

PART II:
THE LAW

CHAPTER 5

JURISDICTION

5.1. Ireland and the United Kingdom are both parties to UNCLOS.

5.2. Ireland has brought this claim in order to uphold its specific rights under UNCLOS Articles 123, 192, 193, 194, 197, 206, 207, 211, 212, 213, 217 and 222.

5.3. UNCLOS Part XV establishes a regime for the settlement of disputes concerning the interpretation and application of the Convention. In July and December 1999, Ireland notified the United Kingdom that a dispute would arise if the United Kingdom authorised the operation of the MOX plant without a proper environmental impact assessment having been carried out and in the absence of co-operation with Ireland, and in consequence in violation of various provisions of the UNCLOS. Ireland specified that such authorisation would in its view be incompatible with the United Kingdom's obligations under the UNCLOS. These matters are fully described in chapter 4.¹

5.4. The issue was not resolved. On 3 October 2001 the United Kingdom published a decision allowing the operation of the MOX plant to proceed.² At a meeting held in London on 5 October 2001,³ and subsequently by letter dated 16 October 2001,⁴ Ireland notified the United Kingdom that a dispute concerning the interpretation and application of UNCLOS then existed between the two States, as a result of the authorisation by the United Kingdom of the MOX plant.

5.5. UNCLOS Article 283(1) requires States Parties which are parties to a dispute concerning the interpretation or application of UNCLOS to exchange views regarding the settlement of that dispute.

5.6. There has been a full exchange of views by Ireland and the United Kingdom concerning the settlement of this dispute. Ireland has written to the United Kingdom on numerous occasions, beginning in 1999, setting out its views as to the violations of UNCLOS that would be occasioned by the authorisation of the MOX plant.⁵ Those views were amplified at the meeting on 5 October 2001⁶ and in the letter of 16 October 2001.⁷ Those exchanges are detailed in chapter 4, above.

¹ See chapter 4, paras 4.27 *et seq.*

² See chapter 4, para 4.26.

³ See chapter 4, para 4.46.

⁴ Ireland's letter of 16 October, vol 3(1), Annex 34.

⁵ See Ireland's letter of 23 December 1999; vol 3(1), Annex 20. See further chapter 4, particularly paras 4.45 *et seq.*

⁶ See para 4.46.

⁷ Letter from Ireland to the United Kingdom dated 16 October 2001, vol 3(1), Annex 34.

5.7. In view of the imminence of the commissioning of the MOX plant, then expected to be on or around 23 November 2001,⁸ Ireland accordingly had no option but to exercise its right to initiate proceedings under the UNCLOS, and to seek provisional measures for the protection of its rights from the ITLOS.

5.8. As the ITLOS decided, “a State Party is not obliged to continue with an exchange of views when it concludes that the possibilities of reaching agreement have been exhausted”.⁹ It was apparent that after the publication of the United Kingdom’s decision on 3 October 2001, no agreement could be reached and that the United Kingdom was determined to proceed to operate the MOX plant. The ITLOS rejected the United Kingdom’s submission that there had not been an exchange of views within the meaning of Article 283 of the Convention.

5.9. Ireland appeared before the ITLOS on 19 and 20 November 2001. The ITLOS issued its Order on 3 December 2001. A copy of that Order is annexed hereto, as Annex 3.¹⁰

5.10. Since that date the United Kingdom and Ireland have sought to co-operate in order to arrange for the timely and efficient determination of this dispute by the Annex VII Tribunal.¹¹

5.11. This dispute falls within the jurisdiction of the Annex VII Tribunal. Ireland and the United Kingdom have failed to settle the dispute between them by negotiation, and have not chosen any other means for its settlement. UNCLOS Article 281(1) allows recourse to procedures provided for in Part XV, including compulsory procedures entailing binding decisions under Section 2 of that Part. Article 286 permits these compulsory procedures to be activated by the submission of the dispute to the court or tribunal having jurisdiction under Section 2, and it permits any party to the dispute to make that submission.

5.12. Article 287 governs the choice of compulsory procedures. Article 287(1) permits a State Party, by way of a written declaration, to choose one or more of the means for the settlement of disputes listed in the paragraph, which include an arbitral tribunal established under UNCLOS Annex VII. Ireland has made no written declaration pursuant to Article 287(1), and is therefore deemed by operation of Article 287(3) to have accepted arbitration in accordance with Annex VII. The United Kingdom has opted for the settlement of disputes by the International Court of Justice.

5.13. As the parties to the dispute have not both accepted the same procedure for the settlement of the dispute, Article 287(5) applies. That paragraph stipulates that, “if the parties to a dispute have not accepted the same procedure for the settlement of the dispute, it may be submitted only to arbitration in accordance with Annex VII, unless the parties otherwise agree.” There has been no agreement between the parties to the submission of this dispute to any forum other than an Annex VII Tribunal. Article 1 of UNCLOS Annex VII provides that any Party that cannot otherwise settle a dispute may submit the same to arbitration by written notification to the other Party. Accordingly, Ireland has requested the

⁸ See the letter from BNFL to Friends of the Earth, dated 17 October 2001, vol 3(3), Annex 120.

⁹ Order of 3 December 2001, paragraph 60; vol 3(1), Annex 3.

¹⁰ In vol 3(1).

¹¹ See paras 4.63 *et seq.*

submission of the dispute between itself and the United Kingdom to an arbitral tribunal constituted under Annex VII.¹²

5.14. No prior procedures need to be exhausted before arbitration proceedings may be initiated under Annex VII. Nevertheless, as has been explained,¹³ Ireland had, over a period of nearly two years, raised its concerns in relation to the dispute by correspondence and in bilateral meetings. Indeed, Ireland has continued to be active in seeking the co-operation of the United Kingdom in the months since the Order of the ITLOS, dated 3 December 2001. Ireland's efforts to resolve the dispute prior to the submission to UNCLOS were, however, unsuccessful; and the dispute remains unresolved to the present time.

5.15. It was suggested by the United Kingdom during the ITLOS proceedings that the ITLOS lacked jurisdiction because this dispute could and should have been pursued under the dispute settlement provisions of some other treaty, such as the 1992 OSPAR Convention, the EC Treaty, and/or the EURATOM Treaty.

5.16. As Ireland explained to the ITLOS, that suggestion is factually incorrect. Ireland has rights under the UNCLOS that it does not have under the other treaties to which the United Kingdom referred. No treaty other than UNCLOS provides such a comprehensive set of rules – procedural and substantive– embodying Ireland's rights and protecting its interests in marine environment of the Irish Sea. There is no reason why the existence of narrower rights under other treaties should bar Ireland from relying upon its wider rights under the UNCLOS. Ireland is entitled to rely upon its wider rights under the UNCLOS, as it does in this case.

5.17. The greater breadth of the UNCLOS rights is apparent on the face of the Convention. The provisions of UNCLOS Article 123, concerning the duty of co-operation and co-ordination in semi-enclosed seas, colour the application of all the other UNCLOS Articles, giving them a particular legal context altogether lacking in other legal instruments. Similarly, the Articles falling within UNCLOS Part XII, on Protection and Preservation of the Marine Environment, impose substantive and procedural duties upon the United Kingdom. The nature and extent of the United Kingdom's duties under these provisions of the UNCLOS, are spelled out in the chapters of this Memorial that follow. It is the application of these Articles of the UNCLOS to the United Kingdom that is the substance of the dispute in the present case.

5.18. The ITLOS specifically, explicitly and unanimously rejected the United Kingdom's challenges to the jurisdiction of the UNCLOS Annex VII Tribunal based on UNCLOS Article 282. That Article reads as follows:

“If the States Parties which are parties to a dispute concerning the interpretation or application of this Convention have agreed, through a general, regional or bilateral agreement or otherwise, that such dispute shall at the request of any party to the dispute, be submitted to a procedure that entails a binding decision, that procedure shall apply in lieu of the procedures provided for in this Part, unless the parties to the dispute otherwise agree.”

5.19. In the Order of 3 December 2001, the ITLOS upheld its jurisdiction, which was, according to UNCLOS Article 290(1), dependent upon a finding by the ITLOS that *prima*

¹² Ireland's Statement of Claim appears at vol 3(1), Annex 1.

¹³ See chapter 4.

facie the Annex VII tribunal has jurisdiction. The ITLOS included in the statement of its reasoning the following paragraphs:

“48. *Considering* that, in the view of the Tribunal, article 282 of the Convention is concerned with general, regional or bilateral agreements which provide for the settlement of disputes concerning what the Convention refers to as ‘the interpretation or application of this Convention’;

49. *Considering* that the dispute settlement procedures under the OSPAR Convention, the EC Treaty and the EURATOM Treaty deals with dispute concerning the interpretation or application of those agreements, and not with disputes arising under the Convention;

50. *Considering* that, even if the OSPAR Convention, the EC Treaty and the EURATOM Treaty contain rights or obligations similar to or identical with the rights or obligations set out in the Convention, their rights and obligations under those agreements have a separate existence from those under the Convention;

51. *Considering* also that the application of international law rules on interpretation of treaties to identical or similar provisions of different treaties may not yield the same results, having regard to, *inter alia*, differences in the respective contexts, objects and purposes, subsequent practice of parties and *travaux préparatoires*;

52. *Considering* that the Tribunal is of the opinion that, since the dispute before the Annex VII arbitral tribunal concerns the interpretation or application of the Convention and no other agreement, only the dispute settlement procedures under the Convention are relevant to the dispute;

53. *Considering* that, for the reasons given above, the Tribunal considers that, for the purpose of determining whether the Annex VII arbitral tribunal would have *prima facie* jurisdiction, article 282 of the Convention is not applicable to the disputes submitted to the Annex VII arbitral tribunal.”¹⁴

5.20. In these circumstances, Ireland submits that it is evident that this Annex VII Tribunal has jurisdiction to determine Ireland’s claims concerning the interpretation and application of the UNCLOS.

¹⁴ See vol 3(3), Annex 3.

CHAPTER 6

THE APPLICABLE LAW

INTRODUCTION

6.1. Article 293(1) of the UNCLOS directs the Annex VII Tribunal to apply “[UNCLOS] and other rules of international law not incompatible with [the] Convention”. It follows that the rules of international law which the Annex VII Tribunal is called upon to apply – in relation to the issues which divide the parties on co-operation, on the requirement to carry out an environmental impact assessment, and to take measures to prevent pollution from the MOX plant and associated activities – are to be found both in the relevant provisions of UNCLOS and in “other rules of international law which are not incompatible” with the Convention. The negotiating history of UNCLOS and the case-law of the International Tribunal for the Law of the Sea confirm that these other rules of international law include rules of customary and conventional law, as well as general principles of law recognised by civilised nations.¹

A. THE RELATIONSHIP BETWEEN THE RULES OF THE 1982 UNCLOS AND OTHER RULES OF INTERNATIONAL LAW

6.2. It is self-evident that the Annex VII Tribunal should first identify the rights and obligations of the parties by reference to the provisions of UNCLOS. Article 293 reflects an agreement on the priority of UNCLOS among the sources of law to be applied by the courts and tribunals having jurisdiction under the Convention.² The “other rules of international law” which the Annex VII Tribunal is called upon to apply are related to the provisions of UNCLOS in two ways.

6.3. Firstly, in applying “other rules of international law” the content of certain rules in UNCLOS establishing in general terms obligations will be informed and developed by the existence of rules of international law arising outside UNCLOS. This reflects the general principle in international law supported by the jurisprudence of the International Court of Justice:

“... an international instrument has to be interpreted and applied within the framework of the entire legal system prevailing at the time of the interpretation.”³

¹ See generally Gudmundur Eriksson, *The International Tribunal for the Law of the Sea*, 145-147 (2000).

² See Center for Oceans Law and Policy, *United Nations Convention on the Law of the Sea 1982: A Commentary*, vol 5, p 73 (1993).

³ *Legal Consequences for States of the Continued Presence of South Africa in Namibia (Southwest Africa) notwithstanding Security Council Resolution 276 (1970)*, Advisory Opinion, ICJ Reports 1971, p 16, at p 31.

The “legal system” includes treaties, customary international law, acts of international organisations and general principles of law. The approach has been confirmed more recently by the 1996 resolution of the *Institut de Droit International*: “[t]reaty and custom form distinct, interrelated sources of international law [...] a norm deriving from one of these two sources may have an impact upon the content and interpretation of norms deriving from the other source.”⁴

6.4. Like the Charter of the United Nations, the UNCLOS is not a static instrument. The content and effect of its obligations evolve over time, to take into account developments in international law and changes in the state of scientific knowledge and understanding. This general consideration is especially true in the field of environmental law, where rapid changes have occurred in the state of scientific knowledge and a growing awareness of the potential risks which certain activities might have for man and the environment. In this case the approach applies, for example, in relation to the content of the requirement to carry out an environmental impact assessment⁵ and the duty to co-operate.⁶

6.5. Secondly, rules of international law arising outside UNCLOS are to be applied by the Annex VII Tribunal in another way. In respect of certain obligations which they have accepted by becoming parties to UNCLOS States are expressly directed – sometimes individually, sometimes jointly – to implement or to take into account international rules, standards or practices arising outside UNCLOS in order to fulfil their obligations under the 1982 Convention.

