of the proposed operation of the Orion mill for the next 40 years.

— Section II confirmed that the particular features of the River Uruguay make it an environment that is intrinsically unsuitable for discharges of the planned kind and scale, and that the environmental quality and condition of this watercourse and its surroundings are generally

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[802] *Ibid.*

[803] *Ibid.*, Sec. 4.10.1, p. 4.92. Anns., Vol. V, Ann. 6.

[804] See the ENCE press release of 21 Sept. 2006. Anns., Vol. VI, Ann. 2.

satisfactory. This Section also showed that there already exist, in some respects, environmental problems which the operation of the pulp mill would be likely to make seriously worse (such as the presence of high levels of phosphorus in the waters in the immediate vicinity of the mill, on the Argentine side).

346 — Section III described the operation of the Orion mill, indicating the environmental effects which projects of this type are likely to have, as well as the environmental risks that are intrinsically associated with them. On the basis of these factors, it is quite impossible to state, as Uruguay does in its position, that the Orion mill is not liable to affect the quality of the waters of the River Uruguay (cf. Art. 7 of the 1975 Statute).

— Section IV explained in more detail the planned operating mode for the Orion mill and the types of emissions it would produce. This Section also clearly established that the Orion mill is liable to affect the quality of the waters of the River Uruguay. That is a characteristic which entails a clear obligation for Uruguay to take all necessary measures to prove that the mill will cause no damage to the aquatic environment or no pollution that constitutes a breach of the 1975 Statute.

— Section V further confirmed that the Orion mill would be intrinsically harmful to the environment and that its operation will have direct and immediate effects in terms of air and water quality, noise pollution, visual and general nuisance and risks to human and animal health, for example by encouraging the appearance and spread of potentially toxic algae. The specific impacts of the project on the tourism sector were also identified in this section.

— Section VI thus definitively establishes that Uruguay has authorized a facility which is "liable to affect . . . the quality [of the waters of the River Uruguay]", and that this authorization was issued without Uruguay being able to demonstrate that it had taken all necessary measures to protect and preserve the aquatic environment of the River Uruguay and to prevent its pollution.

347 7.208 The general conclusion of the Wheater report is that the CIS does not provide an adequate technical basis to satisfy concerns for the environmental impact of the proposed pulp mill. It summarizes the deficiencies and the skewed approaches of the CIS as follows:

(a) water quality criteria for impact assessment based on dilution are inappropriate;

(b) uncertainty concerning environmental impacts is not recognized, nor the fact that detrimental effects on aquatic life have been observed following secondary treatment of effluents. Nutrient levels are a particular concern;

(c) the lack of consideration of sediment dynamics or sediment chemistry of the river/estuary environments is a major omission;

(d) the effects of flow reversal are under-represented, and the uncertainty associated with short records is not accounted for. No assessment is made of the impacts of climate variability or climate change;

(e) the water quality analysis of effluent discharges requires additional work; in particular, the far-field hydrodynamic modelling requires validation with appropriate observational data and appropriate treatment of uncertainty is required;

(f) the hydrological impact of the proposed plantations is not analysed; conclusions are based on assertions that are inconsistent or erroneous;

(g) risks of accidental pollution have not been fully addressed.

348 7.209. To summarize, Uruguay has shown itself unable to take full or satisfactory account of all the impacts of the construction and operation of the Orion pulp mill on the environment[805]. In particular, Uruguay has failed to assess properly the capacity of this Section of the River Uruguay to receive and cope with the proposed discharges, or with the risks associated with the operation of the mill, over such a long period of time.

[805]See the Executive Summary of the Latinoconsult report, para. 3, and Sec. 1, p. 13, where the approach of the CIS to the potential environmental impacts of the Orion mill is described as "completely deterministic". Anns., Vol. V, Ann. 3.

CHAPTER VIII

REMEDIES SOUGHT BY ARGENTINA

351 8.1. It is apparent from the preceding chapters of this Memorial, in particular Chapters IV and V, that Uruguay is, by its acts and omissions, the source of several internationally wrongful acts which entail its international responsibility[806], and is unable to invoke any grounds to excuse their wrongfulness. It is therefore for the Court to establish its violations of the 1975 Statute (Sect. I) and draw the necessary conclusions, in particular to find that Uruguay has an obligation to cease those breaches and resume performance of the provisions which have been breached (Sect. II), to make reparation for the injury caused by those breaches by re-establishing the situation that existed before the breaches were committed and, where that proves impossible, to compensate for the damage caused thereby (Sect. III), and to provide appropriate assurances and guarantees of non-repetition of its wrongful conduct (Sect. IV).

