

# The Time Dimension in International Regime Interplay

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## Introduction

Interplay between different international agreements is a novel field of study in regime theory. However, the importance of understanding this interplay is increasing, due to the rising number of international agreements with overlapping functional scopes. While analyzing the interplay between different international agreements pertaining to the management of plant genetic diversity in agriculture I found that different development stages of overlapping international agreements were important in explaining how the regimes affected each other. Of the three international agreements I investigated, one was under implementation, the second was partly under implementation, and the third was under negotiation up to November 2001, when it was adopted. Not surprisingly, it appeared that the regimes under implementation influenced the regime under formation. Moreover, and quite surprisingly, it also turned out that the regime under formation developed a potential to modify the effects of a regime under implementation, despite its weaker enforcement mechanisms. However, the negotiation of that agreement was delayed due to particular formulations in the two other agreements. The emerging picture of how these three agreements influenced each other was puzzling. It was while seeking to piece together this puzzle that three propositions took form on how different development stages of international agreements may affect their interplay. In this article, I present these propositions on regime interplay and discuss their relevance in the case of overlapping regimes pertaining to the management of plant genetic resources for food and agriculture.

## Theoretical Approach and Propositions

The propositions to be presented in this section are intended as a contribution to the further development of regime theory.<sup>1</sup> Due to the increasing number of

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1. According to the so-called "consensus definition" (Hansen et al. 1996, 178) regimes can be understood as "implicit or explicit principles, norms, rules and decision-making procedures

international regimes pertaining to environmental issues, the demand for an analytic grasp of the interplay between agreements that cover the same issues is increasing. Young distinguishes between four categories of regime interplay.<sup>2</sup> Embedded regimes are those which are deeply embedded in overarching institutional arrangements that represent a broader context of principles and practices. Nested regimes are those which are incorporated into broader institutional frameworks on the same issue area. Clustered regimes which are knit together in more comprehensive institutional packages. Overlapping regimes are defined as a situation that occurs when individual regimes, which are formed for more or less different purposes, intersect on a *de facto* basis. It implies that the functional scope of one regime protrudes into the functional scope of at least one other regime. In this article, I limit my analysis to overlapping regimes.

Several analysts have investigated the interplay between overlapping international environmental regimes.<sup>3</sup> Gehring and Oberthür distinguish between *effects* with regard to normative output, regime outcome and impact.<sup>4</sup> Rosendal suggests an approach aimed at identifying whether and how regimes conflict in terms of norms and/or regulations with regard to particular issue areas.<sup>5</sup> In order to grasp the mechanisms behind the dynamics of such conflicts and of other more benign forms of interplay, Stokke identifies four causal pathways of regime interplay, pertaining to the diffusion of norms and ideas, political spill-over, and normative and operational interplay.<sup>6</sup>

The study of dynamic causal regime interplay is relatively new. A central feature of regime processes is that they evolve and develop over long periods of time. Thus, it appears that the time dimension is essential when seeking to grasp the dynamics of interplay. This article is a contribution to gaining a more systematic understanding of the time dimension in the regime context, using the above mentioned contributions as a basis for theory development.

### *The Time Dimension: Regime Development Stages*

Time can not *per se* explain the interplay between different regimes. It is not the age of a regime that determines whether it will be in a position to influence another regime. For some regimes it takes a short time for an agreement to be adopted and implemented. For other regimes it takes many years. Several factors may influence the speed of regime development, such as relative divergences between the parties with regard to priorities and interests, power, and public attention. These factors will not be addressed in this article. Here I focus

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around which actors' expectations converge in a given issue-area" (based on Krasner 1982, 185).

2. Young 1996.

3. For example, Rosendal 2001 and 2000; Stokke 2000, 2001a and 2001b; Gehring and Oberthür 2000; Oberthür 1999; and Zhang 1998.

4. Gehring and Oberthür 2000.

5. Rosendal 2001.

6. Stokke 2000.

on the effects of development stages over time on the interplay between overlapping regimes. The development stages of a regime can be described as follows:

1. *The agenda setting phase*, where the awareness of the issue is growing, and the demand for an agreement is rising.
2. *The regime formation phase*, where negotiations are initiated and carried out, hopefully ending with an agreement for signing and ratification.
3. *The implementation phase*, where the agreement is to be implemented by the parties.
4. *The review/evaluation phase*, where the implementation is assessed and evaluated.

Following the review/evaluation phase, agendas may be changed or new agendas may be set, followed by further regime formation. The review/evaluation phase may result in the development of more detailed measures of implementation for a better follow-up, for example in the form of guidelines or protocols. A regime is not necessarily coherent with regard to development stages. Some of the issues covered by the regime may advance further than others in terms of development stages.

*Propositions on the Effects of the Development Stages of International Regimes on their Interplay*

How can different development stages of regimes affect their interplay? How can we delineate the processes by which one regime could influence the other in such a context? The following propositions may serve as points of departure for investigating these dynamics:

*Proposition 1:* When two international regimes have overlapping issue areas, and are similar in terms of member states, interests, power and international political weight, but in different development stages, the regime at the earliest stage will be influenced by the regime at the later stage with regard to those issue areas.

Negotiating countries will normally seek to make a new regime compatible with agreements that have already been adopted if they overlap with regard to functional scopes. International agreements usually contain provisions to ensure that the parties follow up the agreement in the negotiation of new agreements. As long as the interests of the member states or parties are compatible, there are no significant conflicts between the two regimes and thus no barriers against such a follow-up.

When it comes to the question of how to describe the pathways of influence, we may hold that this is a typical learning situation. A regime under formation will be in the position to draw on the experiences and results of a more established regime. As Stokke describes, the diffusion of norms and ideas

from one regime to another may result in one regime influencing the material contents of another, what he calls an *ideational interplay*.<sup>7</sup> Seen in a time perspective, we may say that this is most likely to occur when the influencing regime is rather settled whereas the influenced regime is under formation.

