

Reference: Published in *Global Governance* Vol. 7, No. 1, (2001), pp. 95-117.

by G. Kristin Rosendal

## **Impacts of Overlapping International Regimes: The Case of Biodiversity**

### ABSTRACT

The large number of international environmental agreements has been negotiated in the absence of explicit measures to resolve the frequently conflicting goals of overlapping economic regimes. This raises the question of how such overlap may affect the formation and subsequent implementation of environmental regimes. Presently, we lack both systematic mapping of types of institutional overlap and mapping of effects from overlap. There is little knowledge about how institutional overlap may affect the effectiveness of international environmental co-operation. The first part of this article proposes a typology based on compatible and diverging norms and rules, in order to determine the scope and type of overlap. Against this backdrop, I develop assumptions concerning the scope for synergy and conflict in different situations of overlap. In the second part, I apply this framework to the analysis of the CBD and TRIPs in order to illustrate how the typology may be used. I will argue that the overlap between the Convention on Biological Diversity (CBD) and the Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPs) concerns both diverging norms and regulations pertaining to the same issue-area.

### ABSTRACT TO IPSA (123 WORDS)

Most international environmental agreements have been negotiated without explicit measures to resolve the frequently conflicting goals of overlapping economic regimes. A critical question, therefore, concerns how overlap may affect the formation and implementation of environmental regimes. We lack systematic knowledge of types and effects of institutional overlap and how it affects the effectiveness of international environmental co-operation. I propose a typology based on compatible and diverging norms and rules, and develop assumptions concerning the scope for synergy and conflict in situations of overlap. I apply the framework to the overlap between the Convention on Biological Diversity and the TRIPs part of the World Trade Organisation, arguing that this concerns both diverging norms and regulations and may hamper the effectiveness of the former regime.

## **Impacts of Overlapping International Regimes: The Case of Biodiversity**

*Biographical note:* G. Kristin Rosendal is a senior research fellow and director of the Research Programme on Global Resource Management at the Fridtjof Nansen Institute at Lysaker, Norway. She has written extensively on international environmental negotiations, focusing on the North-South debate on genetic resources and property rights, and also on the international debate on forest management. Since 1994, Rosendal is an Associate Editor for the Biotechnology Annual Review (Elsevier). She holds a doctorate in political science from the University of Oslo. Her PhD dissertation is on the formation and implementation of the Convention on Biological Diversity.

Name: G. Kristin Rosendal

Institution: the Fridtjof Nansen Institute (FNI)

Address: P.O. Box 326, 1326 Lysaker, Norway

Tel. (47) 67 11 19 28

Fax. (47) 67 11 19 10

e-mail: [Kristin.Rosendal@fni.no](mailto:Kristin.Rosendal@fni.no)

# Impacts of Overlapping International Regimes: The Case of Biodiversity

G. Kristin Rosendal, the Fridtjof Nansen Institute

The recent couple of decades have witnessed an upsurge in transborder environmental problems, as well as a large number of international arrangements set up to meet these challenges. This proliferation boosts both scientific and political interest in broadening our understanding of the actual factors that determine effectiveness and successful implementation of international environmental agreements. The large number of international environmental agreements has been negotiated without explicit measures having been taken to resolve the frequently conflicting goals of overlapping economic regimes. This raises the question of how such overlap may affect the formation and subsequent implementation of environmental regimes.

The focus in this article is on the overlap between one environmental and one trade-related regime. These are the international Convention on Biological Diversity (CBD)<sup>1</sup> and the Trade-Related Aspects of Intellectual Property Rights (TRIPs) under the World Trade Organization (WTO). In response to the rapid loss of species and ecosystem decay worldwide, the CBD was agreed to in Rio in 1992 and entered into force in 1993. One year later, the TRIPs agreement under the WTO was formally established. The CBD is concerned with conservation of biological diversity and equitable sharing of benefits derived from the world's genetic resources.<sup>2</sup> The TRIPs, being part of a trade regime, seeks to discourage policies that obstruct trade liberalisation in any area – including that of biotechnology, which is based on the utilisation of genetic resources. How do the functional scopes of these institutions overlap and what are the implications for the operation of the CBD? I will argue that the overlap between the CBD and TRIPs concerns both diverging norms and diverging regulations pertaining to the same issue-area.

Presently, we lack both systematic mapping of types of institutional overlap and mapping of effects from overlap. There is little knowledge about how institutional overlap may affect the effectiveness of international environmental co-operation.<sup>3</sup> Clearly, within the scope of an article it is hardly possible to provide a full answer to these questions. The aim here is to propose a typology for approaching analysis of institutional overlap, to develop some assumptions, and apply these to the analysis of the CBD and TRIPs. The first part of this article proposes a typology based on compatible and diverging norms and rules, in order to determine the scope and type of overlap. Against this backdrop, I develop assumptions concerning the scope for synergy and conflict in different situations of institutional overlap. In the second part, I study the two regimes, the CBD and TRIPs, in light of this framework, in order to illustrate how the typology may be used. Finally, the article winds up with a

discussion of the analytical implications of thus elaborating or diverging from traditional regime theory. The analysis of several regimes active in a single issue-area may bring about lessons other than those that an isolated regime study might engender. This discussion is confined to how the overlapping regime approach may add to our understanding of the regime formation process, as it is premature to conclude about impacts in the implementation phase.

### ***Overlapping International Institutions: Analytical Framework***

The analytical approach builds on theoretical contributions from the field of institutionalism and international relations; more specifically, regime and implementation studies. *Regimes* are often defined as “implicit or explicit principles, norms, rules and decision-making procedures around which actors’ expectations converge in a given issue-area”.<sup>4</sup> The term *implementation* is used to indicate deliberate efforts by national authorities to follow up their international commitments in domestic policies within the specific issue area.<sup>5</sup> Domestic implementation involves ratification, legislation establishing domestic policies and programmes aimed at following up international commitments at the national level.<sup>6</sup> There is also a level of international implementation, which concerns the further international negotiations on protocols and compliance mechanisms, and this is a main concern when dealing with interlinkages between institutions.

Oran Young (1996) differentiates between four types of institutional linkages that are becoming increasingly important as the density and interdependence between regimes expands.<sup>7</sup> Providing one of the most comprehensive attempts to grapple with institutional linkages, he defines the concepts of *embedded*, *nested*, *clustered* and *overlapping* institutions.<sup>8</sup> In this article, the main focus will be on the fourth linkage type of overlapping institutions. In Young’s definition, overlap implies that the functional scope of one regime protrudes into the functional scope of others. In contrast to the other three, this fourth linkage-type may be seen as an externality, resulting from choices with unintended and unforeseen effects.<sup>9</sup>

There are two dimensions along which institutional overlap may be studied in depth. First, within the same issue-area there may be a great number of sub-items allowing for several sets of functional overlap between two different regimes. These items may involve a great number of implications in terms of for instance economic, environmental and social effects. Secondly, there may be more than one other regime overlapping with the first within the same issue-area. An in-depth examination of the implications of all overlapping aspects, with all overlapping regimes, would soon exhaust the limits of an article. Hence, we need a way to distinguish between types of overlap with possibilities for synergetic and conflicting effects on international co-operation.

