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Multiple International Courts and the ‘Fragmentation’ of International Environmental Law

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A hallmark of contemporary international litigation is that it takes place in an array of adjudicative institutions including permanent courts, ad hoc arbitral tribunals, regional courts, and bodies with highly specialised subject-matter jurisdiction. The parallel operation of multiple judicial institutions poses a range of practical difficulties for international dispute settlement,[1] and has introduced considerable unpredictability in some well-known environmental disputes.[2] This article assesses a related but less examined question, namely whether in resolving disputes touching upon environmental issues some of these adjudicative bodies are destabilising key organising rules and principles of international environmental law by adopting parochial approaches that suit the narrow purposes of non-environmental issue-specific regimes. Such analysis is now clearly desirable having regard to the sizeable expansion in the body of international environmental case law.[3]

This inquiry is set against the backdrop of ongoing debates concerning the ‘fragmentation’ of international law

as international courts and tribunals grow in number.[4] It is seen in section I that the mainstream analysis of fragmentation proceeds on the assumption that public international law comprises a coherent legal system of general applicability, and asserts that courts and tribunals operating within issue-specific regimes may cleave the overarching normative system into increasingly separate and isolated legal orders. It is suggested that this narrative greatly oversimplifies the dynamics of international legal specialisation, and that some degree of fragmentation is a natural and constructive process that allows the elaboration of specific rules to address needs inadequately served by general international law. Indeed international environmental law itself is an example of this phenomenon, and section II examines the emergence of this increasingly distinctive sub-discipline of public international law. Nonetheless, and somewhat paradoxically, this important product of the fragmentation process may itself be a victim of some of its potentially troubling dynamics. This is because environmental disputes are increasingly resolved not in courts having an environmental specialisation, or in courts of general subject-matter jurisdiction, but rather in other issue-specific judicial bodies. By reference to the development of an environmental jurisprudence in human rights courts and complaints bodies and in the dispute settlement system of the World Trade Organization (WTO), section III examines whether these institutions have taken approaches to issues of environmental law and policy that challenge conventional understandings. While it is suggested that these bodies have for the most part subscribed to international environmental law on its own discursive terms, several areas of possible future divergence are identified.

I. The 'Fragmentation' of International Law

International law has always comprised both general norms and rules of a more specific character. However, an important feature of the contemporary legal order is the existence of increasingly specialised and technical regimes, rules and procedures.[5] While some commentators have argued that developing international law into quasi-autonomous branches unhelpfully compartmentalises international law,[6] others have observed that decentralisation can advance community objectives that cannot be attained through more general rules.[7] This process of decentralisation has been particularly evident in the environmental context, with detailed regulatory regimes devised to address environmental challenges at national, regional and global scales.

(a) International courts and fragmentation

The debate concerning the nature and desirability of this phenomenon took on fresh life with the proliferation of new international courts and tribunals in the late twentieth century. The 'judicialisation'[8] of some areas of international law poses questions as to whether issue-specific tribunals might also contribute to the compartmentalisation of international law. In particular it raises the spectre that new bodies might co-opt and adapt general norms for the narrow purposes of specialised regimes, and thereby undermine their universal applicability. This seems more than merely an abstract concern, as the legitimacy and authority of rules of public international law depends substantially upon their consistency and universality. Yet there appears no way of addressing the perceived problem other than by suppressing the emergence of new institutions. The international legal system possesses few mechanisms for maintaining consistency (there is no strict doctrine of precedent, or a hierarchy among jurisdictions)[9] and uncertainty surrounds the efficacy of existing techniques to promote coherence (such as the rule expressed in article 31(3)(c) of the Vienna Convention on the Law of Treaties[10] that treaties should be interpreted having regard, among other things, to 'any relevant rules of international law applicable in the relations between the parties').[11]

Current and former members of the International Court of Justice (ICJ) have been among the most prominent participants in this debate, both as harbingers of supposed calamity,[12] and as more optimistic commentators[13] upon the expansion in the international adjudicative system. Indeed the critique of the proliferation phenomenon only gained significant momentum after it was taken up by successive Presidents of the ICJ, who warned that it could lead to practical problems such as forum shopping and overlapping jurisdiction, and generate jurisprudential inconsistency.[14] Particular concern was expressed for the future of the ICJ as the pre-eminent international judicial forum, as it was thought that its caseload might diminish and its decisions would become less influential.

This appears far too pessimistic a prognosis. Indeed many publicists have regarded the growth of international courts and tribunals as a largely benign, and even beneficial, consequence of the expansion of international law into a wider range of activities. Such optimistic views range from bold claims that the

proliferation of courts is indicative of 'the construction of coherent international order based on justice'[15] to the more sedate proposition that international law is acquiring greater maturity,[16] and is developing into a 'legal system' in the Hartian sense.[17] It has also been suggested that some level of diversity is not only tolerable but desirable, and that major points of jurisprudential difference can readily be overcome through a 'transjudicial' dialogue.[18]

The anxiety concerning judicial dissonance is at this stage a predominantly speculative concern, rather than one rooted in a lengthy history of jurisprudential conflict. In 1998, in an extensive survey examining seven areas of international law addressed by more than one tribunal, Charney argued that a multiplicity of forums had not led to any serious problems of jurisprudential divergence.[19] Indeed only a select few examples of conflicting pronouncements can in fact be cited, and the best known are found in the fields of international humanitarian law[20] and human rights.[21] An environmental case may also be added to this short list. The *Southern Bluefin Tuna Dispute*,[22] in which the International Tribunal for the Law of the Sea (ITLOS) and a subsequent Arbitral Tribunal established under Annex VII of the United Nations Convention on the Law of the Sea (UNCLOS)[23] reached diametrically opposed conclusions, has been portrayed by some commentators as an instance of fragmentation.[24] While in the provisional measures phase ITLOS considered that jurisdiction on a prima facie basis could be established, the Arbitral Tribunal constituted to determine the merits of the dispute held that its jurisdiction was clearly excluded through the combined operation of UNCLOS and the Convention for the Conservation of Southern Bluefin Tuna.[25]

(b) The effects of politics

Accepting the anxiety that surrounds the prospects of normative fragmentation, it must be asked how this latent potential for jurisprudential conflict should be conceptualised. More specifically, how does this process operate in the context of international environmental law?

The starting point must surely be a recognition that the differences that can and do arise between courts and tribunals are not mere 'mistakes' emerging from an otherwise neatly organised international legal system, and which are therefore capable of resolution by technical legal solutions. On the contrary, the establishment of new courts and tribunals, and efforts by some courts to develop a distinctive jurisprudence, are ultimately the result of underlying political forces.[26] International regimes are created by states to address particular issues perceived as being poorly regulated by general public international law and, as a consequence, they reflect distinctive policy agendas. It is therefore to be expected that in performing their mandate specialised courts and tribunals will adhere to interpretations of rules of international law that satisfy the regulatory needs of the regimes in which they operate.[27] Koskenniemi and Leino describe this process as part of a broader dynamic: a 'hegemonic struggle' in which each court or tribunal seeks to have its own particular perspective regarded as the preferable general approach.[28]

That this 'struggle' appears as a central storyline in the narrative of international law's expansion and diversification does not mean that it is always desirable. In the context of international environmental law this is because there is an absence of a counterweight to powerful institutions driving normative change in non-environmental arenas. International environmental dispute settlement is increasingly dominated by issue-specific, judicial bodies called upon to determine essentially environmental disputes, often essentially by default.[29] It is certainly the case that efforts have been made to improve the environmental specialisation of existing bodies with general jurisdiction such as the Permanent Court of Arbitration[30] and the ICJ.[31] And it must also be acknowledged that quasi-judicial bodies such as non-compliance procedures (NCPs) have been established within a growing number of environmental regimes.[32] However, these institutions have not, and arguably cannot ever, be more influential curial protagonists. The ICJ's Chamber for Environmental Matters has, for instance, never been used, and in any event possesses no specific environmental jurisdiction differing from the court in plenary. Moreover, NCPs operating within several environmental regimes cannot properly be regarded as international judicial bodies, having an influence upon the development of international environmental law.[33] In sum, there is no established international environmental jurisdiction, much as there is no global environmental organisation.[34]

On the one hand the reality that much contemporary environmental litigation is channelled through non-

environmental institutions presents an opportunity for environmental concerns to be integrated and mainstreamed within the decisions of specialised tribunals, and therefore within the specific areas of law administered by those bodies. Yet, as suggested above, it is also possible that these bodies will develop approaches to rules and principles of international environmental law that challenge their original objects and purposes.[35] By appealing to a conception of international law as a value-neutral normative order, issue-specific judicial bodies could thereby effect a gradual shift in the substantive meaning of rules of international environmental law, and thereby undermine its importance as a particular agenda or project for global action to address environmental problems.

II. The Project of International Environmental Law

In a little over 30 years international environmental law has evolved from protean origins into an identifiable body of law regulating many dimensions of human/nature relations.[36] Its genesis as a discipline can be traced to general rules of public international law adapted and applied to address environmental problems such as transboundary air pollution.[37] However, from the 1960s onwards a range of regional and sectoral regimes were developed to address specific environmental issues, principally those relating to marine and atmospheric pollution. These initiatives were initially piecemeal and ad hoc and it was only in 1972, following the adoption of the Declaration of the United Nations Conference on the Human Environment[38] (Stockholm Declaration), that it became possible to speak of the emergence of a distinctive 'international environmental law'.

Although largely aspirational in character, the Stockholm Declaration was a landmark developmental step, articulating a set of basic principles to guide the progressive evolution of international environmental law, a process that intensified and accelerated following the Stockholm Conference as new conventions were concluded,[39] soft-law instruments were endorsed,[40] and the World Commission on Environment and Development completed its work.[41] These developments culminated in the 1992 United Nations Conference on Environment and Development (UNCED), which adopted the UN Declaration on Environment and Development[42] (Rio Declaration), several multilateral environmental agreements,[43] and Agenda 21,[44] which set out a program of action to address global environmental challenges in the twenty-first century. Both the Stockholm Declaration and the Rio Declaration were important texts in the articulation of mainstream ideas about sustainable development.[45] Indeed the soft- and hard-law instruments concluded at UNCED continue to provide the main legal and policy direction for international environmental law,[46] which has since developed further apace, principally through a range of multilateral agreements. These are characterised by an increasing sophistication, both in terms of the standards that are prescribed and the institutional structures established for monitoring implementation and promoting compliance.

In light of these developments there has been much debate concerning whether 'international environmental law' is indeed a sub-discipline of international law or whether it is no more than the sum of those rules of public and private international law relevant to environmental issues.[47] While it is beyond question that many rules of international law have some application in the environmental field, or have been developed over time having regard to environmental concerns,[48] it is also possible to discern, in two related trends, the evolution of a distinctive corpus of international environmental law.[49]

(a) Environmental principles

The first of these is the emergence of fundamental environmental principles that shape and constitute international environmental law. These principles share close company in a manner not dissimilar to the relationship between the 'maxims of equity' known to some common law legal systems.[50] Equitable notions such as 'he or she who seeks equity must do equity' and 'equity is equality' stand in association with one another much as the precautionary principle[51] or approach can be said to be a specific component of the broader concept of environmentally sustainable development.[52] And maxims of equity exert an influence upon the application of discrete equitable rules in a similar way as environmental principles guide decision-makers in implementing environmental regulations at both national and international levels.

In addition to sustainable development and the precautionary principle/approach it is possible to identify at

least five other environmental principles that have attracted broad acceptance:[53]

• that states possess permanent sovereignty over their natural resources but also the responsibility to ensure that they do not cause transboundary damage,

• the principle of preventive action,

• the principle of co-operation,

• the polluter-pays principle, and

• the principle of common but differentiated responsibility.

These principles are an important legacy of the 'soft-law' origins of the discipline.[54] Determining appropriate limits to the exploitation of natural resources, or imposing limitations upon development activities to preserve species or ecosystems, inevitably involves contentious political choices. In this context the notion that states might agree to a non-binding or imprecise standard has obvious attractions as it permits some agreement on environmental protection without appearing to limit state autonomy. An environmental principle therefore involves some degree of normativity, but does not necessarily bear all the hallmarks of a legal rule[55] (although they may eventually acquire such status).

Environmental principles provide international environmental law with an ethical basis,[56] a conceptual structure and a distinctive vocabulary. Among other things they seek to explain why and how the natural environment should be valued, how efforts at resource conservation and ecosystem protection should be pursued, and how environmental values should be balanced against other objectives pursued by the international community. In expressing environmental policy perspectives and goals these principles also provide focal points for ongoing dialogue and debate in the international community over how best to achieve them. As the principles are relatively open-textured they are amenable to adaptation and transformation through this process. Nowhere is this more evident than in debates concerning the meaning and importance of the 'precautionary principle'. Various arguments have been made as to whether it should be understood as a 'principle' or merely as an 'approach' and, more concretely, whether it only prevents scientific uncertainty from being used as a justification for environmentally damaging activities, or instead mandates the taking of positive steps to protect the environment whenever there is a chance that ecosystems are threatened.[57]

Much has been written concerning the customary status of environmental principles. In the *Nuclear Weapons Advisory Opinion*[58] the ICJ recognised what had been widely accepted for some time, namely that the first of these principles had crystallised as a rule of customary law.[59] Analysis of the binding status of other environmental principles, particularly those of sustainable development and precaution,[60] continues. The latter has been repeatedly referred to and relied upon by the Court of Justice of the European Communities (ECJ).[61] However, other international courts have not cited or endorsed the precautionary principle with the same enthusiasm. In the *Gabčíkovo-Nagymaros Case* the ICJ made only passing reference to the importance of 'vigilance and prevention' in the field of environmental protection.[62] Similarly, ITLOS has avoided express reference to the precautionary principle or approach, but has instead articulated the notion of 'prudence and caution'[63] and so charted a diplomatic course through a politically-charged debate.[64] The WTO Appellate Body in *European Communities: Measures Concerning Meat and Meat Products* (*Hormones*)[65] also declined to state any view as to the status of the precautionary principle, preferring instead to resolve the issues of risk management by reference to WTO rules.