Section I

Establishment by the Court of the internationally wrongful acts committed by Uruguay

8.2. Having regard to the nature of the case, Argentina is not requesting the Court to determine at this stage the amount of compensation due to it from Uruguay in reparation for the injury suffered[807]. Nor, with one exception[808] is Argentina asking the Court to make, at least exclusively, a declaratory judgment on its rights — although it would unquestionably be legally possible for it to do so[809] — because such a judgment would not fully compensate for the damage caused to Argentina by Uruguay's internationally wrongful conduct — conduct which is having, and will continue to have, very specific consequences which require more than simple satisfaction.

352 8.3. Nonetheless, initially establishing the existence and substance of the breaches of the 1975 Statute would appear crucial for the Court to be able to give a ruling on the actual content of the resulting responsibility of the respondent State. Indeed, it goes without saying that the distinguished Court would not be in a position to give a ruling on the other submissions of Argentina (cessation of breaches, principle of reparation and decision on the terms thereof, and guarantees and assurances of non-repetition) if it had not first established the various breaches by Uruguay of the obligations incumbent on that State under the Statute.

8.4. Those breaches were the subject of detailed examination in Chapters IV and V of this Memorial and are recalled here. They are:

— failure to comply with the mechanism for prior notification and consultation provided for in Chapter II of the 1975 Statute;

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[806]Cf Arts. 1 and 2 of the Articles of the International Law Commission on Responsibility of States for Internationally Wrongful Acts, annexed to resolution 56/83 of the General Assembly of the United Nations of 12 Dec. 2001 (hereinafter "the ILC Articles").

[807]See para. 9.1 below.

[808]See para. 0.17 above.

[809]*Northern Cameroons (Cameroon* v. *United Kingdom), Preliminary Objections, Judgment, I.C.J. Reports 1963,* pp. 32-33: "That the Court may, in an appropriate case, make a declaratory judgment is indisputable."

— breach of the obligation to carry out a full and objective study of the transboundary impact of the Orion mill on the environment of the River Uruguay and the areas affected by it;

— breach of the obligation to take all measures necessary for the optimum and rational utilization of the River Uruguay;

— breach of the obligation not to significantly impair the régime of the river or the quality of its waters;

— breach of the obligation to take all measures necessary to protect and preserve the aquatic environment and prevent pollution; and

— breach of the obligation to protect biodiversity and fishery resources.

8.5. These internationally wrongful acts of varying character must give rise to varied consequences. Those consequences are the subject of the three sections which follow.

353 8.6. However, in one particular respect, declarations by the Court establishing the breaches committed by Uruguay will in themselves be "appropriate satisfaction"[810]. As Argentina has noted above[811], on 21 September 2006 the Spanish company ENCE announced that it had reversed its decision to locate the CMB mill at the site initially planned on the outskirts of Fray Bentos. At the same time, its managers stated their intention to construct a similar mill elsewhere in Uruguay, but did not indicate the exact location. This uncertainty places Argentina in a position where it is impossible for it to determine precisely the consequences of that decision. Argentina is therefore forced to reserve all its rights in that regard.

8.7. The fact nonetheless remains that the decision to suspend the construction of the CMB mill and to relocate it has no impact on the breaches committed by Uruguay of the obligations incumbent on it pursuant to Articles 7 to 11 of the 1975 Statute:

— in breach of Article 7, Uruguay gave ENCE authorization to construct the mill without notifying CARU of the matter;

— in breach of Article 8, Uruguay failed to provide CARU with full information which would have enabled Argentina to respond in connection with the plan with full knowledge of the facts;

— consequently, Uruguay did not allow Articles 8 to 12 of the 1975 Statute to be applied and, in particular, it brought to a standstill any possibility of reaching agreement as required in Article 12.

8.8. There is unquestionably a dispute "concerning the interpretation [and] application of the . . . Statute" within the meaning of Article 60 of the Statute, which the Court has a duty to resolve by establishing that Uruguay has committed serious breaches of the substantive provisions referred to above. Argentina is all the more concerned that the Court should rule on this matter

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[810]See *Corfu Channel (United Kingdom* v. *Albania), Merits, Judgment, I.C.J. Reports 1949*, p. 35; see also the operative part of the Judgment, p. 36. See also for example: International Tribunal for the Law of the Sea, Judgment of 1 July 1999, *M/V Saiga (No. 2), Reports 1999*, Vol. 3, p. 67, para. 176, or the Decision of 30 April 1990, *Rainbow Warrior (New Zealand/France),* United Nations, *Reports of International Arbitral Awards (RIAA)*, Vol. XX, pp. 272-273.