*Proposition 2:* When two international regimes with similar membership and power constellations have overlapping issues that are conflicting in terms of norms and/or rules, and they are in different development stages, the formation of the newer regime will be more difficult, the further the more settled one has developed.

As different regimes are developed with regard to more or less different topics and purposes, their objectives and norms may be diverging. Thus, regulations that are overlapping with regard to particular functional scopes may be in conflict. Efforts to avoid such conflicts may pose serious hindrances for regime formation.

We may describe pathways of influence in this situation as follows: Negotiating countries will normally work for new regimes to be in compliance with agreements that have already been adopted pertaining to the same issue. By trying to rule out conflicts between the two regimes, the parties may seek to harmonize the regime at the earliest stage with the one at the later stage. Dependent on interest and power constellations, the negotiations of the newer regime can thus be difficult and time consuming.

*Proposition 3:* If two international regimes pertaining to the same issue area are in different development stages, conflicting in terms of norms and/or rules, and the conflicts are not ruled out, the regime that is under formation may have the potential to modify the effects of the more established regime.

In a situation with two or more regimes pertaining more or less to the same issues, different countries may give priority to different regimes, dependent on where they expect their interests to have better chances of dominating. Such a differentiation may result in different arenas for groups of countries,<sup>8</sup> and thereby open up for regime constellations as described in Proposition 3. However, institutional aspects may also be important. Whereas representatives from one government sector may be active in the development of one regime, representatives of another government sector may be involved in another regime with overlapping issues. The communication between two ministries in the same country may be inadequate, or the culture within the ministries may differ, resulting in partly diverging positions in the different regime processes.

There are two possible paths of influence. First, the new regime may introduce rules that limit the scope of the more established regime. For example, it may provide rules that in effect make exemptions from the established regime

7. Stokke 2000 and 2001b.

8. Also see Rosendal 2001.

for some particular situations. Another example could be that provisions are introduced in the new agreement which add to the provisions of the more established agreement, thereby limiting its functional scope. Second, the other path of potential influence could be learning. If there is a certain period of time between the beginning of the two regimes, and the international discussion has reached a certain consensus on overlapping topics of relevance in the meantime, the newer regime might induce a modernization of the more established one.

In the following section, these propositions will be discussed on the basis of experiences from one field of international regulation, the management of plant genetic resources for food and agriculture.

### **Development Stages of International Regimes Pertaining to Agricultural Plant Genetic Diversity**

Plant genetic diversity is crucial to the breeding of food crops and thus is one of the central preconditions for food security. However, the diversity of domesticated plant varieties is disappearing at an alarming rate.<sup>9</sup> At the same time, the interest in the commercial use of genetic resources has increased in line with growing economic stakes of the biotechnologies, followed by demands for intellectual property rights. As patent systems are costly institutions, the capacity of actors in developing countries to develop and effectively use such systems is limited. For this and other reasons there have been many protests against intellectual property rights from the South, along with demands in favor of protecting farmers' and indigenous peoples' rights. The international community has responded with regimes fully or partly pertaining to agricultural plant genetic resources for food and agriculture (PGRFA),<sup>10</sup> most notably:

- The Convention on Biological Diversity (CBD), which was adopted in 1992 and entered into force in 1993.
- The Agreement on Trade Related Intellectual Property Rights (TRIPs), which was adopted in 1994 and entered into force in 1995.
- The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which was adopted in 2001 and has not entered into force yet. Its forerunner, the International Undertaking on Plant Genetic Resources for Food and Agriculture (IU) was adopted in 1983, but was not legally binding.

9. There are few exact figures on the extent and pace of genetic erosion in agriculture. However, nearly all countries reporting to the FAO (a total of 154 countries) say that genetic erosion is taking place and that it is a serious problem (FAO 1998). In China an estimated 90% of the 10,000 wheat varieties that were grown a century ago have been lost. In Mexico an estimated 80% of the maize varieties that were grown in 1930s are gone. In the USA, 86% of the apple varieties, 95% of the cabbage varieties, 91% of field maize, 94% of the pea varieties and 81% of the tomato varieties that were grown a century ago have been lost (all estimates from FAO 1998).
10. Plant genetic resources for food and agriculture (PGRFA) encompass the diversity of genetic material in traditional varieties and modern cultivars, as well as crop wild relatives and other wild plant species used as food, according to the prevailing FAO definition (FAO 1998).

What these three regimes have in common is that they are more or less of a regulatory nature and that they pertain to the management of PGRFA. However, they are all based on different rationales and interests, and have different scopes, as will be further elaborated below. In the following, the three regimes will be described with regard to their development stages.

### *The Development Stage of the CBD*

The Convention on Biological Diversity was the first international treaty to address the conservation, sustainable use and equitable sharing of benefits derived from utilization of biological diversity world-wide, including PGRFA. It was opened for signing at the United Nations Conference on Environment and Development in Rio in 1992, and entered into force 29 December 1993.

As a framework convention, the specific terms of the treaty are to be negotiated and adopted in particular protocols. So far one protocol has been adopted, the Cartagena Protocol on Biosafety (January 2001), but it is not yet in force. Parallel to the negotiation of protocols, the Contracting Parties are expected to develop national strategies, plans or programs for implementation. Priority areas and strategies are dealt with in the Conference of the Parties to the CBD. The intention has been that a protocol on agricultural biodiversity should form the basis for implementation with regard to this issue. The Conference of the Parties to the CBD expected that the International Undertaking would provide this protocol.<sup>11</sup> While waiting for the finalization of the IU negotiations (which resulted in the ITPGRFA in 2001), the Conference of the Parties to the CBD initiated some activities in the field of agricultural biodiversity, but the output has so far been marginal. We may thus maintain that the CBD, while under implementation, is also in a state of further formation, in particular as it pertains to agricultural plant genetic diversity.