It must be recognised that, regardless of their status as binding legal rules, environmental principles have influenced the development of environmental law and policy at both national and international levels.[66] They have been incorporated in international agreements[67] and national legislation,[68] and have been considered and applied by national courts and tribunals.[69] They have also informed international judicial decision-making even where there has been no confirmation as to their precise legal status. For instance the principle of sustainable development was not expressly accepted in the *Gabčíkovo-Nagymaros Case* to constitute a legal rule,[70] but it nonetheless provided the court with an essential frame of reference to balance the competing environmental and developmental considerations at issue between the parties. Pointing to its ambiguity and multidimensional character, Lowe notes that sustainable development possesses insufficient

normative character to qualify as a rule of customary international law. Nonetheless, he argues, it does have a considerable degree of influence as a principle existing in the interstices of the international legal order, and can help judicial bodies reconcile competing rules of law in contentious cases.[71]

(b) The advent of technical and regulatory standards and regimes

A second distinguishing feature of contemporary international environmental law is its increasingly bureaucratic character. There are now over a thousand treaties, conventions and other international legal instruments incorporating provisions concerned with some aspect of environmental protection.[72] While some early texts often do no more than espouse broad principles,[73] the discernible trend in recent practice has been towards highly detailed and technical regimes that include procedures and institutions for monitoring implementation and for setting detailed regulatory standards. Sand and Contini correctly predicted as early as 1972 that such 'ecostandards'[74] would emerge as an alternative to traditional environmental treaty-making.

The efforts of the international community to address stratospheric ozone depletion caused by chlorofluorocarbons, and other substances, is one important example of this shift. The Convention for the Protection of the Ozone Layer,[75] provides no more than a framework, encouraging states to take 'appropriate measures' to address ozone depletion. However, it was the basis for the conclusion of the Montreal Protocol, which specifies precise rules concerning reductions in the consumption, production and trade of ozone-depleting substances, and couples this with a non-compliance procedure for continued supervision of the regime. Since its adoption the Montreal Protocol has been finessed at several meetings of the parties, and the regime has thereby acquired even greater reach and complexity.

These and other technical mechanisms rely heavily upon the expertise of government officials, of treaty institutions such as scientific committees, and of broader 'epistemic communities'[76] of experts who often play a key role in identifying and drawing political attention to environmental problems.[77] This advent of a specialised and technical international environmental law, implemented and monitored by an emerging environmental technocracy,[78] has implications for the relationship between environmental norms and other areas of international law. It cannot be said that this renders environmental law a hermetically-sealed normative order only capable of being interpreted and implemented by a narrow class of environmental technician. Nonetheless, an important consequence of this process of legal specialisation is that in the interaction with non-environmental regimes the institutions of the latter ought to take seriously the context in which environmental law has been developed and is now administered.

III. The Application of International Environmental Law in Specialised Courts and Tribunals

As international environmental law encounters other fields of law, environmental issues have begun to be considered in the institutions of non-environmental regimes, and this has been particularly evident in the context of the human rights and trade-dispute settlement systems. The purpose of this section is not to rehearse debates concerning whether international environmental norms should or should not prevail over other rules or principles of law applied by these specialised bodies. The task is a narrower, but no less important one, and examines the ways in which non-environmental jurisdictions have used rules and principles of international environmental law in their decision-making. In the specific context of human rights and trade jurisprudence it seeks to answer one central question: where they are relevant to the dispute at hand, have environmental norms been faithfully recited and applied?

(a) Human rights and the environment: the environmental jurisprudence of human rights bodies

(i) Human rights and environmental protection

The relationship between international environmental norms and human rights continues to generate tension and uncertainty. Although there have been repeated calls for greater integration of these two fields of law,[79] a right to a clean, healthy and safe environment has not been included in global human rights instruments.[80]

Nor have such substantive environmental rights been codified in international environmental agreements.[81] Both of these potential developments have been resisted on the grounds that human rights approaches to environmental protection are essentially anthropocentric, and cannot accommodate the notion that animals and nature possess intrinsic and not merely instrumental value.[82] Reflecting the present reluctance of the international community to adopt a human rights approach to environmental protection, the Rio Declaration conspicuously avoided any reference to a human right to a healthy environment.[83] This was in contrast to the Stockholm Declaration, which had declared in Principle 1 that 'Man has the fundamental right to freedom, equality and adequate conditions of life in an environment of a quality that permits a life of dignity and well-being.'[84]

(ii) The jurisprudence

Human rights and environmental regimes have therefore existed somewhat in isolation from one another. However, there have been increasing points of interaction, particularly in the operation of human rights complaints procedures operating within and outside the United Nations system.

Notwithstanding the lack of any express environmental rights in human rights texts, global and regional human rights bodies including the Human Rights Committee, the European Court of Human Rights (ECtHR), the European Commission on Human Rights (EComHR) and the Inter-American Commission on Human Rights (IAComHR) are confronting a growing number of environmental cases. This is mainly because they offer the only international procedures for individuals to challenge governmental action or inaction in relation to environmental matters.[85] As a result, these bodies have begun to develop an important body of environment-related human rights jurisprudence. The human rights that have been invoked include both procedural rights (such as rights to information, participation and legal redress) and substantial guarantees (such as rights to life, health and enjoyment of property). It is convenient to consider each of these two categories of case in turn.

(iii) Procedural human rights

As has been noted, attempts to advance the cause of environmental protection through substantive human rights, such as a right to an 'adequate', 'decent' or 'healthy' environment, have met strong resistance for philosophical reasons. In contrast, few such difficulties have emerged in the context of civil and political rights of a procedural character. This is mainly because enhancing respect for such rights can help promote broader and more meaningful participation in processes of environmental governance.

Both environmental agreements and human rights texts include reference to three specific procedural guarantees: a right to obtain information, to participate in decision-making and to be an effective remedy for breaches of the law. Principle 10 of the Rio Declaration declared that 'environmental issues are best handled with the participation of all concerned citizens', that each individual 'shall have appropriate access to information concerning the environment', and that there be 'effective access to judicial and administrative proceedings, including redress and remedy.'[86] The most expansive statement of these three procedural rights is now found in the Aarhus Convention. This Convention, the first to guarantee such rights in a legally binding environmental instrument, requires not only that states implement these rights at a national level,[87] but also that they promote their application in international environmental decision-making processes.[88] Expressed in more general terms, such civil and political rights also form an important part of human rights instruments, and their operation in relation to environmental matters has been considered in a growing collection of cases.

The right to environmental information has generally been construed narrowly by human rights bodies. In *Guerra and Others v Italy*[89] the ECtHR considered the effect of article 10 of the Convention for the Protection of Human Rights and Fundamental Freedoms,[90] which guarantees 'the freedom to receive information'. The applicants asserted that the Italian government had violated the provision by failing to provide the public with information concerning the risks of operation of a chemical facility near the town of Manfredonia in southern Italy. Concluding that there was no breach in this instance, the Court held that article 10 did not impose a positive obligation to collect and disseminate information, but instead only prohibited governments from interfering with the freedom to receive information that others are willing to impart.[91] Just

such a prohibited interference was found to have taken place in *Bladet Tromsø and Stensaas v Norway*[92] after Norwegian defamation law prevented the publication of a newspaper report claiming that the government was aware of inhumane seal hunting practices. It may be noted here that international environmental law is developing a somewhat broader approach to informational rights. The Aarhus Convention imposes, in articles 4 and 5, obligations upon parties to provide access to environmental information, and to that end to collect and disseminate relevant information. However, other instruments are not as expansive. For instance, as the Permanent Court of Arbitration held in the OSPAR Arbitration,[93] the Convention for the Protection of the Marine Environment of the North-East Atlantic[94] cannot be seen to establish a general freedom of information scheme as known to some domestic legal systems.[95]

Turning from informational to participatory rights, it is striking that human rights and environmental texts refer to the similar basic requirement that individuals have an opportunity to participate meaningfully in government.[96] The IAComHR has recognised that participatory rights contained in the American Convention on Human Rights (ACHR)[97] extend to include involvement in decision-making on environmental matters. In its report on the human rights situation of indigenous peoples living in the interior of Ecuador affected by development activities, the IAComHR observed that article 23 of the ACHR, which provides that all persons enjoy a right 'to take part in the conduct of public affairs', implicated a right 'to participate, individually and jointly, in the formulation of decisions which directly concern their environment'.[98] The Commission concluded that '[t]he quest to guard against environmental conditions which threaten human health requires that individuals have access to: information, participation in relevant decision-making processes, and judicial recourse.'[99] Ecuador was encouraged to take additional steps to ensure that these rights could be enjoyed. Although applicable only to participatory rights in relation to a human rights treaty, the Commission's conclusion would appear entirely consistent with the approach taken in environmental texts, including the Aarhus Convention.

A civil right that has often engaged the attention of human rights bodies in cases involving environmental issues is the guarantee of effective administrative or judicial remedies. The International Covenant on Civil and Political Rights (ICCPR) requires states to ensure that persons whose rights are violated have access to an effective remedy, to be determined by competent judicial, administrative or legislative authorities.[100] Article 6 of the European Convention on Human Rights (ECHR)[101] is narrower; it provides only that in the determination of civil rights or criminal charges individuals are entitled to a fair and public hearing. However, it has been frequently relied upon by applicants asserting a failure to provide an adequate judicial hearing of disputes concerning matters such as the granting of permits to carry out activities affecting the environment.[102]

It has been made clear that article 6 can only have an application where an interest of the applicants has, or may be, directly affected. In *Balmer-Schafroth and Others v Switzerland*[103] the applicants who lived nearby a nuclear power station complained that they had been denied a hearing in relation to the government's renewal of an operating permit for the plant. The ECtHR accepted that there was a genuine and serious dispute between the applicants and the Swiss government over a right recognised under domestic law, that of 'physical integrity'. However, the complaint was ultimately rejected by the Court on the grounds that the applicants had failed 'to establish a direct link between the operating conditions of the power station … and their right to protection of their physical integrity'.[104] According to the majority, the applicants had not shown that the operation of the power plant exposed them to danger that was serious, specific and, above all, imminent.[105] And in the absence of such a finding 'neither the dangers nor the remedies were established with a degree of probability that made the outcome of the proceedings directly decisive'.[106] In a dissenting opinion seven judges criticised this conclusion on the grounds that it ran counter to rules and principles of international environmental law, including the precautionary principle, although it was not explained in detail how these principles mandated a different result in this instance.[107] Nonetheless, the dissenting opinion does highlight the way in which the majority carefully framed the dispute so that it could be resolved solely on the basis of procedural rights contained in the ECHR, rather than requiring the application of substantive norms of international environmental law.

(iv) Substantive human rights

Complainants to human rights bodies have made a range of innovative arguments in an effort to pursue remedies for environmental damage by reference to established rights including the right to life, the right to health, the right to respect for private life and home, and the right to peaceful enjoyment of possessions. The following discussion considers the key human rights cases in which such submissions have been made, and assesses the extent to which these have involved intersections with international environmental law.

Although the right to life has been invoked in a number of petitions, most of these have been found to be inadmissible on the grounds that the applicants had not pointed to a real and imminent threat to life.[108] There are some exceptions. In *Yanomami v Brazil*[109] the IAComHR found that Brazil had violated the rights to life and health of a group of indigenous people, the Yanomami. These violations resulted from a variety of factors, including the construction of a highway through Yanomami territory, the failure to establish a promised Yanomami Park, the authorisation of resource exploitation, and allowing the penetration of Yanomami lands by outsiders carrying contagious diseases.

Another stark violation of the right to life as a result of environmental mismanagement was considered by the ECtHR in *Öneryildiz v Turkey*.[110] Nine members of the applicant's family had perished when their home, located in a slum quarter of Istanbul, was buried by a landslide of refuse from a nearby rubbish tip as the result of a massive methane gas explosion. Civil and criminal proceedings were instigated against several individuals in local government who had failed to take preventive measures in the face of warnings from an expert consultant that precisely such an explosion would occur. However, no criminal sanctions were ultimately imposed by the Turkish courts, and in civil proceedings the applicant was awarded only a small sum in damages.

In the ECtHR it was held that there had been a breach of the right to life. The Court developed its reasons by reference to European and international environmental law relating to civil and criminal liability including the Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment.[111] It concluded that article 2(1) of the ECHR 'enjoins the State not only to refrain from the intentional and unlawful taking of life, but also guarantees the right to life in general terms and, in certain well-defined circumstances, imposes an obligation on States to take appropriate steps to safeguard the lives of those within their jurisdiction'.[112] The Court noted that it was clear that a violation of the right to life 'can be envisaged in relation to environmental issues'.[113]

In the European human rights system the substantive right that has proven to offer the most promising avenue for environment-focused human rights litigation is article 8(1) of the ECHR, which provides that '[e]veryone has the right to respect for his private and family life, his home and his correspondence.' This guarantee is subject to several important qualifications in article 8(2), which permits interference with the exercise of this right if in the interests, among other things, of 'the economic well-being of the country'. The right has often been relied upon in tandem with article 1 of the Protocol to the Convention for the Protection of Human Rights and Fundamental Freedoms[114] which states that 'every natural or legal person is entitled to the peaceful enjoyment of his possessions'.

Cases brought in reliance on these two provisions are in many respects akin to common law actions for private nuisance. Much as common law nuisance involves striking a balance between conflicting private property interests,[115] these human rights cases have often attempted to balance the interests of individuals in the quiet enjoyment of their property against broader community interests such as economic development. In finding for complainants affected by noise and other forms of pollution they have nonetheless promoted a degree of incidental environmental protection.

Most cases involving article 8 of the ECHR have related to noise pollution. In *Powell and Rayner v United Kingdom*[116] the ECtHR concluded that although the applicants' properties were adversely affected by noise emanating from aircraft arriving or departing from Heathrow Airport, there was no violation of article 8. The Court observed that 'regard must be had to the fair balance that has to be struck between the competing interests of the individual and of the community as a whole'[117] and that the United Kingdom 'enjoys a certain margin of appreciation in determining the steps to be taken to ensure compliance with the Convention'.[118] Highly relevant here was the economic importance of Heathrow Airport to the United Kingdom's economy.[119]

Lopez-Ostra v Spain[120] is arguably the most important decision of the ECtHR relating to environmental

harm violating the right to private life and the home, and involved a major pollution incident. In this case the applicant had brought a petition before the Court after suffering serious health effects from fumes emitted from a tannery waste-treatment plant located just 12 metres from her home. The start-up of the plant had emitted noxious fumes causing health problems for a number of local residents, and as a result the town council evacuated those affected, including the applicant, and rehoused them free of charge in the town centre. The authorities also ordered a partial closure of the plant, but permitted certain waste-treatment activities to continue.

The applicant's claim in the ECtHR related to the failure of the municipality to respond adequately to the pollution emanating from the plant. The Court observed that:

> [S]evere environmental pollution may affect individual's well-being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely, without, however, seriously endangering their health.
>
> [In determining whether there has been compliance with Article 8] regard must be had to the fair balance that has to be struck between the competing interests of the individual and of the community as a whole, and in any case the State enjoys a certain margin of appreciation.[121]

Having regard to the limited efforts by the authorities to mitigate the pollution problem, and despite the margin of appreciation open to them, Spain had not succeeded in striking a fair balance between the interest of the town's economic well-being and the applicant's effective enjoyment of her right to respect for her home and family life.[122]

A similar conclusion was arrived at by the Court in *Guerra* in which the ECtHR reiterated that environmental pollution may violate article 8 by affecting the well-being of individuals and preventing them from enjoying their homes. The ECtHR observed that article 8 does not merely prohibit member states arbitrarily interfering with a person's private or family life, it also imposes a positive obligation that is inherent in effective respect for private or family life.[123] In this case involving pollution from a chemical factory, the Court found a violation of article 8 on the basis that local authorities took inadequate steps to protect the applicants' right to respect for their private and family life, and awarded compensation. However, the compensation that the applicants sought for biological damage was refused, a result that perhaps confirms that existing human rights, focused as they are on human wellbeing, offer only indirect protection of environmental interests.