Synergy is characteristic of a situation where the two institutions are largely pulling in the same direction, where they are mutually reinforcing and where wasteful duplication may be avoided through co-ordination.<sup>10</sup> Conflict is a more likely result when the overall policy objectives as well as the obligations emanating from overlapping international agreements fail to complement and enhance each other; or worse, when they are mutually exclusive. This situation may hamper efforts to reach effective institutional responses to environmental problems, let alone to implement one or both of the regimes. Such situations may require procedures or mechanisms through which to deal with the more serious implications for the effectiveness of international environmental co-operation and implementation.<sup>11</sup>

In order to approach the diverse situations of institutional overlap, I shall distinguish between the *norms* generated by a regime, and the explicit *rules* to which states may commit themselves. *Norms* refer to the overall policy objectives and principles of a regime that tend to carry legitimacy among participating actors. The explicit *rules* prescribe specified regulations for state behaviour, in the implementation phase.

The distinction between norms and rules is made primarily to capture the dynamics of regime development. The normative sway is likely to be apparent from the early stages of regime formation.<sup>12</sup> Explicit rules tend, however, to appear later in the regime formation process. Currently, many multilateral environmental agreements tend to be formulated as framework conventions, where the more specific policy oriented rules are established later within nested protocols. On the same note, a situation of conflict is not necessarily static. As negotiating parties come to realise the tensions created by diverging norms or rules this may give rise to constructive discussions and efforts to produce compatible solutions.

The majority of overlaps can be assumed to be potentially synergetic as regimes will often build on compatible norms and give rise to mutually reinforcing (positive) or complementary (neutral) regulations. Within the prolific field of international institutions we are, however, also likely to find a great amount of overlap that comprise diverging norms and rules.

For the simplicity of the typology, I shall treat mutually reinforcing and complementary interactions together as compatible. Against this backdrop, four situations can be envisaged: Overlap between regimes with compatible or diverging norms, and overlap between regimes with compatible or diverging rules (Table 1). The assumptions tied to this typology are intended as an aid in focusing on linkages among institutions that may need special attention. In addition, the typology will provide some structure for the discussion of the following case study. However, it is not within the scope of this study to test the assumptions on the case. Rather, the case study will serve as an illustration.

**Table 1 Types of overlap between regimes**

		NORMS	
		compatible	diverging
RULES	compatible	I	II
	diverging	III	IV

- Type I depict a largely synergetic situation, although it could theoretically develop into a box III situation at later stages. A typical example of a rather stable type I relationship is that between the CBD, the Ramsar Convention on Wetlands and the Convention on Trade in Endangered Species (CITES), among others.<sup>13</sup> It should be noted that even though this situation provides a high scope for synergies, this potential is not necessarily tapped. Overlap between two or more such institutions may result in significant double work in terms of for instance national reporting, which may represent a heavy burden not least on bureaucracies in developing countries. Type I will not automatically give rise to synergies, unless the parties establish some form of co-operation or co-ordination mechanisms.
- In type II we face a relatively synergetic situation with diverging norms and compatible rules. Examples here can be the relationship between conservation treaties and some resource management regimes, such as the Whaling regime under which the International Whaling Commission (IWC) is working. At the establishment of the IWC, the whale was seen as an economic resource and the main reason conservation was needed, was to secure a stable and long-term income for the whaling industry. This overall policy objective, as reflected in the preamble to the International Convention on the Regulation of Whaling (ICRW), remains the same. The regulations emanating from the IWC in the recent decade have been greatly changed, however, reflecting a much higher focus on pure conservation.<sup>14</sup> Another example is the international organisation on tropical timber (ITTO), with its principal goal pertaining to increasing international trade in tropical timber. In recent years, the ITTO focus has turned towards a much greater emphasis on developing regulations for sustainable forest management.<sup>15</sup> In other cases, however, a box two situation may simply indicate a temporal lack of regulations. The lack of diverging rules may be due to the early stage of regime formation, where protocols embodying explicit (and diverging) rules have yet to arise. The relationship between environmental treaties and trade regimes may exemplify this type of situation.
- The third type (box III) may turn out to be problematic in terms of implementation, even if two overlapping regimes largely build on compatible norms. Common norms and principles will not redeem the situation if prescribed practice (rules) is mutually detrimental. An example of this type of regime discord is found in the cases of the Montreal Protocol of the ozone regime and the Kyoto Protocol of the framework Convention on Climate Change (FCCC). Both regimes are based on common principles of environmental concern – aimed at mitigating threats to the global atmosphere. However, while hydrofluorocarbons (HFCs) represent destructive greenhouse gasses to be faced out within the climate regime, HFCs are

part of the solution within the ozone regime as they may act as substitutes for ozone-depleting substances.<sup>16</sup> Another example can be found in the initial approach to forestry under the biodiversity and the climate change negotiations respectively.<sup>17</sup> From a climate change perspective, reforestation with uniform, fast-growing tree species may be the quickest way to provide CO<sub>2</sub> sinks. The homogeneous habitat devised by this method is, however, hardly compatible with the objective to enhance biodiversity.

- The situation in box IV depicts overlap between regimes with both diverging norms and rules relating to the same issue-area. This may be assumed to represent the situation with the highest potential for conflict and the situation may arise when multilateral agreements, aimed at trade and environment respectively, clash within a single issue-area. The situations pictured in box III and IV would seem to ask for more than mere co-ordination. The relationship between the CBD and TRIPs may come to represent an example of this fourth category, as I will elaborate further in case study.

Determining whether a situation of overlap is compatible or diverging is not, however, necessarily an easy task. A situation of overlap may be characterised as giving rise to synergies or conflicts – but the characteristics given may be related to the particular interests of parties involved in international negotiations. There may frequently be political interests tied to the demarcation of an issue-area and ‘its’ regime.<sup>18</sup> While the explicit wording of a rule may be relatively straightforward, its practical consequences may also be greatly disputed among negotiating parties. If we find that a situation of institutional overlap is characterised by diverging norms and rules (box IV), yet another step should be taken prior to conclude on the scope for conflict. I propose to distinguish between functional overlap that concerns *core* aspects of the issue-area and overlap involving *secondary* aspects. Secondly, I make a distinction between overlap involving *regulatory* and *programmatic* rules.