### *The Development Stage of the TRIPs Agreement*

The Agreement on Trade-Related Intellectual Property Rights under the World Trade Organization (WTO) was established in 1994 with the objective of providing full competitive opportunities of trade on equal terms among the member countries. The TRIPs agreement came into effect in 1995 and provides minimum standards for the protection of intellectual property rights in the member states. In this context, the WTO members are allowed to exclude plants and animals other than micro-organisms, and essentially biological processes for the production of these from patentability. However, members shall provide for the protection of plant varieties "either by patents or by an effective "sui generis" system or any combination thereof" (Article 27.3b). This provision pertains to, *inter alia*, PGRFA.

11. UNEP 1997, Decision III/11, section 18.

The harmonization of national legislation of WTO member countries with the TRIPs agreement was to be reviewed in 1999. This was calculated to be before the bulk of the member countries should have implemented the provisions in their legislation by the end of that year (the least developed countries were granted a five-year extension on the deadline).

However, the collapse of the Millennium Round in Seattle resulted in an abrupt end to the review negotiations. It turned out that only around 30 percent of the developing countries that should have implemented Article 27.3 of the TRIPs agreement had actually done so.<sup>12</sup> Demands from developing countries to open the text of the Article for renegotiations were not met. The review meetings were postponed, and a new set of meetings was scheduled for 2000 and 2001. The experiences from this first implementation phase have given rise to the demand from a range of developing countries for a revision of the agreement text, i.e. a demand for further regime formation and thus a new agenda setting process. These demands were maintained in Doha at the WTO Ministerial Conference in November 2001, but without much success. However, the Ministerial Declaration from the Conference holds that the development dimension shall be taken fully into account in the review process (Section 19). Given these developments, we may conclude that the TRIPs agreement is still at the review/evaluation stage.

### *The Development Stage of the ITPGRFA*

The International Treaty on Plant Genetic Resources for Food and Agriculture was adopted at the Conference of the Food and Agriculture Organization of the United Nations (FAO) in Rome 3 November 2001, and is the first legally binding agreement exclusively pertaining to PGRFA. Its objectives are the conservation and sustainable use of these resources, and the fair and equitable sharing of the benefits arising from their use—in harmony with the CBD—for sustainable agriculture and food security. Seen together with the International Undertaking, this is the oldest of the three regimes, as the IU was first adopted in 1983 and revised in 1989 and 1991. It was under re-negotiation with the purpose of harmonizing it with the CBD and making it a binding agreement since 1994. Since the ITPGRFA is in the process of being signed, but is not yet ratified, its position with regard to development stages is between formation and implementation.

However, it is the only one of the three regimes that has been through several rounds of development stages already, as a non-binding agreement. From the agenda setting phase and negotiations leading up to its adoption in 1983 and subsequent efforts for implementation, it developed via its revisions in 1989 and 1991 (new agenda setting phase) to the decision to fundamentally revise the agreement, which started in 1994 (new regime formation).

The functional overlaps between the CBD and the ITPGRFA are extensive both in terms of norms and rules. At first glance they may seem largely compati-

12. GRAIN 2000, 5.

ble. However, the links between the two regimes are complex, and as the analysis below will show, problematic. When adding the TRIPs agreement to this picture, the scope of overlap is narrowed down to one central issue, the question of intellectual property rights to PGRFA. In the next section Propositions 1 and 2 will be illustrated by the interplay between the CBD and the ITPGRFA, and in the following section Proposition 3 will be illustrated by the interplay between the CBD/ITPGRFA and the TRIPs agreement.

## **The Interplay between the CBD and the ITPGRFA in a Time Perspective**

The interplay between the CBD and the ITPGRFA illustrates Propositions 1 and 2 outlined above. We can clearly see that the overall policy objectives (norms) from the CBD were set forth in the negotiations for the ITPGRFA, and that the latter was thus influenced by the former (re: Proposition 1). The ITPGRFA objectives provide the evidence:

The objectives of this Treaty are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security.

It is obvious that a learning process has taken place, and that the earlier regime influenced the later one (Proposition 1).

However, whereas the norms of the two agreements are largely compatible, some central elements of their rules diverge. The core of this divergence pertains to the bilateral versus the multilateral approach to the management of access and benefit sharing. The effects of this divergence can not be fully understood in a time perspective without taking into account the problems with the unclear division of labor between the two regimes. The result was that the ITPGRFA was seriously delayed in its negotiations (re: Proposition 2). As these dynamics are more complex, the following elaboration will be focused on the dynamics illustrating Proposition 2. Here we will take the division of labor between the two regimes as the point of departure, proceed to the content of the divergences, before summing up on the interplay in a time perspective.

### *An Unclear Division of Labor*

After some uncertainty, the Conference of the Parties to the CBD in 1995 affirmed that agricultural biodiversity is covered by the objectives and provisions of the Convention.<sup>13</sup> However, the parties were not able to solve all the questions pertaining to PGRFA prior to the adoption of the CBD in 1992. Thus, according to the Nairobi Final Act of the Conference on the Adoption of the Agreed Text of the CBD adopted 22 May 1992, "outstanding issues" were left for

13. UNEP 1995, Decision I/9, Annex, points 5.9 and 6.3. This was also decided for coastal and marine biological diversity (Decision I/9, Annex, point 5.3).

the FAO to solve. The FAO was asked to revise the International Undertaking in order to harmonize it with the CBD and thereby solve the following “outstanding issues”:

- *Ex situ*<sup>14</sup> accessions collected before the entry into force of the CBD
- Farmers’ rights to PGRFA

The CBD could only apply to gene bank material collected after its entry into force. That means that all the material that had already been collected was not covered by the CBD. The major issue of how to internationally regulate access to these resources was left for the FAO to solve.