(v) Evaluation

This overview of the developing environmental jurisprudence of human rights bodies suggests no collision or conflict with mainstream environmental jurisprudence, or any challenge to conventional understandings of rules and principles of international environmental law. In the majority of cases there has been no detailed consideration or application of environmental norms, and when international environmental law has been referred to it has been in broad and uncontroversial terms. Therefore, in addressing environmental questions through the specific terminology of international human rights law it would seem that the case law of human rights bodies has as yet posed no threat to the integrity of international environmental law. Indeed, given the synergies between procedural rights in both the human rights and environmental contexts, determinations on issues such as access to information, participation in decision-making, and right to legal redress for injury, form an important body of precedent for the implementation of similar rights recognised in environmental law. These decisions will be of considerable assistance in understanding and applying the detailed provisions of the Aarhus Convention as states begin to implement its provisions at national and international levels.

It should not be thought, however, that the relationship between human rights guarantees and international environmental law is necessarily unproblematic. The absence to date of conflict, or any tendency towards fragmentation, is largely reflective of the nature of the complaints that have been brought. It has been seen that complainants have pointed to substantive human rights that assist them in addressing underlying environmental interests. However, it is possible to envisage conflicting scenarios in which the recognition of economic, cultural or social rights may involve collision with norms requiring the protection of environments, ecosystems or species. A state policy to impose restrictions upon human activities in a protected area may well, for instance, attract opposition by an indigenous community having an historical connection with that area on the grounds that such limitations constituted an infringement of cultural rights, or perhaps even the

'right to development'.[124] In the *Gabčikovo-Nagymaros Case* Judge Weeramantry suggested that the rise of the concept of 'sustainable development' had achieved a reconciliation between 'the right to development' and the 'right to environment'.[125] However, it is by no means clear that in concrete cases these twin goals can be convincingly united in the same normative framework. When competing rights are in issue, priorities will need to be set and trade-offs made, and such a process may pose some risk of normative fragmentation for international environmental law.

(b) Trade and Environment: The Environmental Jurisprudence of the WTO

Whereas much discussion of the relationship between human rights and environmental protection has involved reference to several important synergies, the overwhelming impression emerging from assessments of the interaction between international trade and environmental regimes is that problems of underlying tension and conflict pertain much more prominently than any systemic complementarity.

(i) Trade law and environmental protection

By virtue of its breadth and its institutional sophistication, international trade law has far-reaching implications for environmental governance at the domestic and international levels. The increase in global trade, a key dimension of economic globalisation, has inevitably meant that some domestic and international measures to protect human health or the natural environment carries ramifications for international trade law.

The most fundamental issue arising from this interaction is whether trade and environmental policies are mutually supportive,[126] or whether the liberalisation of trade is inimical to environmental conservation and protection.[127] The evidence in this respect is mixed. Trade liberalisation may have negative environmental effects by, among other things, creating incentives for industry to move production to states with poor environmental standards (the so-called 'race to the bottom').[128] However, it can also have positive consequences by providing poorer nations with the material capacity to implement environmental policies, [129] and by mandating the removal of subsidies to uneconomic and ecologically unsustainable agricultural or fisheries industries.[130]

This debate concerning the compatibility of the trade and environment agendas has been particularly prominent in international law. Notwithstanding the attempt to integrate the agendas through the principle of sustainable development,[131] a range of questions continue to be raised concerning the extent to which there is conflict or congruence between the trade law and environmental law. These issues have been elevated to particular prominence in the operation of dispute settlement bodies established by trade regimes including the North American Free Trade Agreement (NAFTA) and the WTO. As Notaro observes, 'the judiciary has been charged with the task of finding a way out of the trade and environment impasse, in part due to the contentious character of the disputes at issue and in part due to the absence of practicable alternatives'.[132] However, a recurrent criticism has been that in seeking to address this 'impasse' the dispute settlement bodies of trade regimes have exhibited a strong bias towards trade liberalisation at the expense of sound environmental management.[133] This has been thought to be a concern from the perspective of fragmentation, because the WTO in particular is the source of 'a rapidly developing jurisprudence that is unequalled in other international regimes'.[134]

(ii) The environmental jurisprudence of the WTO

The WTO was established in 1995,[135] providing an institutional superstructure for the international trade rules that had developed out of the General Agreement on Tariffs and Trade (GATT) [136] agreed at the end of the Second World War.[137] Integral to the WTO is a compulsory and binding system of dispute settlement established by the Understanding on Rules and Procedures Governing the Settlement of Disputes.[138] Under this procedure WTO members may initiate consultations and, should they fail, request the establishment of a Panel.[139] Appeals against Panel reports may thereafter be brought before a standing Appellate Body.[140] Unlike the previous ad hoc GATT panel system, the decisions of WTO Panels and the Appellate Body are adopted automatically and are therefore binding unless the WTO Dispute Settlement Body decides against

adoption by consensus.[141]

Since it commenced operation on 1 January 1995, over 335 complaints have been notified to the WTO, with over 100 Panel and Appellate Body reports adopted.[142] By any measure this dispute settlement system has been amongst the most active and has been vital to the development and consolidation of the WTO regime.[143] The system has also encountered environmental issues, with a number of disputes involving essentially environmental questions being brought before GATT panels and the WTO. This has in turn implicated environmental rules and standards. While the WTO dispute system may only be used to resolve disputes relating to WTO rules,[144] it is not a closed or self-contained regime. WTO Panels and the Appellate Body are required by article 3(2) of the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU)[145] to interpret the covered agreements by reference to 'customary rules of interpretation of public international law'. In *United States: Standards for Reformulated and Conventional Gasoline*[146] (*Gasoline*) the Appellate Body stated that this meant that WTO agreements could not be read 'in clinical isolation from public international law'.[147] However, as will now be seen, rules and principles of international environmental law may be relevant in WTO disputes for more than merely interpretive purposes.

(iii) Cases concerning the GATT environmental exemptions

The starting point for any analysis of the impact of WTO jurisprudence upon international environmental law is the substantial case law that deals with the so-called 'environmental exemptions' to the GATT. The key organising principles of the WTO system are the most-favoured nation principle,[148] and the national treatment principle.[149] Together they limit the circumstances in which states may impose trade restrictive measures. However, they are subject to article XX of the GATT, which sets out certain limited exceptions for health and environmental measures:

> Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:
> …
> (b) necessary to protect human, animal or plant life or health;
> …
> (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.[150]

(iv) The Tuna-Dolphin Cases

United States: Restrictions on Imports of Tuna[151] (*Tuna-Dolphin I*) and *United States: Restrictions on Imports of Tuna*[152] (*Tuna-Dolphin II*) were important early cases that considered the scope of these exemptions.

The cases were brought under the GATT panel system in response to restrictions imposed by the United States on imports of yellowfin tuna harvested in a manner that resulted in excessive by-catch of dolphins in the Eastern Tropical Pacific Ocean. Under the Marine Mammal Protection Act 1972 (US) (MMPA) tuna imports were prohibited unless the harvesting states maintained a program to reduce incidental taking of marine mammals comparable with that of the United States, and unless the average rate of such incidental taking was similar to that for United States-flagged vessels engaged in tuna fishing. Imports were also prohibited from intermediary nations that processed tuna that had not been caught in conformity with MMPA standards.

In both *Tuna-Dolphin I* and *Tuna Dolphin II*, GATT Panels rejected the arguments of the United States that the import bans were justified under article XX(b) of the GATT as measures necessary to protect animal life. The decisions attracted strong criticism on the grounds that they privileged trade considerations over legitimate efforts to achieve the protection of marine wildlife.[153] The Panels had adopted a narrow interpretation of article XX and had decisively rejected the legality of using domestic measures for an extraterritorial purpose,

namely to affect the environmental policies of other states. However, when considering the impact of these decisions upon international environmental law it must be noted that in neither case did the United States seek to make arguments beyond the terms of the GATT itself. Beyond suggesting that trade measures pursuant to a multilateral agreement to protect cetaceans would be GATT-consistent[154] the Panels made no reference to environmental instruments potentially having a bearing on the cases.[155]

(v) The Shrimp-Turtle Cases

The environmental case law of the WTO was inaugurated in *Gasoline* but again it was not deemed necessary to address issues of international environmental law when rejecting the WTO-consistency of United States gasoline standards designed to improve air quality. A markedly different approach was taken in *United States: Import Prohibition of Certain Shrimp and Shrimp Products* (*Shrimp-Turtle I*),[156] a decision that has been widely regarded as evidencing the greening of GATT/WTO jurisprudence.[157]

The issue in *Shrimp-Turtle I* was similar to that confronted in the *Tuna-Dolphin Cases*. In conformity with the Endangered Species Act 1973 (US), the United States government imposed a prohibition on the import of shrimp harvested using methods that involved high rates of mortality for species of sea turtle protected by CITES.[158] The ban applied to all imports of shrimp unless from certified nations and certification was only forthcoming for nations harvesting shrimp in sea turtle habitats where it was established that Turtle Excluder Devices or other preventative measures were used.

The United States trade measure was challenged by India, Malaysia, Pakistan and Thailand on the basis that it was inconsistent with articles I, XI and XIII of the GATT and not justified as a permissible measure to protect animal life under article XX. The complainants were ultimately successful, with a Panel finding that the import ban was inconsistent with WTO rules and that article XX did not apply.[159] On appeal, the Appellate Body also upheld the earlier result. However, it effectively reversed the rationale for this conclusion, thereby opening the door for unilateral environmental measures in certain circumstances. Indeed there is much that is significant about the Appellate Body report for national and transnational environmental management.[160] Not only did the Appellate Body find that *amicus curiae* submissions from environmental groups could be considered in the WTO dispute-settlement process, it also developed a more flexible interpretation of article XX environmental exemptions having regard to developments in international environmental law.

The Appellate Body adopted a two-stage test for determining whether the measures adopted by the United States were justified under article XX. In the first place it asked whether the measure fitted specifically within article XX(g) by relating to the 'conservation of exhaustible natural resources'. If so, the second stage involved determining whether the measure met the requirements of the article XX chapeau in not being applied in a manner that would constitute unjustifiable discrimination or a disguised restriction on international trade.[161] In applying both stages of this test the Appellate Body referred to international environmental law.

International environmental law was also relevant to a threshold question for the Appellate Body, namely whether sea turtles could be considered 'exhaustible natural resources' within the meaning of article XX(g) of the GATT. Having regard to the need to interpret the GATT 'in light of contemporary concerns of the community of nations about the protection and conservation of the environment'[162] the Appellate Body held that sea turtles were indeed 'exhaustible natural resources' just as much as any non-living 'resource'.[163] The Appellate Body reached this conclusion by reference to the concept of sustainable development included in the first recital of the Preamble to the WTO Agreement.[164] Also considered relevant to a contemporary interpretation of the term 'natural resources' were references to 'living natural resources' in the UNCLOS,[165] the Biodiversity Convention,[166] Agenda 21, and the Bonn Convention.[167] For the Appellate Body all of these instruments confirmed that 'it was too late in the day to suppose that Article XX(g) of the GATT may be read as referring only to the conservation of exhaustible mineral or other non-living natural resources'.[168] The Appellate Body also referred to the fact that as all sea turtles were listed as endangered under CITES, they must therefore be considered 'exhaustible' under article XX(g) of the GATT.[169]

After determining this initial issue it was then evident that the United States' trade measure was one 'relating to' the conservation of sea turtles,[170] and the Appellate Body turned to consider whether the 'provisionally

justified' import ban was consistent with the requirements of the chapeau to article XX. The Appellate Body found against the United States on this point, concluding that the measure was 'a means or arbitrary or unjustifiable discrimination' within the meaning of the chapeau. In reaching this conclusion the principle of sustainable development was cited yet again, in order to give 'colour, texture and shading' to an interpretation of article XX. Precisely how the concept had relevance here was not explained, but there appeared to be nothing controversial about the Appellate Body's interpretation of the principle, which it achieved by reference to the Rio Declaration and Agenda 21.

According to the Appellate Body it was not acceptable for the United States to have adopted measures that prohibited imports from some countries where shrimp were caught using the same turtle-friendly methods employed in the United States simply because those countries had not been certified.[171] Moreover, the United States had failed to engage members exporting shrimp to the United States 'in serious, across-the-board negotiations with the objective of concluding bilateral or multilateral agreements for the protection and conservation of sea turtles, before enforcing the import prohibition'.[172] The Appellate Body observed that 'the protection and conservation of highly migratory species of sea turtles … demands concerted and cooperative efforts on the part of the many countries whose waters are traversed in the course of recurrent sea turtle migrations'[173] and to this end referred to the Rio Declaration, Agenda 21 and the Biodiversity Convention all of which declare that unilateral actions to protect the environment should generally be avoided and that multilateral environmental measures should, as far as possible, be preferred.[174] The Appellate Body therefore strongly emphasised the need for states to attempt a cooperative, multilateral, solution to environmental problems, an emphasis that is consistent with the notion of co-operation, which underpins many aspects of international environmental law.[175] In this case the United States had led negotiations on a regional agreement for the protection and conservation of sea turtles, a fact that demonstrated that an alternative course of action was reasonably open to the United States to secure the legitimate objective of sea turtle conservation.[176] However, while the United States had negotiated seriously with some members, it had not done the same with others, and according to the Appellate Body the effect was therefore plainly discriminatory and unjustifiable.

The follow-up case of *United States: Import Prohibition of Certain Shrimp and Shrimp Products* (*Shrimp-Turtle II*)[177] was brought by Malaysia, one of the original complainants in *Shrimp-Turtle I*, under article 21.5 of the DSU.[178] Malaysia argued that the United States had not taken WTO-consistent measures to implement the Appellate Body report in *Shrimp-Turtle I*; however, a Panel and the Appellate Body disagreed. The main significance of this case is the ultimate finding that temporary measures imposed by the United States were permissible pending international agreement on sea turtle conservation. To justify this conclusion the Appellate Body referred to principle 12 of the Rio Declaration, which states that environmental measures should only be based upon consensus and co-operation as far as this is possible. The United States was therefore permitted to apply a unilateral measure so long as it continued to negotiate an internationally-agreed action-plan to improve the protection of endangered sea turtles.

