34 ELR 10340 4-2004

ELR
NEWS & ANALYSIS

# Invasive Alien Species and the Multilateral Trading System

by Jacob Werksman

International trade is one of the most important pathways for both the intentional and the unintentional introduction of alien species. The intentional introduction of alien species takes place through the importation of exotic plants and animals as commercial products. But alien species may also enter unintentionally, as byproducts of trade, e.g., through cross-breeding of exotics with local populations, as parasites of products, e.g., as an infestation or infection on agricultural products, or as "stowaways" during trade, e.g., in the ships, planes, or vehicles that deliver products. Furthermore, the unintentional introduction of alien species occurs not only by way of trade in goods, but also by way of trade in services, e.g., as parasites or stowaways through tourism. Not surprisingly, governments have used their authority and responsibility to regulate commerce at their borders as a primary means of controlling the introduction of alien species. As the volume and geographical spread of trade grows, this regulatory challenge will increase, particularly for developing country governments.

This Article examines the potential interaction between the policy objectives and rules associated with efforts to regulate the introduction of alien species, and those designed to promote and protect free trade. Free trade rules, as represented by the agreements of the World Trade Organization (WTO), generally recognize the right of governments to impose rules necessary to protect domestic animal and plant life and health. However, WTO rules may not take full account of the specific concerns of officials and nongovernmental organizations (NGOs) working to protect native biodiversity from the threat of invasive alien species.

For example, WTO rules abhor distinctions made on the basis of national origin. Discrimination against or between products or services on the basis of their "foreignness" runs contrary to the WTO's central principles that prohibit *imported* products or services from being treated less favorably than "like" *domestic* products or services. Such distinctions are considered inherently suspect and probably motivated by efforts to protect domestic industries from foreign competition. Thus, under free trade rules, regulators seeking to ban the import of a product must justify their request with something more substantial than the mere fact of the foreignness of the product. By contrast, rules that seek to prevent the introduction of "alien" species are primarily concerned with excluding that which is foreign, i.e., "non-native." The somewhat arbitrary manner in which some governments and groups have chosen to define what is native and what is not, may pose particular difficulties with trade rules.

WTO rules increasingly rely on science as an "objective" arbiter to determine when governments can reasonably restrict trade in products and services as a means of protecting animal and plant life. Evolving interpretations of WTO rules suggest, for example, that defending a quarantine measure against a WTO challenge requires a scientific risk assessment. Such assessments can be both technically difficult and expensive. WTO rules could substantially limit the scope and ability of governments to take precautionary actions in the absence of supporting scientific evidence. While the impact or potential impact of a number of alien introductions has been well documented, concerns about other species and pathways remain hypothetical or unstudied. Aggressive, precautionary regulations against the introduction of alien species are thus potentially vulnerable to conflicts with free trade rules.

WTO rules and practices also look toward multilaterally negotiated, internationally agreed upon standards as a means of striking a reasonable balance between national concerns about environmental protection, and global concerns about trade protectionism. If an appropriate international institution has adopted an international standard on the regulation of alien species, the WTO rules may, in certain circumstances, defer to this standard. This deference is based on the rationale that a large, representative grouping of states is unlikely to agree to standards that are discriminatory, arbitrary, or protectionist. However, the international community is still struggling to agree on global standards to define, identify, and regulate alien species. Thus far, there are no concrete or definitive internationally agreed upon rules that might help defend a national measure against a WTO challenge. The WTO's broadly applicable trade rules and its powerful dispute settlement system will fill this regulatory vacuum unless or until other international institutions develop specific rules related to the trade in alien species.

This Article reviews the landscape of WTO law and practice relevant to the regulation of alien species. After a brief review of the general rules governing trade in products and services, the analysis focuses on the Agreement on Sanitary and Phytosanitary Measures (SPS Agreement).[1] The discus-

Jacob Werksman is Environmental Institutions and Governance Adviser, Bureau for Development Policy, United Nations Development Program. This Article was written for the World Conservation Union (IUCN) while Mr. Werksman was a Senior Lawyer at the Foundation for International Environmental Law and Development (FIELD), London. The views expressed are the author's.