6.6. One example of this requirement is in relation to the various obligations to prevent, control and reduce pollution of the Irish Sea. This requires the parties to “implement applicable international rules and standards” concerning land-based pollution (Article 213).⁷ Another example concerns the obligation to prevent reduce and control pollution of the Irish Sea from vessels flying the British flag or registered in the United Kingdom. This requires the United Kingdom to adopt laws and regulations which “shall have at least the same effect as that of generally accepted international rules and standards” (Article 211(2));⁸ such rules and standards include “*inter alia* those relating to prompt notification to coastal states, whose coastline or related interests may be affected by incidents ... which involve discharge or probability of discharges” (Article 211(7)).⁹ A further example concerns the obligation to prevent, reduce and control pollution of the marine environment from or through the atmosphere. This requires the United Kingdom to “[take] into account internationally agreed rules, standards and recommended practices and procedures” (Article 212(1)).¹⁰

6.7. In these two ways – by the interpretation of general UNCLOS provisions in the light of the wider body of international law, and by the direction to apply other international rules, standards and practices – UNCLOS assumes an integrating function, bringing together conventional and customary norms, and regional and global norms.

⁴ Resolution on Problems arising from a Succession of Codification Conventions on a Particular Subject, Conclusion 10, reprinted in 66 *Annuaire I.D.I.* 435, 441 (1996-II).

⁵ See Chapter 7, paras 7.16 *et seq.*

⁶ See Chapter 8, paras 8.45 *et seq.*

⁷ See Chapter 9, paras 9.127 *et seq.*

⁸ *Ibid.*, para 9.17.

⁹ *Ibid.*

¹⁰ *Ibid.*, para 9.19.

Article 293 thereby directs the Annex VII Tribunal to apply all the relevant rules of international law in identifying the nature and extent of each State's obligations, and in determining whether a state's behaviour is in conformity with those obligations. The only limitation on that direction is that the Tribunal must be satisfied that the other rules of international law are "not incompatible" with UNCLOS.

B. THE APPLICATION OF THE RULES IN UNCLOS

6.8. UNCLOS came into force for Ireland on 21 July 1996 and for the United Kingdom on 24 August 1997. As between the parties to this dispute the Convention became binding as between them on 24 August 1997. By that date the United Kingdom had not justified or authorised the operation of the MOX plant, or any transports associated directly or indirectly with the operation of the MOX plant. The decision justifying the plant, which paved the way for the authorisation of its operation, was adopted on 3 October 2001. The plant was commissioned on or around 20 December 2001. It is therefore plain that:

- UNCLOS was in force on the date the decision to authorise was taken by the United Kingdom;
- the obligations under UNCLOS were applicable to the United Kingdom at the material times, including the various public consultations in respect of justification; and
- Ireland is entitled to invoke the provisions of UNCLOS against the United Kingdom in respect of the decision to authorise the operation of the MOX plant and other activities associated directly or indirectly with its operation.

6.9. Notwithstanding the applicability of UNCLOS to the MOX decision-making process, and the fact that Ireland expressly and in writing invoked UNCLOS in its dealings with the United Kingdom as early as 1999, none of the United Kingdom's decision documents in relation to the MOX plant (from the 1993 Environmental Statement to the October 2001 Decision) make reference to the requirements of UNCLOS. According to these documents no account appears to have been taken of the requirements of UNCLOS, directly or indirectly. The United Kingdom has confirmed as much in its answer to the 55 questions posed by Ireland following the ITLOS Order of 3 December 2001.¹¹

6.10. Indeed, as will be elaborated in subsequent chapters of this Memorial, there appears to be no indication that the United Kingdom ever took any account of the requirements of UNCLOS in deciding to authorise the operation of the MOX plant and associated international transports. This absence of consideration applies in relation to the duty to co-operate with Ireland, to carry out a proper environmental impact assessment, and to take appropriate measures to prevent pollution.

¹¹ See Question 44 and answer thereto, vol 3(1), Annex 7, p 81.

C. THE APPLICATION OF OTHER RULES OF INTERNATIONAL LAW NOT INCOMPATIBLE WITH THE CONVENTION

6.11. Other rules of international law not incompatible with the Convention are particularly relevant for assessing the lawfulness (under UNCLOS) of the decision to authorise the operation of the MOX plant and associated activities. These other activities include the extended operation of the THORP plant (and consequential increase in radioactive discharges into the Irish Sea) and the greater number of international transports of radioactive materials in and around the Irish Sea (with consequential increase in the risk of pollution arising as a result of accidents or terrorist activity). These other rules are pertinent for several reasons:

- **first**, they indicate how the concept of activities “likely to cause a significant adverse transboundary impact”, used in UNCLOS, is interpreted and understood in international practice; and
- **second**, because they indicate how the general UNCLOS provisions on environmental protection should be interpreted, notably by indicating the applicability of the precautionary principle and the concept of sustainable development to the authorisation of the MOX plant.

6.12. Other rules of international law which are to be applied or taken into account by the Annex VII Tribunal are to be found in (1) internationally agreed rules set forth in other international treaties, (2) rules of customary international law, and (3) internationally agreed standards and recommended practices and procedures, including those adopted by international organisations at the regional and global levels. The specific requirements of other rules of international law, and relevant standards and practices, are addressed in subsequent chapters, dealing with specific requirements relating to co-operation (Chapter 8), environmental impact assessment (Chapter 7) and pollution prevention (Chapter 9). For present purposes it is appropriate to briefly note the principal other rules and standards which are to be applied or to be taken into account, or which inform the content of UNCLOS rules and obligations.

(1) INTERNATIONAL TREATIES

6.13. A number of regional agreements establish detailed obligations for the protection of the Irish Sea from pollution, and in particular pollution from radioactive sources. These agreements inform, develop and define the content of the United Kingdom’s specific obligations under UNCLOS. Important examples include obligations imposed by the 1973 International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), the 1979 International Convention on Maritime Search and Rescue, and the 1992 Convention on the Protection of the Marine Environment of the North-East Atlantic (“1992 OSPAR Convention”).¹² Other examples referred to subsequently (in relation to the duty to co-operate) include the 1980 Convention on the Physical Protection of Nuclear Material,¹³ the 1994 Convention on Nuclear Safety¹⁴ and the 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.¹⁵

¹² See vol 3(1), Annex 74.

¹³ Chap 8, paras 8.212-221.

¹⁴ *Ibid*, paras 8.180-182.

¹⁵ *Ibid*, paras 8.183-186.

6.14. MARPOL 73/78 includes detailed regulations to prevent pollution from ships as set forth in various annexes.¹⁶ The Irish Sea is a MARPOL “special area”. The 1979 International Convention on Maritime Search and Rescue sets out detailed obligations in relation to the duty to co-operate, including the duty to inform, the duty to react to information, and the duty to consult.¹⁷

6.15. The 1992 OSPAR Convention¹⁸ replaced two other regional instruments (to which Ireland and the United Kingdom were also party) and which imposed substantial restrictions on discharges of radioactive substances into the Irish Sea, namely the 1972 Oslo Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft¹⁹ and the 1974 Paris Convention for the Prevention of Marine Pollution from Land-Based Sources (“the 1974 Paris Convention”).²⁰ The 1974 Paris Convention was one of the very first international conventions to mandate the principle of precautionary action²¹ and to require discharge authorisations relating to nuclear processing installations to be issued only if special consideration had been given to a “full environmental impact assessment”.²² These regional requirements were applicable to the United Kingdom even before the MOX plant was formally proposed or UNCLOS had come into force.

6.16. The preamble to the OSPAR Convention recalls the “relevant provisions of customary international law reflected in Part XII of the United Nations Convention on the Law of the Sea and, in particular Article 197 on global and regional co-operation for the protection and preservation of the marine environment”. OSPAR provisions, and actions taken in pursuance of them, indicate what is considered to be necessary in order to protect the environment, and what is practicable. The requirements of the OSPAR Convention therefore inform the content of many provisions of Part XII of UNCLOS, requiring the United Kingdom “to take all possible steps to prevent and eliminate pollution” and to “take the necessary measures to protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected” (Article 2(1)(a)).

6.17. To give effect to these and other objectives the OSPAR Convention requires the United Kingdom to apply the precautionary principle and take specific measures to prevent and eliminate pollution from land based-sources (Article 3 and Annex I) and from other sources. The OSPAR Convention also prohibits any dumping of radioactive wastes in the Irish Sea.²³ The OSPAR Commission, established under the Convention, has adopted a number of decisions and recommendations which provide a benchmark against which the Annex VII Tribunal can assess the United Kingdom’s compliance with its obligations under the UNCLOS, including in particular the requirement that the United Kingdom substantially reduce and eliminate discharges of radioactive substances into the Irish Sea.²⁴

¹⁶ 12 ILM 1291 (1973) and 17 ILM 246 (1978) as amended subsequently.

¹⁷ Chapter 8, paras 8.47 *et seq.*

¹⁸ See also Chapter 9, paras 9.43 *et seq.*

¹⁹ 15 February 1972, UKTS 119 (1975), Cmnd 6228.

²⁰ 4 June 1974, 13 ILM 352 (1974).

²¹ PARCOM Recommendation 89/1 (1989).

²² PARCOM Recommendation 93/5 (1993).

²³ Article 4 and Annex II: see Chapter 9, para 9.42. See also OSPAR Decision 98/2 on Dumping of Radioactive Waste.

²⁴ OSPAR Decision 2000/1 on Substantial Reductions and Elimination of Discharges, Emissions and Losses of Radioactive Substances, with Special Emphasis on Nuclear Reprocessing (vol 3(1), Annex 78);

6.18. In 1998 the Ministers of the OSPAR parties (including the United Kingdom) adopted the Sintra Ministerial Statement.²⁵ This sets out a detailed timetable for the elimination of discharges of radioactive substances into the marine environment of the Irish Sea, promotes an OSPAR Strategy with Regard to Radioactive Substances,²⁶ and establishes an OSPAR Action Plan for the Period 1998-2003.²⁷ These commitments inform the United Kingdom's obligations under Part XII of the UNCLOS, in relation to the duty to co-operate, to assess the environmental impacts of the MOX plant, and to prevent further radioactive pollution of the Irish Sea.

6.19. Mention may also be made of the 1991 UN Economic Commission for Europe Convention on Environmental Impact Assessment in a Transboundary Context, as well as relevant EU rules. These instruments, together with those mentioned above, and others identified elsewhere in the Memorial, are relevant not because the Tribunal is being asked to apply them *per se* (as Article 293 directs), but because they show how general obligations in UNCLOS are to be interpreted and applied. In the terms of the 1991 Espoo Convention the MOX plant is an installation which is "likely to cause a significant adverse transboundary impact" and which must therefore be subject to *inter alia* an environmental impact assessment before any decision is taken to authorise its operation.²⁸ European Community law also imposes specific obligations relating to various aspects of the MOX plant, including the requirement to carry out an environmental impact assessment on the MOX plant,²⁹ to "justify" the benefits of the MOX plant,³⁰ and to ensure that transboundary movements of radioactive wastes are subject to appropriate safeguards.³¹

6.20. At the global level, other relevant rules of international law are reflected in numerous international conventions (and other instruments) adopted under the auspices of the International Atomic Energy Agency (IAEA). The 1980 Convention on the Physical Protection of Nuclear Material obliges parties to ensure during international nuclear transport the protection of nuclear material within their territory or on board their ships or aircraft.³² The 1994 IAEA Convention on Nuclear Safety commits participating States operating land-based nuclear power plants to maintain a high level of safety, and establishes obligations requiring parties to apply international standards on siting, design, construction, operation, quality assurance and emergency preparedness.³³ The 1997 IAEA Joint Convention of the Safety of Spent Fuel Management and on the Safety of

OSPAR Decision 2001/1 on the Review of Authorisations for Discharges or Releases of Radioactive Substances from Nuclear Reprocessing Activities (vol 3(1), Annex 79).

²⁵ Vol 3(1), Annex 76; see also Chapter 9, paras 9.48-49.

²⁶ Vol 3(1), Annex 75; see Chapter 9, para 9.50.

²⁷ Annex 77.

²⁸ 25 February 1991, in force 10 September 1997, 30 *ILM* 802 (1991). Annex I includes amongst the activities which must be subject to a prior environmental impact assessment all "installations solely designed for the production or enrichment of nuclear fuels, for the reprocessing of irradiated nuclear fuels or for the storage, disposal and processing of radioactive waste". The United Kingdom ratified on 10 October 1997; Ireland signed on 27 February 1991. See generally Chapter 7, paras 7.22-23.

²⁹ Directive 85/337/EEC, (O.J. No. L175, 5.7.1985) as amended by Directive 97/11/EC (O.J. No. L 73, 14.3.1997); see Chapter 7, paras 7.20-21.

³⁰ Directive 96/269/EURATOM; see Chapter 2, paras 2.89 *et seq.*, and Chapter 4, paras 4.10 *et seq.*

³¹ Directive 92/3/EURATOM; see Chapter 4, para 4.97.

³² 18 *ILM* 1419 (1979), in force on 8 February 1987; United Kingdom and Ireland ratified on 6 September 1991.

³³ 33 *ILM* 1514 (1994), in force 24 October 1996; Ireland ratified on 11 July 1996, United Kingdom ratified on 17 January 1996.