Regimes are per definition issue-specific. The *core* aspects of an issue-area demarcate the central items on which that specific regime is focused. This is where the fundamental principles – the underlying normative orientations – of the regime are centred. In the case of the CBD this includes the principles relating to equitable sharing of benefits derived from genetic resources. More general examples may be the relative valuation of individual freedom vs. social equity, and the relative importance assigned to economic growth vs. environmental protection. *Secondary* aspects concern perceptions about the seriousness of a problem and the relative importance of causal factors in a problem area.<sup>19</sup> While diverging norms relating to secondary aspects can be associated with scientific uncertainty within an issue area, diverging norms relating to core elements can be associated with political discord – i.e. carrying (re)distributive implications if translated into obligations.

The *regulatory* rules are the regime objectives spelled out as explicit obligations (such as timetables, targets, standards and catch quotas) that member parties are expected to comply with. Regulatory rules spell out the rights and obligations under the treaty, such as the property rights

pertaining to natural resources. Overlap between regimes with conflicting regulations will clearly cause problems. *Programmatic* rules concern those aspects of a regime dealing with efforts to enhance knowledge about an issue-area. Overlapping programmatic activities would probably give rise to calls for co-ordination, but it would hardly cause conflict among the parties involved in compliance.

Against this backdrop, two broad assumptions can be made concerning how overlap may affect the effectiveness of international environmental co-operation and subsequent implementation:

- *Norms*: Diverging norms in the case of overlap between *core* aspects are likely to offer a higher scope for conflict (potentially hampering formation and implementation of one or both institutions) than when the overlap concerns *secondary* aspects. One effect may be obstruction of developing compliance mechanisms or protocols.<sup>20</sup>
- *Rules*: Diverging *regulatory* rules in overlapping regimes are likely to render a higher scope for conflict (potentially hampering implementation of one or both institutions) than when overlap concerns opposing *programmatic* rules. As overlap becomes evident, the effect may be reduced domestic implementation in terms of ratification and legislation.

On the same note, four possible types of *diverging institutional overlap* can be envisaged: Overlap between regimes with diverging norms relating to either *core* or *secondary* aspects, and overlap between regimes with diverging rules of a predominantly *regulatory* or *programmatic* character (Table 2). Overlap between regimes with diverging norms relating to core aspects of the issue-area and with diverging regulatory rules is assumed to represent the situation with the highest scope for conflict (situation IV in Table 2). The other three types of situations will thus be assumed to have a relatively higher potential for synergies, as learning and diffusion of policy ideas may give rise to compatible solutions. Again, the assumptions tied to this typology are meant to direct attention and provide a structure for the analysis, rather than being subject to testing in the following case study.

**Table 2 Types of diverging overlap between regimes**

	NORMS (diverging)		
		secondary	core
RULES (diverging)	programmatic	I	II
	regulatory	III	IV

The type of regime relationship may still not be easily determined. First, there may be disputes between members about whether the overlap really concerns core aspects or merely secondary ones (I or II). Moreover, it may be hard to distinguish between core and secondary aspects until a specific situation arises that puts the issue onto the agenda. When cases of conflicting principles between trade and environment first began to appear before the GATT – such as the 1991 tuna dispute between the USA and Mexico over the right to use market restrictions to protect dolphins – the trade regime’s limitations on state behaviour came unexpectedly to the



member countries.<sup>21</sup> The US government was startled to find itself (and its environmental policy) hamstrung by the principles of trade liberalisation.

Another difficult definition concerns the potentially conflicting situation in the case of programmatic overlap between regimes that are built on diverging core principles (II). International regimes are hardly static entities and may well evolve from purely programmatic to regulatory regimes (from box II to IV). The point here is to distinguish activities with significantly (re)distributive effects from activities where overlap can be resolved by co-ordination between regime secretariats. An example of programmatic activities is the functions performed by the International Aviation Treaty Association (IATA). Granted, the programmatic type of overlap may give rise to turf wars between secretariats and such inter-regime conflicts may represent a hurdle for their effective operation. An example of inter-regime conflict can be found in the initial rounds of the biodiversity negotiations, where the UN Food and Agricultural Organization (FAO) was reluctant to shed parts of its turf to the UN Environment Programme (UNEP). While UNEP had been given the mandate to preside over the CBD negotiations, there was apprehension in the FAO that this would interfere with their newly established Undertaking for plant genetic resources.

Turning to the case study, I now go on to examine the different normative approaches to property rights to genetic material as found in the CBD and TRIPs respectively. In the next section, I present the regulations of the two regimes pertaining to the issue-area. This provides a picture of the background for the institutional overlap. I then go on to comment upon the effects of this overlap on the formation of the CBD and on how the two institutions seem to deal with the situation of overlap. Finally, I shall briefly discuss the analytical implications in light of traditional regime theory.

### *Diverging Norms in Overlapping Issue-Areas: CBD and TRIPs*

The issue of biological diversity constitutes one of today's greatest challenges, for two main reasons:

- First, the concern with biodiversity stems largely from our increasing awareness that the current rate of species extinction is extremely high, viewed against the natural average rate.<sup>22</sup>
- Second, as the new biotechnologies greatly enhance the potential utility areas of the world's genetic resources, economic incentives to conserve biological diversity increase.<sup>23</sup>

The main objective of the Convention on Biological Diversity is threefold: "to ensure *conservation* of biological diversity, and *sustainable use* of its components; and to promote a fair and *equitable sharing* of the benefits arising out of utilisation of genetic resources, including

by appropriate access to genetic resources and by appropriate transfer of relevant technologies, and by appropriate funding” (Article 1).

The normative orientation towards equitable sharing, which is a central trait of the CBD, builds on the understanding that costs and benefits of biodiversity have long been asymmetrically distributed – and that this situation needs to be remedied in order to combat the loss of biodiversity. The CBD stipulates that those who have the ultimate responsibility of carrying the costs of conservation and sustainable use of the resources must also be given a fair and equitable share in the benefits derived from this use. The major bulk of species diversity is found in the tropical countries of the South, while it is largely the countries of the North that possess the technology to exploit the resources commercially – and to ensure private rights and royalties through patents.<sup>24</sup>

A basic normative difference between the CBD and TRIPs concerns the views on property rights to genetic resources: The CBD advocates national sovereignty to, and equitable sharing of benefits from utilisation of genetic resources. TRIPs seeks to enhance trade liberalisation by strengthening and harmonising intellectual property rights (IPR) systems, such as patent legislation, in all technological fields world-wide – including biotechnology. The background for these diverging views is described here.

The contrast between the CBD and TRIPs normative approach can be traced back to the opposing views on the merits of patents on organic material. A patent is a contract between researcher and society. The researcher is making her invention public, rather than keeping it a secret, and society offers royalties for using the invention for a limited period of time. The idea is to provide incentives for innovative research by compensating for the time and costs going into research.