[811]See para. 0.5 above.

354 because, in Argentina's view, the very fate of the 1975 Statute is at stake; Argentina is anxious to preserve the integrity of that Statute and ensure its effective application in the future, so as to preserve its object and purpose and the "fraternal spirit"[812] in which it was entered into.

Section II

Cessation of breaches and resumption of compliance with the obligations laid down in the 1975 Statute

8.9. For the same reasons, it is essential that the Court should order the cessation of the breaches of the Statute attributable to Uruguay and the resumption of compliance with all the obligations it lays down.

8.10. In that respect, an initial distinction must be drawn between continuing breaches of the obligations laid down by the 1975 Statute and breaches of an immediate nature or which must be recognized as having ceased at the date of drafting this Memorial — even though their effects are still felt (and will continue to be so).

8.11. In the present case, not all the breaches of the obligations laid down by the 1975 Statute which are attributable to Uruguay have a continuing character, in the sense that some of them were internationally wrongful acts once and for all when they occurred, even if their effects still remain[813]. This is particularly the case, for example, with the lack of prior notification of CARU, and with the authorization given by Uruguay to the ENCE and Botnia companies to construct the mills at issue (and the associated facilities), regardless of the provisions of Articles 7 *et seq.* of the Statute.

8.12. In those cases, wrongful acts which continue to have harmful effects for Argentina occurred at the time when the decisions not to notify CARU of the mill projects, to authorize construction, and not to require Botnia to suspend works were taken by Uruguay, but they were
355 wrongful acts of an immediate nature. Nonetheless, their effects continue to be felt (because of the wrongful construction of the Orion mill and its probable commissioning in the relatively near future[814]). Those decisions produced their full effects immediately, and it would not be reasonable for the Court merely to "annul" them for failure to comply with the procedural obligations laid down in the Statute and require Uruguay to "terminate" the lack of notification to CARU and the authorization to proceed with construction.

8.13. Argentina also wishes to state expressly that it is not seeking an order from the Court to the effect that Uruguay must, *now*, discharge the obligations incumbent on it under Articles 7 to 11 of the 1975 Statute:

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[812] See the Preamble to the 1975 Statute.

[813] See Art. 14 (1) of the ILC Articles ("Extension in time of the breach of an international obligation").

[814] See para. 0.16 above.

— on the one hand, resumption of the procedure could only be formal in nature; by presenting Argentina with a fait accompli regardless of the provisions in question, Uruguay committed a series of wrongful acts which are now completed[815];

— on the other hand, and more importantly, by providing for intervention by the International Court of Justice (whose "judgment is final and without appeal"[816]) in the event that "the Parties fail to reach agreement", the drafters of the 1975 Statute intended to avoid the danger of the procedure for negotiations between the parties not reaching an outcome, and it would be fundamentally contrary to the spirit of Article 12 to require the procedure to resume after the Court has given a ruling in a judgment constituting *res judicata*, even though the legal basis for the jurisdiction of the Court in the present case is Article 60 alone, since Uruguay's failure to notify its plans to CARU brought the application of Chapter II as a whole to a complete standstill, including Article 12.

356 8.14. As regards the breaches of the "material" obligations incumbent on Uruguay pursuant to the 1975 Statute, most of them have a continuing character and one of the most important consequences of the Court's findings in their regard will be to require the respondent State to cease breaching those obligations and to resume performance of them. For example, the construction of the Orion mill constitutes (and its future commissioning would constitute) a continuing breach of the obligation to take all appropriate measures to protect and preserve the aquatic environment and to prevent pollution which the Parties entered into pursuant to Article 41 *(a)* of the Statute[817]; further, as is expressly stated in Article 42, "[e]ach Party shall be liable to the other for damage inflicted as a result of pollution caused by its own activities or by those carried out in its territory by individuals or legal entities".

8.15. Where these continuing breaches of treaty-based obligations or other comparable internationally wrongful acts are concerned — such as the breach of the obligations not to cause significant damage to Argentina[818] or significantly impair the régime of the river and the quality of its waters[819] or the "areas affected by it"[820] — the initial consequences of Uruguay's responsibility for these internationally wrongful acts are, on the one hand, to cease those acts and, on the other hand, to resume performance of the obligations at issue.