The Appellate Body's use of international environmental law in *Shrimp-Turtle I* and *Shrimp-Turtle II* has not gone without criticism, although this has not involved critique of the Appellate Body's interpretation of international environmental law so much as its use in supposed derogation of WTO rules. For instance Triggs is critical of the 'judicial creativity' of the Appellate Body and notes that '[f]or the developing nations of Asia … the outcomes of the *Shrimp Case* may prove to be the harbinger of new interpretations of WTO rules that could be to their economic disadvantage.'[179] However, a close examination of the Appellate Body's reasons suggests that it turned to international environmental law only to the extent that it was necessary to make sense of the GATT in light of the concern of many states, including the complainants, that a threatened species of marine wildlife receive appropriate and effective international legal protection.

No article XX case before or after the *Shrimp-Turtle Cases* has engaged in the same detailed consideration as to the relevance of international environmental law to the interpretation and application of the GATT.[180] Nor has any other case involved reliance by a respondent state upon a multilateral environmental agreement. The only dispute in which the prospects of such reliance has so far emerged was *Chile: Measures Affecting the Transit and Importation of Swordfish*[181] in which Chile justified closing its ports to Spanish vessels on the basis of UNCLOS, which it was said required it to take measures to protect a straddling fishery under threat of collapse. The dispute, which also involved the commencement of parallel proceedings under the UNCLOS dispute settlement system,[182] was ultimately settled.[183]

(vi) Cases concerning sanitary and phytosanitary measures

The second main category of trade/environment disputes in the WTO are those under the rubric of the Sanitary and Phytosanitary Agreement[184] (SPS Agreement), which regulates the extent to which states may impose quarantine restrictions and other measures to safeguard animal and plant health.[185]

The SPS Agreement is perhaps the WTO agreement most closely situated at the intersection between free trade and environmental protection agendas, and in respect of sanitary and phytosanitary (SPS) measures it elucidates upon the general environmental exemption contained in article XX(b) of the GATT.[186] Member states are permitted to take their own decisions concerning SPS measures.[187] However, if these have the effect of limiting imports they are only permissible if supported by scientific investigation[188] and a rigorous risk assessment. Under no circumstances may they be disguised attempts at protectionism or discrimination.

Disputes over the interpretation and application of these provisions are a burgeoning area of environment-related litigation in the WTO and there is the potential for a range of issues of international environmental law to be implicated in their resolution. Most obvious is the specific question as to whether the precautionary principle may be relied upon to justify quarantine and other health-related trade measures, or whether the SPS Agreement establishes a *sui generis* system for the evaluation of scientific uncertainty and risk.

The only SPS decision thus far to deal expressly with the precautionary principle is *European Communities: Measures Affecting Livestock and Meat* (*Hormones*)[189] (*Beef Hormones*) which related to import bans imposed by the European Community (EC) on hormone-fed livestock and meat in 1997.[190] European regulators had concerns that certain hormones administered to livestock could have a carcinogenic effect upon consumers. After consultations with the United States and Canada failed, Panels were established to determine the disputes in which the complainants contended that the EC measures were inconsistent both with the GATT and with the SPS Agreement.

To defend its actions the EC relied specifically on the precautionary principle, arguing that it was a binding rule of customary international law. For their part the United States and Canada argued that it was only an emerging principle that might eventually crystallise into a general principle of law recognised by civilised nations. Each of the Panels found that to the extent that the principle could be considered as part of customary international law, and be used to interpret articles 5.1 and 5.2, the principle could not override the express wording of these articles, because the precautionary principle had been incorporated and given a specific meaning in article 5.7.[191] For these and other reasons the Panels ultimately held that the EC had acted inconsistently with the SPS Agreement.

The Appellate Body reached the same conclusion, but for somewhat different reasons. On the issue of the precautionary principle the Appellate Body avoided answering the question as to its character. It considered that regardless of its status 'under international environmental law'[192] the principle did not need to be applied because the relevant rules governing the assessment of risk were set out in the SPS Agreement. Articles 5.1 and 5.2 specify the need for a risk assessment, and for that assessment to be based upon scientific evidence. In addition, because the import bans had been in place for over a decade, the EC had not sought to rely on article 5.7, which allows provisional measures to be implemented pending a more complete assessment of the risk. The Appellate Body explained that:

> It is unnecessary, and probably imprudent, for the Appellate Body in this appeal to take a position on this important but abstract question. We note that the Panel itself did not make any definitive finding with regard to the status of the precautionary principle and that the precautionary principle, at least outside the field of international environmental law, still awaits authoritative formulation. [193]

Nevertheless, the Appellate Body noted 'some aspects of the relationship of the precautionary principle to the SPS Agreement', observing that:

> A panel charged with determining … whether sufficient scientific evidence exists to warrant the maintenance by a member of a particular SPS measure may, of course, and should, bear in mind that responsible, representative governments commonly act from perspectives of prudence and precaution where risks of irreversible, e.g. life-terminating, damage to human health are

concerned.[194]

In sum, therefore, the Appellate Body considered that the SPS Agreement itself permitted the taking of precautionary measures, where prudence and precaution demanded them.[195] In other words both the Panels and the Appellate Body were of the view that a precautionary approach finds some form of expression in the SPS Agreement itself.

The Appellate Body's non-committal treatment of the precautionary principle is hardly controversial from the perspective of international environmental law. However, it does raise some questions regarding whether the correct approach was taken in terms of addressing the EC's arguments. In this respect Pauwelyn has argued that the Appellate Body reached the correct conclusion, but for the wrong reasons.[196] In his view 'there was no need for the SPS agreement to refer explicitly to the precautionary principle for this principle to be a possible defence in WTO dispute settlement'.[197] This is because the principle could have been applied if it was concluded that it was a rule of customary international law that arose later in time and which was in conflict with an earlier rule set out by the SPS Agreement. Pauwelyn therefore considers the Appellate Body's decision to have been far too categorical, ignoring critical questions as to the meaning of the precautionary principle and its normative value.[198] Nonetheless Pauwelyn notes that this defect in the reasoning was not problematic in this case, as he himself doubts whether the precautionary principle meets the requirements of a customary norm of international law.

(vii) Evaluation

a. The evidence to date: Although trade liberalisation and environmental regimes reflect substantially different objectives, which are pursued through distinctive institutions, the foregoing review of relevant WTO jurisprudence has identified no evidence to suggest that the WTO has adopted parochial interpretations of international environmental law in conflict with prevailing understandings. Instead it appears that WTO Panels and the Appellate Body have sought to integrate accepted environmental rules and concepts within the WTO regime. This conclusion that the WTO has demonstrated 'integrative' rather than 'disintegrative' tendencies is in line with an earlier assessment of the place of treaty law and other basic principles of public international law within WTO jurisprudence.[199]

In the *Shrimp-Turtle Cases* the Appellate Body referred to a range of international environmental instruments to justify its decision on several questions relating to the interpretation of the GATT. In no respect did the Appellate Body appear to prefer 'trade-friendly' interpretations of environmental rules. Quite to the contrary, it may be argued that by faithfully reciting the principle of sustainable development, and drawing upon environmental instruments, the Appellate Body was anxious to address the criticism that the WTO was indifferent or hostile to environmental concerns.[200] Indeed one commentator has suggested that the Appellate Body has displayed a greater willingness to integrate environmental concerns in trade law than the political organs of the WTO, giving rise to a 'hiatus between the rule-making and rule-adjudicating arms of the WTO'.[201]

The *Beef Hormones Case* is essentially neutral as regards its influence upon international environmental law as the Appellate Body found it unnecessary to enter into an evaluation of the precautionary principle. Nonetheless, the decision is controversial in the sense that the Appellate Body adopted a curious approach to relating this asserted rule of customary international law to WTO rules. If the Appellate Body's reasoning is followed it will reinforce the view of some commentators that the WTO regime is closed except in so far as other rules of international law are relevant for the limited purpose of interpreting the GATT and other covered agreements.[202] However, as has been seen, it can be argued that international environmental law may be given a more general application. Admittedly, WTO Panels and the Appellate body can only determine disputes arising out of or relating to WTO rules. Nonetheless, in dealing with these disputes they may be called upon to apply *all* relevant rules of international law, including those set out in environmental agreements, which are binding on the disputing parties.[203] This will include not only those rules articulated in international environmental agreements, but also relevant norms of customary international law having a bearing upon questions of environmental protection, should such questions be implicated in the controversy.

b. Future directions: Although the practice to date suggests no reason to be alarmed about any fragmentation of international environmental law as yet perpetrated at the hands of the WTO dispute-

settlement system, there have only been a limited number of cases and there remain possibilities for divergences to develop in the future. In this regard it must be acknowledged, as Eckersley has observed, that it is in the WTO, and not the dispute resolution systems of environmental regimes, where disputes over trade restrictive measures are most likely to be adjudicated:

> [T]he dispute resolution process of the WTO still remains the more powerful mechanism for the resolution of trade and environmental conflicts (when compared to the enforcement provisions of MEAs). If a WTO member were to launch a WTO challenge against a trade restrictive measure in a MEA, then the question of the compatibility of the two regimes is decided by the dispute settlement proceedings of the WTO rather than the MEA … The [Appellate Body] thus stands as the final arbiter of the meaning of the relevant MEA obligations.[204]

It is precisely because of this positionality of the WTO that the question of fragmentation of international environmental law remains a live one.

There appear to be three main areas where issues of international environmental law are likely to arise in future WTO litigation. The first of these is when international environmental law has relevance for interpretive purposes. It was seen in the *Shrimp-Turtle Cases* that the concept of 'exhaustible natural resources' was given content by reference to developments in international environmental law. In essence the GATT was updated to reflect contemporary environmental standards. The Appellate Body has therefore made it clear that the combined operation of article 3(2) of the DSU and article 31(3) of the Vienna Convention on the Law of Treaties[205] means that environmental rules may be used to assist in the interpretation of WTO agreements. As international environmental law develops, this means that WTO law may likewise evolve.[206] However, the extent to which WTO law may be appropriately developed by judicial exegesis to adapt to environmental concerns very much depends on the extent to which Panels and the Appellate Body are able faithfully to interpret and apply international environmental law. This will in turn depend on the extent to which environmental considerations are prioritised within the broader discursive context in which WTO dispute settlement takes place. In this respect the apparent 'greening' of the GATT achieved in the *Shrimp-Turtle Cases* should not be regarded as an irreversible process. Just as the Appellate Body sought in that dispute to meet the expectations of many WTO members that environmental considerations be given a more prominent place in international trade law, it is entirely possible that future decision-makers may be more sympathetic to the views of some WTO members from the global South that the WTO regime should not privilege the interests of Northern environmental movements at the expense of trade-led developmental policies.

The second area in which the application of international environmental law may be in issue is when a WTO member relies upon a multilateral environmental agreement to justify trade restrictive measures that would offend the organising principles of the WTO regime. Approximately 40 multilateral environmental agreements include trade-related provisions,[207] one of the earliest being CITES and the Cartagena Protocol the most recent. However, no WTO case has yet arisen where a respondent state has mounted a defence based directly upon these, or indeed any other, environmental instruments.[208] In the *Shrimp-Turtle Cases* the United States invoked several multilateral environmental agreements in justification of its import restrictions, however it was never contended that the United States was positively mandated by international environmental law to implement unilateral trade measures. Nonetheless, it is in this second context that the risk of fragmentation remains most real, as the WTO may yet be called upon to reconcile conflicting standards, and in so doing effectively render nugatory one of those norms. On one view, by emphasising the importance of co-operation through multilateral environmental agreements to resolve environmental challenges the Appellate Body's approach to date suggests that this area of potential conflict between trade and environment may be more imagined than real. Moreover, where states have committed themselves to a multilateral environmental regime with trade consequences it appears politically unlikely that trade restrictions imposed in conformity with the environmental instrument will be the subject of a WTO challenge.[209] However, this cannot disguise the continuing areas of contention, which are most visible in the unresolved status of negotiations in the WTO Committee on Trade and Environment (CTE) on the relationship between the WTO and MEAs.[210]

The third, and perhaps most anticipated, area where international environmental law is implicated in WTO dispute settlement is in the interpretation and application of the SPS Agreement in light of parallel environmental norms and regimes dealing with issues of risk management in relation to products that may affect human health and/or the natural environment. Indeed this was a central question raised, but apparently

avoided, in *European Communities: Measures Affecting the Approval and Marketing of Biotech Products* (*Biotech Products*)[211] in which Argentina, Canada and the United States pursued[212] a complaint in relation to delays in the approval by the EC of genetically modified (GM) crops within Europe.[213] The complainants initially requested consultations in 2003 but these were unsuccessful, and the Dispute Settlement Body established a single panel in August 2003 to determine the dispute.

The target of the complaint in the case was a de facto moratorium imposed by the EC on approvals of GM products in Europe in 1998. Since the early 1990s the EC has adopted a precautionary stance towards the importation and approval of genetically modified organisms (GMOs). In 1996, under Council Directive 90/220/EEC,[214] the importation of GM soybeans from the United States was permitted and generated widespread public opposition. This led to the EC blocking further authorisations of GM products pending a strengthening of Council Directive 90/220/EEC to deal with several issues, including product labelling and traceability. The EC regulatory framework was thereafter substantially reformed through the adoption of Council Directive 2001/18/EC[215] (which came into force in October 2002) and two new regulations, which entered into force in April 2004. These replaced the earlier Directive, and under this new regime a number of applications for GMOs have been resubmitted for approval, and these remain under active consideration. The dispute in the *Biotech Products Case* revolves only around the delays experienced from 1998 under the previous regime, rather than the new approvals system.

The complainants and respondent took radically different approaches both to the issues of risk management involved in the dispute and the applicability of international environmental law.[216] All three complainants asserted that the moratorium on approvals of agricultural biotech products was inconsistent with the SPS Agreement.[217] It was argued that as a result of several violations of the SPS Agreement there was a disguised restriction on international trade within the meaning of articles 2.3 and 5.5. Much of the argument in this respect turned on the alleged failure of the EC to undertake a risk assessment in accordance with article 5.1 or to provide scientific justification in accordance with article 2.2. As a consequence at the centre of the dispute is the meaning and practice of 'risk management'. Could this process, as the United States suggested, be conceived as one that is entirely objective, based on impartial scientific investigation? Or conversely, and having regard to the way in which the regulatory stance of other states is founded on a fundamentally different cultural attitude to risk, is the very process of risk assessment one that depends upon values and policy judgments?[218] As Peel, Nelson and Godden explain, there was here a fundamental clash between the complainants' particular science-based approach and the European precaution-based model: [219]

> The science-based model embodies the idea that risk regulation, including the way in which it deals with scientific uncertainty, should be founded on scientific methods and risk assessment techniques. Under a precaution-based approach, risks that are subject to uncertainty are treated as complex problems best resolved by an inclusive and deliberative decision-making process.