Along with the developments in biotechnology, there have been legal reinterpretations of national patent laws. Legal reinterpretations were necessary to overcome the technical barriers to patentability. Traditionally, the patent system was limited to technologies dealing with non-organic material. Biological products or processes were originally excluded from patentability on the basis that such inventions could not meet the fundamental patent criteria: *novelty* (not published anywhere before), *inventive step* (the invention must display non-obviousness), *industrial utility* (the invention must have a practical application, to distinguish between basic research and applied technology, which is eligible for patenting), and *reproducibility* (the application must describe the invention in such detail that other experts may repeat the experiment and arrive at the same results).<sup>25</sup> In addition to these criteria, patent legislation commonly excludes from patentability inventions whose utilisation would run counter to *public order or morality*.

However, patenting within biotechnology remains a contentious issue. Some of the controversies are fairly technical in nature and can be classified as secondary aspects in relation to the CBD core objectives. For instance, many biologists question whether a product patent on naturally occurring organisms is fulfilling the criteria of *novelty* and *inventive step*. Biological material was traditionally regarded as natural products rather than industrial products – discoveries rather than inventions. It is still contested whether the process of isolating and describing a micro-organism or a gene may be defined as ‘inventive enough’ to meet this criterion. Second, in contrast to traditional breeding methods, the new biotechnologies may comply with the *reproducibility* criterion. However, many biotechnology patent applications are so complex that they fail to fulfil the reproducibility criterion. Hence, the deal with patents as an alternative to secrecy is forfeited and scientific exchange and development is impeded. Other controversies are more likely to pertain to core aspects within the two regimes:

- **The equitable sharing aspect:** Patenting is a long and costly business that can primarily be employed by large corporations. It is hardly a tool for indigenous and local communities, even though these groups often harbour much knowledge about the use of biological resources. Biotechnological products often build on local breeding and knowledge about the medicinal traits of these resources.<sup>26</sup> In that case, a patent will reward only the one that provided the last piece of a long process of breeding or invention. Hence, it is argued that patenting here is a form of *biopiracy* that may be incompatible with the CBD objective of equitable sharing. On a more optimistic note, other actors coin this activity *bioprospecting*: The concept *bioprospecting* denotes among others the prospects for making beneficial and equitable contracts for access to genetic resources between local communities and transnational corporations.<sup>27</sup>
- **The conservation & sustainable use aspect:** Another dispute concerns whether intellectual property rights represent a direct threat to genetic diversity in agriculture. Supporters of intellectual property rights (IPR) argue about the need to introduce high-yielding plant varieties, and have linked to this the use of *plant breeders’ rights* and patents, as preconditions for food security. Opponents argue that the precondition for food security lies in the conservation and sustainable use of the huge variety of (non-systematically bred) farmers’ cultivars. They go on to say that the patent and plant breeders’ rights criteria of reproducibility and “uniform, stable and distinct from existing varieties”<sup>28</sup> may lead to increased use of monocultures. These will in turn replace diverse varieties and hence result in loss of genetic diversity.

As formulated by the leader of the Ethiopian delegation to the CBD negotiations, Dr. Tewolde B. Egziabher:

By sanctioning the patenting of varieties of genetic material developed over generations by (such) communities (of farmers) and enabling Northern corporations to secure monopoly control over them, the TRIPs is undermining the concept of equitable benefit-sharing envisaged in the CBD.<sup>29</sup>

These controversies indicate the fundamental difference between the normative orientations of the two regimes. While concerns for equitable sharing and conservation constitute the core

norms and principles engendered by the CBD, the TRIPs promotes the privatisation of genetic resources through individual rights. Regardless of the “real” rights and wrongs of the debate, the latter controversies in particular go to the very core of the biodiversity issue. According to the analytical framework, such diverging principles within core aspects of overlapping issue-areas may offer a high potential for conflicts, which may obstruct the implementation process. When two regimes are established with the intention to bolster greatly opposing principles, this is likely to fuel the controversies among affected parties. Subsequent to the presentation of the explicit rules, I will deal with the question of how this overlap may have impeded the formation and establishment of compliance mechanisms in the CBD.

### ***Diverging Regulations in Overlapping Issue-Areas***

This section presents the main regulations of the CBD and TRIPs pertaining to property rights to, and equitable sharing of benefits from genetic resources.

#### ***The regulations of TRIPs***

Questions concerning the widening scope of industrial patents were brought up in the Uruguay Round (1988–1994) of the GATT. The final text of the Agreements established the World Trade Organisation (WTO), including the TRIPs Agreement, and was adopted in April 1994.

The USA, Japan and, less adamantly, the EU advocated the principle that all countries should provide and respect intellectual property protection in all technical fields – including biotechnology. Disregarding this principle would constitute a contravention of GATT regulations, making the offending country liable to economic sanctions.<sup>30</sup> Governments in developing countries were strongly opposed to the GATT TRIPs proposals, arguing that patents benefit those states that are already technologically and economically strong. This point was hard to refute, as the developing world held no more than one to three per cent of all patents world-wide.<sup>31</sup> Many developing countries argued that the application of IPR systems would hinder the transfer of technology to the developing world as well as disregarding the very real contributions of generations of farmers to the world’s plant genetic resources – the basis of global food security. Hence, the discussion of the TRIPs regulations brought up several of the controversial normative aspects related to the issue-area.

The opposition has had some success in GATT. This was partly due to the mitigating effect of the EU. At the time, the *European Patent Convention* (Art. 53(b)) allowed for *plant varieties* to be excluded from patentability. The final agreement on TRIPs contains the following decisions:

- It grants parties the right to exclude from patentability (Art. 27.3. [a]) diagnostic, therapeutic and surgical methods for the treatment of humans and animals, and (Art. 27.3.[b]) plants and animals other than micro-organisms.<sup>32</sup>
- It obligates parties to introduce some kind of intellectual property rights for *plant varieties*. TRIPs requires members to provide for the protection of *plant varieties*, either by patents or by establishing an effective *sui generis* system (a legal system of its own kind). It is still unclear whether this *sui generis* option basically means joining the Union for the Protection of New Varieties of Plants (UPOV), or if it will allow for the development of community rights to counterbalance IPR-systems like patents and UPOV.
- It obligates those WTO member-states that choose the *sui generis* laws to establish these by January 2000. The least developed countries have until 2005 to fulfil their TRIPs obligations. Developing countries may hence create systems better suited to their present needs. During the Millennium Round of the WTO, which only just started at the end of 1999, the *sui generis* option within TRIPs will be up for review by the member states.