Radioactive Waste Management imposes specific safety requirements in respect of various activities at Sellafield.³⁴ These requirements, and the other relevant rules of international law identified in particular in Chapters 7, 8 and 9 of this Memorial, are relevant also because they show how the UNCLOS obligations are to be interpreted and applied. Finally, a number of other international conventions establishing rules of international law are relevant to the issues of co-operation, environmental impact assessment and pollution prevention. These too are entirely compatible with the requirements of UNCLOS.³⁵

(2) CUSTOMARY INTERNATIONAL LAW

6.21. The International Tribunal for the Law of the Sea has confirmed that the other relevant rules of international law to be applied by the Annex VII Tribunal include rules of customary (or general) international law.³⁶ Beyond the role indicated above for the treaties and rules invoked by Ireland in this Memorial, these treaties and rules are also indications of a general practice accepted as law. Of particular relevance here are the ILC's Articles on Prevention of Transboundary Harm from Hazardous Activities, adopted in 2001,³⁷ and norms reflected in the jurisprudence of international courts and tribunals.³⁸ In the dispute between Ireland and the United Kingdom two norms of general international law are especially pertinent, namely (1) the obligation to apply the precautionary principle and (2) the obligation, pursuant to the concept of sustainable development, to ensure that current norms and standards of environmental protection are to be applied to the authorisation of the MOX plant.

*Precautionary Principle*³⁹

6.22. In this case the application of the precautionary principle means that

“preventive measures are to be taken when there are reasonable grounds for concern that substances or energy introduced, directly or indirectly, into the marine environment may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects”.

6.23. This language, which is to be found in Article 2(2)(a) of the 1992 OSPAR Convention, reflects a rule of general international law amongst European States which are

³⁴ 36 *ILM* 1431 (1997), in force 18 June 2001; Ireland ratified on 20 March 2001, United Kingdom ratified on 12 March 2001.

³⁵ These are referred to where relevant in Chapters 7, 8 and 9.

³⁶ See e.g. International Tribunal for the Law of the Sea, *The M/V “Saiga” (No.2)*, Judgment of 1 July 1999, at para 120 (“there is nothing to prevent [the Tribunal] from considering the question whether or not, in applying its laws to the *Saiga* in the present case, Guinea was acting in conformity with its obligations towards Saint Vincent and the Grenadines under the Convention and general international law”), emphasis added. Whilst recognising the right of a state to invoke “other rules of international law”, the International Tribunal rejected the claims by Guinea that its activities were justified by reference to “other rules of international law” (as provided by Article 58(3) of the 1982 Convention), namely the principle of “self-protection” and the “state of necessity”.

³⁷ Vol 3(1), Annex 73.

³⁸ E.g., the arbitral award in the *Lac Lanoux case* (1957), vol 3(1), Annex 80.

³⁹ See also Chapter 9, paras 9.79-9.86.

parties to the OSPAR Convention or members of the European Community. The approach has been endorsed by Ireland and the United Kingdom.

6.24. The commitment to apply the precautionary principle to the Irish Sea dates back as far as 1989,⁴⁰ and has been accepted by both States in numerous international conventions to which they are parties as well as the 1992 Rio Declaration on Environment and Development.⁴¹ Also in 1992 Ireland and the United Kingdom joined over 170 other states in expressly undertaking to

“Not promote or allow the storage or disposal of high-level, intermediate-level and low-level radioactive wastes near the marine environment unless they determine that scientific evidence, consistent with the applicable internationally agreed principles and guidelines, shows that such storage or disposal poses no unacceptable risk to people and the marine environment or does not interfere with other legitimate uses of the sea, making, in the process of consideration, appropriate use of the concept of the precautionary approach.”⁴²

6.25. The precautionary principle has been recognised as being inherent in the approach adopted by UNCLOS.⁴³ It is reflected in relevant regional treaties.⁴⁴ In proceedings before the WTO Appellate Body (in 1998) the European Community (on behalf of all its Members) has described the principle as being “a general customary rule of international law or at least a general principle of law”, which applies both to the assessment and management of a risk.⁴⁵ Also in 1998 the United Kingdom and Ireland and other parties to the OSPAR Convention adopted a strategy on radioactive substances for the period 1998-2003 which expressly committed to the application of the precautionary principle in reducing concentration of artificial radioactive substances in the Irish Sea to “close to zero” by 2020.⁴⁶

6.26. During the course of the provisional measures phase of proceedings before the International Tribunal for the Law of the Sea the United Kingdom did not challenge Ireland’s characterisation of the precautionary principle as having the status of customary international law. In prescribing its measure the International Tribunal applied “prudence and caution”.⁴⁷ The precautionary principle requires the Tribunal to interpret and apply the

⁴⁰ See PARCOM Recommendation 89/3, supra. note 20.

⁴¹ 31 *ILM* 874 (1992) (“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. 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”).

⁴² Annex 82, Agenda 21, paragraph 22.5(2), 14 June 1992, A/CONF.151/26/Rev.1. See also Agenda 21, Chapter 17, para 17.5(d) (“Coastal states commit themselves to ... [a]pply preventive and precautionary approaches in project planning and implementation, including prior assessment and systematic observation of the impacts of major projects”), para 17.22. See also para 111(a) of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (1995), Annex 83.

⁴³ See ITLOS, Separate Opinion of Judge Laing, *Southern Bluefin Tuna Cases*, Order of 27 August 1999, para 16. See also Chapter 9, para 9.64 (“pollution” is to be interpreted and applied in the light of the precautionary principle).

⁴⁴ See e.g. 1992 UN Economic Commission for Europe Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Art. 2(5)(a), 31 *ILM* 1312 (1992).

⁴⁵ See Report of the Appellate Body, 16 January 1998, WT/DS48/AB/R, at para 16.

⁴⁶ Vol 3(1), Annex 75.

⁴⁷ ITLOS Order of 3 December 2001, para 84, vol 3(1), Annex 3.

relevant provisions of UNCLOS in a precautionary manner. The specific application of the principle is described in more detail in Chapter 9.⁴⁸

*Sustainable Development and the Obligation to Apply Current Norms
and Standards of Environmental Protection*

6.27. Together with the precautionary principle, Ireland and the United Kingdom have also committed to apply the principle of sustainable development in their activities relating to the marine environment. Agenda 21, adopted at the 1992 United Nations Convention on Environment and Development (UNCED), expressly identifies UNCLOS as being part of the commitment to achieve sustainable development, and commits states to “integrate protection of the marine environment into relevant general environmental, social and economic development policies”.⁴⁹

6.28. Sustainable development requires that economic and environmental objectives be treated in an integrated manner: as declared by Principle 4 of the Rio Declaration on Environment and Development, to which both parties have subscribed:

“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.”⁵⁰

6.29. The obligation to treat environment and development in an integrated manner is now reflected in international law. As one leading treatise has put it:

“if states do not carry out EIAs....or integrate developmental and environmental considerations in their decision-making [...] they will have failed to implement the main elements employed by the Rio Declaration and other international instruments for the purpose of facilitating sustainable development. There is ... ample state practice to support the normative significance of most of these elements.”⁵¹

6.30. The obligation to integrate environment and development comprises a number of different elements, but central to the concept is the requirement that when States take decisions on proposed activities they must take into account all the environmental consequences of that decision.

6.31. Related to the requirement to apply the concept of sustainable development is the obligation of States to apply current standards of environmental protection, not older standards. In circumstances where the impact upon, and implications for, the environment are of necessity a key issue, as in the case of highly dangerous activities such as the operation of the MOX plant and associated activities, the principle has been put in this way by the International Court of Justice:

⁴⁸ Chapter 9, para 9.79-84.

⁴⁹ Agenda 21, Chapter 17, para 17.22(c), vol 3(2), Annex 82. See also paragraph 4 and 9 of the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (1995) (“The duty to protect the marine environment from land-based activities was placed squarely in the context of sustainable development by the United Nations Conference on Environment and Development in 1992”). vol 3(2), Annex 83.

⁵⁰ Supra. note 38.

⁵¹ See P. Birnie and A. Boyle, *International Law and the Environment*, (2nd ed., 2002), at p 96.

“The Court is mindful that, in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage. 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.”⁵² (emphasis added)

6.32. As described in more detail in subsequent chapters, what this means for the present case is that the United Kingdom is under an obligation, in taking any decision in 2001 relating to the operation of the MOX plant and related activities, to apply the environmental standards which are applicable in 2001. It will not be appropriate or lawful to apply environmental standards which may have been applicable in 1993 or in 1996 or in 1998 but which take no account of subsequent developments in the law or in the state of scientific knowledge or in the requirements of environmental protection. But as shown in this Memorial,⁵³ that is precisely what the United Kingdom has done.

6.33. The requirement to apply current standards applies equally to substantive norms (governing, for example, discharge levels) and to procedural norms (imposing requirements, for example, on co-operation and information exchange, and in respect of environmental impact assessment). For the Annex VII Tribunal the approach adopted by the International Court of Justice indicates that the standards to be applied in assessing the United Kingdom’s compliance with its obligations under the 1982 Convention and other rules of international law are those which were applicable as at 3 October 2001.

6.34. The United Kingdom Environment Agency has explicitly recognised the consequences of its inability to consider the entirety of the economic costs of the MOX plant, in the context of its proposed Decision on the Justification for the Commissioning and Operation of the MOX plant. In October 1998 it stated:

“It is unsatisfactory that the Agency has no powers under the RSA 93 to require an application to be submitted for a new plant prior to its construction. The time at which an application is received is crucial to the Agency’s involvement in the regulation of new plant. The Agency is dissatisfied that it was unable to consider the full economic case for the MOX plant.”⁵⁴

This refers to the fact that the Agency did not take into consideration any of the costs of construction of the plant, which had already been incurred by the time it was required to take its decision. This constitutes a clear example of a failure by the United Kingdom to

⁵² *Case Concerning the Gabčíkovo-Nagymaros Project*, 1997 ICJ Reps, p 7, para 140.

⁵³ See e.g. chapter 7, para 7.81, and chapter 9, at paras 9.128-141.

⁵⁴ Vol 3(2), Annex 95, at Executive Summary, and Introduction para 17 (Proposed Decision on the Justification of the MOX Plant).

apply standards to “activities begun in the past” – although here it is standards which were in force at the time the activity in question (construction of the MOX plant) began.

(3) INTERNATIONALLY AGREED STANDARDS
AND RECOMMENDED PRACTICES AND PROCEDURES

6.35. As identified above, a number of provisions of UNCLOS require States to take into account internationally agreed standards and recommended practices and procedures.⁵⁵ Such standards, practices and procedures are now set forth in many international instruments to which the United Kingdom has expressed its support and commitment. For the purposes of this case the relevant international instruments include:

- IMO Codes, such as the International Code for the Safe carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High Level Radioactive Waste on Board Ships;⁵⁶
- IAEA guidelines;⁵⁷
- the UNEP Guidelines on Environmental Impact Assessment (1987);⁵⁸
- Agenda 21 (1992);⁵⁹
- the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (1995);⁶⁰
- the OSPAR Strategy with Regard to Radioactive Substances (1998);⁶¹ and
- the Bergen Ministerial Declaration (2002).⁶²

⁵⁵ *Supra.* para 6.6.

⁵⁶ See Chapter 8, paras 8.231 *et seq.*, and 8.233.

⁵⁷ See Chapter 8, paras 8.222 *et seq.*

⁵⁸ Vol 3(2), Annex 81.

⁵⁹ *Ibid.*, Annex 82.

⁶⁰ *Ibid.*, Annex 83.

⁶¹ Vol 3(1), Annex 77.

⁶² Vol 3(2), Annex 86.

SUMMARY AND CONCLUSIONS

6.36. Article 293(1) of UNCLOS directs the Annex VII Tribunal to apply UNCLOS and other rules of international law not incompatible with the Convention. This means that the general UNCLOS provisions are to be applied and interpreted in the light of the wider body of international law, and that the Tribunal is to apply other international rules, standards and practices. UNCLOS therefore assumes an integrating function. It brings together conventional and customary norms, and regional and global norms. It directs the Annex VII Tribunal to apply all the relevant rules of international law in identifying the nature and extent of each State's obligations, and in determining whether a state's behaviour is in conformity with those obligations. The only limitation on that direction is that the Tribunal must be satisfied that the other rules of international law are "not incompatible" with UNCLOS.

CHAPTER 7

ENVIRONMENTAL IMPACT ASSESSMENT

INTRODUCTION

7.1. Ireland has long been concerned to ensure that all the environmental consequences for the marine environment of the Irish Sea flowing from the operation of the MOX plant should be fully identified and properly assessed prior to the operation of the plant. The need to assess the environmental impact of the MOX plant requires assessment of the environmental consequences of all activities that would not have occurred but for the operation of the MOX plant. The requirement to assess therefore encompasses:

- the consequences of the MOX plant;
- the extension of the life of the THORP plant which will arise as a result of the operation of the MOX plant, and the consequences thereof;
- the storage of additional wastes produced as a result of the operation of the MOX plant and additional activities at the THORP plant; and
- the risks posed by international transports, related to the MOX plant, of nuclear materials to and from the Sellafield site.