*[Editors' Note: This Article is excerpted from* HARMFUL INVASIVE SPECIES: LEGAL RESPONSES *(Marc Miller & Robert Fabian eds., Envtl. L. Inst. 2004). The book, now available from the Environmental Law Institute, describes the law and policy regarding harmful non-indigenous species in six countries: New Zealand, Germany, South Africa, Argentina, Poland, and the United States. The book also addresses three international and cross-cutting dimensions of harmful non-indigenous species policy: quarantine systems, trade issues, and the special concerns raised by genetically modified organisms. For more information and to order, visit http://www.elistore.org/books_detail.asp?ID=10930.]*

1. WTO, *Agreement on the Application of Sanitary and Phytosanitary Measures*, *in* THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS. THE LEGAL TEXTS (1994) [hereinafter SPS Agreement].

sion reviews specific challenges facing regulators of alien species as they struggle to comply with SPS disciplines, including conforming to international standards, carrying out scientific risk assessments, ensuring consistency in the application of levels of protection, and designing least-trade-restrictive alternatives.

## The WTO

The agreement establishing the WTO entered into force January 1, 1995. The WTO agreements establish legally binding disciplines that govern the trade in goods and services, and the enforcement of intellectual property rules among 140 Members.[2] The agreements also established the WTO as a formal international organization authorized to monitor the implementation of these disciplines, to resolve disputes that arise between WTO Members, and to negotiate and implement new rules. WTO law draws upon 40 years of practice under the General Agreement on Tariffs and Trade (GATT),[3] a narrower and more loosely organized institution, which focused on trade in products.

One of the most innovative institutional aspects of the WTO is its dispute settlement system, which can issue binding judgments and authorize retaliation against WTO Members who fail to comply with their obligations.[4] WTO Members must answer complaints brought against them by other Members. The WTO's ad hoc arbitration panels and its Appellate Body (AB), both of which decide disputes, provide reasoned and authoritative clarifications of WTO rules on a case-by-case basis. Once a dispute is resolved, if a WTO Member fails to comply with a panel or AB report, the "losing" Member can be subject to trade sanctions by the complaining Member. As disputes arise and are then resolved, a dynamic and evolving set of new understandings emerges from these changing legal and factual contexts.

The WTO dispute settlement system is thus crucial to understanding and predicting the interaction between trade rules and other national and international rules. There have, however, only been two WTO disputes to date, both of which fall under the SPS Agreement, that deal directly with regulatory measures designed to deal with the introduction of alien species. While the analysis of the SPS Agreement is the focus of this Article, other WTO agreements will be mentioned as well to provide a fuller context of the development and potential application of trade law to alien species regulation.

The WTO agreements most relevant to this analysis are the Multilateral Agreements on the Trade in Goods, in particular the GATT of 1994; and the WTO SPS Agreement; as well as the General Agreement on Trade in Services (GATS).[5] The WTO agreements that apply, either individually or in combination, to a particular measure designed to regulate alien species depend upon the nature of the threat being regulated, the nature of the measure designed to regulate that threat, and the way in which the measure impacts trade. The most common measures to regulate introductions through trade pathways are border controls designed either to bar unintentional introductions or to regulate intentional introductions. These measures can include mandatory advanced notification and other documentation, import licenses, quarantine, and fumigation.[6] An intentionally introduced species may be subject to further regulation after it has crossed the border, such as permits conditioned upon monitoring and containment procedures, and restrictions on breeding, sale, and resale.[7] Whether the alien species is the product itself, or "hitchhiking" on a product or service, measures that slow or hinder the flow of commerce fall under the WTO's jurisdiction.