For the first time, through article 27.3, there was a global effort to push for patents on living material. Many countries in the North (such as Norway) and South (such as India) still do not allow patents on plants and animals.

### Regulations of the CBD

At the start of the biodiversity negotiations the North's interpretation of the principle of common heritage of mankind (CHM) did constitute the international regime for exchange of and access to plant genetic resources (seeds). International gene banks were stocked with seeds from the most commonly used food plants. These seeds were primarily collected from the extensive variation found in the South, and the gene banks were based on the North's interpretation of the CHM-principle – *open access, free of charge*.<sup>33</sup>

In response to the developments in GATT among others, developing countries claimed national sovereignty over their genetic heritage, demanding that it be regarded as a national asset along the lines of other natural resources, like oil and minerals.<sup>34</sup> National sovereignty ended up as the only passageway for reaching consensus about property rights between the North and the South in the CBD text. Hence, the CBD establishes a new type of property rights regime, where national sovereignty is introduced to counterbalance intellectual property rights. The principle of national sovereignty to natural resources has little material basis. This is because of the 'elusive' character of genetic resources – with the actual limited control over these resources in the South.<sup>35</sup> The CBD has no retroactive effect in legal terms and, hence, the industrialised world still has free access to large quantities of genetic resources through the international gene banks.<sup>36</sup>

The CBD equity provisions include:

- provision of new and additional financial assistance to developing countries to cover “agreed full incremental costs” of implementing the Convention and enabling compliance (art. 20.2).
- transfer of environmentally safe technology, including biotechnology and technologies covered by intellectual property rights, on “fair and most favourable terms” (art. 16.2).
- obligations to share equitably benefits arising from utilisation of the knowledge, innovations and practices of indigenous and local communities with the countries concerned (art. 8, and 12th preambular).
- obligations to advance priority access to developing-country parties and to share equitably the benefits and the results of research and development arising from the commercial or other utilisation of genetic resources (art. 15).
- obligations to advance priority access to developing countries and to share equitably the results and benefits arising from biotechnologies based on genetic resources (art. 19).

The CBD states that each country has the sovereign authority to determine access to its genetic resources – through *prior informed consent* and on *mutually agreed terms*. In addition, there is Art. 16(5), saying that IPR-systems should “not run counter to the objectives in the CBD”. Here, the diverging norms and regulations constituting the two regimes are explicitly referred to.

This section has demonstrated how the CBD and TRIPs introduce opposing regulations aimed at the same issue-area. Both regimes contain regulatory rules that seek to define the rights and obligations of the parties. If taken to their logical end, these rules may have significant implications in terms of distribution. Whereas interests of transnational corporations and industrialised countries mainly mould the TRIPs regulations, the equity provisions in the CBD text largely reflects the position of gene-rich developing countries in the South. The next two sections address the questions of why this was so and how the situation is dealt with in the implementation phase.

### *Effects of Overlap on the Formation of the CBD*

Overlap (typically) results from choices with unintended and unforeseen effects. It is still premature to assess the effects on domestic implementation but we may come some way in addressing the general question of how overlap between regimes with diverging norms may have affected the effectiveness of international environmental co-operation. First, this includes regime formation in general – the efforts to achieve agreement on international negotiation outputs. Second, it includes more concrete efforts, such as the establishment of compliance mechanisms. An institution with strong pushers behind it will often, but not necessarily, be equipped with stronger compliance mechanisms.<sup>37</sup> On the other hand, some institutions may have a strong normative sway – a high degree of legitimacy – even in the absence of powerful states pushing for their implementation.

In order to address the question of effects of overlap on the formation of the CBD, the following question seems pertinent: Was the TRIPs a strategic move by dominating northern countries, in particular the United States, to counter the objectives in the CBD? One interpretation of the developing countries' breakthrough in the CBD could be that the USA stopped worrying about the output in the biodiversity negotiations, being confident that their interests would be secured by the TRIPs regulations in WTO. In the same vein, it would seem that the issue has been raised to a higher level. It is now subject to potential conflict between international institutions, in addition to between states. This interpretation may go some way in explaining the output.

Three aspects, however, speak against this interpretation: First, it disregards the fact that it was the northern countries, and most prominently the USA, that started out as pushers for the establishment of a convention on biodiversity in the first place. The CBD was initially part of the North's global environmental agenda, and while WTO/TRIPs touches on central aspects of this issue area; it is certainly not a tool for conservation of biodiversity. Second, the CBD text explicitly seeks to counter the possible detrimental effects from WTO/TRIPs. Realising that patents are hardly a tool for people in poor countries, the CBD counters intellectual property rights by introducing the concepts of *national sovereignty*, *prior informed consent* and *mutually agreed terms* to regulate access to genetic resources, combined with its formulations in article 16(5). Finally, the interpretation that the United States stopped worrying about the biodiversity output on account of the TRIPs does not explain why the USA as the sole OECD country still refuses to ratify the CBD. This may be because the interpretation disregards sub-national explanations.

Another interpretation of the developing countries' breakthrough links up to the interplay between norms and institutions and how this may affect negotiation results. It is easier for the developing countries to win through with their arguments in UN-related fora like FAO and UNEP, compared to international fora on trade and economy – where use of economic sanctions represents a convincing threat. It could be surmised that the particular arena of the UNEP biodiversity negotiations was more sympathetic to the recognition that these biological resources were largely situated in, and did indeed belong to, the poor countries of the South. Strengthening this trend is the predominant representation of Ministries of Environment in UNEP, in contrast to the Treasury and Foreign Affairs dominating the WTO. Moreover, these negotiations culminated with the signing of the CBD at the UN Conference on Environment and Development (UNCED). The pervading norms in the UNCED setting were even more clearly geared towards appeasing the South.<sup>38</sup> As the UNCED Earth Summit approached, and a global public attention with it, it became necessary for high level politicians to achieve a credible outcome during this meeting. At the issue-specific level this underscores the importance of institutions in framing international negotiation outputs.

These observations appeal for a further discussion of the particular institutional setting for these negotiation games. There is also the possibility of interplay between power and institutions. Industrialised countries generally dominate fora on economy and trade. While the USA retains a stronghold in trade regimes, it has frequently found itself isolated, an almost single laggard, on environmental issues.<sup>39</sup> Trade regimes may obviously have a greater overall impact, as they define the economic and trade-related framework that a wide array of policies in other sectors must abide by. The developing world is highly dependent on market access and also vulnerable to economic sanctions.

Choosing the UN forum to advocate their environmental agenda could be seen as a strategic move on the part of the North. The industrialised countries could hardly expect to achieve political acceptance for environmental change in developing countries from regulations originating from any other forum. UNCED was clearly the best forum in which to achieve some kind of environmental concessions from the South, whereas the WTO may still be used strategically by the North to maintain their economic interests. If these were indeed parts of a strategic move, the effects on the formation of the CBD were, however, less detrimental than might have been expected.