Farmers’ rights to the genetic resources is an extremely complex issue. It is thanks to the contribution of farmers in conserving, improving and making available these resources since the dawn of agriculture that we have this agricultural heritage today.<sup>15</sup> However, the breeding process has become steadily more professional and commercialized, and in the wake of this development patents and other forms of intellectual property rights have emerged as means to secure investments and profits.<sup>16</sup> Whereas the main genetic resource base for PGRFA stems from developing countries, it is primarily the industrialized countries that have the financial and technological capacities to develop these resources into commodities, to make use of intellectual property rights, and thus to take control of the resources. Against this backdrop, farmers’ rights were seen as an important counter move for developing countries, in addition to being an important means to reward farmers for their contribution to the world agricultural genetic heritage. The problem was to find practical solutions to how farmers’ rights could be formulated and implemented.<sup>17</sup> This highly contentious issue was left for the FAO to solve. However, *in situ* conservation, such as that in the farmers’ fields, was clearly to be covered by the Convention. This resulted in the following division of labor:

**Table 1**

Division of Labor: Comparing the CBD to the FAO

CBD	FAO: <i>Subject to further negotiations</i>
Gene bank accessions collected after the entry into force of the CBD	Gene bank accessions collected before the entry into force of the CBD
<i>In situ</i> <sup>18</sup> conservation of PGRFA	Farmers’ rights to PGRFA

14. The conservation of ex-situ collections refers to “the conservation of components of biological diversity outside their natural habitats,” where “habitat” means “the place or type of site where an organism or population naturally occurs” (Article 2). The most usual way of ex situ conservation is gene bank storage.

15. Vavilov 1992; Harlan 1992; and Wilson 1992.

16. Kloppenburg 1988; and Fowler and Mooney 1990.

17. Rosendal 2000; Henne 1998; Bragdon and Downes 1998; Leskien and Flitner 1997; and Swaminathan 1996.

18. In situ conservation refers to the maintenance of plant species in their natural or agricultural

In legal terms the division of labor between the CBD and the ITPGRFA might seem clear. However, in practical terms it is not, for the following reasons:<sup>19</sup>

- It is very difficult to determine whether a plant variety or a genetic trait belongs to the “before CBD” or the “after CBD” category. There are very different and in part insufficient information routines in gene banks. Also plants that have been collected prior to the CBD may still be grown *in situ*, and thereby apply to both regimes.
- An important aspect of farmers’ rights is that these rights are related to genetic material grown in their fields. Thus, farmers’ rights and *in situ* conservation are closely related.

So it is highly uncertain what the CBD actually covers in the interim period until ITPGRFA enters into force, and what it does not cover. Since negotiations for the ITPGRFA took so long, and it has still not entered into force, the interim period has now continued for ten years. During this time, the implementation of the CBD has developed further for biodiversity in general than for PGRFA. According to a note by the Executive Secretary to the Conference of the Parties, most Parties to the CBD had developed national biodiversity strategies and action plans.<sup>20</sup> However, only a few countries had developed comprehensive strategies and action plans for the conservation and sustainable use of agricultural biodiversity.

FAO was “only” to harmonize the IU with the CBD and thereby include farmers’ rights and the management of *ex situ* resources collected prior to the CBD. How could that have taken so long? What took most of the time was to develop an alternative approach to the bilateral approach of the CBD, as the next section will show.

### *The Bilateral versus the Multilateral Approach and the Problems with the CBD “Country of Origin of Genetic Resources” Concept*

The original version of the IU (1983) was based on the concept of plant genetic resources being a common heritage of mankind and that they should consequently be available without restrictions. In 1991 the FAO Conference modified the principle of genetic resources as a common heritage of mankind in the sense that it was made subject to the sovereign rights of nations over their genetic resources (Resolution 3/91). This may have set the stage for the CBD-negotiations, where the principle of the sovereign rights of states to exploit their own re-

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habitat, thus allowing the evolutionary process that shapes the genetic diversity and adaptability of plant populations to continue to operate. In the particular case of on-farm conservation, landraces continue to evolve, influenced by natural selection as well as by selection pressures imposed by farmers, thus providing opportunities for continuous crop adaptation and improvement (FAO, 1998:51). “In situ management” is thus a more appropriate term than the often used “in situ conservation.”

19. I am grateful to Cary Fowler for having made me aware of these complexities.

20. UNEP 2000, Section III. B. 16.

sources,<sup>21</sup> was finally (after hard discussions) adopted without any reference to a common heritage of mankind.<sup>22</sup> However, the bilateral approach adopted in the CBD was very difficult to apply in the negotiations leading up to the ITPGRFA. The result was that the ITPGRFA—after long and complex negotiations—adopted a multilateral system for facilitated access and benefit sharing, taking the bilateral approach as a point of departure. This is explained further below.

The CBD reaffirms the sovereign rights of states over their natural resources that are an established principle of international law. On this basis it assigns to national governments the authority to determine access to genetic resources (Article 15). Access is subject to prior informed consent of the provider country and the fair and equitable sharing of the benefits thereof on mutually agreed terms. Thus, it is the country providing access that is central also when it comes to the issue of benefit sharing.