## GATT (1994)

The GATT as amended in 1994 (GATT 1994) consists of the general rules designed to govern the trade in products that were developed through 40 years of practice under the original GATT agreement, adopted in 1947. The 1994 WTO agreements that are now in force not only retain and clarify the original GATT rules, but have also brought into force more detailed agreements on specific kinds of products and measures. The GATT's general disciplines govern all products traded between WTO Members unless they are expressly overridden by the more specific and recent agreements. These GATT rules will be briefly reviewed here before moving on to an in-depth discussion of the SPS Agreement—the WTO agreement most likely to be invoked in the context of regulating alien species.

The GATT rules potentially relevant to the regulation of alien species include a prohibition against the use of trade bans,[8] rules aimed at eliminating discrimination on the basis of the national origin of products,[9] and general exceptions

2. On February 1, 2003, WTO membership stands at 145. *See* WTO, *Members and Observers*, *at* http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (last visited Aug. 27, 2003).

3. GATT, *opened for signature* Oct. 30, 1947, General Agreement on Tariffs and Trade, Text of the General Agreement (July 1986) [hereinafter GATT].

4. When joining the WTO each Member agrees, under the WTO's Dispute Settlement Understanding, to answer all disputes brought against it and to abide by the resulting judgments. Any WTO Member who feels benefits it was expecting under the WTO have been "nullified or impaired" by another Member's failure to comply with WTO rules can request the establishment of a panel of arbitrators to hear the case. Each WTO panel is formed ad hoc, and is composed of three to five trade experts appointed either by agreement between the disputants, or, should they fail to agree, by the head of the WTO's administrative body. After both oral and written pleadings, the panel issues a report. The panel's report is generally considered binding upon the disputants, unless it is rejected by a consensus of the WTO membership, or it is appealed. Rejection by consensus is extremely unlikely, as it would require the support of the entire membership, including the Member who "won" the dispute. Appeal, however, is extremely common, as either disputant is entitled to appeal any mistake of law made by the panel. The WTO Appellate Body (AB), a standing body composed of seven internationally recognized legal experts appointed by the WTO membership, hears the appeal. The AB hears each appeal in a division of three Members, and its reports are generally considered binding upon the disputants, unless rejected by a consensus of the entire membership. If a WTO Member fails to comply with an adopted panel or AB report, the complaining Member can request the authorization of a trade sanction at a level equivalent to the damages resulting from the continuing noncompliance. Such sanctions usually take the form of an increase in the tariffs that can be assessed by the complaining Member against products or services exported by the noncomplying Member.

5. General Agreement on Trade in Services, Apr. 15, 1994, 36 I.L.M. 354 (entered into force Jan. 1, 1995) [hereinafter GATS].

6. Clare Shine et al., A Guide to Designing Legal and Institutional Frameworks on Alien Invasive Species 63 (2000) [hereinafter IUCN Guide].

7. *Id.* at 52, 59.

8. GATT, *supra* note 3, art. XI.

9. *Id*. arts. I, III.

that allow Members to deviate from the rules in certain limited circumstances.[10]

GATT Article XI forbids WTO Members from instituting or maintaining prohibitions or quantitative restrictions on the importation of products from other WTO Members (through quotas, import licenses, or other measures). Such bans are the most obvious manner in which governments interfere with free trade, and the GATT rules are designed to ensure that they can only be maintained in the most limited circumstances. Trade bans that are aimed at alien species as products or that are designed to prevent their introduction as parasites or stowaways on other products would be a prima facie violation of Article XI and would have to be justified under an exception.

GATT Article III (National Treatment) and Article I (Most-Favored-Nation Treatment) prohibit measures that directly or indirectly discriminate between "like products" on the basis of their country of origin. These rules are based on the assumption that if two products are physically alike in all relevant characteristics, there can be no legitimate regulatory basis for discriminating between them. Articles III and I have been interpreted broadly to catch both regulation that discriminates "on its face," i.e., that expressly distinguishes on the basis of national origin, as well as regulation that is facially neutral, but discriminates in its effect. Restrictions on the sale, resale, or use of alien species, if these species are demonstrably "like" an unregulated species of domestic origin or are "like" another unregulated foreign species, might violate these GATT provisions. Determinations of "likeness" made by GATT and WTO panels have focused on a comparison of the physical characteristics of the products, and the regulatory risks associated with those physical characteristics.[11]