8.16. Pursuant to Article 30 *(a)* of the ILC Articles:

> "The State responsible for the internationally wrongful act is under an obligation:
>
> *(a)* To cease that act, if it is continuing."

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[815]See paras. 4 to 6 of the Commentary on Art. 14 of the ILC Articles (International Law Commission, Report on the work of its Fifty-third Session (23 April-1 June and 2 July-10 Aug. 2001), *General Assembly Official Records*, *Fifty-sixth Session, Supplement No. 10* (A56/10), pp. 147-148).

[816]Art. 60 of the Statute of the Court.

[817]See paras. 5.27-5.29 above.

[818]See Chap. V, Sec. III.

[819]*Ibid.*

[820]See Arts. 13 and 36 of the 1975 Statute.

357 And, as the Commission states in the commentary on that Article: "Cessation of conduct in breach of an international obligation is the first requirement in eliminating the consequences of wrongful conduct."[821]

8.17. In the present case, the first consequence of a finding by the Court of breaches of the 1975 Statute must therefore be the cessation of breaches of a continuing character and the resumption of full application of the Treaty as its corollary.

8.18. As Article 29 of the ILC Articles states: "the legal consequences of an internationally wrongful act . . . do not affect the continued duty of the responsible State to perform the obligation breached". In the present case, resumption of performance has a special significance: if it did not occur, then Uruguay, by violating the 1975 Statute, would achieve its termination *de facto*, whereas Argentina, rather than accepting such a consequence, is seeking to ensure, as is its right[822], that Uruguay fully complies with the obligations incumbent on it under the 1975 Statute.

8.19. Therefore, following a judgment by the Court, Uruguay will have to cease the continuing breaches of the obligations under, *inter alia*, Articles 1 and 27 (on the optimum and rational utilization of the waters of the river), Articles 35 and 36 (obligation to co-ordinate the necessary measures to avoid any change in the ecological balance in the river and the areas affected by it) and Article 41 *(a)* (which lays down obligations to take all necessary measures to preserve the aquatic environment and prevent its pollution), and of the general obligations ensuing from
358 those provisions not to cause significant damage to Argentina or significantly impair the régime of the river and the quality of its waters.

Section III

Reparation by Uruguay for the injury caused by its internationally wrongful acts

8.20. In addition to the obligations referred to above resulting from Uruguay's international responsibility, Uruguay is under an obligation to make full reparation for the damage sustained by Argentina as a result of the breaches of its international obligations pursuant to the 1975 Statute which are attributable to it.

8.21. In accordance with the celebrated dictum of the Permanent Court of International Justice in its Judgment of 13 September 1928 in the case concerning the *Factory at Chorzów*:

> "[t]he essential principle contained in the actual notion of an illegal act — a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals — is that reparation must, as far as possible, wipe out all

[821] See para. 4 of the ILC Articles (A/56/10), *op. cit.*, p. 217.

[822] See Art. 60 (1) of the Vienna Convention on the Law of Treaties of 23 May 1969, the customary nature of which is not in doubt (see *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 47; *Gabčíkovo-Nagymaros Project (Hungary/Slovakia), op. cit.,* p. 68, para. 114; or para. 3 of the Commentary on Art. 29 of the ILC Articles (A/56/10), *op. cit.*, p. 215.

the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed"[823].

The adequate form of the reparation depends upon "the concrete circumstances surrounding each case and the precise nature and scope of the injury, since the question has to be examined from the viewpoint of what is the 'reparation in an adequate form' that corresponds to the injury"[824]. It may
359 take the form of restitution, compensation or satisfaction[825], it being understood that the various means of reparation may be combined, the essence being to achieve full reparation[826].

8.22. Pursuant to Article 35 of the ILC Articles:

"A State responsible for an internationally wrongful act is under an obligation to make restitution, that is, to re-establish the situation which existed before the wrongful act was committed, provided and to the extent that restitution:

(a) Is not materially impossible;

(b) Does not involve a burden out of all proportion to the benefit deriving from restitution instead of compensation."

It follows that the State responsible has an obligation to take all necessary measures to re-establish the situation which existed before its internationally wrongful act or acts was or were committed.