Country of origin of genetic resources is defined as “the country, which possesses those genetic resources in *in-situ* conditions” (Article 2). In the case of domesticated or cultivated resources, the term *in-situ* refers to “the surroundings where they have developed their distinctive properties” (Article 2). It is, thus, not possible to understand *country of origin* as synonymous with source country of a genetic resource, as is often assumed more or less consciously in CBD interpretations.<sup>23</sup> However, it is clearly stated in the CBD that two types of countries are assigned with the right to facilitate access to genetic resources for other parties under the Convention. These are either countries in which the actual genetic resources have developed their distinctive properties, or countries that have acquired the resources directly or indirectly from such countries in accordance with the CBD (Article 15.3).<sup>24</sup>

Gudrun Henne argues that the principle of country of origin of genetic resources represents a new form of access regulation to natural resources in international law in that countries possessing genetic resources within their territory delegate this right to those that are countries of origin.<sup>25</sup> As Henne shows, this may cause a problematic situation in cases where the country of origin and the source country are not identical, as is often the case.<sup>26</sup>

However, the problem is even more complicated. Often it is not possible to determine the country of origin of agricultural genetic resources.<sup>27</sup> Agricultural biodiversity has evolved through the selection, growing and exchange of seeds and plants by farmers over short and long distances for thousands of years—in addition to the natural selection. A range of scientists have worked on

21. This is according to the Charter of the United Nations and the principles of International Law.

22. Henne 1998, 121.

23. See for example, Glowka 1998, 3; and Kate and Laird 1999, 15.

24. Fowler 2001.

25. Henne 1998, 144.

26. Henne 1998, 142.

27. Fowler 2001.

the identification of the geographic origins of agricultural plant genetic resources, including first and foremost Candolle, Vavilov, and Harlan.<sup>28</sup> Summing up their findings in this regard, it would be hard for most agricultural plants—if not impossible—to identify the point in time when a particular variety came into existence and to determine the place or country where that should have happened.<sup>29</sup> For most crops, including the majority of the important food crops in the world, it is not worthwhile trying to identify a country of origin, as the results, if any, would be too uncertain.

It is important to understand this principle in the context of the overall objectives of the Convention (Article 1). These are the conservation of biological diversity, the sustainable use of its components, the fair and equitable sharing of the benefits arising out of their use, including the appropriate access to these resources and transfer of relevant technologies. We may infer that the Convention is based on the assumption that “countries of origin of genetic resources” are the adequate Parties to facilitate access to genetic resources. However, when the country of origin of a genetic resource can not be identified, there is also no Party that can be assigned to facilitate access to that resource under the provisions of the CBD. In other words, the CBD is not conducive to facilitating access to genetic resources with unclear origins, as is mostly the case when it comes to PGRFA. As the provisions on prior informed consent and benefit sharing presuppose the identification of countries of origin, it follows that the CBD fails its purpose also here when it comes to plant genetic resources for food and agriculture.

So far this problem has been bridged by the Consultative Group on International Agricultural Research (CGIAR), which stores between 20 and 50 percent of all material conserved in gene banks in trust for the FAO,<sup>30</sup> facilitating free access according to a material transfer agreement. This has been an intermediate solution in the negotiation period, while awaiting the establishment of an international legally binding agreement on PGRFA.

It was a great challenge to harmonize what should become the ITPGRFA with the CBD, on the basis of a bilateral approach that was so insufficient for the purpose. After seven years of complex negotiations, the FAO finally adopted the ITPGRFA on 3 November 2001 with 116 country votes. The US and Japan abstained from voting.

The core of the ITPGRFA is a multilateral system for facilitated access to a list of specified PGRFA from the public domain in the countries that are parties to the agreement. The countries collectively delegate their responsibility to the multilateral system. The entity to decide over access to these resources is easily identified—it is the Governing Body of the ITPGRFA—thereby solving the problem of identification of countries of origin. The list contains 35 central food crops and 29 forage plants, and it is not allowed to take any form of intellectual

28. Candolle 1883; Vavilov 1951, 1992 and 1997; and Harlan 1975, 1992 and 1995.

29. Andersen 2001.

30. FAO 1998, 280.

property rights on material received from the multilateral system, in the form it is received.

The list includes important food species such as rice, wheat, maize, rye, potatoes, beans, cassava and bananas. But it excludes species such as soybean, oil palm, cotton, sugarcane, cocoa, ground nut, most vegetables and important tropical forage plants. The management of access and benefit sharing with regard to these resources will remain subject to national jurisdiction following the CBD. A new material transfer agreement will have to be negotiated with regard to *ex situ* resources. It remains to be seen whether the principle of prior informed consent by the countries of origin will be maintained here, or if the situation can be solved in other ways. Furthermore there remains the question of whether countries that have jurisdiction over genetic resources will provide access to them, and under what conditions. Depending on the terms of access, intellectual property rights may be accepted, such that access to these plants is likely to deteriorate as a result of the ITPGRFA.

#### *Summing up: Development stages and Interplay*

The CBD and the ITPGRFA are agreements having more or less the same countries as Parties/supporters.<sup>31</sup> They are also agreements with more or less the same constellations of Parties/supporters with regard to interests, and with similar levels of power, in that the enforcement mechanisms have about the same levels of strength. But they have different scopes in that the CBD seeks to cover all biodiversity, whereas the ITPGRFA focuses solely on PGRFA. The divergences with regard to the bilateral approach of the CBD were an important reason for the delays of the ITPGRFA negotiations. In addition, there is reason to believe that the unclear division of labor between the CBD and the IU was one important reason for the Parties to the CBD largely refrain from implementing the CBD with regard to the strategies on PGRFA. The most serious effect of this vacuum situation is that the erosion of PGRFA could continue as it has done without a sufficient legally binding international regulation for the past ten years.

### **The Interplay between the CBD/ITPGRFA and the TRIPs Agreement in a Time Perspective**

The interplay between the CBD/ITPGRFA and the TRIPs agreement illustrates Proposition 3 on the potentials of a regime in an early development stage to modify the effects of a regime in a later development stage. The overall policy objectives and principles of the TRIPs agreement pertaining to PGRFA differ from those of the CBD and the ITPGRFA in that they pertain to the issue of patentability and intellectual property rights exclusively. The crucial question is whether the norms and rules of the three regimes on this issue are compatible

31. As the ITPGRFA is still in the signing process, we can not use the term "Parties." "Supporters" refer to the countries voting for the adoption of the Treaty.

or not. There is no obvious answer to this question. I will argue that there is a scope for conflict, and that the interests attached to the TRIPs agreement and the CBD/ITPGRFA follow these conflict lines. The scope of conflict has not been ruled out. For part of the ITPGRFA it has resulted in the adoption of provisions that may modify the effects of the TRIPs agreement (re: Proposition 3). We will turn to the relevant provisions of the TRIPs agreement before elaborating on the interplay between the TRIPs agreement and the CBD and then the TRIPs agreement and the ITPGRFA.