Measures that are found to violate Articles XI, I, or III:4 may, nevertheless, qualify for an exception under GATT Article XX. Such an exception requires a two-step process. First, the Member defending the measure bears the burden of provisionally justifying the measure under one of the policy objectives enumerated in subparagraphs of Article XX. A measure shown to be *necessary* to the protection of "human, animal or plant life or health"[12] or, under certain conditions, *related to* the conservation of natural resources[13] may qualify for an exception. Either of these exceptions could be applicable to alien species regulations. The more restrictive of the two, Article XX(b), requires the importer to defend the measure by showing it is the least trade-restrictive means reasonably available for achieving the measure's objective.[14] The second step of the process to qualify for an exemption under Article XX requires the Member to demonstrate that the measure is not being applied in an arbitrary or unjustifiable manner, or as a disguised restriction on trade.[15]

The absence of an internationally recognized definition of an "alien invasive" species could not only raise difficulties for the defense of a regulation designed to distinguish between otherwise "like" products under Article III, but also complicate efforts to demonstrate, in accordance with Article XX, that a regulation is, in fact, not "arbitrary."[16] No alien species-related disputes arose under the GATT prior to the entry into force of the WTO, despite the fact that use of quarantine and licensing provisions designed to regulate and prevent the introduction of invasive species have been quite common for some time.[17] With regard to the regulation of intentional introductions, the absence of disputes may reflect the very low volume of instances of introduction, as well as widespread acceptance of the need to control trade in exotics by potential exporters concerned about the loss of their native biodiversity. With regard to the regulation of unintentional introductions as parasites and stowaways, the absence of disputes may reflect a broad recognition that such measures are indeed necessary to protect domestic animal (sanitary) and plant (phytosanitary) health. Nevertheless, concern that governments were using such SPS measures for illegitimate purposes led to the negotiation, as part of the Uruguay Round, of the SPS Agreement, which greatly elaborates disciplines intended to implement, in particular, the GATT Article XX(b)'s health-based exceptions. As discussed below, several alien species-related disputes have subsequently arisen under the SPS Agreement.

## The GATS

While the GATT and SPS Agreement govern measures affecting trade in products, they do not apply to measures designed to prevent the introduction of alien species through the provision of a service, such as tourism by ship or plane. These regulations would most likely fall under the GATS. The GATS contains general rules on nondiscrimination, specific commitments on market access, and general exceptions similar to those in the GATT.

An analysis of the interaction between alien species regulation and the GATS is made more difficult by the unique structure of the agreement. The GATS allows a large degree of differentiation in obligations from Member to Member. Thus, the scope of each Member's obligations would need to be assessed separately. Members are entitled, when acceding to the GATS, to opt out of certain measures and sectors related to Most-Favored-Nation Treatment. Similarly, each Member binds itself to the GATS Market Access obligations on a sector-by-sector basis and may negotiate to retain noncompliant measures in specific areas of its trade in services.

10. *Id.* art. XX.

11. The test for a "like product" in the context of Article III:4, which applies to all "nonfiscal" measures, was recently articulated by the WTO AB, when testing the legitimacy of a French ban on the import and internal sale of asbestos and asbestos-containing products. It calls for a case-by-case determination in which a panel should assess, among other things, the product's properties, nature, and quality; its end uses in a given market; its tariff classification; and consumers' tastes and habits. European Communities—Measures Affecting Asbestos and Asbestos-Containing Products, AB-2000-11, WT/DS135/AB/R, at 31–56 (Mar. 12, 2001).

12. GATT, *supra* note 3, art. XX(b).

13. *Id.* art. XX(g).

14. The reasonable availability of alternatives cannot be based solely on administrative ease, but can be based on, among other things, the importance of the value being pursued by the regulation, and whether an alternative regulation could achieve the same level of protection as the challenged measure. *Id.* at 60-63.