### ***Institutional Response to Overlap in the CBD and TRIPs: Options and Obstacles***

The Conferences of the Parties (COP) to the CBD have put much emphasis on examining the relationship between the CBD objectives and the strengthened IPR systems.<sup>40</sup> COP3 issued a declaration on intellectual property rights, encouraging governments and organisations to submit case studies on the impact of intellectual property rights in regard to the Convention's three main objectives. As the Committee on Trade and the Environment of the WTO began discussion of the relationship between environmental protection and TRIPs in June 1995, it centred on the relationship between that and the CBD. The relationship between TRIPs and CBD will also be a central topic at the review of the TRIPs. This is likely to happen when the Millennium Round of the WTO, which started and came to an abrupt stop in November 1999, is reconvened.

A crucial question is whether these are actually efforts to succeed in coming to grips with the diverging *regulatory* rules of the two regimes, or whether efforts will stop short at the *programmatic* level. Mere co-ordination of the functional scopes of the CBD and the TRIPs is hardly sufficient to deal with the problems emerging from their opposing norms and regulations.

There are some indications that the potential conflict is being taken seriously, at least by the Secretariat and the Parties to the CBD. A document from COP3 points out some *regulatory options* of possible complementarity:<sup>41</sup>



- First, *mutually agreed-upon terms* for access to genetic resources could allocate intellectual property rights as part of the benefits to be shared among parties to an agreement on genetic resources. Such IPR could be defined under TRIPs-compatible IPR-systems.
- Second, there is a proposal to require or encourage disclosure in patent applications of the country and community of origin for genetic resources and informal knowledge used to develop the invention.<sup>42</sup>

However, there are also *regulatory obstacles*: COP3 points out that national measures to promote technology transfer under CBD Article 16 might raise WTO *most-favoured nation* issues if Convention Parties and non-Parties were treated differently. It might also raise TRIPs issues if owners of proprietary technology were compelled to license technologies on grounds other than those prescribed in the TRIPs Agreement.<sup>43</sup>

There are also potential *institutional obstacles*. Even though the conflicts are explicitly admitted and attended to, implementation of the CBD objectives may be hampered by the stronger regulatory force of the TRIPs:

- First, patenting in the biotechnology sector is a contested, though relatively small part of a larger issue-area concerning international trade and patenting in all sectors. The driving forces in this much wider issue-area are powerful and gaining in strength.
- Second, if WTO members refuse to sign up to TRIPs, they become liable to economic *sanctions*. This makes the WTO a more powerful instrument than the CBD, which carries no economic sanction mechanisms.<sup>44</sup>
- Third, the WTO is a stronger institution in terms of its compliance mechanism, incorporating different sets of *timetables* for countries to harmonise their patent legislation. In contrast, the CBD does not provide timetables for parties to comply with its objectives.

The WTO/TRIPs is stronger in terms of compliance mechanisms and in being controlled by the more powerful states. On the other hand, there is ample evidence that the issue of the two regimes' diverging objectives has been accepted as an important one in the WTO and the CBD alike. The programmatic aspects of the issue have been institutionalised by providing for continued discussions between the two, as well as by institutionalising representation in the respective fora. The final result of these deliberations is still far from certain, and the opposing norms and regulations between the two regimes are likely to remain contested international issues for a long time to come.

### ***Analytical Implications of the Overlapping Regimes Approach***

What lessons can be learned from the overlapping regime perspective and what are the analytical implications for regime theory? The question of whether industrialised countries, such as the

United States, used UNCED and WTO strategically to achieve different ends directs attention to the potential importance of other international fora when examining the formation of any specific regime. The horizontal, overlapping regime approach concerns the effects of *exogenous institutional factors*. This perspective highlights how processes in other international fora may prompt issue linking. Biodiversity does not constitute a significant issue within the WTO; it is rather a by-line to the more general orientations of the trade organisation. The CBD agenda, however, and the issue-linking taking place in the bio-negotiations, greatly reflected the developments in the WTO. This was seen most particularly in the decision to include the issue of property rights to genetic resources. This established the link to domesticated biological resources and emphasised the need for equitable sharing of benefits. The background for this issue-linking – and the force that this root cause may still carry in the implementation phase – are aspects that would not have been equally apparent within a strictly vertical approach to regime studies.

The combined effect of different, albeit related, international fora leads to the conclusion that a narrow focus on one (issue-specific) regime will hardly reveal the whole story of regime formation. It may even leave the observer ignorant of some of the main explanatory factors. While regimes by definition are issue specific, there is a high probability that important aspects of the issue itself are likely to be addressed also in other arenas, specifically in those with a broader functional scope. Biodiversity is hardly the only issue that is influenced by broader trade and economic frameworks laid down by WTO and what originated as the Bretton Woods institutions. At the same time, this is not an argument against the explanatory force of regime theory. On the contrary, it underlines the importance of regimes in framing issue-areas through different official purposes. A traditional realist perspective would probably have led attention more directly towards the more powerful arenas, but it would hardly have predicted the mitigating effect of the ‘bioregime’.

An analytical implication of this observation, however, is that it points out the inherent tension between the issue-specific definition of regimes and the notion of issue-linking taking place within a regime. This may be due to the historical roots of regime theory – as it originated as an offspring or alternative to neo-functional integration theory. Not only may the issue-specific regime be influenced by processes in other fora, it may also adopt related aspects of the issue from such arenas. The opposite situation could also be envisaged; a regime may be ‘shedding’ parts of the issue to related fora. This portrays the caution needed when identifying the often dynamic and contested functional scope of a regime. A related lesson that is emphasised by this observation is that defining and delineating an issue area may in itself be a highly political (and controversial) process.<sup>45</sup> On a similar note, the choice of forum in which to debate certain aspects of an issue area may also be a highly political and controversial process.

In this regard, the case of the CBD and TRIPs is hardly unique in terms of institutional overlap. Characteristic of most global and regional environmental issue-areas is their

disposition to penetrate several and significant sectors of society. There is a high probability that environmental issues overlap with regimes aimed at trade and economy – including both diverging norms and diverging regulatory rules. It is less likely, but possible, that different environmental issues may also produce opposing regulations for their solution. It is hardly surprising that the overlapping regime approach directs attention to aspects of a regime formation process that might escape notice within a single-regime study.

Finally, it must be stressed that this theoretical field is very young and the framework applied here is basically a typology. This study can be seen as one among the first steps to address analytical and empirical questions concerning impacts of regime overlap. It can safely be concluded that much interesting work remains with a view to formulate and examine assumptions about how and when overlap between international institutions will affect the effectiveness of international environmental co-operation.