7.2. The identification and assessment of environmental risks is required to be the subject of an environmental impact assessment procedure, including the preparation of a written environmental statement. The objectives of a proper environmental assessment are, *inter alia*, to ensure that the activities comply with applicable international environmental obligations, to ensure that appropriate protective and response measures may be taken, to ensure that alternative proposals have been fully considered, and to ensure that interested parties and concerned States are fully informed of the environmental implications of the project.

7.3. The only environmental assessment which has ever been carried out in respect of the MOX plant was prepared in 1993 by BNFL (the 1993 MOX Environmental Statement.¹ Ireland first communicated to the United Kingdom its concerns about the quality of the 1993 Environmental Statement in 1994.² Ireland considered that the 1993 Environmental Statement did not meet the standards which applied when the assessment was prepared. Ireland was further concerned by the failure of the United Kingdom to re-assess the direct and indirect effects of the MOX plant by reference to the new environmental standards which came into effect after 1993. It communicated to the United Kingdom its concerns in this regard in 1997, in 1998, in 1999 and again in 2000.

7.4. In summary, Ireland's case is that, in October 2001, the United Kingdom adopted a Decision justifying the operation of the MOX plant by reference to an inadequate environmental assessment, obtained in 1993 and never updated. Ireland considers the

¹ Vol 3(3), Annex 103.

² Vol 3(1), Annex 8.

failure properly to assess the environmental consequences of the MOX plant to be a violation of Article 206 of UNCLOS. Specifically, the United Kingdom has failed properly to assess the actual and potential environmental effects of the MOX plant by *inter alia*:

- Failing to identify and assess the effects of the additional discharges into the Irish Sea arising from the additional operation of the THORP plant;
- Failing to assess the state of the Irish Sea and determine the cumulative effects of the discharges from the MOX plant and the consequential additional discharges from the THORP plant on the Irish Sea;
- Failing to assess the effects of international transports through the Irish Sea of nuclear materials associated with the MOX plant;
- Failing to assess the possible environmental effects of accident or terrorist attack on the MOX plant or on international transports associated with the MOX plant;
- Failing to set out any scoping or justification for why the range of impacts studied was selected;
- Failing to provide any real consideration of alternatives;
- Failing to use adequate baseline data, or to justify choices made in dealing with data;
- Failing to consider *any* effects of the MOX plant, other than direct effects;
- Failing to consider adequately the environmental effects of decommissioning the MOX plant.

The consequence of these multiple failures is that the United Kingdom has failed properly to assess the potential impacts of the MOX plant on the Irish Sea, as required by Article 206 of the Convention. The failure to carry out a proper environmental impact assessment is at the heart of this dispute: by not properly informing itself as to all the environmental consequences of the authorisation of the MOX plant the United Kingdom has disabled itself from fulfilling its duties to co-operate and to prevent pollution. In this way the violations of Article 206 are related to further violations of UNCLOS, including an inability to co-operate with Ireland (as required by Article 123 and 197 of UNCLOS) and a failure to “take all necessary measures to ensure that activities under [its] jurisdiction or control are so conducted as not to cause damage by pollution” to Ireland, as required by Article 194 and subsequent provisions of UNCLOS.

A. THE RATIONALE FOR ENVIRONMENTAL ASSESSMENT

7.5. This part of the Memorial is concerned with the obligation to carry out a proper assessment of the environmental impact of the MOX plant. The essence of Ireland’s argument is that the United Kingdom was bound to identify all possible environmental consequences for the Irish Sea arising from the authorisation of the MOX plant, including indirect environmental consequences which would not occur but for the authorization of the MOX plant, and to assess those consequences by reference to its environmental obligations at the date of authorisation (October 2001). Ireland considers that the United Kingdom has violated its obligation because:

- a. For reasons outlined above and developed further below and in the Report of William Sheate,³ the 1993 MOX Environmental Statement was not in accordance with the legal standards applicable when it was made.
- b. Further, the United Kingdom has failed to update or otherwise revisit the MOX Environmental Statement in accordance with the law applying at the time of authorisation of the MOX plant, i.e. in 2001.

B. THE LAW

THE SOURCE OF THE LEGAL OBLIGATIONS

7.6. Article 206 of UNCLOS imposes upon the United Kingdom an obligation to assess all the potential effects of the MOX plant on the marine environment of the Irish Sea. The interpretation of Article 206 is governed by the normal rules of treaty interpretation, as reflected in Article 31 of the 1969 Vienna Convention on the Law of Treaties, and in particular its Article 31(1) (“A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.”) As described in Chapter 6,⁴ the context includes the United Kingdom’s obligations under other international agreements and instruments, notably the 1985 EC Directive 85/337 on Environmental Impact Assessment (as amended), the 1991 UNECE Convention on Environmental Impact Assessment in a Transboundary Context, the 1987 UNEP Goals and Principles of Environmental Impact Assessment, the 1995 Global Programme of Action, and Chapter 17 of Agenda 21. These instruments are relevant as a guide to the interpretation of the duties imposed by Article 206 of UNCLOS and as instances of the “other rules of international law not incompatible with this Convention,” which the present Tribunal is directed to apply to the case before it by Article 293(1) of UNCLOS.

THE DUTIES UNDER UNCLOS

7.7. The United Kingdom’s obligation to assess the effects of the MOX plant and related activities arises from Article 206 of UNCLOS. It reads as follows:

“Article 206: Assessment of potential effects of activities

When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.”

7.8. The essential obligation under Article 206 is the making of the assessment of the risk to the environment. As the Virginia Commentary puts it:

³ Vol 2, Appendix 6.

⁴ See paras 6.2-6.7.

“Article 206 ... is concerned with the assessment of planned activities *before* they are begun. It is similar to the requirements of some national environmental legislation, for example, the United States National Environmental Policy Act (NEPA) of 1969, to prepare environmental impact statements in respect of actions likely to affect the quality of the environment in a significant way.

In essence, Article 206 provides for the collection and dissemination of information related to the potential polluting effects of planned activities under a State’s jurisdiction or control before those activities occur. Its purpose is to ensure that such activities may be effectively controlled, and to keep other States informed of the potential risks and effects of such activities. As such, it is an essential part of a comprehensive environmental management system, and is a particular application of the obligation on States, enunciated in article 194, paragraph 2, to “take all necessary measures to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment”.⁵ (emphasis added)

The obligation to carry out an environmental impact assessment, as contained in Article 206, reflects a rule of general international law.⁶

7.9. This is confirmed by Article 7 of the ILC Draft Articles on Prevention of Transboundary Harm From Hazardous Activities (2001), which states:

“Any decision in respect of the authorization of an activity within the scope of the present Articles shall, in particular, be based on an assessment of the possible transboundary harm caused by that activity, including any environmental impact assessment”⁷

7.10. An Environmental Assessment has two purposes: to minimize environmental risks, and to ensure that neighbouring states are duly informed of any activities entailing risk in order that their views might be made known and their interests taken into account. Environmental assessment is therefore also a central pillar of the duty to co-operate.⁸ Article 206 clearly requires the environmental assessment to be prepared in written form.⁹ Article 206 establishes a mandatory requirement (“States ... shall ... assess the potential effects”) subject to two conditions.

7.11. First, there must be “reasonable grounds for believing that [the MOX plant] may cause substantial pollution of or significant and harmful changes to the marine environment”. This is an objective test. As described below, other international instruments have determined that the preparation of an environmental assessment of the MOX plant is mandatory because it is deemed as a matter of international law to have potential adverse effects. The first condition is plainly fulfilled, and the United Kingdom cannot possibly claim that there are no reasonable grounds for believing that the MOX plant has no potential to cause substantial pollution of or significant and harmful changes to the marine environment.

⁵ *Virginia Commentary* (1993), Part. IV, p 122.

⁶ See Separate Opinion of Judge Weeramantry, Case concerning the Gabčíkovo-Nagymaros project, 1997 ICJ Reports, p 7 at p 111.

⁷ Vol 3(1), Annex 73.

⁸ See Chapter 8, paras 8.110 *et seq.*

⁹ In accordance with the requirements of Art. 205 UNCLOS. This requirement is also common to the instruments establishing more detailed requirements: see *infra* para 7.25.

7.12. Second, Article 206 states that any assessment is to be carried out “as far as practicable”. It might be argued by the United Kingdom that these words could, conceivably, impose a degree of discretion on the state required to carry out the assessment. However, what is “practicable” is essentially a question of fact, which is influenced by the obligations imposed upon the United Kingdom under “other rules of international law”. For the MOX plant the specific conditions governing the preparation of the environmental assessment are determined by reference to the specific requirements of European Community law (Directive 85/337), the 1987 UNEP Guidelines and the 1991 Espoo Convention. These instruments commonly define with considerable precision the nature of the assessment that is to be carried out. They apply legal requirements. It is not open to the United Kingdom to claim that that which is required as a matter of law is not practicable.

7.13. In these circumstances, Article 206 requires the United Kingdom to assess the potential environmental effects of the MOX plant. The “practicability” of any assessment is informed by the requirements of UNCLOS and other rules of international law which are not incompatible with UNCLOS: see Article 293 UNCLOS.¹⁰ The obligation of the United Kingdom to carry out an environmental assessment is confirmed by other international instruments which it has endorsed.

7.14. Chapter 17 of Agenda 21 repeatedly commits the United Kingdom to assess projects which may have an impact on the marine environment, and generally requires the United Kingdom to carry out “prior environmental impact assessment, systematic observation and follow-up, of major projects, including the systematic incorporation of results in decision-making”.¹¹ Agenda 21 makes it clear that the prior assessment of activities that may have significant adverse impacts upon the marine environment is required in order to prevent, reduce and control degradation of the marine environment, and is central to the application of a “precautionary and anticipatory rather than a reactive approach”.¹²

7.15. Similar requirements are imposed by the 1995 Global Programme of Action,¹³ which additionally requires States to prepare “comprehensive environmental assessments of the effect on the marine and coastal environment of historical discharges and current discharges of radioactive substances”.¹⁴

OTHER INTERNATIONAL INSTRUMENTS

7.16. The obligation under UNCLOS to carry out an environmental assessment of the MOX plant is general in nature. Greater precision can be given to its requirements by looking to other international instruments. These instruments are relevant because they give an indication of what measures are “practicable” within the meaning of Article 206.

¹⁰ See Chapter 6.

¹¹ Agenda 21, Chapter 17, para 17.6(d); vol 3(2), Annex 82.

¹² *Ibid*, paras 17.21 and 17.22(b).

¹³ Vol 3(2), Annex 83, at para 9(a): “States agreed it is necessary [...] b) To ensure prior assessment of activities that may have significant adverse impacts upon the marine environment”; also para 110(c): “Ensuring proper planning, including environmental impact assessment, of safe and environmentally sound management of radioactive waste, including emergency procedures, storage, transportation and disposal, prior to and after activities that generate such waste”.

¹⁴ *Ibid*, para 112(c).

The following section identifies the relevant instruments in general terms, and then describes the common requirements they impose. These define, in concrete terms, the requirements of Article 206.

(a) Overview of Relevant Instruments (in Chronological Order)

1987 UNEP Goals and Principles

7.17. The 1987 UNEP Goals and Principles of Environmental Impact Assessment were adopted by UNEP Governing Council Resolution 14/25 on 17 June 1987.¹⁵ Governing Council Resolution 14/25 notes that the Governing Council was

“Mindful that the environmental impacts of development activities, which may on occasion reach beyond national boundaries, can significantly affect the sustainability of such activities,

Convinced that the integration of environmental and natural resources issues into planning and programme implementation is indispensable in a process of sustainable development,

Considering that environmental impact assessment is a valuable means of promoting the integration of environmental and natural resources issues into planning and programme implementation and thereby helps to avoid potential adverse impacts”.

7.18. The object of the Goals and Principles is to ensure that “before decisions are taken ... to undertake or to authorise activities that are likely to significantly affect the environment, the environmental effects of those activities should be taken into account”.¹⁶ The Goals also emphasise the duty to co-operate, with the object of encouraging “information exchange, notification and consultation between States when proposed activities are likely to have significant transboundary effects on the environment of those States”.¹⁷ Principle 1 then provides that

“Where the extent, nature or location of a proposed activity is such that it is likely to significantly affect the environment, a comprehensive environmental impact assessment should be undertaken in accordance with the following principles”.

7.19. The Principles then set out the detailed requirements which an environmental impact assessment should, at a minimum, include (Principle 4), requiring that the environmental effects in an EIA “should be assessed with a degree of detail commensurate with their likely environmental significance” (Principle 5). The Principles also call for the conclusion of appropriate arrangements to provide for notification, exchange of information and consultation on the potential environmental effects of activities which are likely to significantly affect other States (Principles 11 and 12). It is apparent that environmental assessment is a central part of the duty to co-operate: if an environmental assessment is carried out inadequately the entire basis for co-operation is put in jeopardy. Moreover, without a proper assessment it becomes difficult, if not impossible, for neighbouring states to prepare adequately for any emergencies which may occur.

¹⁵ Vol 3(2), Annex 81.

¹⁶ *Ibid*, Goals, para 1.

¹⁷ *Ibid*, Goals, para 2.

Directive 85/337/EEC

7.20. Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment was adopted unanimously by the (then) ten EEC member states, and required them to take “the measures necessary to comply with [the] Directive by 3 July 1988”.¹⁸ The Directive requires the environmental assessment “of public and private projects which are likely to have significant effects on the environment”.¹⁹ It indicates the United Kingdom’s view as to what is “practicable”.