8.23. As was established in Chapter IV of this Memorial, one of the internationally wrongful acts for which Uruguay is responsible consists in authorizing the construction of pulp mills and associated facilities in breach of several obligations incumbent on it under the 1975 Statute and the rules of international law referred to therein. Appropriate restitution therefore consists, firstly, in the annulment of those authorizations. The annulment of administrative acts taken in breach of international law has indeed been recognized as an appropriate means of restitution, since it wipes out the wrongful act[827]. That request applies both to the CMB and the Orion mills since, as far as Argentina is aware, the authorization granted to ENCE to construct the CMB mill has not been officially withdrawn, despite ENCE's decision to relocate the mill.

8.24. As far as Orion is concerned, the breaches of the obligations incumbent on Uruguay
360 under the Statute have resulted directly in a gigantic paper mill and associated facilities being on the point of completion on the left bank of the River Uruguay and due to be commissioned before the Court delivers its judgment. The annulment of the authorization to construct this mill and the port associated with it, and of the authorizations to begin operations at the port and extract and use a significant volume of water annually from the River Uruguay, may indeed wipe out the wrongful acts in themselves, but is definitely not sufficient to wipe out all the consequences of those acts.

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[823] *P.C.I.J., Series A, No. 17*, p. 47. For recent examples from the case law of the Court, see for example *LaGrand (Germany* v. *United States of America), Judgment, I.C.J. Reports 2001,* p. 485, para. 48; *Arrest Warrant of 11 April 2000 (Democratic Republic of the Congo* v. *Belgium), Judgment, I.C.J. Reports 2002*, pp. 31-32, para. 76; *Avena and Other Mexican Nationals (Mexico* v. *United States of America), Judgment, I.C.J. Reports 2004*, p. 59, para. 119. See also Art. 31 (1) of the ILC Articles.

[824] *Avena and Other Mexican Nationals (Mexico* v. *United States of America), op. cit.,* p. 59, para. 119.

[825] See Art. 34 of the ILC Articles.

[826] See para. 2 of the Commentary on Art. 34 of the ILC Articles: "Wiping out all the consequences of the wrongful act may . . . require some or all forms of reparation to be provided, depending on the type and extent of the injury that has been caused." (*Op. cit*., p. 236.)

[827] See Art. 35 of the ILC Articles, para. 5 of the Commentary (*ibid.*, p. 240).

Only the dismantling of the mill and its associated facilities or, where appropriate, their reassignment to other uses compatible with the provisions of the 1975 Statute can re-establish the *statu quo ante*.

8.25. In no way is this means of restitution disproportionate as compared to compensation[828]. Mere payment of compensation is not capable of wiping out all the damage which the mills at issue, which have an estimated lifetime of at least 40 years[829], will continue to cause in the future to the régime of the River Uruguay, the quality of its waters and the areas affected by it — damage which it is impossible to assess precisely at present.

8.26. Moreover, in its Order of 13 July 2006, the Court warned Uruguay against the consequences of non-suspension of the works when it stated:

> "Whereas in proceeding with the authorization and construction of the mills, Uruguay necessarily bears all risks relating to any finding on the merits that the Court might later make; whereas the Court points out that their construction at the current site cannot be deemed to create a fait accompli because, as the Court has had occasion to emphasize, 'if it is established that the construction of works involves an infringement of a legal right, the possibility cannot and should not be excluded *a priori* of a judicial finding that such works must not be continued or must be modified or dismantled' (*Passage through the Great Belt (Finland* v. *Denmark), Provisional Measures, Order of 29 July 1991, I.C.J. Reports 1991*, p. 19, para. 31)."[830]

361 8.27. Uruguay itself has also expressed its awareness of the risk of having to dismantle the mills in the event that it is held responsible for breaches of its obligations under the 1975 Statute and the rules of international law referred to therein. It was stated at the hearing on 8 June 2006 that:

> "it should be for Uruguay to decide whether to risk proceeding with the construction of the plants in light of Argentina's claim. If the Court, at the conclusion of the merits phase, were to order the plants closed, or dismantled, Uruguay would have to live with that result."[831]

The Court noted that statement[832]. In consequence, Uruguay could not in any event contend that full restitution is disproportionate.

8.28. To the extent that restitution cannot "wipe out all the consequences of the wrongful act and re-establish the situation which would, in all probability, have existed if that act had not been committed", Uruguay is under an obligation to compensate Argentina for material damage suffered. The compensation must cover any financially assessable damage, including loss of profits in so far as it is established[833].

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[828]Cf. Art. 35 *(b)* of the ILC Articles.

[829]CR 2006/46, p. 24, para. 16 (Picolotti).

[830]*Pulp Mills on the River Uruguay (Argentina* v. *Uruguay), Provisional Measures, Order of 13 July 2006*, para. 78.