On issues of international environmental law the complainants' submissions were a model of simplicity and economy. Relying exclusively upon WTO rules, in particular the SPS Agreement, they rejected any suggestion that the Cartagena Protocol may help resolve the dispute. In contrast the EC adopted a more complex line of argument. It was contended that WTO agreements must be interpreted and applied having regard to other norms of international law.[220] In particular, the argument went, the Cartagena Protocol was 'the international agreement which is most directly relevant to the matters raised by the present proceedings'[221] and that:

> [T]here is ample authority to support the proposition that the [Cartagena] Protocol and the SPS Agreement (as well as the TBT Agreement and GATT 1994) are so closely connected that they should be interpreted and applied consistently with each other, to the extent that is possible (as is the case in this dispute).[222]

Hence for the EC it was not an issue of a normative hierarchy; rather the SPS Agreement and the Cartagena Protocol are complementary instruments. And this also meant that the precautionary principle as stated in the Cartegena Protocol could be applied to the dispute..[223]

However, the difficulty with any reference to the Cartagena Protocol is that among the disputants only the EC

is a party.[224] Argentina and Canada have signed but not ratified the Protocol,[225] while the United States, and important third party states such as Australia, have not even taken this step. Obviously, this precludes any direct reliance by the EC on the Protocol, but it also weakened any argument that the instrument expresses norms that are binding as a matter of customary law. Finally, even as regards the process of interpreting WTO rules, the Cartagena Protocol includes somewhat ambiguous language in its preamble concerning its relationship with other regimes. It emphasises on the one hand that the Protocol 'shall not be interpreted as implying a change in the rights and obligations of a Party under any existing international agreement' while at the same time stating that this 'recital is not intended to subordinate this Protocol to other international agreements'.

These three weaknesses were identified by the United States in its rebuttal. [226] It argued that the Cartagena Protocol, along with any asserted rule of precaution, could only be pertinent if under article 3.2 of the DSU it could help clarify provisions of the SPS Agreement or other WTO agreements.[227] However, the EC submissions did not explain precisely how these norms could so assist. Even if they did, said the United States, they could only help interpret particular treaty terms, and could not override any provision of the SPS Agreement. Above all, the United States entreated the Panel to take the same approach as the Panel and Appellate Body in the *Beef Hormones Case*:

> Just as the Appellate Body found it unnecessary and imprudent to make a finding on the status of the precautionary principle in international law, this Panel also should have no need to address this theoretical issue. Nonetheless, the United States notes that it strongly disagrees that 'precaution' has become a rule of international law. In particular, the 'precautionary principle' cannot be considered a general principle or norm of international law because it does not have a single, agreed formulation. In fact, quite the opposite is true: the concept of precaution has many permutations across a number of different factors. Thus, the United States considers precaution to be an 'approach', rather than a 'principle' of international law.[228]

The Panel's preliminary report finally released to the parties in early 2006 has not been made public, however media reports suggest that it reached a decision largely favourable to the complainants without having to take a stance on these submissions.[229] Rather than engaging directly with the WTO consistency of the European Union (EU) moratorium, it appears to have been concluded that the measure breached WTO rules because it did not involve a prompt and effective application by the EU of its own approvals procedures, as required by article 8 of the SPS Agreement. Although observations on the Panel's decision remain only speculative until the final report is released, it would seem that a potentially controversial conclusion on environmental questions may have been avoided. Nonetheless the case should not be regarded as closed, as there remains the possibility of appeal to the Appellate Body, which may well be encouraged by the United States and the other complainants to take the EU's arguments regarding environmental issues head-on.

Conclusions

This article has examined the expanding body of environmental jurisprudence emanating from some of the most active international adjudicative institutions. This review has not sought to argue that these bodies have rendered decisions that have always appropriately recognised environmental considerations. What has been suggested, however, is that to date there is no indication that these institutions have preferred inadequate or 'skewed' interpretations of environmental rules and principles in order to uphold the policy objectives of the issue-specific regimes that they operate within.

The main reasons for this conclusion in relation to human rights bodies were seen to be twofold. In the first place, in relation to substantive human rights, the attempts to seek redress for environmental damage have been pursued predominantly through the language of human rights, including the right to life, relieving the relevant bodies of any need to examine potentially relevant environmental norms. Nonetheless, the point was also made that future petitions involving human rights and environmental issues may not be so unproblematic from the perspective of international environmental law. There are distinct possibilities of normative conflict if complaints are made concerning state environmental policies that, among other things, interfere with social, economic, or cultural rights, including the 'right to development'. Second, in relation to procedural rights, the potential for fragmentation has been lessened by the almost complete overlap between the human rights and environmental agendas to improve access to information, to enhance public participation, and to provide effective remedies for rights infringements. Indeed it was suggested that the human rights jurisprudence on

such matters is likely to be of considerable value as procedural environmental rights receive greater recognition in international environmental law.

The resolution of disputes involving environmental issues in the WTO system involves substantially greater opportunities for environmental norms to be considered in a selective and parochial manner. This is because such norms may be pertinent in interpreting several WTO rules relating to natural resources and environmental risk, and also because environmental prescriptions may be relied upon to justify what would otherwise constitute violations of WTO disciplines. However, and despite dire predictions to the contrary, the WTO's judicial bodies have so far evinced a willingness to consider international environmental law faithfully, on its own terms. This reflects both the nature of the disputes that have been litigated, and the careful way in which they have been framed by Panels and the Appellate Body to avoid straying beyond narrow questions of international trade law. However, it is also indicative of sensitivity of these bodies to the popular, but not always accurate, belief that trade liberalisation and environmental protection agendas are irreconcilable. Nonetheless it is perhaps too early to draw definitive conclusions. The WTO dispute settlement system has not been fully tested as no case has yet arisen where a state has sought to rely upon environmental rules in express derogation from WTO commitments. Such a situation would pose most acutely the potential problem of 'fragmentation' as it affects international environmental law, as WTO dispute settlement bodies will no doubt be called upon by one or more disputing parties to prefer interpretations of applicable environmental norms that have the least trade restrictive effects. Such a dispute would doubtless set the scene for a further outpouring of anxiety over the channelling of key concepts of international environmental law away from their central rationale and purpose.

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[1] See generally Y Shany, *The Competing Jurisdictions of International Courts and Tribunals* (2003); V Lowe, 'Overlapping Jurisdiction in International Tribunals' [1999] AUYrBkIntLaw 11; (1999) 20 *Aust YBIL* 191.

[2] See for instance the *Southern Bluefin Tuna Cases* (*New Zealand v Japan; Australia v Japan*) (*Provisional Measures*) [1999] 38 ILM 1624; *Southern Bluefin Tuna Case* (*Australia and New Zealand v Japan*) (*Award on Jurisdiction and Admissibility*) [2000] 39 ILM 1359 (together the *Southern Bluefin Tuna Dispute*) and the *MOX Plant Case* (*Ireland v United Kingdom*) (*Provisional Measures*) [2002] 41 ILM 405 (*MOX Plant Order*); *MOX Plant Case* (*Ireland v United Kingdom*) (*Suspension of Proceedings on Jurisdiction and Merits and Request for Further Provisional Measures*) (*Order 3 of 24 June 2003*) (*Order 4 of 14 November 2003*) <http://www.pca-cpa.org> (*MOX Plant Award*) (together the *MOX Plant Dispute*). In both proceedings the litigation stalled as a consequence of the problematic interaction between competing dispute settlement systems.

[3] With some prescience, Sands observed in 1999 that 'a few years from now the body of case law will probably require us to address how to maintain coherence among the various fora at which international environmental issues are litigated': Philippe Sands, 'International Environmental Litigation and Its Future' (1999) 32 *University of Richmond Law Review* 1619, 1641.

[4] The issue has also attracted the attention of the International Law Commission. The Commission established a Study Group on Fragmentation of International Law at its 54th Session. See UN Doc A/55/10, ch IX.A.1 [729]. For the most recent report of the Study Group see *Report of the Study Group on Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*, UN Doc A/CN.4/L.676 (2005). See also G Hafner, 'Pros and Cons Ensuing from Fragmentation of International Law' (2004) 25 *Michigan Journal of International Law* 849; M J Matheson and S Bickler, 'The Fifty-Fifth Session of the International Law Commission' (2004) 98 *American Journal of International Law* 317, 322; P Sreenivasa Rao, 'Multiple International Judicial Forums: A Reflection of the Growing Strength of International Law or its Fragmentation?' (2004) 25 *Michigan Journal of International Law* 929, 935-37.

[5] J Pauwelyn, *Conflict of Norms in Public International Law* (2003) 9.

[6] See eg I Brownlie, 'The Rights of Peoples in Modern International Law' in James Crawford (ed), *The Rights of Peoples* (1988) 1, 15.

[7] K C Wellens, 'Diversity in Secondary Rules and the Unity of International Law: Some Reflections on Current Trends' in L A N M Barnhoorn and K C Wellens (eds), *Diversity in Secondary Rules and the Unity of International Law* (1995) 3, 28 ('[T]he relative autonomy of special fields … [has] promoted and guaranteed the growing effectiveness of their own particular set of primary rules, without putting in jeopardy the unity of coherence of the international legal order'); T Franck, *Fairness in International Law and Institutions* (1995) 4 ('Specialization is a tribute which the profession pays to the maturity of the legal system').

[8] While 'proliferation' is used to describe the quantitative increase in the number and type of international courts, the term 'judicialisation' captures the idea that there has been a qualitative expansion in the role of international courts in some areas of international relations and law.

[9] See the *Statute of the International Court of Justice* art 59, which provides that '[t]he decision of the Court has no binding force except as between parties and in respect of that particular case.' See also M Shahabuddeen, *Precedent in the World Court* (1996) 67. The absence of a precedential system might also be suggested as a reason for doubting the seriousness of the problem of fragmentation, as judicial decisions do not form a source of public international law in the same way or to the same extent as treaty or custom: in the words of art 38(1)(d) they are but 'subsidiary means for the determination of the rules of law'. Nonetheless, in practice judicial decisions have assumed great practical importance in processes of normative development: see generally S Rosenne, *The Perplexities of Modern International Law* (2004) 43; P Allott, *The Health of Nations: Society and Law Beyond the State* (2002) 52. This can be said to be especially the case in relation to general environmental principles such as the obligation upon states not knowingly to allow damage to be caused to the territory of other states. See the *Trail Smelter Case* (*Canada/United States*) [1938] and [1941] 3 RIAA 1911 (*Trail Smelter Case*).

[10] Vienna Convention on the Law of Treaties (23 May 1969) 1155 UNTS 331.

[11] For a comprehensive account of the way in which this provision may be used to address fragmentation see C McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention' (2005) 54 *International and Comparative Law Quarterly* 279.

[12] R Jennings, 'The Role of the International Court of Justice' (1997) 68 *British Yearbook of International Law* 58; R Jennings, 'The Judiciary, International and National, and the Development of International Law' (1996) 45 *International and Comparative Law Quarterly* 1; G Guillaume, 'The Future of International Judicial Institutions' (1995) 44 *International and Comparative Law Quarterly* 848; S Oda, 'Dispute Settlement Prospects in the Law of the Sea' (1995) 44 *International and Comparative Law Quarterly* 863.

[13] R Higgins, 'Respecting the Sovereignty of States and Running a Tight Courtroom' (2001) 50 *International and Comparative Law Quarterly* 121, 122 ('this is an inevitable consequence of the busy and complex world in which we live and is not a cause of regret.').

[14] Judge Stephen M Schwebel, 'Address to the Plenary Session of the General Assembly of the United Nations' (speech delivered to the General Assembly of the United Nations, New York, 26 October 1999) [19] <http://www.icj-cij.org/icjwww/ipresscom/SPEECHES/iSpeechPresidentGA54_19991026.htm> Judge Gilbert Guillaume, 'Address to the General Assembly of the United Nations' (speech delivered to the General Assembly of the United Nations, 26 October 2000); Judge Gilbert Guillaume, 'Address to the Sixth Committee of the General Assembly of the United Nations' (speech delivered to the Sixth Committee of the General Assembly of the United Nations, 27 October 2000) <http://www.icj.org/icjwww/ipresscom/SPEECHES/SpeechPresident_Guillaume_SixthCommittee_20001027.htm> .

[15] C Romano, 'The Proliferation of International Judicial Bodies: The Pieces of the Puzzle' (1999) 31 *New York University Journal of International Law and Politics* 709, 751.

[16] Rao, above n 4, 960.

[17] H L A Hart, *The Concept of Law* (2nd ed, 1994). Hart argued that while courts were not necessary to assure the binding and obligatory character of legal rules, they were an indispensable part of a fully-fledged legal system (see 213-37) characterised by a combination of norms regulating conduct ('primary' rules)

together with additional norms that allow primary rules to be identified, modified and promulgated ('secondary' rules, namely the rule of recognition, rules of change and rules of adjudication). The absence of such a union in public international law led Hart to conclude that international law was indeed law, but did not constitute a 'legal system'. For a critical review of the relevance of Hart's theory to debates about unity and fragmentation in international law see M Craven, 'Unity, Diversity and the Fragmentation of International Law' (2003) 14 *Finnish Yearbook of International Law* 3, 6-15.

[18] See for instance W W Burke-White, 'International Legal Pluralism' (2004) 25 *Michigan Journal of International Law* 963, 977 ('A pluralist legal system accepts a range of different and equally legitimate normative choices by … international institutions and tribunals, but it does so within the context of a universal system').

[19] J I Charney, 'Is International Law Threatened by Multiple International Tribunals' (1998) 271 *Recueil Des Cours* 101. The seven areas were treaty law, sources of international law, state responsibility, compensation standards, exhaustion of domestic remedies, nationality and maritime boundaries. See also J I Charney, 'The Impact on the International Legal System of the Growth of International Courts and Tribunals' (1999) 31 *New York University Journal of International Law and Politics* 697.

[20] In *Prosecutor v Tadić* (*Appeals Chamber Judgment*) Case No IT-94-1-A (15 July 1999) the International Criminal Tribunal for the Former Yugoslavia adopted a different approach on a question of attribution from the ICJ in *Case Concerning Military and Paramilitary Activities in and Against Nicaragua* (*Nicaragua v United States*) (*Merits*) [1986] ICJ Rep 14.