7.21. Article 2(1) of the Directive provides that:

“member states shall 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 an assessment with regard to their effects.”

Article 4 divides projects subject to assessment into two classes: certain projects which are presumed to have “significant effects on the environment” and for which assessments are mandatory (Annex I projects), and other projects for which assessment is not presumed to be necessary but will be required if the project is likely to have “significant effects on the environment” (Annex II projects). The Annex I list includes nuclear power stations and radioactive waste disposal and storage installations. The minimum requirements of the assessment are defined in Articles 5 to 10 of the Directive, and addressed in further detail below. Directive 85/337/EEC was amended by Directive 97/11/EC, requiring Member States to take measures necessary to comply with the Directive by 14 March 1999. Directive 97/11 introduced amendments to *inter alia* the information to be provided and the range of projects subject to mandatory environmental assessment.²⁰ Directive 97/11 does not apply to projects in respect of which a request for development consent has been submitted to a competent authority before 14 March 1999.²¹

1991 Espoo Convention

7.22. The 1991 Espoo Convention was adopted under the auspices of the UN Economic Commission for Europe.²² It commits parties to take all appropriate and effective measures to prevent, reduce and control significant adverse transboundary environmental impact

¹⁸ O.J. No. L 175, 5. 7.1985, p 40.

¹⁹ Art. 1(1) and (4).

²⁰ Annex I is amended to include:

“3. (a) Installations for the reprocessing of irradiated nuclear fuel.

(b) Installations designed:

- for the production or enrichment of nuclear fuel,
- for the processing of irradiated nuclear fuel or high-level radioactive waste,
- for the final disposal of irradiated nuclear fuel,
- solely for the final disposal of radioactive waste,
- solely for the storage (planned for more than 10 years) of irradiated nuclear fuels or radioactive waste in a different site than the production site.”

²¹ Directive 97/11/EC, Art. 3(2).

²² 30 *ILM* 802 (1991). The Convention entered into force on 10 September 1997. The United Kingdom and the European Communities are parties, Ireland is a signatory.

from proposed activities;²³ requires that parties of origin notify affected parties of certain proposed activities which are likely to cause a significant adverse transboundary impact and requires discussions between concerned parties.²⁴ Article 1(vii) of the Convention defines “impact” broadly to include

“any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors.”

Article 1(viii) defines “transboundary impact” as

“any impact, not exclusively of a global nature, within an area under the jurisdiction of a party caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another party”.

7.23. The party of origin is required to ensure that, in accordance with the provisions of the Convention, an environmental impact assessment is undertaken “prior to a decision to authorise or undertake a proposed activity listed in Appendix I that is likely to cause a significant adverse transboundary impact.”²⁵ Appendix I includes installations solely designed for the production or enrichment of nuclear fuels, for the reprocessing of irradiated nuclear fuels or for the storage, disposal and processing of radioactive waste, and plainly includes the MOX plant. The Convention requires transboundary co-operation amongst parties. The documentation to be submitted to the competent authority of the party of origin must contain the information required in Appendix 2.

(b) Environmental Impact Statement: Common Requirements

7.24. The 1987 UNEP Principles, the 1985 EEC Directive and the 1991 Espoo Convention each contain provisions requiring the United Kingdom to ensure the preparation of a report containing an environmental impact statement (Environmental Report).²⁶ They indicate (a) the benchmarks for determining what is “practicable”, and (b) what the United Kingdom is bound to cause to be prepared. For the purposes of Article 206 UNCLOS the benchmark requirement of the practicability of preparing a proper environmental report is central to this case. The Environmental Report, which is usually prepared by the developer, will be made publicly available for comment from members of the public and potentially affected states, and will serve as the basis upon which the national authorities will decide whether or not to authorise the project. As set out above, it will also serve as a basis for giving effect to the obligations inherent in co-operation.²⁷

7.25. The 1987 UNEP Principles, the 1985 EEC Directive and the 1991 Espoo Convention indicate the minimum information in an environment impact statement or

²³ Indicating what is “practicable” in terms of the substantive requirements to take “all measures necessary” to reduce pollution: see Chapter 9.

²⁴ Art 2(1), (4) and (5).

²⁵ Art. 2(3).

²⁶ Although each instrument uses a different terminology.

²⁷ See *supra*. para 7.10; see also Chapter 8, paras 8.110 *et seq.*

report. The requirements of these three instruments are more or less identical. They require the Environmental Report to include:

- A description of the proposed activity;²⁸
- A description of the potentially affected environment;²⁹
- A description of practical and reasonable alternatives, including the no action alternative;³⁰
- An assessment of the likely or potential environmental impacts of the proposed activity and alternatives, including the direct, indirect, cumulative, short-term and long-term effects;³¹
- An identification and description of measures available to prevent, mitigate or minimise or offset adverse environmental impacts of the proposed activity and alternatives, and an assessment of those measures;³²
- An indication of gaps in knowledge and uncertainties which may be encountered in compiling the required information;³³
- An indication of predictive methods and underlying assumptions as well as the relevant environmental data used;³⁴
- An outline for monitoring and management programmes and any plans for post-project analysis;³⁵
- An indication of whether the environment of any other State is likely to be affected by the proposed activity or alternatives;³⁶ and
- A non-technical summary of the information provided.³⁷

7.26. These requirements are common to the three international instruments and reflect a general requirement under international law. They reflect what is “practicable” for the purposes of Article 206 of UNCLOS, and thereby establish the minimum requirements against which the United Kingdom’s compliance with Article 206 falls to be determined. The environmental statement is viewed in the context of UNCLOS as an “essential part of

²⁸ 1987 UNEP Principles, Principle 4(a); 1985 EC EIA Directive, Annex III, para 1; 1991 Espoo Convention, Appendix II, para (a).

²⁹ 1987 UNEP Principles, Principle 4(b); 1985 EC EIA Directive, Annex III, para 3; 1991 Espoo Convention, Appendix II, para (c).

³⁰ 1987 UNEP Principles, Principle 4(c); 1985 EC EIA Directive, Annex III, para 2; 1991 Espoo Convention, Appendix II, para (b).

³¹ 1987 UNEP Principles, Principle 4(d); 1985 EC EIA Directive, Annex III, para 4; 1991 Espoo Convention, Appendix II, para (d).

³² 1987 UNEP Principles, Principle 4(e); 1985 EC EIA Directive, Annex III, para 5; 1991 Espoo Convention, Appendix II, para (e).

³³ 1987 UNEP Principles, Principle 4(f); 1985 EC EIA Directive, Annex III, para 7; 1991 Espoo Convention, Appendix II, para (g).

³⁴ 1991 Espoo Convention, Appendix II, para (f).

³⁵ 1991 Espoo Convention, Appendix II, para (h).

³⁶ 1987 UNEP Principles, Principle 4(g); 1985 EC EIA Directive, Article 7; the requirement is implicit in the requirements of the 1991 Espoo Convention, which is limited to projects with potential transboundary consequences.

³⁷ 1987 UNEP Principles, Principle 4(h); 1985 EC EIA Directive, Annex III, para 6; 1991 Espoo Convention, Appendix II, para (i).

a comprehensive environmental management system”.³⁸ An environmental statement which fails to meet the standards required by Article 206 implies also a failure on the part of the State concerned to “take all necessary measures to ensure that activities under [its] jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment”, as required by Article 194(2) of UNCLOS. The Virginia Commentary underscores the central requirement of environmental assessment, and the environmental statement.³⁹

(c) Environmental Impact Assessment: The Need to Update

7.27. The three instruments defining the precise requirements of the content of an Environmental Report are silent about what is to happen when a project is initiated and an environmental assessment carried out, only for there to be a significant delay (for example 5 or more years) between the preparation of the environmental statement and final approval by the relevant national authorities. An environmental assessment, including any statement or report, is necessarily limited to a particular time and place, and is not a license to develop the same plant in another place or at another time. But this is how the 1993 MOX Environmental Statement is treated by the United Kingdom authorities. As described below, the Environmental Statement for the MOX plant was prepared in 1993, approved by the local municipality in 1994, and only approved by the national authorities in the process of reaching the decision to authorise the operation of the MOX plant in October 2001 (i.e. some eight years after the 1993 MOX Environment Statement was prepared).

7.28. This issue has not been considered by the courts and tribunals authorised to review compliance with the Directive 85/337/EEC and the 1991 Espoo Convention. However, reference was made to the issue in one case before the European Court of Justice, which concerned the situation in which a project was initiated but not completed prior to the date for implementing Directive 85/337/EEC (1988), and then came up for a fresh consent from the national authorities after 1988. Although the point did not eventually have to be decided by the Court, Advocate-General Mischo expressed his “fear that the absence of any provision regarding the period of validity of consents will be the source of many difficulties”, stressing that

“we are dealing with the environment, a field in which certainties become obsolete particularly rapidly. Who cannot call to mind some grandiose project drawn up ten years ago, or even more recently, in the name of economic development (sacrosanct) or simply of progress, unopposed at the time but not implemented for lack of funds, and which no-one would dare to recommend today because of the foreseeable impact on the environment?”⁴⁰

7.29. If the matter has not come before the European courts, it has been addressed by the International Court of Justice in relation to general international law. In the *Case Concerning the Gabčíkovo-Nagymaros Project* the International Court was presented with a situation in which it was called upon, in 1997, to direct the parties to the appropriate standards of environmental protection to be applied in the future in respect of a project which had been agreed and initiated in 1977. Recognising that the Project’s impact upon,

³⁸ Virginia Commentary, para 7.8 above.

³⁹ *Ibid.*

⁴⁰ Case C-81/96, *Burgemeester en wethouders van Haarlemmerliede en Spaarnwoude and Others v Gedeputeerde Staten van Noord-Holland*, 1998 ECR I-3923, at pars. 34 and 32.

and its implications for, the environment were potentially significant, the Court stated that “In order to evaluate the environmental risks, current standards must be taken into consideration”.⁴¹ The Court went on:

“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. [...] For the purposes of the present case, this means that the Parties together should look afresh at the effects on the environment of the operation of the Gabčíkovo power plant.”⁴²

7.30. The requirement that States must give proper weight to new standards, including assessing and re-assessing the effects of a project on the environment, is reflected also in the Separate Opinion of Judge Weeramantry, who joined in the majority. His Separate Opinion includes a section entitled “The Principle of Continuing Environmental Impact Assessment”. That part of the Opinion explains the rationale which lay behind paragraph 140 of the International Court’s Judgment:

“[E]nvironmental impact assessment means not merely an assessment prior to the commencement of the project, but a continuing assessment and evaluation as long as the project is in operation. This follows from the fact that EIA is a dynamic principle and is not confined to a pre-project evaluation of possible environmental consequences. As long as a project of some magnitude is in operation, EIA must continue, for every such project can have unexpected consequences; and considerations of prudence would point to the need for continuous monitoring.”⁴³

7.31. The logic behind this approach applies equally to the phases between the initiation of a project (1993 in the case of the MOX plant) and the final authorisation of its operation (2001 in the case of the MOX plant). It arises also from the “principle of contemporaneity in the application of environmental norms” which is reflected in paragraph 140 of the International Court’s judgment. As Judge Weeramantry puts it:

“In the application of an environmental treaty, it is vitally important that the standards in force at the time of application would be the governing standards”.⁴⁴

7.32. The principle applied in the *Gabcikovo-Nagymaros* case is of general application. It concerned a joint project between two States pursuant to a treaty between them, but applies equally to a project undertaken by one State which is to be developed in a manner consistent with an international convention, in this case UNCLOS.

⁴¹ 1997 ICJ Reports, p 7, para 140.

⁴² *Ibid* (emphasis added).

⁴³ 1997 ICJ Reports, p 7, at 111.

⁴⁴ *Ibid*, p 115 (emphasis in original).

C. THE FACTS

7.33. In the present case the Environmental Statement for the proposed MOX plant was prepared by BNFL in 1993. It is a short document (especially as compared with an equivalent Environmental Statement prepared for a smaller proposed US MOX facility in 2000: see Volume 4 of this Memorial). The 1993 MOX Environmental Statement includes no assessment of the direct consequences of the MOX plant in relation to the extension of the life of the THORP plant, or international transports, or waste storage consequences at the Sellafield site. The MOX Environmental Statement has never been updated since 1993 (notwithstanding Ireland's requests that it be updated to take into account *inter alia* the United Kingdom's commitment to reduce concentrations of radionuclides in the Irish Sea to "close to zero" by 2020).

7.34. The Statement provided the basis for the authorisation by the local council (in 1994) for construction, and the authorisation in October 2001 by the United Kingdom Government for the operation of the MOX plant. The information contained in the 1993 Environmental Statement may also have been relied upon by the United Kingdom in its submission to the European Commission in relation to the required Article 37 EURATOM Opinion. Ireland first objected to the Environmental Statement, on the grounds of its manifest inadequacies, in 1994.⁴⁵ Ireland continued to object to the Statement regularly thereafter.⁴⁶ The inadequacies of the 1993 Statement by reference to the requirement of Article 206 of UNCLOS have tainted the entirety of the authorisation process, including the 1997 European Commission Opinion (pursuant to Article 37 EURATOM) and the October 2001 decision by the United Kingdom.