[831]CR 2006/47, p. 50, para. 26 (Reichler).

[832]Order of 13 July 2006, *op. cit.*, para. 47.

[833]See Art. 36 of the ILC Articles.

8.29. The damage actually sustained by Argentina as a result of the unilateral and wrongful authorizations to construct the Orion mill and the associated facilities, their construction and their future commissioning[834] exceeds what can be re-established by annulling the authorizations and dismantling the mill. Following the granting of the authorizations and since construction of the mills commenced, Argentina has had to deal with major economic and financial losses and damage which it has suffered directly and through its nationals. That damage includes, but is not limited to:

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— the financial losses sustained by tourism operators in the Gualeguaychú region, particularly because of the significant drop in tourist-related activities[835];

— damage resulting from the decline in property values, rental prices and economic activity in general in that area affected by the river experiencing the consequences of the construction and possible future commissioning of the mills[836];

— significant additional expenditure and losses in the agricultural, apiculture and fisheries sectors which could occur in the event of the mills becoming operational in the future[837].

8.30. All this damage is the direct result of the authorization and construction (to which we may add the commissioning, very probably before this case reaches a conclusion) of the Orion mill and the changes made to the ecosystem of the River Uruguay and the areas affected by it. Because of the installation and operation of the Orion industrial complex and the threat it poses to the ecosystem of the river and the areas affected by it[838], the Gualeguaychú region is likely to see a significant decline in its rapidly developing ecotourism sector[839], for which the region is a well-known base. The loss of profits for future years is considerable even though at the time of writing it is still very difficult to place a figure on the injury in this respect.

8.31. At this stage in the proceedings, Argentina finds itself in a situation where it is impossible to assess all the damage sustained, whether by reason of the construction proceeding or the future operation of the mill. Consequently, at this stage, in keeping with customary practice in situations of this kind, Argentina is seeking from the Court only a finding that Uruguay is required to make compensation for the damage sustained as a result of the internationally wrongful acts which the Court has found to exist[840], while reserving the assessment and determination of the amount of injury suffered for a subsequent stage of the proceedings[841].

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[834]Or present, as regards the commissioning of the port, authorized on 24 Aug. 2006, and the authorization to extract and use water from the River Uruguay for industrial purposes granted to Botnia on 12 Sept. 2006. Anns., Vol. VII, Anns. 15 and 16.

[835]Cf. paras. 7.195-7.196.

[836]*Ibid.*

[837]See the notarized declaration by José Eduardo Heft, Jorge Albino Janusa and Oscar Enrique Stockli of 30 May 2006 (documentation submitted by Argentina on 2 June 2006, doc. No. 13).

[838]See Chap. VII, Sec. V.

[839]See Chap. VI, Sec. III.

[840]See Sec. I above.

[841]See for example *Fisheries Jurisdiction (Federal Republic of Germany v. Iceland), Merits, Judgment, I.C.J. Reports 1974,* pp. 204-206, paras. 76-77; *United States Diplomatic and Consular Staff in Tehran, Judgment, I.C.J. Reports 1980*, pp. 45 *et seq*. (para. 6 of the operative part of the Judgment).

Section IV

Argentina is entitled to appropriate guarantees and assurances of non-repetition of Uruguay's wrongful conduct

8.32. Pursuant to Article 30 *(b)* of the ILC Articles:

> "The State responsible for the internationally wrongful act is under an obligation:
>
> . . . . . .
>
> *(b)* To offer appropriate assurances and guarantees of non-repetition, if circumstances so require."

That is the situation in the present case.

8.33. The ILC commentary on that provision notes that the guarantees and assurances of non-repetition are presented as:

> "an aspect of the continuation and repair of the legal relationship affected by the breach. Where assurances and guarantees of non-repetition are sought by an injured State, the question is essentially the reinforcement of a continuing legal relationship and the focus is on the future, not the past."[842]

8.34. Having regard to the facts and circumstances at the heart of the dispute between Argentina and Uruguay, Uruguay is certainly required to give assurances and guarantees of non-repetition. The repeated and deliberate breaches of the 1975 Statute, and in particular of the procedure provided for in Articles 7 *et seq.* thereof, illustrate the extent to which those guarantees are appropriate in the present case. Mere reparation for the damage suffered is not sufficient to restore Argentina's confidence in future compliance by Uruguay with the Statute, which, as noted in Chapter III of this Memorial, is the framework for continued and extensive co-operation between the Parties.