### *The TRIPs Agreement Article 27.3.b*

The scope of interpretations for Article 27.3.b is related to the term “*sui generis* system” (which means a system of its own kind) and the word “effective.” The limits for a *sui generis* system and the indicators for an effective *sui generis* system are not defined in the text. The International Union for the Protection of New Varieties of Plants (UPOV) has advocated that the most effective way to comply with the provision of an effective *sui generis* system is to join its Union, and the United States has supported this stand.<sup>32</sup> However, many developing countries seek other ways to harmonize their intellectual property rights systems with the CBD and the ITPGRFA—as *sui generis* systems. The core question is what kind of system will be accepted as domestic implementation of the TRIPs agreement within the WTO. So far, the revision process of the implementation of the TRIPs agreement has not provided any clear answer.

### *The Overlap between the CBD and the TRIPs Agreement*

The CBD entails two provisions that pertain to intellectual property rights, and these may be understood as an attempt to seek a balance between existing agreements on such rights and ensuring that future international and national laws on intellectual property rights will not run counter to the Convention:

- In the case of technology subject to patents and other intellectual property rights, access and transfer shall be provided on terms that are consistent with the adequate and effective protection of intellectual property rights (Article 16.2).
- It further recognizes that patents and other intellectual property rights may influence the implementation of the CBD, and thus obliges the parties to cooperate in order to ensure that such rights are supportive of and do not run counter to its objectives (Article 16.5). Such efforts are expected at the level of international laws as well as in national legislation.

Technology may refer to processes applied to produce a new plant variety, for the extraction and use of single genes or gene sequences. It may or may not include the variety/gene/gene sequence itself. The parties are obviously left with

32. GRAIN 1997.

great space for interpretations. On the other hand, they are called to work for a judicial framework for patents and intellectual property rights at the international and national level that is consistent with the CBD. In other words, they are expected to influence future international negotiations in such a way that the respective agreements do not run counter to the conservation and sustainable use of biological diversity, and the fair and equitable sharing of the benefits thereof, including access to genetic resources. However, the conditions under which intellectual property rights are compatible with or conflicting with the CBD are not determined, and it is a controversial question. It would be logical to infer that the extent to which patents may hinder access and sustainable use of PGRFA is dependent on what the patent covers. Generally we may say that patents restrict access and that the extent to which they do so is determined by their coverage (e.g. process and/or product, i.e. a new variety, and/or breeding lines of varieties used for that purpose).

The degree to which patents or other intellectual property rights exclude plant varieties from open access is decisive to the considerations on whether they conflict with the overall objectives of the CBD and its provisions pertaining to access. When the WTO as a result of its review process accepts patent legislation or *sui generis* systems that restrict open access to PGRFA, there is a conflict. We may thus conclude that the TRIPs agreement has the potential to seriously conflict with the CBD. If *sui generis* systems are developed and accepted by the WTO members that safeguard open access to PGRFA, the conflict may be prevented.

This scope of conflict between the TRIPs agreement and the CBD is latent, but has not resulted in any particular measures from the part of either regime. For the ITPGRFA, however the scope of conflict is more evident, and it has resulted in particular measures.

#### *The Overlap between the ITPGRFA and the TRIPs Agreement*

The multilateral system established under the ITPGRFA includes the listed 35 food crops and 29 forage plants that are under the management and control of the Contracting Parties and that are in the public domain (Article 11.2). What the term "public domain" refers to in this context is not clear. It further states that recipients of such genetic resources "shall not claim any intellectual property or other rights that limit the facilitated access to the plant genetic resources for food and agriculture or their genetic parts or components, in the form received from the Multilateral System." The latter formulation, "in the form received from the Multilateral System," leaves quite a scope for interpretations. However, the language is quite clear in terms of the intention, namely to restrict the admission to intellectual property rights, and as such, it is in conflict with the TRIPs agreement.

In addition, the ITPGRFA lays out that recipients who commercialize products that incorporate material from the Multilateral System, shall pay an

equitable share of the benefits arising from the commercialization of products, except if they are available without restrictions to others for further research and breeding (Article 13.2.d.ii). The monetary benefits arising from the use of PGRFA<sup>33</sup> that are shared under the Multilateral System should flow via a financial mechanism set up under the ITPGRFA to farmers in all countries, especially in developing countries, and countries with economies in transition, who conserve and sustainably utilize PGRFA (Article 13.3). A Governing Body was set up to *inter alia* distribute these resources (Article 19).

What these provisions have in common is that they may modify the outcome of the implementation of the TRIPs agreement. If implemented, the Parties to the ITPGRFA will have to make exemptions in their legislation on intellectual property rights (if they have them) for the genetic resources listed under the Multilateral System, on the given terms. Furthermore, as the *sui generis* term in the TRIPs agreement Article 27.3 is not defined, the provisions of the ITPGRFA could serve as a vehicle for interpretation and subsequently for attempts at a *sui generis* protection of PGRFA that do not restrict access to such resources. On this basis, the ITPGRFA can have a strategic value for its Parties that are members of the WTO.

#### *Assessing the Scope of Conflicts and Summing Up*

The divergence between the TRIPs agreement on the one hand and the CBD/ITPGRFA on the other hand, was possible due to the actors focusing on different arenas of regime negotiations. In her study of the CBD and the TRIPs negotiations, Rosendal found that strategic interests may have influenced the way in which different actors participated in these processes.<sup>34</sup> The result was, very broadly speaking that, as a kind of compromise, the developing countries “got” the CBD, whereas the industrialized countries “got” the TRIPs agreement.