[21] *Case of Belilos v Switzerland* [1988] ECHR 4; (1988) 10 EHRR 466 and *Case of Loizidou v Turkey* (*Loizidou*) (*Preliminary Objections*) [1995] ECHR 10; (1995) 20 EHRR 99 illustrate the distinctive approach that the European Court of Human Rights has taken when considering the effect of reservations to the Convention for the Protection of Human Rights and Fundamental Freedoms (4 November 1950) 213 UNTS 222. It differs substantially from the ICJ's pronouncement in *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide* [1951] ICJ Rep 26, but was justified on the grounds of a 'fundamental difference in the role and purpose' of the ECtHR and the ICJ (*Loizidou* [1995] ECHR 10; (1995) 20 EHRR 99, [83]). For a concise overview of these divergent approaches to the effect of reservations see R Moloney, 'Incompatible Reservations to Human Rights Treaties: Severability and the Problem of State Consent' [2004] MelbJlIntLaw 6; (2004) 5 *Melbourne Journal of International Law* 155. See also Craven, above n 17, 15-23.

[22] *Southern Bluefin Tuna Case (Australia and New Zealand v Japan)* [1999] 38 ILM 1624 (Order); *Southern Bluefin Tuna Award* ILM 1359 (2000) (Award.

[23] United Nations Convention on the Law of the Sea (10 December 1982) 1833 UNTS 397.

[24] See C Romano, 'The *Southern Bluefin Tuna* Dispute: Hints of a World to Come … Like it or Not' (2001) 32 *Ocean Development and International Law* 313.

[25] Convention for the Conservation of Southern Bluefin Tuna (10 May 1993) 1819 UNTS 359.

[26] M Koskenniemi and Päivi Leino, 'Fragmentation of International Law? Postmodern Anxieties' (2002) 15 *Leiden Journal of International Law* 553, 561 ('[T]he fact is that proliferating tribunals, overlapping jurisdictions and "fragmenting" normative orders … arise as effects of politics and not as technical mistakes or unfortunate side-effects of some global logic.') See also M C W Pinto, 'Judicial Settlement of International Disputes: One Forum or Many' in Antony Anghie and Garry Sturgess (eds), *Legal Visions of the 21st Century: Essays in Honour of Judge Christopher Weeramantry* (1998) 465, 467.

[27] Guillaume, 'Address to the General Assembly of the United Nations', above n 14, ('specialised courts … are inclined to favour their own disciplines').

[28] Koskenniemi and Leino, above n 26, 562. See also M Koskenniemi, 'What is International Law For?' in Malcolm D Evans (ed), *International Law* (2003) 89, 110.

[29] For instance the absence of mandatory dispute settlement mechanisms under environmental agreements dealing with trade-related issues means that, in practical terms, trade and environment disputes are only likely to be brought before compulsory and binding systems operating in the WTO and other trade regimes.

[30] *Optional Rules for the Arbitration of Disputes Relating to Natural Resources and/or the Environment* (2001) <http://www.pca-cpa.org/ENGLISH/EDR/> .

[31] International Court of Justice, *Communiqué 93/20 on the Establishment of a Permanent Chamber for Environmental Matters* (19 July 1993).

[32] The first such NCP was established under the *Montreal Protocol on Substances that Deplete the Ozone Layer*, (16 September 1987) 1522 UNTS 29: Decision IV/5 of the Fourth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, *Report of the Fourth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer,* UN Doc UNEP/Oz.L.Pro.4/15 (1992) (as revised in by Decision X/10 of the Tenth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, *Report of the Tenth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer*, UN Doc UNEP/OzL.Pro.10/9 (1998)). One of the most recent NCPs was the procedure established for the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, (25 June 1998) 38 ILM 517 (1999) (Aarhus Convention): Decision 1/7 of the First Meeting of the Parties to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, *Report of the First Meeting of the Parties to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters,* UN Doc ECE/MP.PP/2/Add.8 (2002).

[33] See eg C Pitea, 'NGOs in Non-Compliance Mechanisms under Multilateral Environmental Agreements: From Tolerance to Recognition?' in T Treves, M Frigessi di Rattalma, A Tanzi et al (eds), *Civil Society, International Courts and Compliance Bodies* (2005) 205, 206 (noting that non-compliance procedures 'established under MEAs are meant to differ significantly from [judicial or quasi-judicial bodies] since they are designed mainly to prevent and avoid, rather than resolve, disputes and to do so in a non-judicial, non-confrontational and cooperative manner.').

[34] A Gillespie, *The Illusion of Progress: Unsustainable Development in International Law and Policy* (2001) 138. For a discussion of proposals for a Global Environmental Organisation (GEO) to counterbalance the WTO see, among others, D Esty, 'The World Trade Organization's Legitimacy Crisis' (2002) 1 *World Trade Review* 7; F Biermann, 'The Emerging Debate on the Need for a World Environment Organization: A Commentary' (2001) 1 *Global Environmental Politics* 45; F MacMillan, *WTO and the Environment* (2001) 272; S Charnovitz, 'A World Environment Organization' (2000) 27 *Columbia Journal of Environmental Law* 323. Although no dedicated international environmental organisation has yet been created, agencies such as UNEP and the Commission on Sustainable Development (CSD) fulfill some of the functions that an environmental organisation having the full status as an organ of the UN would likely perform.

[35] On the relevance of this concern to public international law more generally see Craven, above n 17, 32 ('the evident competition between … domain[s] offers the possibility of the … general marginalisation or distortion of certain endeavours by way of their being channelled through institutions associated with another').

[36] For a concise history see P Sands, *Principles of International Environmental Law* (2nd ed, 2003) ch 2. For a more comprehensive overview see L K Caldwell, *International Environmental Policy: From the Twentieth to the Twenty-First Century* (3rd ed, 1996) chs 2-8.

[37] See in particular the *Trail Smelter Case (US v Canada)* [1938] and [1941] 3 RIAA 1911.

[38] Declaration of the United Nations Conference on the Human Environment (16 June 1972) 11 ILM 1416.

[39] See eg Convention on International Trade in Endangered Species of Wild Fauna and Flora, (3 March 1973) 993 UNTS 243 (CITES) and the Convention on the Conservation of Migratory Species of Wild Animals (23 June 1979) 19 ILM 15 (1980) (Bonn Convention).

[40] See eg *World Charter for Nature,* GA Res 37/7 (1982).

[41] World Commission on Environment and Development, *Our Common Future* (1987).

[42] United Nations Declaration on Environment and Development (June 13 1992) 31 ILM 874.

[43] United Nations Framework Convention on Climate Change, (9 May 1992) 1771 UNTS 165; Convention on Biological Diversity (5 June 1992) 170 UNTS 143 (Biodiversity Convention).

[44] Agenda 21 UN Doc A/CONF.151/26/Rev.1 (1992).

[45] See W M Adams, *Green Development: Environment and Sustainability in the Third World* (2nd ed, 2001) 54-101.

[46] See eg *2005 World Summit Outcome,* [48], UN Doc A/60/L.1 (2005) ('We reaffirm our commitment to achieve the goal of sustainable development … [t]o this end, we commit ourselves to undertaking concrete actions and measures at all levels and to enhancing international cooperation, taking into account the Rio principles.'). Despite initially high expectations, the most recent global environmental conference, the World Summit on Sustainable Development, held in Johannesburg in 2002 to make the 10th anniversary of UNCED, failed to agree upon specific action to address global environmental challenges. Instead it marked a general commitment to work towards the achievement of the goals agreed at UNCED, and specifically emphasised the need for major reductions in poverty: see *Plan of Implementation of the World Summit on Sustainable Development*, UN Doc A/CONF.199/20 (2002).

[47] P W Birnie and A E Boyle, *International Law and the Environment* (2nd ed, 2002) 2.

[48] See eg *Articles on Responsibility of States for Internationally Wrongful Acts*, art 48, *Report of the International Law Commission on the Work of its 53rd Session,* UN Doc A/56/10 (2001), 43-59 (noted in GA Res 56/83, UN Doc A/RES/56/83 (2001)) (Articles on State Responsibility) which deals with the invocation of responsibility in response to violations of *erga omnes* obligations of an environmental or other character.

[49] A Kiss and D Shelton, *International Environmental Law* (2000) 1. By contrast Brownlie has been among the strongest critics of any movement towards 'overspecialisation': I Brownlie, 'State Responsibility and International Pollution: A Practical Perspective', in D Barstow Magraw (ed), *International Law and Pollution* (1991) 120, 122. Nonetheless, Professor Brownlie has acknowledged that in the environmental context 'general international law does not provide the focussed problem-solving which results from carefully prepared standard-setting treaties linked with domestic and international support systems and funding.': I Brownlie, *Principles of Public International Law* (5th ed, 1998) 281. See also M A Fitzmaurice, 'International Environmental Law as a Special Field' in L A N M Barnhoorn and K C Wellens (eds), *Diversity in Secondary Rules and the Unity of International Law* (1995) 181, 183 (while not accepting that international environmental law is a distinct field, nonetheless noting that 'the attempt to provide a necessary legal framework to meet the problems of the environment … are stretching and possibly straining the limits of classical international law').

[50] For a recent scholarly examination of the potential influence of equity upon public international law see Justice M White, 'Equity – A General Principle of Law Recognised by Civilised Nations?' (2004) 4 *Queensland University of Technology Law Journal* 103.

[51] See the Rio Declaration, above n 42, principle 15, which provides that '[i]n 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.'

[52] The most frequently cited mainstream definition of sustainable development is that expressed by the Brundtland Commission, which defined the concept in terms of inter-generational equity, namely as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs': World Commission on Environment and Development, above n 41, 87. Although the term is ubiquitous in international environmental texts both diplomatic and legal, many have doubted whether

it is expressive of a notion that is sufficiently precise to constitute a rule of international law (see V Lowe, 'The Politics of Law-Making: Are the Method and Character of Norm-Creation Changing?' in M Byers (ed), *The Role of Law in International Politics* (2000) 19; V Lowe, 'Sustainable Development and Unsustainable Arguments' in A Boyle and D Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999) 207). Others have suggested that this ambiguity is not in fact a disadvantage, and that sustainable development derives much of its strength from the fact that it is susceptible to multiple understandings. It is a vacuum into which often quite radically different ideas about priorities in the environment/development relationship can be injected: Adams, above n 45, 4.

[53] Sands, *Principles of International Environmental Law,* above n 36, 231. See also the nine principles recited in IUCN – World Conservation Union, *Draft International Covenant on Environment and Development* (3rd ed, 2004): (1) respect for all life forms (art 2), (2) common concern for humanity (art 3), (3) interdependent values (art 4), (4) intergenerational equity (art 5), (5) prevention (art 6), (6) precaution (art 7), (7) right to development (art 8), (8) eradication of poverty (art 9), (9) common but differentiated responsibilities (art 10). Several of these clearly seek to advance the agenda of environmental protection and sustainable development, and the extent to which they are subject to general acceptance is therefore more open to doubt than those included in Professor Sands' list.

[54] For a discussion of the emergence of the 'polluter-pays', 'preventive' and 'precautionary' concepts that sheds light on the origins, character, and impact of environmental principles more generally see N de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (Susan Leubusher trans, 2002).

[55] For a general discussion of the distinction between 'rules' and 'principles' see R Dworkin, *Taking Rights Seriously* (3rd ed, 1981) 26 ('All that is meant, when we say that a particular principle is a principle of law, is that the principle is one which officials must take into account, if it is relevant, as a consideration inclining one way or another.').

[56] See eg J M Macdonald, 'Appreciating the Precautionary Principle as an Ethical Evolution in Ocean Management' (1995) 26 *Ocean Development & International Law* 255.

[57] J Peel, 'Precaution – A Matter of Principle, Approach or Process?' [2004] MelbJlIntLaw 19; (2004) 5 *Melbourne Journal of International Law* 483, 485.

[58] *Legality of the Threat or Use of Nuclear Weapons* [1996] ICJ Rep 226 (*Nuclear Weapons Advisory Opinion*).

[59] Ibid [29] ('The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of Other States or of areas beyond national control is now part of the corpus of international law relating to the environment'). Recited and approved in *Case Concerning the Gabčíkovo-Nagymaros Project* (*Hungary/Slovakia*) (*Merits*) [1997] ICJ Rep 7, [53] (*Gabčíkovo-Nagymaros Case*).

[60] O McIntyre and T Mosedale, 'The Precautionary Principle as a Norm of Customary International Law' (1997) 9 *Journal of Environmental Law* 221; R Cooney, *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management* (2004).

[61] See for instance the decision of the Court of Justice of the European Communities in *United Kingdom of Great Britain and North Ireland v Commission of the European Communities* (C-180/96) [1998] EUECJ C-180/96; [1998] ECR I-2265 (*Mad Cow Disease Case*).

[62] *Gabčíkovo-Nagymaros Case* [1997] ICJ Rep 7, [140]. Although the majority did not refer to the principle, in the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests Case* (*New Zealand v France*) [1995] ICJ Rep 288, two dissenting judges referred to the precautionary principle as one which 'may now be a principle of customary law relating to the environment' (Judge Palmer, at 412) or at least is 'gaining increasing support as part of the international law of the environment' (Judge Weeramantry, at 342).

[63] *SBT Order,* 38 ILM 1624 (1999) [77]; *MOX Plant Case* (*Ireland v United Kingdom*) (*Provisional Measures*)

[2002] 41 ILM 405 [84] (*MOX Plant Order*); *Case Concerning Land Reclamation by Singapore in and Around the Straits of Johor* (*Malaysia v Singapore*) (*Provisional Measures*) [2003], [99] <http://www.itlos.org> (*Straits of Johor Order*).

[64] Peel, above n 57, 493-95.

[65] *European Communities: Measures Concerning Meat and Meat Products* (*Hormones*) (Report of the Appellate BodyWTO Doc WT/DS26/AB/R, WT/DS48/AB/R, AB-1997-4 (1998) (*Beef Hormones Appellate Body Report*).

[66] P Sands, 'International Law in the Field of Sustainable Development: Emerging Legal Principles' in Winifred Lang (ed), *Sustainable Development and International Law* (1995) 53, 66.

[67] See eg the Consolidated Version of the Treaty Establishing the European Community, [2002] OJ C 325, 33 art 174(2) (EC Treaty) which provides that EC policy regarding the environment must be based upon 'the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.'

[68] See eg the Environment Protection and Biodiversity Conservation Act 1999 (Cth) which sets out 'principles of ecologically sustainable development' in s 3A: '(a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations; (b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation; (c) the principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations; (d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making; (e) improved valuation, pricing and incentive mechanisms should be promoted.' See also s 391(2) which defines the precautionary principle as 'that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage'. These principles must be considered when a variety of powers are exercised under the Act.