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8.35. It is hardly necessary to draw the Court's attention once again to the fact that, despite the most vigorous protests by Argentina and its attempts to find an amicable solution, complying with both the letter and the spirit of the 1975 Statute, to the dispute arising from the authorization to construct the CMB mill that was unilaterally granted by the Respondent, Uruguay continued openly to breach its obligations when it authorized the construction of the second mill, Orion, and then the port for Orion's exclusive use. Those acts have profoundly shaken Argentina's confidence in Uruguay's commitment to the 1975 Statute, the importance it attaches to it, and its intention to comply with it in the future.

8.36. Events subsequent to the filing of the Application but inherently connected with it have also contributed to undermining that confidence further. Indeed, Uruguay once again released itself from the procedure laid down by Articles 7 to 12 when on 24 August 2006, without CARU having been notified in advance, the port associated with the Orion mill, which had been

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[842] Para. 11 of the Commentary, ILC Articles, (A/56/10)), *op. cit.*, p. 236.

unilaterally authorized, was brought into operation[843], and when on 12 September 2006 an authorization to extract 60 million m^3 water per annum (until 2011) was granted to Botnia. This manner of proceeding clearly shows that Uruguay in no way intends to be subject to the 1975 Statute where the construction and commissioning of the Orion mill are concerned. Furthermore, the plan for another pulp mill in Uruguay, this time on the Río Negro, a tributary of
365 the River Uruguay, which would be constructed and operated by Stora Enso, a Finno-Swedish company, is currently being studied; this is a matter that can only be a source of concern to Argentina, which has very little information on the plan[844].

8.37. In those circumstances, in order to repair the legal relationship between the two Parties on the basis of the fraternal spirit, co-operation and mutual confidence which have traditionally been its distinguishing features, Argentina asks Uruguay to specifically commit itself to comply scrupulously in future with the obligations arising from the 1975 Statute, in particular the procedure provided for in Articles 7 *et seq.*; otherwise that Statute will in the long term be devoided of its object and purpose, no doubt irremediably.

8.38. Argentina is aware of the fact that the Agent of Uruguay has already stated, at the hearing of 8 June 2006, the "intention [of Uruguay] to comply in full with the 1975 Statute of the River Uruguay and its application"[845]. Recent events regarding the authorization for commissioning of a port associated with the Orion mill, the authorization to extract significant quantities of water from the river or the Stora Enso mill plan nevertheless demonstrate that Argentina has good reason to be sceptical of the seriousness of the commitment thus expressed.

8.39. Therefore, Argentina is of the view that a formal declaration made by a competent authority of Uruguay, a declaration which is more precise than the one given by that country's Agent at the hearings on the request for the indication of provisional measures, whereby Uruguay would undertake to comply in future with the provisions of Articles 7 *et seq.* of the 1975 Statute and of which the Court would take formal note in the operative part (and not merely in the grounds) of its judgment would be one possible means of giving such assurances and guarantees of non-repetition. That undertaking, which would therefore have the force of *res judicata*, could be
366 supplemented by the establishment by Uruguay, in conjunction with Argentina, of a fund to support the preservation and improvement of the environment of the River Uruguay and the areas affected by it. Moreover, joint management of that fund by both Parties would constitute a guarantee capable of restoring Argentina's confidence in Uruguay's adherence to the 1975 Statute.

8.40. Argentina's submissions which follow summarize the conclusions to be drawn from the considerations set out in this chapter with regard to:

(i) the establishment by the Court of the internationally wrongful acts attributable to Uruguay;

(ii) the cessation of the continuing breaches and the resumption by Uruguay of its obligations under the 1975 Statute;

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[843] Annexes, Vol. VII, Anns. 15 and 16.

[844] See the press releases by the Uruguayan Presidency, "Movotma authorizes Stora Enso to plant 5,000 hectares", 11 July 2006 (http://www.presidencia.gub.uy/_web/noticias/2006/07/2006071109.htm); and "Stora Enso has presented its project for investment in Uruguay", 5 Sept. 2006 http://www.presidencia.gub.uy/_web/noticias/2006/09/2006090514.htm). Anns., Vol. VI, Anns. 12 and 7.

[845] CR 2006/49, p. 36 (Gros Espiell).

(iii) the re-establishment of the situation that existed before the breaches were committed and appropriate compensation which alone is capable of wiping out all the consequences of those internationally wrongful acts; and

(iv) the guarantees and assurances of non-repetition which Argentina is entitled to receive from Uruguay.