THE 1993 ENVIRONMENTAL STATEMENT

7.35. The 1993 Environmental Statement (vol 3(3), Annex 103) was prepared by BNFL in October 1993 in connection with its application to Copeland Borough Council. That application was limited to the construction of the MOX plant, and did not concern an application for permission to operate the MOX plant.⁴⁷ It is important to note that the application to build the MOX plant was submitted prior to the grant of an operating license for the THORP plant, which was at that time under consideration by the relevant UK authorities. There has never been an Environmental Statement prepared for the THORP plant. The authorisation of the THORP plant did not consider the possible relationship of that plant to a future MOX facility, and did not therefore include any environmental assessment of the increased and prolonged discharges from THORP (resulting from the extension of the life of the THORP plant) which will be consequential to the operation of a MOX plant.

7.36. The 1993 Environmental Statement was prepared on the basis of the Town and Country Planning (Assessment of Environmental Effects) Regulations 1988, which sought to put into English law the requirements of Directive 85/337/EEC.

⁴⁵ *Infra.*, para 7.50; and Chapter 4, para 4.8.

⁴⁶ See in particular the letter of 23 December 1999, *infra.* para 7.54 *et seq.*

⁴⁷ The 1993 Environmental Statement, vol 3(3), Annex 103, preface (BNFL "has prepared this Environmental statement in connection with its application to Copeland Borough Council for consent to build a facility for the manufacture of Mixed Oxide (MOX) fuel assemblies", emphasis added).

7.37. The Environmental Statement runs to 51 pages. It comprises a summary of five pages, followed by five chapters. Chapter 1 (10 pages) describes BNFL, its activities in the nuclear industry and the procedures it followed in applying for consent to construct the MOX plant. In describing the consent procedure it states:

“This Environmental Statement does not form part of the formal applications which BNFL will make to the NII for agreement to the commencement of the various stages of the project.” (para. 1.9)

That appears to suggest that a future application to the NII for consent to operate the MOX plant will include a further Environmental Statement. In fact no further Environmental Statement was prepared, and the 1993 Statement was relied upon by BNFL in its application for operating consents.

7.38. Chapter 2 (2 pages) is entitled “The Need for the Development”. It proceeds on a number of assumptions that have been shown to be false. First, it assumes that the market for MOX fuel “will expand significantly over the next few years to over 300 tonnes per year by the end of the century” (para. 2.6). BNFL’s “conservative” estimates indicated demand for MOX fuel of 305-370 tonnes per year by 2000 (para. 2.7). As a report commissioned by Ireland from Professor Gordon Mackerron makes clear, those assumptions were inaccurate and actual production in 2000 was significantly lower.⁴⁸

7.39. Second, the Environmental Statement claims that the development of the MOX plant will “help secure the Company’s continuing profitability and the important contribution it makes to the UK economy” (para. 2.9). But in November 2001 the United Kingdom announced that ownership of the MOX plant was to be taken away from BNFL, at its own request, and vested in a new Liabilities Management Authority.⁴⁹ That announcement indicated that the Sellafield site (including the MOX plant) was being treated by the United Kingdom Government as a “liability”:

“I [the Secretary of State for Trade and Industry] therefore propose to set up a Liabilities Management Authority responsible for the Government’s interest in the discharge of public sector nuclear liabilities, both BNFL’s and the [United Kingdom Atomic Energy Authority’s]...

[T]o enable the LMA to exercise its role across the whole public sector civil nuclear liabilities portfolio, the Government now propose to take on responsibility for most of BNFL’s nuclear liabilities and the associated assets. The most significant of those will be the Sellafield and Magnox sites.”⁵⁰

7.40. Chapter 3 of the 1993 MOX Environmental Statement (4 pages) is entitled “Site Selection”. Among the factors mentioned in identifying a suitable site is the need for “a nuclear site which ... minimises the transport requirements for raw nuclear materials” (para. 3.1). The Statement goes on to state that “much of the plutonium dioxide which will be used in the manufacture of MOX fuel assemblies is either in store, or will originate, at Sellafield” (para. 3.3). No mention is made of the need or intention to transport large amounts of plutonium and other nuclear materials from Germany and Japan or any other countries. No mention is made of the fact that the site is located on the coast of the Irish Sea. And no mention is made of the United Kingdom’s commitment, given a year earlier at

⁴⁸ First Mackerron Report, vol 2, Appendix 10, p 501 (table C.1, column 5, shows actual production in 2000 at less than 200 tonnes).

⁴⁹ See Chapter 2 paras. 2.64-69.

⁵⁰ House of Commons Hansard Debates, 28 November 2001, col. 991-2, at vol 3(2), Annex 93.

the United Nations Conference on Environment and Development, not to store or dispose of nuclear material near the marine environment.⁵¹

7.41. Chapter 3 is notable for another reason. It concludes with the following observation:

“From an operational point of view, the chosen site has the following additional advantages as a site for SMP;

- Integrated access with THORP will allow direct transfer of plutonium dioxide with consequential transport advantages;
- Management and operations can be combined with THORP;
- Facilities, such as the discharge stack, changerooms and services can be shared with THORP.” (para. 3.9).

The passage confirms the integrated relationship between the MOX plant and the THORP plant. In fact, the MOX plant is constructed as an extension of the THORP plant, and physically adjoins it. Nevertheless, as the following chapter of the Statement confirms, no mention was made of the additional and prolonged discharges from the THORP plant which would arise as a result of this proximity to, and operational connection with, the MOX plant.

7.42. Chapter 4 (10 pages) is entitled “The Proposed Development”. It begins with the statement that in considering “control of the radiological impact on the environment” BNFL has proceeded on the basis that the construction and operation of the MOX plant is based upon “a fundamental requirement for nuclear safety that the risk presented by a facility must be as low as reasonably practicable” (para. 4.1). It is to be noted that the standard applied by BNFL differs from, and is significantly lower than, that which the United Kingdom is bound as a matter of international law to apply by UNCLOS (*inter alia* to minimize “to the fullest possible extent” the release of radioactive substances (Article 194(3)(a)) and by the 1992 OSPAR Convention (*inter alia* to use “best available techniques” and “best environmental practice ... including ... clean technology” (Annex I, article 1(1)).⁵² This contrasts with the subsequent statement that the operation of the MOX plant will meet “all international requirements” (para. 4.3), which it plainly does not – as described in Chapter 9.⁵³

7.43. This chapter includes a description of the process of manufacturing MOX fuel (paras. 4.20 to 4.24). That section makes no mention of the fact that all the plutonium dioxide which is used to manufacture MOX fuel will originate from the THORP reprocessing plant, which process will lead to significant additional discharges of radioactive substances into the Irish Sea and into the atmosphere, as well as production of radioactive wastes. That section follows with a description of the effluents and wastes which will be produced by the MOX plant (it makes no mentions of the effluents and wastes which will be produced by the THORP plant, which will be far greater in volume).⁵⁴ In relation to solid wastes it is stated that the annual volume of plutonium-contaminated material arising from the MOX plant will be “about 120m³” (para. 4.35).

⁵¹ See Chapter 9, para 9.35.

⁵² Chapter 9, para 9.45.

⁵³ *Ibid*, at e.g. paras 9.127-145.

⁵⁴ See Chapter 3, paras 3.27 *et seq*.

7.44. No mention is made of any other solid wastes arising or of the volume of additional solid wastes which will be generated in the process of obtaining the plutonium dioxide (from the THORP plant) needed to manufacture the MOX fuel. As indicated in Chapter 3, the additional wastes arising from the THORP plant will be very significant in volume.⁵⁵ In relation to the solid wastes arising it is stated that all plutonium contaminated material will be “routed to the proposed new Waste Treatment Complex (WTC) where it will be compacted to approximately half its volume before being prepared for ultimate disposal in a manner consistent with the Company’s and the UK’s strategy for the disposal of intermediate level waste” (para. 4.35). This in effect means permanent storage at Sellafield, since it cannot presently be disposed of in any other way.

7.45. In relation to liquid effluents, it is stated that these will be “minimal” since MOX fabrication is an “essentially dry process” (para. 4.37). The volumes of “[e]ffluent arisings from floor washings and fuel assembly wash will be about 107m³/yr”, which will be “conditioned as necessary to make them suitable, after monitoring, for discharge to the sea” (para. 4.37). What this means is that radioactive liquids will be discharged directly into the Irish Sea.

7.46. The 1993 MOX Environmental Statement makes no mention of the volume of additional liquid effluents which will be generated by the THORP plant in the process of obtaining the uranium dioxide and plutonium dioxide needed to manufacture the MOX fuel, and then discharged into the Irish Sea. As discussed in Chapter 3, these too will be very significant in volume.⁵⁶

7.47. Gaseous effluents will be released through the existing THORP stack (indicating the interconnection between the two plants). The Environmental Statement does not make it clear how radioactive they will be (see para. 4.41 of the 1993 Environmental Statement). Some of these effluents will reach the Irish Sea, either directly or by rain or run-off. Again, the Environmental Statement makes no mention of the volume of additional gaseous effluents which will be generated by the THORP plant in the process of obtaining the plutonium dioxide needed to manufacture the MOX fuel, and then discharged into the atmosphere. Once again, the effluents arising from the THORP plant will be far, far greater than those arising from the MOX plant.⁵⁷

7.48. Chapter 5 (21 pages) is entitled “Assessment of Environmental Effects”. 3 pages deal with employment. 2.5 pages deal with traffic (but only by road: there is no mention of transports by sea). 1 page deals with noise pollution. 3.5 pages deal with “landscape and visual”. 1 page deals with soil. 1 page deals with water (not including the marine environment). 1 page deals with “air and climate”. 1.5 pages deal with “flora and fauna” (although none in the marine environment”). Half a page deals with interactions, material assets and cultural heritage.

7.49. That leaves just 6 pages on the impact of radiological discharges. The Sheate Report states that:

“[s]ince the scope of the assessment has been narrowly drawn only the direct radiological aspects are considered, with no attempt to identify indirect or cumulative impacts in relation to radionuclides or other emissions. The information

⁵⁵ *Ibid.*

⁵⁶ See Chapter 3, para 3.32.

⁵⁷ *Ibid.*

provided for direct radiological aspects is insufficient to judge the basis on which the impact magnitude is predicted. All aspects therefore score similarly as unsatisfactory/poor.”⁵⁸

IRELAND’S CONCERNS ABOUT THE 1993 ENVIRONMENTAL STATEMENT (1993-2001)

7.50. In 1994 Ireland communicated to the United Kingdom its views as to the inadequacies of the Environmental Statement, summarising its position as follows:

“The Environmental Statement does not provide sufficient and adequate information to enable the effects on the environment of the MOX plant to be assessed and ... it does not comply with the relevant requirements of the EC Directive on Environmental Impact Assessment.”⁵⁹

7.51. In its submission Ireland set out its concerns. It noted in particular the failure to

- provide information on the relationship between the plant and the nearby marine environment of the Irish Sea;
- consider the effect of further radioactive discharges on the ecology of the marine environment, including marine invertebrate fauna, algae, plankton, and commercial and sport fish;
- assess the consequences of transport accidents or of accidents to the proposed MOX plant, or the impact of exposures of members of the public, either near the site or in the nearest Member State, Ireland; and
- provide any information about the radiation doses which might be received by members of the public in Ireland during the normal operation of the MOX plant.

Other important concerns related *inter alia* to: the failure to take proper account of the area’s topography, geology and seismology; the failure to provide information on demography and meteorology; the failure to provide data on the nature and quantities of materials to be used in the production processes; the failure to provide complete information on the nature and quantities of the effluents and wastes to be generated by the MOX plant, or the methods of processing them; the absence of complete information on decommissioning and its effects; and the failure to provide information on the environmental monitoring programmes to be undertaken by BNFL.

7.52. No response was then received to Ireland’s expression of concern.

7.53. No response has ever been received.

7.54. Ireland repeatedly expressed its concerns about these aspects of the proposed MOX plant, in particular in its letter of 23 December 1999 to the UK Secretary of State for the Department of the Environment, Transport and the Regions.⁶⁰ By this time more than five years had passed since the Environmental Statement had been published, and no

⁵⁸ Sheate Report, vol 2, Appendix 6, at p 229.

⁵⁹ *Submission to Copeland Borough Council on Proposed Sellafield Mixed Oxide (MOX) Plant*, 1994, vol 3(1), Annex 8.

⁶⁰ Vol 3(1), Annex 20.

supplement had been prepared to update it. Ireland wrote to the United Kingdom reiterating its earlier concerns (in particular in relation to the inadequate assessment of the impact of discharges into the marine environment) and setting forth its view that the environmental assessment of the plant was further deficient by reason of the fact that it failed to take any account of the material developments in English, EC and international law which had occurred since 1993 for the protection of the marine environment of the Irish Sea. These legal developments, which had all come into effect for the United Kingdom since the 1993 Environmental Statement was published and approved, include the 1982 UNCLOS, the 1992 OSPAR Convention, the 1998 Sintra Ministerial Statement, the 1997 entry into force for the United Kingdom of the 1991 Espoo Convention, and the amendments to EEC Directive 85/337.