[69] See for instance the English case of *R v Secretary of State for Environment, Food and Rural Affairs* [2001] New Property Cases 176 (noting at [84] that 'it may in some fields of regulation be relevant to take into account the precautionary principle and … its limitations'), the Canadian decision of *114957 Canada Ltée* (*Spraytech, Société d'Arrosage*) *and Services des Espaces Verte Ltée v Town of Hudson* [2001] 2 SCR 241 (noting, in a case concerning a challenge to restrictions on the use of pesticides, that there may be sufficient state practice to support the conclusion that the precautionary principle is a rule of customary international law) and the Indian decision of *Vellore Citizens Welfare Forum v Union of India* AIR 1996 Supreme Court 2715 (applying the sustainable development, precautionary, and polluter-pays principles to a case involving industrial pollution).

[70] *Gabčíkovo-Nagymaros Case* [1997] ICJ Rep 7, [140] ('[The] need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.').

[71] Lowe, 'The Politics of Law-Making: Are the Method and Character of Norm-Creation Changing?' above n 52, 217. ('If the tribunal chooses to adopt the concept, the very *idea* of sustainable development is enough to point the tribunal towards a coherent approach to a decision in cases where development and environment conflict. There is absolutely no need for the concept to have been embodied in State practice coupled with the associated *opinio juris* … All that is needed to enable the norms to perform this role is that they be clearly and coherently articulated.').

[72] E Brown Weiss, 'Understanding Compliance with International Environmental Agreements: The Baker's Dozen Myths' (1999) 32 *University of Richmond Law Review* 1555, 1555.

[73] See eg Convention on Wetlands of International Importance Especially as Waterfowl Habitat (2 February 1971), 996 UNTS 245 comprising 12 articles that require parties to select wetlands of importance to be listed on the Ramsar list, and to take those measures necessary to promote the conservation of such wetlands.

[74] P Contini and P H Sand, 'Methods to Expedite Environment Protection: International Ecostandards' (1972) 66 *American Journal of International Law* 37, 56 ('International environmental protection … may and should indeed be a highly technical matter once it has cleared some of its present political-emotional hurdles …').

[75] Convention for the Protection of the Ozone Layer (22 March 1985), 26 ILM 1529 (1985) (Vienna Convention).

[76] Such communities may be defined as networks 'of professionals with recognised expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area.': P M Haas, 'Introduction: Epistemic Communities and International Policy Coordination' (1992) 46 *International Organization* 1, 3.

[77] On the role of epistemic communities in relation to the Vienna Convention and Montreal Protocol see P M Haas, 'Banning Chlorofluorocarbons: Epistemic Community Efforts to Protect Stratospheric Ozone' (1992) 46 *International Organization* 187.

[78] On the emergence of a 'global technocracy' in relation to a range of issues see A Slaughter, *A New World Order* (2004) 219-21.

[79] See in particular the UN Commission on Human Rights, Sub-Commission on Prevention of Discrimination and Protection of Minorities, *Human Rights and the Environment,* Final Report of the Special Rapporteur, UN Doc E/CN.4/Sub.2/1994/9 (1994).

[80] R R Churchill, 'Environmental Rights in Existing Human Rights Treaties' in A E Boyle and M R Anderson (eds), *Human Rights Approaches to Environmental Protection* (1996) 89. However, Churchill notes that such rights have been included in some regional regimes, which do in fact cover a large portion of the globe: African Charter on Human and Peoples' Rights (27 June 1981), 21 ILM 58 (1982) art 24 ('All peoples shall have the right to a general satisfactory environment favourable to their development'); Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (17 November 1988), OAS TS 69, art 11 ('(1) Everyone shall have the right to live in a healthy environment and to have access to basic public services, (2) The state parties shall promote the protection, preservation and improvement of the environment'); Convention on the Rights of the Child (20 November 1989), 1577 UNTS 3, art 29(e) (requiring education for '[t]he development of respect for the natural environment').

[81] But see now the Aarhus Convention. This instrument only establishes certain procedural rights such as the right to environmental information, but art 1 declares that the objective these rights are to serve is ultimately substantive: 'the protection of the *right* of every person of present and future generations to live in an environment adequate to his or her health and well-being' (emphasis added).

[82] C Redgwell, 'Life, The Universe And Everything: A Critique of Anthropocentric Rights' in A E Boyle and M R Anderson (eds), *Human Rights Approaches to Environmental Protection* (1996) 72, 72.

[83] See generally D Shelton, 'What Happened in Rio to Human Rights' (1992) *Yearbook of International Environmental Law* 75.

[84] Stockholm Declaration (16 June 1972) 11 ILM 1416

[85] D Shelton, 'The Environmental Jurisprudence of International Human Rights Tribunals' in R Picolotti and J D Taillant (eds), *Linking Human Rights and the Environment* (2003) 1, 2. See also C Dommen, 'Claiming Environmental Rights: Some Possibilities Offered by the United Nations' Human Rights Mechanisms' (1998) 11 *Georgetown International Environmental Law Review* 1.

[86] Rio Declaration, UN Doc A/CONF.151/5/Rev.1 (1992).

[87] Aarhus Convention, above n 81, art 3(1).

[88] Ibid art 3(7).

[89] *Guerra and Others v Italy* [1998] ECHR 7; [1998] 26 EHRR 357 (*Guerra*).

[90] Convention for the Protection of Human Rights and Fundamental Freedoms (4 November 1950), 213 UNTS 222 (ECHR).

[91] *Guerra* [1998] ECHR 7; (1998) 26 EHRR 357, [53], following *Leander v Sweden* [1987] ECHR 4; [1987] 9 EHRR 433, [74].

[92] *Bladet Tromsø and Stensaas v Norway* [1999] ECHR 29; [2000] 29 EHRR 125.

[93] *OSPAR Arbitration* (*Ireland v United Kingdom*) (Final Award) (2 July 2003), <http://www.pca-cpa.org> .

[94] (22 September 1992), 32 ILM 1069 (1992) (OSPAR Convention).

[95] Ireland commenced proceedings against the United Kingdom in June 2001 under art 32 of the OSPAR Convention, seeking access to the full contents of two reports commissioned by the United Kingdom to examine the economic justifications for the mixed oxide nuclear fuel (MOX) plant to be built at Sellafield in North-West England. Ireland asserted that the disclosure would place it in a better position to consider the impacts which the MOX plant may have on the environment, and to assess the extent of the United Kingdom's compliance with the OSPAR Convention and the LOS Convention. The United Kingdom refused to release this information, contending *inter alia* that it was not information within the meaning of art 9 of the OSPAR Convention. The essence of the dispute was that while Ireland was seeking all information as to the environmental impacts of the operation of the plant, the United Kingdom insisted that the only information it was required to release related specifically to the discharging of radioactive materials into the Irish Sea. In its July 2002 award, a majority of the arbitral panel (with Gavan Griffith QC dissenting) concluded that the information requested by Ireland did not come within art 9(2). It was held that art 9 was not a general freedom of information provision, and that none of the categories of information requested by Ireland could be characterised as material concerning the state of the maritime area within the meaning of art 9(2). The Tribunal went further, observing that even if art 9(2) covered the same information as 'environmental information' within the meaning of art 2(3) of the Aarhus Convention it was far from clear whether Ireland's request could be accepted. See generally T L McDorman 'Access to Information under Article 9 of the OSPAR Convention (Ireland v United Kingdom' (2004) 98 *American Journal of International Law* 330; M Fitzmaurice, 'Dispute Concerning Access to Information Under Article 9 of the OSPAR Convention (*Ireland v United Kingdom*)' (2003) 18 *International Journal of Marine and Coastal Law* 541.

[96] Human rights instruments referring to a right to participate in government include the Universal Declaration of Human Rights, GA Res 217A(III) (1948) and the International Covenant on Civil and Political Rights, (16 December 1966) 999 UNTS 171, art 25 (ICCPR). In the environmental context see the Rio Declaration, above n 42, principle 10 and the Aarhus Convention, above n 81, arts 6, 7 and 8.

[97] American Convention on Human Rights (22 November 1969), 1144 UNTS 123.

[98] Inter-American Commission on Human Rights, *Report on the Situation of Human Rights in Ecuador,* OEA/Ser.L/V/II.96 Doc 10 rev 1 (1997) 93.

[99] Ibid 92.

[100] ICCPR, above n 96, art 2(3).

[101] Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention of Human Rights), ETS 5; 213 UNTS 221 (1950).

[102] Shelton, above n 85, 9.

[103] *Balmer-Schafroth and Others v Switzerland* [1997] ECHR 46; (1998) 25 EHRR 598.

[104] Ibid [40].

[105] Ibid.

[106] Ibid.

[107] Ibid, Dissenting Opinion of Judge Pettiti, joined by Judges Gölcüklü, Walsh, Russo, Valticos, Lopes Rocha and Jambrek.

[108] See eg *Nöel Narvii Tauira and Eighteen Others v France* (1995) 83-B Eur Comm HR 112. The applicants in this case were residents of French Polynesia who claimed that the decision of the French government to resume nuclear testing in the South Pacific in 1995 posed a real, substantial and immediate risk to life. The EComHR rejected the application, noting that it was only in highly exceptional circumstances that an applicant could claim to be a victim of a violation of the Convention on the basis of a possible future violation, and that in such circumstances reasonable and convincing evidence must be presented. Similar reasons were given for the rejection of a parallel petition in the Human Rights Committee in *Bordes, Tauira and Temeharo v France,* UN Doc CCPR/C/57/D/645/1995 (1995). Nonetheless, although not satisfied that the authors were victims of a rights violation, the Committee reiterated the view it expressed in *General Comment No 14* UN Doc E/C.12/2000/4 (2000) that 'the designing, testing, manufacture, possession and deployment of nuclear weapons are among the greatest threats to the right to life which confronts mankind today'. (at [5.9]).

[109] *Yanomami v Brazil*, Case 7615 (Brazil) OAE/Ser.L/VII.66 Doc.10 rev.1 (1985).

[110] *Öneryildiz v Turkey* (48939/99) [2002] Eur Court HR 491 <http://www.worldlii.org/eu/cases/ECH/2002/491.html> .

[111] (21 June 1993), 32 ILM 1228 (1993).

[112] *Öneryildiz v Turkey* (2002) Eur Court HR 491 [62] <http://www.worldlii.org/eu/cases/ECHR2002/491.html> 30 June 2005.

[113] Ibid [64].

[114] Convention for the Protection of Human Rights and Fundamental Freedoms (6 May 1963), 213 UNTS 262.

[115] S Coyle and K Morrow, *The Philosophical Foundations of Environmental Law: Property, Rights and Nature* (2003) 111-12.

[116] *Powell and Rayner v United Kingdom* [1990] ECHR 2; (1990) 12 EHRR 355.

[117] Ibid [41].

[118] Ibid.

[119] See also *Hatton and Others v United Kingdom* (36022/97) [2003] Eur Court HR 338 (8 July 2003) <http://www.worldlii.org/eu/cases/ECH/2003/338.html> where a similar decision was reached. In this case the Grand Chamber of the ECtHR overturned an earlier Chamber decision that had found a violation of art 8 as a result of a substantial increase in night-time aircraft movements at London's Heathrow Airport. The original Chamber had observed that 'in the particularly sensitive field of environmental protection, mere reference to the economic well-being of the country is not sufficient to outweigh the rights of others.' *Hatton and Others v United Kingdom* (36022/97) [2001] Eur Court HR 561 (2 October 2001) [97] <http://www.worldlii.org/eu/cases/ECHR/2001/561.htm> .

[120] *Lopez-Ostra v Spain* (1995) 20 EHRR 277.

[121] Ibid [51].

[122] Ibid [58].

[123] *Guerra* [1998] ECHR 7; (1998) 26 EHRR 357, [58].

[124] Principle 3 of the Rio Declaration stipulates that 'The *right to development* must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations' (emphasis added). The UN General Assembly subsequently adopted a Declaration on the Right to Development in 1986, which provides in art 1 that '1. The right to development is an inalienable human right by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized. 2. The human right to development also implies the full realization of the right of peoples to self-determination, which includes, subject to the relevant provisions of both International Covenants on Human Rights, the exercise of their inalienable right to full sovereignty over all their natural wealth and resources.' UN Doc A/41/53 (1986). See also the International Covenant on Economic, Social and Cultural Rights, art 1(2): '2. All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence'.

[125] *Gabčíkovo-Nagymaros Case* [1997] ICJ Rep 7, Separate Opinion of Vice-President Weeramantry, 110ff.

[126] M Matsushita, T J Schoenbaum and P C Mavroidis, *The World Trade Organization: Law, Practice and Policy* (2003) 444-47.

[127] H E Daly, 'From Adjustment to Sustainable Development: The Obstacle of Free Trade' (1992) 15 *Loyola of Los Angeles International and Comparative Law Review* 33, 41-42.

[128] D C Esty, 'Bridging the Trade-Environment Divide' (2001) 15 *Journal of Economic Perspectives* 113, 121.

[129] J H Jackson, *The Jurisprudence of GATT and the WTO: Insights on Treaty Law and Economic Relations* (2000) 414-15.

[130] H Nordström and S Vaughan, *Trade and Environment* (1999) 26.

[131] Marrakesh Agreement Establishing the World Trade Organization (15 April 1994), 1869 UNTS 190. Preamble, 1st Recital ('relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living … while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development.'); Rio Declaration, above n 42, principle 12 ('States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.').

[132] N Notaro, *Judicial Approaches to Trade and Environment: The EC and the WTO* (2003) 31. See also J H Knox, 'The Judicial Resolution of Conflicts Between Trade and the Environment' (2004) 28 *Harvard Environmental Law Review* 1, 70-74.

[133] J L Dunoff, 'Institutional Misfits: The GATT, the ICJ and Trade-Environment Disputes' (1994) 15 *Michigan Journal of International Law* 1043.

[134] R Eckersley, 'The Big Chill: The WTO and Multilateral Environmental Agreements' (2004) 4 *Global Environmental Politics* 24, 24.

[135] Marrakesh Agreement Establishing the World Trade Organization (15 April 1994), 1869 UNTS 190 (Marrakesh Agreement).

[136] General Agreement on Tariffs and Trade (30 October 1947), 55 UNTS 187 (in force provisionally under the Protocol of Application, 55 UNTS 308) (GATT). See now the Marrakesh Agreement, above n 135, annex 1A (General Agreements on Tariffs and Trade) (GATT 1994) .

[137] See generally G Goh and T Witbreuk, 'An Introduction to the WTO Dispute Settlement System' (2001) 30 *Western Australian Law Review* 51, 52. Unlike the GATT, which was originally intended as a temporary mechanism, the WTO possesses international legal personality and administers the WTO rules found in the updated GATT (GATT 1994) and the other Multilateral Trade Agreements annexed to the Marrakesh Agreement, above n 135.

[138] Marrakesh Agreement, above n 135, annex 2 (DSU).

[139] Ibid art 4(7) and 5(4).

[140] Ibid art 17.

[141] Ibid arts 16(4) and 17(14).