A further result was that some countries only acceded to one of the agreements. Most notably the US refused to ratify the CBD. An important reason was the wording of the CBD Article 16(5) that intellectual property rights systems should not run counter to the objectives of the CBD.<sup>35</sup> This stand, that has so far not been changed, is one of the root causes of the difficulties for other WTO members in their efforts to harmonize the TRIPs agreement with the CBD. The US still opposes an observer status by the CBD in the Council for TRIPs.<sup>36</sup> The same picture is now emerging with regard to the TRIPs agreement—ITPGRFA relationship.

33. The IU emphasizes that facilitated access to PGRFA under the Multilateral System is in itself a major benefit. Other benefits beside the monetary ones are the exchange of information, access to and transfer of technology and capacity-building. These issues are all covered by provisions under Article 14 in the IU.

34. Rosendal 2001, 109–110.

35. Expert panel IV, cited in Rosendal 2000, 149.

36. Bridges Weekly Trade News Digest 2001, 4. See also the Ministerial Declaration from the WTO Ministerial Conference in Doha, November 2001, where this matter was left out.

An important issue to consider, is the question of which agreement prevails in a situation of conflict. Here the comparative judicial status and institutional strength of the agreements are central to consider. All three agreements are binding agreements in international law (the ITPGRFA will have to be ratified first).

According to customary rules in international law, the latest agreement prevails over the other if nothing else is stated, but only if the degree of specialization is equal. The agreement that is most detailed in the regulation of an issue area shall prevail over the other. In practice, these rules are not always clear cut. The CBD is detailed on the regulation of the management of biological diversity, including PGRFA. The ITPGRFA is more detailed with regard to PGRFA, and would thus prevail over the CBD with regard to overlapping issues. The TRIPs agreement and the ITPGRFA are both detailed with regard to intellectual property rights. Thus, it is difficult to determine which of the two agreements that is to prevail, on a judicial basis.

Enforcement mechanisms safeguarding implementation is a crucial aspect in this consideration, as a core indicator of institutional strength. The WTO system, with its economic sanctions, is considerably stronger than the CBD and the ITPGRFA. However, this does not mean that the WTO will necessarily overrule the provisions of the ITPGRFA pertaining to intellectual property rights. The outcome of the interplay between these two regimes remains to be seen. Generally we may say that the potential of the parties to the ITPGRFA to modify the effects of the TRIPs agreement, depends on their political will to pursue this possibility.

## Conclusions

Although there are many international regimes, there are also many differences between them and it is difficult to categorize and draw general conclusions with regard to interplay on a statistical basis. What this article seeks to contribute is some propositions on how a focus on development stages may help to understand interplay, illustrated with one case, as a point of departure for further investigations.

We have seen how the overall policy objectives of the CBD were set forth in the negotiations for the ITPGRFA. This illustrates how an early agreement may influence a later one, as set forth in Proposition 1.

We have also seen how the CBD, due to an unclear division of labor with the FAO and diverging rules, unintentionally complicated the efforts for an international regulation of the management of PGRFA. This contributed to the delay of the ITPGRFA, and thereby illustrates Proposition 2 on the way in which an early regime might hinder a later one. Thereby a vacuum emerged with regard to the ongoing process of an international regulation of the management of PGRFA that was not conducive to the objectives of the two agreements. The erosion of PGRFA could continue without any sufficient international regulation.

Finally, we have seen how the objectives and rules of the TRIPs agreement may potentially conflict with those of the CBD, and are in conflict with the ITPGRFA. In adopting the conflicting provisions as the later regime, the ITPGRFA has the potential to modify the TRIPs agreement. This illustrates Proposition 3 on how a regime under formation may develop potentials to modify the effects of a more established one.

The surprising aspect with regard to these constellations is that this strategic opportunity has received so little attention and recognition by the actors involved in the PGRFA debate, in the civil society and the media. Although the TRIPs negotiations receive far more international attention than the ITPGRFA, the latter seems to have the greater potential to change the global situation for PGRFA management under the current conditions. Whether this opportunity will be used, depends on public attention and political will.

By including the time dimension in the study of interplay between overlapping international regimes, perspectives are opened up, which may provide a better grasp of the dynamics of regime development. Three propositions have been suggested on how development stages may affect interplay. It follows that an analytic grasp of the time dimension might uncover barriers to regime formation, as well as strategic opportunities.

## References

- Andersen, Regine. 2001. *Conceptualising the Convention on Biological Diversity: Why is it Difficult to Determine the "Country of Origin" for Agricultural Plant Varieties?* FNI-Report 7/2001. Lysaker: The Fridtjof Nansen Institute.
- Bragdon, Susan H., and David R. Downes. 1998. Recent Policy Trends and Developments Related to the Conservation, Use and Development of Genetic Resources. *Issues in Genetic Resources* No. 7, June. Rome: International Plant Genetic Resources Institute.
- Bridges Weekly Trade News Digest. 2001. March 7. 5 (25): 4. Geneva: International Centre for Trade and Sustainable Development (ICTSD).
- Candolle, Alphonso de. 1883. *L'origine des plantes cultivées* (Origin of cultivated plants), Paris. English version: *Origin of Cultivated Plants*, reprint of 2 ed. (The International Scientific Series 49). New York: D. Appleton and Company.
- Food and Agriculture Organization of the United Nations (FAO). 1998. *State of the World's Plant Genetic Resources for Food and Agriculture*. Rome: Food and Agriculture Organization of the United Nations.
- FAO. 2001. The International Undertaking on Plant Genetic Resources as Adopted at the Sixth Extraordinary Session of the Commission on Genetic Resources for Food and Agriculture, Rome, 15–30 June 2001. CGRFA-Ex 7/01/REP, Appendix B.
- Fowler, Cary. 2001. Protecting Farmer Innovation: The Convention on Biological Diversity and the Question of Origin. *Jurimetrics* 41: 477–488.
- Fowler, Cary, and Pat Mooney. 1990. *Shattering. Food, Politics and the Loss of Genetic Diversity*. Tucson, AZ: The University of Arizona Press.
- Gehring, Thomas, and Sebastian Oberthür. Forthcoming. Exploring Regime Interaction: A framework for Analysis. In *Regime Consequences: Methodological Challenges and Research Strategies*, edited by Arild Underdal and Oran R. Young.