7.55. In its letter of 23 December 1999 Ireland stated:

“The EIS which was prepared in 1993 does not clearly identify the discharges of radioactive material into the marine environment or assess their impact. It fails to consider the alternatives to the proposed activity, and it does not indicate predictive methods and assumptions. It does not provide any information as to the international movements of radioactive materials associated with the operation of the plant. Moreover, the EIS has been prepared on the assumption that discharges of radioactive material from the MOX operations would be internationally lawful and without taking into account the need to reduce concentrations in the environment to “close to zero” by the year 2020. Further, the EIS is premised on operations which are clearly not precautionary in character, assuming as they do the discharge of new radioactive materials into the marine environment. Finally, the consultation procedure on the economic justification of the plant has been carried out on the basis of inadequate information having been made available to the public. Despite requests from the Irish Government for such information [...] the UK Government has refused to disclose this information to the Irish Government. In light of the above points, a decision to authorize the operation of the MOX plant would be based upon an EIS which was incompatible with the UK obligations under the 1982 UNCLOS, the 1991 Espoo Convention and Directive 97/11/EC and consequently be in violation of the requirements of those instruments. Such authorization would violate the obligations of the United Kingdom to apply a precautionary approach and to *inter alia* protect and preserve the marine environment, to take all possible steps to prevent and eliminate pollution from land based sources, and to reduce concentrations in the environment to “close to zero” for artificial radioactive substances, by the year 2020 (as required by the 1982 UNCLOS, 1992 OSPAR Convention and the 1998 Sintra Ministerial Declaration).”

7.56. The United Kingdom took more than ten weeks to respond to the letter of 23 December 1999 (see United Kingdom letter of 9 March 2000). That response from the UK Minister for the Environment apologised for the delay in responding and stated:

“Whilst I am, of course, grateful to you for your further views and comments, I am sure that you understand why I cannot address these points in detail while we are still in the process of coming to a final decision on the full operation of the plant. I am also sure that you will appreciate that the implications of the data falsification incident at the Sellafield MOX Demonstration Facility will have some bearing on our decisions. Whatever our final decision, we do plan to publish

a decision document which will explain our reasons in full. I will ensure that you are sent a copy immediately it is published.”⁶¹

7.57. The United Kingdom did not respond further to Ireland’s concerns. The decision document on the MOX plant and international movements was published on 3 October 2001. It made no mention whatsoever of the concerns raised by Ireland in relation to the UNCLOS, including in relation to the 1993 Environmental Statement.

THE 1997 EURATOM OPINION

7.58. In the course of the provisional measures proceedings before ITLOS, the United Kingdom sought to make a great deal of an Opinion prepared by the European Commission pursuant to Article 37 of EURATOM.⁶² The Opinion concluded that “in normal operation and in the event of an accident of the magnitude considered in the general data” the implementation of the plan for the disposal of radioactive waste from the MOX plant “is not liable to result in radioactive contamination significant from the point of view of health, of the water, soil or airspace of another Member State” (emphasis added). A number of points may be made. First, the Opinion does not constitute an environmental assessment – it addresses only the human health-related aspects of MOX discharges and not the environmental aspects. This is because EURATOM has no competence at all in relation to environmental aspects. Second, the Opinion is very limited: it does not address (even in relation to human health) discharges arising from THORP plant, the implications of additional waste storage at Sellafield, or the risks arising from international transports. An earlier Opinion was prepared in relation to the THORP plant, and adopted by the European Commission in April 1992.⁶³ It too only addresses human health issues, not environmental issues. And it does not address waste storage or international transportation issues. Ireland has never been provided with the documents which the United Kingdom submitted to the European Commission in support of the application. Ireland therefore cannot indicate to the Tribunal whether it took any account of the MOX plant. It is highly unlikely that it did. The third point is that the approach taken by the Commission in carrying out its Article 37 functions – especially in relation to Sellafield – has been subject to considerable criticism from independent third parties.⁶⁴

THE 55 QUESTIONS

7.59. A number of the questions addressed by Ireland to the United Kingdom pursuant to the ITLOS Order of 3 December 2001 were concerned with environmental impact assessment. Questions 41, 42 and 43 asked the United Kingdom whether it has assessed the impacts (actual and potential) of planned and unplanned discharges from the Sellafield site as a whole and from the MOX and THORP plants on various non-health related aspects of the Irish Sea, including biota, fishing and other legitimate uses, and reduction of amenities. In answering those questions the United Kingdom focused – once again – on

⁶¹ Vol 3(1), Annex 22.

⁶² Vol 3(3), Annex 124.

⁶³ Vol 3(3), Annex 122.

⁶⁴ See STOA Report on Possible Toxic Effects from the Nuclear Reprocessing Plants at Sellafield and La Hague, November 2001, vol 3(3), Annex 105.

health related aspects. It conspicuously did not confirm that these other (non-human health related) aspects of the marine environment had been subject to assessment.⁶⁵

7.60. Ireland also asked:

“What aspects of the 1993 Environmental Statement were given detailed reconsideration, by whom, when and with what results, in the light of the United Kingdom’s acceptance of obligations under (a) [UNCLOS]; (b) the 1992 OSPAR Convention; (c) the 1998 Sintra Ministerial Declaration; and (d) the amendments to EEC Directive 85/337 introduced by Directive 87/11/EC?”

The full answer given by the United Kingdom was as follows:

“In the UK’s written response to Ireland’s Statement of Claim requesting provisional measures (paragraph 31), as put before the ITLOS Tribunal, the UK made clear that decision taken on 3 October 2001, that the manufacture of MOX fuel was justified in accordance with the EC Basic Safety Standards (96/29/EURATOM), was reached after the conclusion of a process lasting 8 years during which time the UK had insisted that environmental and other requirements for the construction and operation of the MOX plant had been satisfied (see paragraphs 56-64 of that decision document). In reaching their decision on 3 October the Secretaries of State were satisfied that these requirements had been met.”

From this answer it appears reasonable to conclude that the 1993 Environmental Statement was never given detailed reconsideration by the United Kingdom in light of the United Kingdom’s obligations under UNCLOS, the 1992 OSPAR Convention and the 1998 Sintra Ministerial Declaration.⁶⁶

7.61. The United Kingdom’s answer directs the reader to paragraphs 56 to 64 of the October 2001 Decision document.⁶⁷ These paragraphs make no mention of UNCLOS, the 1992 OSPAR Convention or the 1998 Sintra Ministerial Declaration. Nor do they indicate that the 1993 Environmental Statement was subject to any reconsideration.

THE INADEQUACIES OF THE 1993 ENVIRONMENTAL STATEMENT: AN INDEPENDENT REPORT

7.62. The 1993 Environmental Statement is inadequate. It did not meet the standards applicable in 1993. It does not meet the standards applicable when the Decision of 3 October 2001 was adopted. This is confirmed by an independent report which Ireland has commissioned from Mr William Sheate (Senior Lecturer, Imperial College, University of London).⁶⁸ The Sheate Report concludes that:

“The MOX [Environmental Statement] is shown to be quite inadequate, even for the standards prevalent at the time in the early 1990s, and especially given the nature of the proposal. Overall, the [Environmental Statement] was given an E grading (poor, significant omissions or inadequacies), against the 1992 criteria

⁶⁵ Vol 3(1), Annex 7, pp 79-80.

⁶⁶ *Ibid.*

⁶⁷ Vol 3(2), Annex 92, pp 235-8.

⁶⁸ Vol 2, Appendix 6 at p 238.

and those of 2001 ... It is of particular concern that the relationship between MOX and THORP would appear never to have been subjected to an environmental assessment process. No EIA was required for THORP (which preceded legal requirements), nor did the MOX [Environmental Statement] address the close relationship between these two facilities. The consequential, indirect and cumulative effects associated with this relationship, especially those relating to transportation of spent plutonium fuel to THORP to supply MOX, radioactive discharges associated with THORP, and the generation of radioactive waste at all stages of the MOX process (including from THORP), have not therefore been addressed.”⁶⁹

7.63. In reaching this conclusion the Sheate Report considered the 1993 Environmental Statement by reference to two sets of criteria, namely (1) the 1992 guidelines from the Institute of Environmental Assessment; (2) the 2001 guidelines from the Institute of Environmental Management and Assessment.⁷⁰ The Sheate Report also considers the 1993 Environmental Statement in comparison with other environmental statements, namely (1) environmental statements prepared in the United Kingdom around 1993 which addressed other projects (in particular the South East London Combined Heat and Power Plant), (2) the 1996 environmental statement prepared by UK Nirex in support of its proposed Rock Characterisation Facility in the context of a possible Deep Waste Repository to be constructed at Sellafield, and (3) the 2000 Environment Report prepared by the developer of a proposed MOX plant in the United States (it is to be noted that this is intended to be a far smaller facility, producing only 3.5 tonnes of MOX fuel per year, as compared with the proposed 120 tonnes per year output from the Sellafield MOX plant).

7.64. These three environmental statements serve to confirm the inadequacy of the 1993 Environmental Statement:

“Comparison with the EIA process for the South East London Combined Heat and Power Plant (SELCHP) has shown how the ES for that proposal, although initially inadequate, was supplemented twice with substantial, additional information on the principal pollutants, including their assessment methodologies. In that case, the provisions for supplying further information were applied. In the case of MOX, Copeland Borough Council would appear to have authorised SMP without requiring further information from BNFL to supplement what is a very poor environmental statement ... The comparison with the US consenting process for their MOX plant is stark. There, a lengthy and comprehensive procedure is being followed, which has included extensive public consultation stages, and further iterations of an environmental report by the proponent. The information being provided by the whole EIA process in the US is likely to amount to thousands of pages, compared to a mere 50 pages in the case of the SMP ES.”⁷¹

7.65. The review was undertaken by two independent reviewers. A table setting out their grading of each aspect of the Environmental Statement is at page 207 of Volume 2. The results set out in that table are summarised as follows:

“The review of the environmental statement produced for the MOX plant is clearly inadequate in most respects. The independent reviews were generally consistent plus or minus one grade, and most frequently identical in the omissions

⁶⁹ *Ibid*, at p 201.

⁷⁰ *Ibid*, at p 205.

⁷¹ *Ibid* at paras 7.2-7.3.

and inadequacies highlighted. A number of the key issues on their own would have been cause for concern, but together make this a very poor example of an environmental statement. Moreover, the often selective and partial evaluation provided throughout the ES casts some doubt even on the reliability of those areas where some assessment is provided. For example, comments are often made in passing which suggest other aspects that should be addressed, only to find that these aspects are not addressed in the ES. A prime purpose of an environmental statement is that anyone reading it (including decision-makers, stakeholders or members of the public) should be able to understand the basis on which the authors have come to their conclusions. This is manifestly not the case with the MOX [Environmental Statement].⁷² (emphasis added)

7.66. In summary, the Sheate Report concludes:

“The review of the 1993 [Environmental Statement] for the MOX Sellafield plant (SMP) against the review criteria reveals considerable inadequacies, and in particular the inadequate treatment of key areas which the [Environmental Statement] could legitimately be expected to have addressed in some detail. These include, in particular:-

- Lack of scoping
- Lack of consideration of impacts other than direct effects
- Lack of consideration of alternatives
- Inadequate baseline data
- Lack of significance evaluation methodology
- Inadequate consideration of decommissioning
- Lack of consideration of accidents
- General lack of description of assessment methodologies.⁷³

The Report considers the adequacy of the 1993 Environmental Statement by reference to other examples, prepared during the same period and subsequently.

OTHER UK ENVIRONMENTAL STATEMENTS IN THE EARLY 1990S

7.67. The Sheate Report compares the MOX Environmental Statement with the Environmental Statement for a similar, though less potentially hazardous, project proposed at around the same time as the MOX plant was first being scrutinised.⁷⁴ The South East London Combined Heat and Power Plant (SELCHP) was proposed in 1989 in the London Borough of Lewisham. This was the first plant in the UK to be built specifically to produce electricity and heat from the combustion of waste. The Environmental Statement for SELCHP was a comparable length to that of MOX – approximately 50 pages. It contained considerably more information on the emissions which would be caused by the plant. However, the data provided, and the assessment, were considered by stakeholders and the planning authority as inadequate, and further information was required. Two

⁷² *Ibid* at para 3.1, (emphasis added).

⁷³ *Ibid*, Executive Summary (p 201).

⁷⁴ *Ibid*, pp 213-214.

supplementary Environmental Statements were provided, and planning consent was granted by Lewisham Borough Council on 21 May 1990, but subject to conditions including the provision of further information to address outstanding issues not covered adequately by the original EIA.

7.68. The Sheate Report concludes that:

“While clearly the MOX plant and the SELCHP incinerator are different kinds of installations, they share many of the same issues and concerns. Key concerns of local planning authorities and the public about incinerators include traffic and transport of waste material to the site, waste residues, atmospheric emissions, groundwater contamination and noise... By comparison with the MOX ES, therefore, for a development where emissions were important, but where there was no issue of radioactive discharges or waste, the original SELCHP ES was supplemented twice. Simply in terms of the number of pages, the two Addenda together amounted to more than twice the length of the original [Environmental Statement].”⁷⁵ (emphasis added)

7.69. Ireland finds it extraordinary that a project which did *not* involve nuclear waste, and which fell to be assessed *before* the MOX plant, was required by the authorities to submit far more detailed information that was ever submitted in relation to the MOX plant.