---

I would like to thank Regine Andersen, Steinar Andresen, Olav Schram Stokke and Professor Arild Underdal for very helpful comments to this article. Any remaining errors are the responsibility of the author.

---

<sup>1</sup> In 1989, the UN Environment Programme (UNEP) was given the formal mandate of negotiating what was to become the all-encompassing Convention on Biological Diversity. This was adopted in Nairobi in May 1992, signed in June at the 1992 UN Conference on Environment and Development in Rio de Janeiro, and entered into force 29 December 1993.

<sup>2</sup> *Biological diversity* is a broad concept that has been used to embody the variability among all living organisms, including diversity within species (genetic diversity), among species and among ecosystems. The CBD defines *genetic resources* as genetic material of actual or potential value.

<sup>3</sup> For a study on interaction between regimes for the protection of marine resources, see Olav Schram Stokke (2000) “Managing Straddling Stocks: The Interplay of Global and Regional Regimes”, *Ocean and Coastal Management*, vol. 43.

<sup>4</sup> Krasner, S. (1982:185) “Structural causes and regime consequences: regimes as intervening variables”, *International Organization* 36 (2): 185-205. *Institutions* are more broadly defined as ‘recognized patterns of behaviour or practice around which expectations converge’ (Young, 1982:277) “Regime Dynamics: the rise and fall of international regimes”, *International Organization* 36 (2): 277-297. *Regime* and *institution* are frequently applied interchangeably, as I will also do.

<sup>5</sup> *Compliance* refers to consistence between international obligations and domestic policies with or without deliberate efforts.

<sup>6</sup> Domestic implementation also involves enforcement of these domestic policies leading to corresponding behaviour change in target groups at sub-national level and impact in terms of genuine environmental problem solving. See G. Kristin Rosendal (2000), *The Convention on Biological Diversity and Developing Countries*, Dordrecht: Kluwer Academic Publishers.

<sup>7</sup> Young, Oran R. (1996) “Institutional Linkages in International Society: Polar Perspectives”, *Global Governance* 2 (1): 1-24.

<sup>8</sup> *Embedded institution*: In Young’s definition, embeddedness characterises all regimes, as every effort of international co-operation takes place within a broader context of existing principles. One example is the principle of state sovereignty, which remains an inherent component in all types of agreements. The notion of embeddedness may thus be useful in directing attention to the interplay between regimes that are building on diverging and even conflicting principles. *Nested institution*: Young employs the concept of nested to capture

---

the establishment of protocols under wider framework conventions, as well as efforts to reproduce and operationalise at (national and) regional levels, those wider, diffuse commitments made at the global level. *Clustered institution*: According to Young, clustered institutional linkage occurs where different functional arrangements are combined into comprehensive package deals. The second and third linkage types (nested and clustered) are frequently based on deliberate and explicit choices among the negotiating parties.

<sup>9</sup> Alternatively, overlap may result from covert activity, as a strategic move by some of the negotiating parties. This could be the case if, as a way of circumventing the effect of one regime, new ones are sought created to combat and undermine the first.

<sup>10</sup> As governments adhere to an ever-increasing number of international agreements, many regimes will also overlap in terms of membership. This may clearly present problems at the domestic level with a view to allocating resources and personnel to deal with the many international commitments.

<sup>11</sup> Effectiveness concerns the clarity and scope of international regulations with a view to implementation. For studies concerned with effectiveness in international environmental co-operation, see for instance Oran R. Young (1994) *International Governance – Protecting the Environment in a Stateless Society*, Ithaca, NY: Cornell University Press; Steinar Andresen & Jørgen Wettestad (1995) “International Problem-Solving Effectiveness: The Oslo Project So Far”, *International Environmental Affairs*, 7:127-149; Arild Underdal (1992) The concept of regime ‘effectiveness’, *Cooperation and Conflict*, vol. 27, no. 3, pp. 227-240; and Marc Levy, Oran R. Young and Michael Zürn (1994) The study of international regimes, Luxembourg, IIASA Working Paper WP-94-113.

<sup>12</sup> Hence, looking out for normative divergence between emerging regimes can be seen as a precautionary principle. When diverging rules have been established, the damage is largely done.

<sup>13</sup> CITES is also an example of a regime with a high degree of internal divergence between norms. There is an internal conflict with regard to whether preservation or sustainable use should represent the dominating view.

<sup>14</sup> See Steinar Andresen (1999) “The International Whaling Regime: Order at the Turn of the Century?” in D. Vidas and W. Østreng (eds), *Order for the Oceans at the Turn of the Century*, Kluwer Law International: Dordrecht, pp. 215-228.

<sup>15</sup> There is still internal opposition regarding the operationalisation of these diverging goals of the ITTO.

<sup>16</sup> Obertür, Sebastian (1999) “Linkages between the Montreal and Kyoto Protocols”, paper to the *International Conference on Synergies and Coordination between Multilateral Environmental Agreements*, UNU, Tokyo, 14-16 July, 1999. As the negotiating parties have come to realise the tensions created by these diverging rules, this has recently given rise to constructive efforts to produce compatible solutions on this item.

<sup>17</sup> Rosendal, G.K. (1995) “The forest issue in post-UNCED international negotiations: conflicting interests and fora for reconciliation”, *Biodiversity and Conservation* 4: 91-107.

<sup>18</sup> An example is timber exporting countries, which may prefer the international negotiations on an instrument for forest management to be shaped by the Framework Convention on Climate Change and the Kyoto protocol, rather than having too close ties to the CBD. Environmental organisations tend to have the opposite view.

<sup>19</sup> For related deliberations on core and secondary aspects of policy issues, see Sabatier, Paul A., & Hank C. Jenkins-Smith (1993) *Policy Change and Learning. An Advocacy Coalition Approach* (Boulder, CO: Westview Press).

<sup>20</sup> The compliance mechanisms of an institution may include incentives, sanctions, monitoring and information. In addition or alternatively, the compliance pull of an institution may rise from normative persuasion based on legitimacy and a sense of common obligations.

<sup>21</sup> See more about this case, as well as the similar shrimp/turtle case, in Chaytor, Beatrice and James Cameron (1999/2000) “The Treatment of Environmental Considerations in the World Trade Organisation”, in Bergesen, H.O., G. Parmann & Ø. B. Thommessen (eds) *Yearbook of International Co-operation on Environment and Development*. London: EarthScan Press Ltd.