- Glowka, Lyle. 1998. *A Guide to Designing Legal Frameworks to Determine Access to Genetic Resources*. Gland/Cambridge/Bonn: The World Conservation Union (IUCN), and the IUCN Environmental Law Centre.
- GRAIN 1997. Towards Our 'Sui Generis' Rights. In *Seedling. The Quarterly Newsletter of Genetic Resources Action International* 14 (4).
- \_\_\_\_\_. 2000. For a full review of TRIPs 27.3(b). An Update on where Developing Countries stand with the push to Patent Life at WTO. Available at: <http://www.grain.org/publications/reports/tripsfeb00.htm>
- Hansenclever, A., P. Mayer, and V. Rittberger. 1996. Interests, Power, Knowledge: The Study of International Regimes. *Mershon International Studies Review* 40 (2): 7–228.
- Harlan, Jack R. 1975. Geographic Patterns of Variation in Some Cultivated Plants. *The Journal of Heredity* 66: 182–191.
- \_\_\_\_\_. 1992. *Crops and Man*. 2<sup>nd</sup> ed. Madison, Wisconsin, USA: American Society of Agronomy, Inc., Crop Science Society of America, Inc.
- \_\_\_\_\_. 1995. *The Living Fields. Our Agricultural Heritage*. Cambridge: Cambridge University Press.
- Henne, Gudrun. 1998. *Genetische Vielfalt als Ressource. Die Regelung ihrer Nutzung*. Baden-Baden: Nomos Verlagsgesellschaft.
- Kate, Kerry ten, and Sarah A. Laird. 1999. *The Commercial Use of Biodiversity: Access to Genetic Resources and Benefit-Sharing*. London: Earthscan Publications Ltd.
- Kloppenborg, Jack Ralph Jr. 1988. *First the Seed. The Political Economy of Plant Biotechnology 1492–2000*. Cambridge University Press, Cambridge.
- Krasner, Stephen. 1982. Structural Causes and Regime Consequences: Regimes as Intervening Variables. *International Organization* 36 (2): 185–205.
- Leskien, Dan, and Michael Flitner. 1997. Intellectual Property Rights and Plant Genetic Resources: Options for a Sui Generis System. *Issues in Genetic Resources No. 6*, June. Rome: International Plant Genetic Resources Institute.
- Oberthür, Sebastian. 1999. Linkages between the Montreal and Kyoto Protocols. Paper prepared for the International Conference on Synergies and Coordination between Multilateral Environmental Agreements, United Nations University, Tokyo. 14–16 July.
- Rosendal, G. Kristin. 2000. *The Convention on Biological Diversity and Developing Countries*. Dordrecht: Kluwer Academic.
- \_\_\_\_\_. 2001. Impacts of Overlapping International Regimes: The Case of Biodiversity. *Global Governance* 7: 95–117.
- Stokke, Olav Schram. 2000. Managing Straddling Stocks: The Interplay of Global and Regional Regimes. *Ocean and Coastal Management* 43: 205–234.
- \_\_\_\_\_. ed. 2001a. *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes*. Oxford: Oxford University Press.
- \_\_\_\_\_. 2001b. *The Interplay of International Regimes: Putting Effectiveness Theory to Work*. FNI Report 14/2001. Lysaker: The Fridtjof Nansen Institute.
- Swaminathan, M. S., ed. 1996. *Agrobiodiversity and Farmers' Rights*. New Delhi: Konark Publishers PVT.
- United Nations Environmental Program (UNEP). 1995. *Report of the First Meeting of the Conference of the Parties to the Convention on Biological Diversity*. Nassau, 28 November—9 December 1994. UNEP/CBD/COP/1/17.
- UNEP. 1997. *Report of the Third Meeting of the Conference of the Parties to the Convention on Biological Diversity*. Buenos Aires, Argentina, 4–15 November 1996. UNEP/CBD/COP/3/38.

- \_\_\_\_\_. 2000. *Agricultural Biological Diversity: Review of Phase I of the Programme of Work and Adoption of a Multi-Year Work Programme*. Note by the Executive Secretary to the Conference of the Parties to the CBD, fifth meeting in Nairobi 15–26 May 2000 on item 16.2 of the Provisional Agenda. UNEP/CBD/COP/5/11.
- Vavilov, Nicolay Ivanonovich. 1951. The Origin, Variation, Immunity and Breeding of Cultivated Plants. *Chronica Botanica* 13 (1/6). [The journal contains selected writings of Vavilov.]
- \_\_\_\_\_. 1992. *Origin and Geography of Cultivated Plants*. Cambridge: Cambridge University Press. [The book contains articles and lectures of Vavilov from the period 1924–1940, first collected and published as a book in Russian in 1987.]
- \_\_\_\_\_. 1997. *Five Continents*. St. Petersburg: N.I. Vavilov Research Institute of Plant Industry and Rome: International Plant Genetic Resources Institute. [The book contains descriptions by Vavilov of the expeditions he made between 1916 and 1940, based on the manuscripts that could be saved during the Second World War and the rest of the Stalin era.]
- Wilson, Edward O. 1992. *The Diversity of Life*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Young, Oran R. 1996. Institutional Linkages in International Society: Polar Perspectives. *Global Governance* 2 (1): 1–24.
- \_\_\_\_\_. 1999. *Governance in World Affairs*. Ithaca, N.Y.: Cornell University Press.
- Zhang, Zhong Xiang. 1998. Greenhouse Gas Emissions and the World Trading System. *Journal of World Trade* 32 (5): 219–239.