THE 1996 NIREX ENVIRONMENTAL STATEMENT AND ITS REJECTION BY THE UK INSPECTOR AND THE UK GOVERNMENT

7.70. The Sheate Report also compares the MOX Environmental Statement to that prepared in 1994 for the proposed NIREX Rock Characterisation Facility. That facility, promoted by UK NIREX Ltd, was intended “to provide data on the geological and hydrogeological characteristics of the potential deep repository host rocks ... and overlying strata, for model validation for long-term safety purposes, for repository design and for the selection of repository construction methods.”⁷⁶ The long-term plan was to build a deep-waste repository for nuclear waste under the Irish Sea.

7.71. Cumbria County Council initially refused planning permission. There was then an appeal inquiry in 1995-6, during which the environmental statement was subjected to intense scrutiny. The Inspector criticised key aspects of the statement, including:

- The process of site selection;
- The lack of consideration of alternatives;
- The scientific uncertainties and technical deficiencies in the proposals;
- The impact upon the Lake District National Park.

7.72. The proposal was subsequently rejected in 1997 by the then Secretary of State for the Environment (see vol 3(3), annex 118). He considered that the adverse impacts on visual amenity, a protected species and the natural beauty of the National Park were serious, and in themselves warranted refusal of the application. Particularly significantly for present purposes, he then went on to say that:

⁷⁵ *Ibid*, paras 5-3-5.5, emphasis added.

⁷⁶ *Ibid*, para 1.9.

“Further, the Secretary of State also remains concerned about the scientific uncertainties and technical deficiencies in the proposals presented by Nirex, which would also justify refusal of this appeal. He is also concerned about the process of selection of the site and the broader issues of scope and adequacy of the environmental statement which again would justify refusal of this appeal.”⁷⁷

The Sheate Report concludes that, “[g]iven the location of the MOX proposal within the Sellafield works it might have been expected that the Nirex case would have had some influence on BNFL and on the planning authority in relation to the MOX plant at the time consent was given in 1996.”⁷⁸ However, that is clearly not the case.

7.73. One important point of contrast between the Nirex case and that of MOX is the perceived relationship between the project directly under assessment and other, related projects. As mentioned above, the Nirex Rock Characterisation Facility was to study the local physical conditions with a view to the eventual construction of an intermediate or deep-level waste repository under the sea. The two facilities were therefore linked in a similar manner to THORP and MOX. However, it is striking that, although “by the closing of the Nirex Inquiry in February 1996 it was clear that the go-ahead for the Sellafield [Rock Characterisation Facility] was far from inevitable”,⁷⁹ the Secretary of State and the Inspector at the Nirex Inquiry took the view that “there is a link between the [Rock Characterisation Facility] and the [Deep Waste Repository]. The Secretary of State concludes that the [Rock Characterisation Facility] should not be considered without reference to the effects of the [Deep Waste Repository].”⁸⁰

7.74. As the Sheate Report points out, this insistence on assessing the environmental impact of a related project which was at that time highly speculative contrasts strikingly with the absence of any assessment of MOX during the THORP authorisation process:

“The decision to go ahead with THORP had already prejudged any decision on alternatives for MOX, since MOX is seen as integral to the operation of THORP and the existence of THORP is seen as integral to the location of MOX. However, MOX had not been addressed at the time THORP was given the go-ahead, when the potential environmental effects would have been most appropriately assessed.”⁸¹

THE 2000 US MOX PLANT ENVIRONMENTAL REPORT

7.75. Duke Cogema Stone & Webster (DCSW) are proposing to construct and operate a Mixed Oxide Fuel Fabrication Facility (“US MOFFF plant”) on a site next to the Savannah River near Aiken, South Carolina. The plant is to be owned by the US Department of Energy, but designed, constructed, operated and deactivated by DCSW, which is a private company. As part of the US regulatory process the owner and operator are required to prepare an Environmental Report, which will be used by the US Nuclear Regulatory Commission in support of its efforts to prepare an Environmental Impact Statement.

⁷⁷ *Ibid*, emphasis added. See vol 3(3), Annex 118.

⁷⁸ *Ibid*, para 1.10.

⁷⁹ *Ibid*, para 4.4.

⁸⁰ *Ibid*, para 4.8.

⁸¹ *Ibid*, para 4.7. See also para 4.14.

7.76. The proposed US MOFFF plant is not intended to be operated as a commercial activity. Rather, it is being proposed as a consequence of the determination by the United States Government that there is a need for a national programme to dispose of surplus United States plutonium, and that this need should be addressed by converting 36.4 tonnes of surplus weapons-grade plutonium into MOX. It will also cater for the implementation of the joint United States and Russian Federation Agreement to convert 28.2 tons of surplus Russian plutonium to MOX. It is apparent that the US plant will produce significantly smaller quantities of MOX fuel than the MOX plant at Sellafield. Alongside the US MOFFF plant it is proposed that there will be constructed and operated a Pit Disassembly and Conversion Facility for disassembling nuclear weapon pits and reconverting the recovered plutonium, as well as plutonium from other sources, into plutonium dioxide to be used as “feedstock” for the US MOFFF plant (this is equivalent to the role of the THORP plant at Sellafield). It is apparent that the US plant will produce far less pollution than the MOX plant at Sellafield, including per unit (tonne) of MOX fuel produced.⁸²

7.77. In December 2000 DCSW prepared an Environmental Report under contract to the US Department of Energy, and it was submitted to the US Nuclear Regulatory Commission. A copy of the DCSW Environment Report is reproduced in full at Volume 4 of this Memorial. The Environmental Report for the US MOFFF plant is intended to address “all of the site-specific impacts associated with the licensing, construction and operation” of the MOFF.⁸³ The Environmental Report comprises an extensive study that runs to 483 pages. It addresses all the matters that were not considered by BNFL’s 1993 Environmental Statement and have never been addressed by the United Kingdom authorities. The Environmental Report concludes that “Although the proposed action does have environmental impacts, the impacts are small and consequently acceptable. The environmental impacts are outweighed by the benefit of enhancing nuclear weapons reduction”.⁸⁴

7.78. The US MOFFF Environmental Report provides a degree of detail which stands in sharp contrast to the 1993 MOX Environmental Statement. Specifically, the US Environmental Report:

- addresses alternative actions, including the “no action alternative”;
- addresses alternative sites;
- addresses the environmental impacts of the Pit Disassembly and Conversion Facility (which processes and produces the plutonium dioxide) “as part of the discussions on cumulative impacts” (ES-3);
- assesses in great detail the current state of the environment which will receive the gaseous and liquid discharges, and seeks to identify the cumulative effects of the discharges from the US MOFFF plant, including the discharges from plutonium dioxide production facility;
- assesses the environmental effects of international transports of nuclear materials destined for use at the plutonium dioxide production facility and the US MOFFF plant (in a separate Statement: Surplus Plutonium Disposition Final Environmental Impact Statement, DOE/EIS-0283, November 1999);

⁸² See Barnaby Report, vol 2, Appendix 8, p 422.

⁸³ Vol 4, at ES-2.

⁸⁴ *Ibid*, ES-6.

- assess the environmental effects of transportation and disposal of spent MOX fuel; and
- assesses the possible environmental effects of accidents or sabotage or terrorist attack on the plutonium dioxide production facility and the US MOFFF plant.

7.79. Notwithstanding its length and its detail, the US Nuclear Regulatory Commission has not accepted the US MOFFF Environmental Report as being adequate. In June 2001 the NRC wrote to DCSW⁸⁵ requesting additional information, including in respect of a number of matters on which Ireland has been requesting information from the United Kingdom. The NRC has requested a great deal more information. It has asked the operator to provide *inter alia*:

- A “site-wide emergency management plan, including Emergency Preparedness Plans and/or appropriate plans that would cover a MOX fuel transportation accident”;⁸⁶
- A general plan for decommissioning the MOFFF “in sufficient detail to support a description of the process and impact analysis in the Environmental Impact Statement”;⁸⁷
- More information on alternative technologies, for example on plutonium polishing and high efficiency particulate air filters;⁸⁸ and
- More information on the impact of certain proposed actions on the environment (e.g. “The ER indicates that liquid and solid wastes will be transferred to the [DOE] for processing and management. The ER also provides general information regarding how DOE manages its waste streams, but provides no information on how MOX FFF wastes will be processed or managed. Although waste processing will not be part of the ... operation, it will produce environmental impacts that need to be considered in the EIS”).⁸⁹

7.80. The Sheate Report notes the extreme contrast between the environmental impact assessment process in relation to the US and UK MOX facilities, which serves to emphasise the inadequacy of the latter:

“A comparison of the detail required for the EIS in the US is amply illustrated by the scoping summary report produced by the US Nuclear Regulatory Commission for the EIS (see Volume 2, Appendix 8.1). This requires considerably more detail than identified against either of the UK sets of review criteria above, but emphasises in contrast the remarkably ‘light touch’ taken by BNFL in their MOX application and ES and by Copeland Borough Council in not requiring further information along the lines identified in the review above. Many of the issues which were omitted or inadequate in the BNFL ES are seen as basic requirements for the EIS for the MOX FFF in the US. The outline for the EIS provided at the end of the scoping summary report as Attachment A emphasises the much more

⁸⁵ Sheate Report, vol 2, Appendix 8, pp 351 *et seq.* (Appendix 8.2).

⁸⁶ *Ibid*, General Comments, para 1 (p 353).

⁸⁷ *Ibid*, Specific Comments, para 3 (p 353).

⁸⁸ *Ibid*, Specific Comments, paras 5 and 6 (p 354).

⁸⁹ *Ibid*, Specific Comments, para 8 (p 354).

comprehensive approach taken to all environmental effects of the proposed MOX plant compared to the Sellafield example.”⁹⁰ (emphasis added)

D. CONCLUSIONS: THE UNITED KINGDOM HAS VIOLATED ARTICLE 206 OF UNCLOS

7.81. In summary, Ireland submits that the United Kingdom has violated Article 206 of UNCLOS by (1) carrying out an environmental impact assessment which was inadequate by the standards applicable in 1993; (2) authorising the MOX plant in 2001, on the basis of the 1993 Environmental Statement, without updating that statement to comply with current international standards relating to (a) the content of the environmental assessment report and (b) requirements relating to the protection of the marine environment of the Irish Sea. Ireland considers that the evidence contained in the Sheate Report makes it entirely clear that, viewed against a range of criteria applicable in 1993 and 2001, the Environmental Statement is not remotely capable of complying with Article 206, the requirements of which must be interpreted in the light of applicable international law and practice. As the Sheate Report concludes:

the 1993 Environmental Statement is “quite inadequate, even for the standards prevalent at the time in the early 1990s, and especially given the nature of the proposal.”⁹¹

In order to bring itself in compliance with the requirements of Article 206 UNCLOS the United Kingdom must look afresh at all the environmental consequences of the MOX plant, and cause to be prepared a new environmental statement which *inter alia*:

- identifies and assess the effects of the additional discharges into the Irish Sea arising from the additional operation of the THORP plant;
- assesses the state of the Irish Sea and determines the cumulative effects of the discharges from the MOX plant and the consequential additional discharges from the THORP plant on the Irish Sea;
- assesses the effects of international transports through the Irish Sea of nuclear materials associated with the MOX plant;
- assesses the possible environmental effects of accident or terrorist attack on the MOX plant or on international transports associated with the MOX plant;
- sets out a scoping or justification for why the range of impacts studied was selected;
- considers alternatives, including alternative sites, alternative technologies, and the no-action alternative;
- makes use of adequate baseline data, and justifies choices made in dealing with data;
- consider all other effects of the MOX plant, including indirect effects and cumulative;
- fully considers the environmental effects of decommissioning the MOX plant.

⁹⁰ Sheate Report, vol 2, Appendix 6, p 215 (para 6.5).

⁹¹ *Ibid*, p 201.

7.82. The violation of Article 206 has other consequences. Having failed to assess properly all the environmental consequences of the authorisation and operation of the MOX plant, the United Kingdom proceeded to authorise the MOX plant on an incomplete and inadequate base of information. It was unable to respond – properly or at all – to requests for information from Ireland, because it had not put itself in a position to know all the environmental consequences of its actions. And it was unable to adequately fulfil its duties of co-operation with Ireland, in particular by disabling itself from the possibility of taking into account the views expressed by Ireland. These procedural violations are addressed in Chapter 8. The procedural violations have substantive consequences.

7.83. In the absence of a proper environmental assessment, the United Kingdom authorised the MOX plant without having first put itself in a position to know what would be all the environmental consequences of the MOX plant. In those circumstances it was not in a position to properly co-operate with Ireland as required by UNCLOS (even if it had wanted to), because it had failed properly to make available to itself the information which such co-operation required it to make available to Ireland.

7.84. Further, without that information, the United Kingdom was not in a position to “take all measures necessary” to prevent and reduce pollution, or to ensure that the authorisation of the MOX plant would not cause pollution to Irish waters, or to minimize “to the fullest possible extent” the release of radioactive substances, as required by Part XII of UNCLOS.

7.85. The failure to cause to be prepared a proper environmental assessment of the MOX plant is of central importance in its own right. But it becomes even more important in giving rise to consequential violations of the obligations to co-operate and to prevent pollution. These aspects are addressed in Chapters 8 and 9 which follow.