- 
- <sup>22</sup> For example, the average species lifetime of mammals in fossil records is in the order of one million years, which would mean roughly 0.5 extinctions per 100 years for the present mammalian fauna of nearly 5000 species. In fact, however, the current rate of extinction of mammals is roughly 100 times higher than this background rate. In other taxa the discrepancy may be even greater (Heywood, 1995:232). Heywood, V.H. (ed) (1995) *Global Biodiversity Assessment*. Cambridge: Cambridge University Press. Estimates of the number of existing species in the world vary from about 5 to 100 million, of which only some 1.7 million have been described scientifically. See Wilson, E.O. (ed) (1988) *Biodiversity*. Washington D.C.: National Academy Press. & Wilson, E.O. (1992) *The Diversity of Life*. Cambridge, MA.: Harvard University Press.
- <sup>23</sup> While the ‘old biotechnology’ includes traditional activities like brewing beer and baking bread, the concept of ‘new biotechnologies’ refers to activities like tissue culture and recombinant-DNA (r-DNA) techniques. By the year 2000, farm-level sales of products of agricultural biotechnology are expected to have reached some US\$ 100 billion. As of 1986, the value of global trade in plant-based pharmaceuticals was estimated at US\$ 20 billion (Report of Panel II, UNEP/Bio.Div/Panels/Inf.2, Nairobi, 28 April 1993.) Three years later, in 1989, the market value in the North of medicinal plants from the South was estimated at US\$ 43 billion: See Principe, P.P. (1989) “Valuing the biodiversity of medicinal plants”, in Akerele, O.; Heywood, V.; Synge, H., (eds) *The Conservation of Medicinal Plants*. Cambridge: Cambridge University Press.
- <sup>24</sup> The concepts ‘north’ and ‘south’, as well as ‘developed’ and ‘developing’ countries, are used here in a very simplified manner. The general trend is valid and I start by presenting the crude picture. In subsequent sections, the variety among countries of the two groups will be addressed.
- <sup>25</sup> See Crespi (1988) for more details on the patent criteria: Crespi, R.S. (1988) *Patents: a Basic Guide to Patenting in Biotechnology*. Cambridge: Cambridge University Press.
- <sup>26</sup> There are also moral concerns regarding exclusive rights to food, medicinals and living material. This is based on the notion that food and medicinals should be excluded from patentability because of their fundamental importance to basic human needs. Opponents of patents claim that access to breeding material should not be restrained by royalties.
- <sup>27</sup> The situation of inequity is believed to be more aggravated within the agricultural sector and for domesticated plant genetic resources, compared to the medicinal sector and concerning the screening of wild germplasm.
- <sup>28</sup> Union for the Protection of New Varieties of Plants, 1978, § 2.
- <sup>29</sup> ‘The TRIPs Agreement of the WTO and the CBD’, *Third World Resurgence*, 1999, No. 106, p. 4.
- <sup>30</sup> TRIPs also incorporates the GATT’s *National Treatment* and *Most Favoured Nation* principles. These principles prevent countries from giving priority to domestic industries or treating one importing country better than another. See article by Chaytor and Cameron (1999/2000) (op.cit).
- <sup>31</sup> WCED, World Commission for Environment and Development (1987) *Our Common Future*. Oxford: Oxford University Press.
- <sup>32</sup> Multilateral Trade Negotiations, the Uruguay Round, The Negotiations Committee, MTN.TNC/W/124, 13 December 1993, MNT/FA II–Annex 1C. Section 5, article 27 in the agreement on Trade-Related Aspects of Intellectual Property rights.
- <sup>33</sup> Technically, the collection of seed samples was considered by all as a non-rival and non-exclusive activity. Moreover, no one questioned this practice on moral grounds, as the seeds of our most utilised food plants were seen to be of basic significance to all mankind.
- <sup>34</sup> Genetic resources differ, however, from oil and minerals in being non-rival and largely non-exclusive goods. Nor is species distribution necessarily confined within national borders. These characteristics will obviously hamper state control over genetic resources.
- <sup>35</sup> In view of the problems facing developing country governments in connection with enforcing catch quotas for foreign fisheries under the UN Convention on the Law of the Sea (UNCLOS), the problems regarding regulation of genes are striking. In addition to the general administrative burdens, the non-exclusive character of genetic

---

resources further complicates control of their movements. This is partly negated, however, by the need for a user to obtain information about the genetic material in question. Without this, it may be difficult to screen genetic material for potentially valuable and interesting traits in secrecy.

<sup>36</sup> This involves the seeds collected prior to the CBD entering into force, 31 December 1993.

<sup>37</sup> A related question concerns regime formation and how institutional mechanisms came to be set up in the first place. An international regime is hardly stronger than the negotiating parties wanted it to be.

<sup>38</sup> Even though a recurring criticism from the South was that UNCED was concerned with ‘the environmental agenda of the North’, developmental issues were nevertheless more overt in this forum than in the preceding UN Conference on the Human Environment (Stockholm, 1972).

<sup>39</sup> ‘Despite talk of U.S. leadership on environmental management, the United States was in reality an obstacle in most international environmental negotiations’, Konrad von Moltke (1997:256) claims, referring to the Basel Convention, climate change, biodiversity and the Global Environment Facility (GEF). The USA has, however, championed environmental agreements in some issue-areas, such as the Antarctic minerals regime, ozone and the Convention on Long-Range Transboundary Air Pollution (LRTAP). See Von Moltke, Konrad (1997) ‘Institutional Interactions: The Structure of Regimes for Trade and the Environment’, in Oran Young (ed) *Global Governance: Drawing Insights from the Environmental Experience* pp. 247-272. Cambridge: MIT Press.

<sup>40</sup> In 1996, COP3 asked the Executive Secretary to ‘liaise with the Secretariat of the World Trade Organization to inform it of the goals and the ongoing work of the CBD and to invite the Secretariat of the WTO to assist in the preparation of a paper for the COP that identifies the synergies and relationship between the objectives of the CBD and the TRIPs Agreement’. Decision II/2 on IPR, 1996 Buenos Aires.

<sup>41</sup> UNEP/CBD/COP/3/23.

<sup>42</sup> Countries implementing measures that implicate both agreements such as rules requiring patent applications to disclose the country of origin of biological material might report them to the TRIPs Council, while at the same time disclosing the same information to the clearing house mechanism for scientific and technical co-operation established under Article 18 (3) of the CBD.

<sup>43</sup> *Most-favoured nation* is a basic principle of the GATT/WTO regime, saying that any trade advantages conferred by one country to another must be given all GATT parties.

<sup>44</sup> The two regimes do not differ significantly in terms of membership. By 1998, the WTO has 132 members and 34 observers, of which all but four (the Vatican, Bhutan, Cape Verde and Ethiopia) have applied to join and approximately 170 states have ratified the CBD.

<sup>45</sup> See Hansenclever et al., 1996:192. Hansenclever, Andreas, Peter Mayer, & Volker Rittberger (1996) ‘Interests, Power, Knowledge: The Study of International Regimes’, *Mershon International Studies Review* 40: 177-228.