SUBMISSIONS

369 9.1. For all the reasons described in this Memorial, the Argentine Republic requests the International Court of Justice:

1. to find that by unilaterally authorizing the construction of the CMB and Orion pulp mills and the facilities associated with the latter on the left bank of the River Uruguay, in breach of the obligations resulting from the Statute of 26 February 1975, the Eastern Republic of Uruguay has committed the internationally wrongful acts set out in Chapters IV and V of this Memorial, which entail its international responsibility;

2. to adjudge and declare that, as a result, the Eastern Republic of Uruguay must:

   (i) cease immediately the internationally wrongful acts referred to above;

   (ii) resume strict compliance with its obligations under the Statute of the River Uruguay of 1975;

   (iii) re-establish on the ground and in legal terms the situation that existed before the internationally wrongful acts referred to above were committed;

   (iv) pay compensation to the Argentine Republic for the damage caused by these internationally wrongful acts that would not be remedied by that situation being restored, of an amount to be determined by the Court at a subsequent stage of these proceedings;

   (v) provide adequate guarantees that it will refrain in future from preventing the Statute of the River Uruguay of 1975 from being applied, in particular the consultation procedure established by Chapter II of that Treaty.

370 9.2. The Argentine Republic reserves the right to supplement or amend these submissions should the need arise, in the light of the development of the situation. This would in particular apply if Uruguay were to aggravate the dispute[846], for example if the Orion mill were to be commissioned before the end of these proceedings.

15 January 2007[*]

(Signed) Susana MYRTA RUIZ CERUTTI.
Agent of the Argentine Republic
before the International Court of Justice

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[846] See the Order of the Court of 13 July 2006 on Argentina's request for the indication of provisional measures, para. 82.

[*] The drafting of this Memorial was completed on 14 Dec. 2006 because of the logistical requirements of its submission to the Court, for example printing and binding.

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— Annex 2 — Lapeyre and Flangini — *El Estatuto del Río Uruguay* — Chapter III, pp. 74-75.

— Annex 3 — González Lapeyre — *El Estatuto del Río Uruguay* — Preface by Enrique Iglesias

— Annex 4 — Official record, statement by the Minister for Foreign Affairs, Mr. Didier Opertti, to the Uruguayan Senate (November 2003)

379 — Annex 5 — Official record, statement by the President of Uruguay's delegation to CARU, Ms Martha Petrocelli, to the Uruguayan Senate (12 September 2005)

— Annex 6 — Resolution TO 39/2005 of Uruguay's Ministry of Transport and Public Works (5 July 2005)

— Annex 7 — Publication: *El Ñandubaysal, Tourist park* — Sections: "Introduction", "The site" and "Final considerations"

— Annex 8 — Uruguay's plan to implement the POP Convention, p. 51 (May 2006)

— Annex 9 — Resolution 342/2003 of the Ministry of Housing, Land Use Planning and Environmental Affairs (9 October 2003)

— Annex 10 — Resolution 63/2005 of the Ministry of Housing, Land Use Planning and Environmental Affairs (14 February 2005)

— Annex 11 — Official record, statement by Argentina's Minister for Foreign Affairs, Mr. Rafael Bielsa, to the Argentine Chamber of Deputies (14 April 2004)

— Annex 12 — Statement by Argentina's Minister for Foreign Affairs, Mr. Jorge Taiana, to the Argentine Chamber of Deputies (14 February 2006)

— Annex 13 — Address by the President of Argentina, Mr. Néstor Kirchner, to the Argentine Congress (1 March 2006)

— Annex 14 — Draft Joint Presidential Declaration on the Full Preservation of the River Uruguay and its Ecosystem (Anchorena Declaration) (3 April 2006)

— Annex 15 — Resolution R/DN/100/2006 of Uruguay's Department of the Environment (24 August 2006)

— Annex 16 — Resolution of Uruguay's Ministry of Transport and Public Works (12 September 2006)

— Annex 17 — Claim filed against the Uruguayan Government by Dr. Enrique Viana, National Prosecutor of the Eastern Republic of Uruguay (12 September 2005)

— Annex 18 — Report on the State of the Argentine Nation 2004 — Points 4.5.4 (pp. 106-107) and 4.5.16 (pp. 126-127)

— Annex 19 — Report No. 64 by the Head of the Cabinet Office to the Argentine Congress, pp. 379-380 (March 2005)

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— Annex 5 — Satellite mapping image “General San Martín international bridge” 3357-19, scale 1:100,000, Argentine Military Institute of Geography

— Annex 6 — Photos