[142] K Leitner and S Lester, 'WTO Dispute Settlement From 1995 to 2005 – A Statistical Analysis' (2006) 9 *Journal of International Economic Law* 219, 220. By comparison only 196 cases had been commenced under GATT dispute settlement procedures throughout its 45 years of existence.

[143] See D Cass, 'The "Constitutionalization" of International Trade Law: Judicial Norm-Generation as the Engine of Constitutional Development in International Trade' (2001) 12 *European Journal of International Law* 39.

[144] DSU, above n 138, arts 1(1) and 3(2).

[145] Annex 2 to the Agreement Establishing the World Trade Organization (15 April 1994), 1867 UNTS 401.

[146] *United States: Standards for Reformulated and Conventional Gasoline* WTO Doc WT/DS2/AB/R (1996).

[147] Ibid 16.

[148] GATT 1994, above n 136, art I requires equality of treatment for like products, and therefore members of the WTO may not discriminate between like products of other members.

[149] Ibid art III stipulates that domestic and imported products should be treated equally in terms of the application of internal regulations and policies.

[150] Given the relatively recent emergence of environmental concerns in international law it is unsurprising that the only reference of the GATT is to 'natural resources' rather than the environment more broadly: M Harris, 'Beyond Doha: Clarifying the Role of the WTO in Determining Trade-Environment Disputes' (2003) 21 *Law in Context* 307, 309.

[151] *United States: Restrictions on Imports of Tuna,* GATT Doc DS21/R (1991) (*Tuna-Dolphin I*).

[152] *United States: Restrictions on Imports of Tuna,* GATT Doc DS29/R (1994) (*Tuna-Dolphin II*).

[153] D C Esty, *Greening the GATT: Trade, Environment and the Future* (1994) 114-30.

[154] See now the Agreement on the International Dolphin Conservation Program (15 May 1998) <http://www.oceanlaw.net/texts/aidcp.htm> .

[155] None of the other environmental cases decided under the GATT system addressed such questions either. See *Canada: Measures Affecting Exports of Unprocessed Herring and Salmon,* GATT Doc L/6268 (1988) (export restrictions as part of system of fishery resource management not justified under art XX(g)),

Thailand: Restrictions on Importation of and Internal Taxes on Cigarettes, GATT Doc L DS10/R (prohibition on importation of cigarettes purportedly for reasons of public health not justified under art XX(b)), *United States: Taxes on Automobiles,* GATT Doc DS31/R (1994) (regulation regarding minimum fuel economy of imported cars not justified under art XX(g)).

[156] *United States: Import Prohibition of Certain Shrimp and Shrimp Products* WTO Doc WT/DS58/R (1998) (Report of the Panel), WTO Doc WT/DS58/AB/R (1998) (Report of the Appellate Body) (*Shrimp-Turtle I Appellate Body Report*). See A H Qureshi, 'Extraterritorial Shrimps, NGOs and the WTO Appellate Body' (1999) 48 *International and Comparative Law Quarterly* 199.

[157] S Blay, 'The WTO and the Greening of World Trade: A Look at WTO Jurisprudence' (2004) 21 *Environmental Planning Law Journal* 27, 32; G Triggs, 'World Trade Organisation: Dispute Settlement and the Environment' (2002) 7 *Asia Pacific Journal of Environmental Law* 43, 59-61.

[158] Above n 39. All seven known species of sea turtle, the longest-living vertebrates, are threatened with extinction, mainly due to modern fishing practices, and are listed in Appendix 1 of CITES.

[159] For a discussion of the panel report see R Hardcastle, 'Environmental Trade Measures Under Siege: The WTO US Shrimp Case' (1998) 3 *Asia Pacific Journal of Environmental Law* 157.

[160] Notaro, above n 132, 197-200; P Sands, 'International Courts and the Application of the Concept of "Sustainable Development"' in J Hatchard and A Perry-Kessaris (eds), *Law and Development: Facing Complexity in the 21st Century* (2003) 147, 151-55; R Howse, 'The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal Baseline for the Trade and Environment Debate' (2002) 27 *Columbia Journal of Environmental Law* 491, 499-516.

[161] *Shrimp-Turtle I Appellate BodyReport*, WTO Doc WT/DS58/AB/R (1998) [118]-[119].

[162] Ibid [129].

[163] Ibid [134].

[164] Ibid [130].

[165] United Nations Convention on the Law of the Sea (10 December 1982), 1833 UNTS 397 (LOS Convention).

[166] Above n 43.

[167] Above n 39.

[168] *Shrimp-Turtle I Appellate Body Report,* WTO Doc WT/DS58/AB/R (1998) [131].

[169] Ibid [132].

[170] Ibid [142].

[171] Ibid [165].

[172] Ibid [166].

[173] Ibid [168].

[174] Rio Declaration, above n 42, principle 12; Agenda 21, above n 44, [2.22(i)]; Biodiversity Convention, above n 43, art 5.

[175] R Briese, 'Precaution and Cooperation in the World Trade Organization: An Environmental Perspective'

[2002] AUYrBkIntLaw 4; (2002) 22 *Aust YBIL* 113, 156.

[176] *Shrimp-Turtle I Appellate Body Report,* WTO Doc WT/DS58/AB/R (1998) [171].

[177] *United States-Import Prohibition of Certain Shrimp and Shrimp Products* (*Shrimp-Turtle II*), WTO Doc WT/DS58/RW (2001) (Report of the Panel), WTO Doc WT/DS58/AB/RW (2001) (Report of the Appellate Body) (*Shrimp-Turtle II Appellate Body Report*).

[178] DSU, above n 138, art 21.5 provides that '[w]here there is disagreement as to the existence or consistency with a covered agreement of measures taken to comply with the recommendations and rulings such disputes shall be decided through recourse to these dispute settlement procedures …'.

[179] Triggs, above n 157, 60-61.

[180] The most recent art XX decision is *European Communities: Measures Affecting Asbestos and Products Containing Asbestos,* WTO Doc WT/DS135/R (2000) (Report of the Panel), WTO Doc WT/DS135/AB/R (2001) (Report of the Appellate Body) in which a Panel and the Appellate Body found that French prohibitions on the import of asbestos were allowable under art XX(g) as they addressed a legitimate human health risk. Neither the Panel nor the Appellate Body referred to international environmental law in reaching this decision but see M Cordonier Segger and M W Gehring, 'The WTO and Precaution: Sustainable Development Implications of the WTO Asbestos Dispute' (2003) 15 *Journal of Environmental Law* 289 (arguing that the Appellate Body's decision was 'inspired by' precaution and sustainable development). See also M Footer and S Zia-Zarifi, 'European Communities – Measures Affecting Asbestos and Asbestos-Containing Products: The World Trade Organization on Trial for its Handling of Occupational Health and Safety Issues' [2002] MelbJlIntLaw 5; (2002) 3 *Melbourne Journal of International Law* 120.

[181] WTO Doc WT/DS193/2 (2000) (Request for Consultations).

[182] *Case Concerning the Conservation and Sustainable Exploitation of Swordfish Stocks in the South-Eastern Pacific Ocean* (*Chile/European Community*), ITLOS Case No 7, <http://www.itlos.org> (*Swordfish Stocks Case*).

[183] For a discussion of the arguments that might have been made on the basis of the LOS Convention, above n 165, before a WTO Panel and the Appellate Body see A Serdy, 'See You in Port: Australia and New Zealand as Third Parties in the Dispute Between Chile and the European Community Over Chile's Denial of Port Access to Spanish Vessels Fishing for Swordfish on the High Seas' [2002] MelbJlIntLaw 4; (2002) 3 *Melbourne Journal of International Law* 79.

[184] Marrakesh Agreement, above n 135, annex 1A (SPS Agreement).

[185] See S Charnovitz, 'The Supervision of Health and Biosafety Regulation by World Trade Rules' (1999-2000) 13 *Tulane Environmental Law Journal* 271. Sanitary measures are those designed to protect the health of animals, including human beings, while phytosanitary measures are those that seek to protect the health of plants (from the Greek *phyton* meaning 'plant').

[186] A F Lowenfeld, *International Economic Law* (2002) 324.

[187] SPS Agreement, above n 184, art 2(1).

[188] Ibid art 2(2).

[189] *European Communities: Measures Concerning Meat and Meat Products* (*Hormones*) WTO Doc WT/DS26/R/USA (1997) (Complaint by the United States – Report of the Panel), WTO Doc WT/DS48/4/CAN (1997) (Complaint by Canada – Report of the Panel) WTO Doc WT/DS26/AB/R, WT/DS48/AB/R (1998) (Report of the Appellate Body).

[190] EC Directive 96/22/EC (which repealed and replaced similar directives going back to 1981, including 91/602/EEC).

[191] *Beef Hormones* WTO Doc WT/DS26/R/USA (1997) (Complaint by the United States – Report of the Panel) [8.157].

[192] *Beef Hormones* [125] WTO Doc WT/DS26/AB/R, WT/DS48/AB/R (1998) (Report of the Appellate Body).

[193] Ibid [123].

[194] Ibid [124].

[195] Peel, above n 57, 493.

[196] Pauwelyn, above n 5, 482.

[197] Ibid.

[198] Ibid.

[199] J I Charney, 'Is International Law Threatened by Multiple International Tribunals', above n 19, 153.

[200] Lowenfeld, above n 186, 322.

[201] R Eckersley, 'The Big Chill: The WTO and Multilateral Environmental Agreements' (2004) 4 *Global Environmental Politics* 24, 29. See also at 37 ('WTO politics lags well behind WTO jurisprudence').

[202] See for instance Koskenniemi and Leino, above n 26, 572 ('In case of conflict between, say, an environmental treaty and a WTO agreement, WTO bodies are constitutionally prevented from concluding that the WTO standard has to be set aside.'); See also P Sands, 'Treaty, Custom and the Cross-Fertilization of International Law' (1998) 10 *Yale Human Rights and Development Law Journal* 3, 12; L D Guruswamy, 'Should UNCLOS or GATT/WTO Decide Trade and Environment Disputes?' (1998) 7 *Minnesota Journal of Global Trade* 287, 311.

[203] J Pauwelyn, 'Recent Books on Trade and Environment: GATT Phantoms Still Haunt the WTO' (2004) 15 *European Journal of International Law* 575, 588-89.

[204] Eckersley, above n 201, 36-37.

[205] (23 May 1969), 1155 UNTS 332, art 60(1).

[206] A Boyle, 'The World Trade Organization and the Marine Environment' in M H Nordquist, J N Moore and S Mahmoudi (eds), *The Stockholm Declaration and Law of the Marine Environment* (2003) 109, 110.

[207] R Skeen, 'Will the WTO Turn Green? The Implications of Injecting Environmental Issues Into the Multilateral Trading System' (2004) 17 *Georgetown International Environmental Law Review* 161, 192.

[208] Although, as noted above, the *Swordfish Stocks Case* would have involved questions as to the interaction between UNCLOS and WTO rules had it proceeded in either the WTO or UNCLOS dispute settlement system. In addition, as discussed below, the applicability of the Cartagena Protocol is a major issue in recent litigation in the WTO in relation to trade in genetically modified organisms.

[209] Lowenfeld, above n 186, 313-14. Although it would be more problematic if a WTO member were to rely upon a multilateral environmental agreement to which another disputant were not a party. This situation has not, as yet, materialised and seems unlikely to, partly because the membership of multilateral environmental agreements tends to be more widespread than the WTO itself.

[210] There are multiple sites of contestation in the CTE including the competence of the Committee to consider all issues of WTO/MEA compatibility, or only the interrelationship between specific trade obligations contained in MEAs and the WTO. For a detailed review of the historical and contemporary sources of tension

and dispute in the CTE see Eckersley, above n 134.

[211] *European Communities: Measures Affecting the Approval and Marketing of Biotech Products* (*Biotech Products*) WTO Doc WT/DS293/17 (2003) (Request for the Establishment of a Panel by Argentina) WTO Doc WT/DS292/17 (2003) (Request for the Establishment of a Panel by Canada) WTO Doc WT/DS291/23 (2003) (Request for the Establishment of a Panel by the United States).

[212] Australia and several other states also joined the litigation in support of the complainants. The third parties comprise Australia, Brazil, Canada, Chile, China, Chinese Taipei, Colombia, El Salvador, Honduras, Mexico, New Zealand, Norway, Paraguay, Peru, Thailand and Uruguay.

[213] Genetic modification involves the use of techniques of molecular biology to add or remove genes within an organism, such as the transfer of genes from one species of cropping plant to another.

[214] [1990] OJ L 117/15.

[215] [2001] OJ L 106/1.

[216] For comprehensive analysis of the submissions of the parties and the *amici curiae* see J Peel, R Nelson and L Godden, 'GMO Trade Wars: The Submissions in the *EC – GMO* Dispute in the WTO' [2005] MelbJlIntLaw 6; (2005) 6 *Melbourne Journal of International Law* 141.

[217] Canada and Argentina also contend that the EC contravened the GATT 1994 and the Agreement on Agriculture and the Agreement on Technical Barriers to Trade.

[218] This dialectic is raised and considered in depth in D Winickoff, S Jasanoff, L Busch, R Grove-White, and B Wynne, 'Adjudicating the GM Food Wars: Science, Risk, and Democracy in World Trade Law' (2005) 30 *Yale Journal of International Law* 81.

[219] Peel, Nelson, and Godden, above n 216, 157.

[220] *European Communities: Measures Affecting the Approval and Marketing of Biotech Products*, [456], WTO Doc WT/DS291 (2004) (First Written Submission of the European Communities).

[221] Ibid [457].

[222] Ibid.

[223] See esp the Preamble, and art 1. Art 1 provides that '[i]n accordance with the precautionary approach contained in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Protocol is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements.' See also R Mackenzie and P Sands, 'Prospects for International Environmental Law' in C Bail, R Falkner and H Marquard (eds), *The Cartagena Protocol on Biosafety: Reconciling Trade in Biotechnology with Environment and Development?* (2002) 458, 462 ('[r]ather than setting out precaution as a general principle, the protocol sets out a specific framework and some operational guidance for its implementation').

[224] The EC signed the Protocol on 24 May 2000, and ratification followed on 27 August 2003.

[225] Argentina and Canada signed the Protocol on 24 May 2000 and 19 April 2001 respectively.

[226] *European Communities: Measures Affecting the Approval and Marketing of Biotech Products*, [456], WTO Doc WT/DS291 (2004) (*Executive Summary of the Rebuttal Submission of the United States*).

[227] Ibid [13].

[228] Ibid [15].

[229] International Centre for Trade and Sustainable Development, 'WTO Panel Provisionally Rules Against EU Moratorium on Biotech Approvals' <http://www.ictsd.org/biores/06-02-17/story1.htm> .