15. United States—Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R (Oct. 12, 1998).

16. See discussion on definitions of "alien invasive species" in IUCN Guide, *supra* note 6, at 1-5.

17. See review of existing domestic legislation on alien species in IUCN Guide, *supra* note 6, at 37-48.

If, for example, a Member were to make a broad commitment to liberalizing its tourism sector, but then put in place SPS measures that banned the entry into port of vessels suspected of carrying alien species, like cruise ships, then other Members might challenge these measures. The panel's analysis would likely follow the same pattern described above in the GATT context, testing whether or not the SPS measures were applied in a discriminatory manner. Are the service providers (the tourist ships) subject to the SPS measures "like" those service providers allowed into port? Thus far, there is no WTO jurisprudence to guide a determination of a "like" service provider. If the service providers were found to be "like," the measure would have to be defended on the basis of a GATS "exception." These exceptions, like those under the GATT, allow Members, in limited circumstances and for specific reasons, to put in place measures that might otherwise violate the GATS. The measures would have to be shown to be "necessary to protect human, animal[,] or plant life or health."[18] While this provision has yet to be applied or clarified through a WTO dispute, it would likely be interpreted in the same manner as the parallel provision in the GATT Article XX, which requires the importer to demonstrate that the measure is the "least trade-restrictive" measure reasonably available to achieve the particular safety objective. However, if the measure were applied in a manner that was neither directly nor indirectly discriminatory, and that had a sound scientific basis, it is difficult to see why it would not survive such a challenge.

**Agreement on the Application of SPS Measures**

The WTO SPS Agreement regulates, among other things, trade measures that governments put in place:

> 1. to protect human, animal[,] and plant life from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms, or disease-causing organisms; and
> 2. to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.[19]

Because alien species entering as parasites or stowaways are likely to be characterized as "pests," the SPS Agreement, rather than the GATT, is the trade agreement most relevant to their regulation. While the SPS Agreement recognizes the right of WTO Members to put SPS measures in place, they must do so only to the extent necessary to protect human, animal, or plant life or health. Furthermore, when identical or similar conditions prevail, the measures must be enacted in a manner that does not arbitrarily or unjustifiably discriminate between Members.

Unlike the GATT, which assesses whether a Member has unjustifiably discriminated between otherwise "like products," the SPS Agreement tests whether the measure at issue is a scientifically justified and proportionate response to the risk at hand. This approach avoids the complex and abstract challenge of interpreting the word "like." It focuses instead on the direct analysis of the risks associated with the product, the level of protection necessary to prevent the risk, and the relationship between the level of protection and the chosen measure.

Thus far, three WTO disputes have tested the SPS Agreement,[20] two of which could be characterized as dealing with alien species. In the first, known as Australia-Salmon, Canada challenged a series of SPS measures that Australia put in place to prevent the introduction of some 24 "disease-causing agents" suspected to be present in fresh Canadian salmon. The Australian ban on the import of Canadian salmon was challenged by Canada as scientifically unjustified. The study upon which the Australian ban was based indicated that the exotic nature of the viruses and bacteria at issue provided an important motivation behind the measures.[21] But a WTO panel and the AB subsequently struck down the Australian measure for failing to meet the SPS Agreement's requirements for risk assessment. The criteria against which the Australian risk assessment was tested are discussed below.

The second releant dispute, known as Japan-Varietals, between Japan and the United States, arose over the fumigation procedures that Japan required on imports of fruits and nuts to prevent the introduction of the coddling moth, a pest exotic to Japan. The Japanese regulation required each variety of a particular fruit or nut be tested to demonstrate the effectiveness of the fumigation process in eradicating the moth. The United States objected to this "varietal" approach as being unnecessarily trade-restrictive and scientifically unjustified. The WTO AB agreed that the measure failed to meet the SPS Agreement's provisions requiring sufficient scientific evidence. Principles developed from this case on the sufficiency of scientific evidence are discussed below.

Together, these two cases demonstrate that a national SPS measure, to comply with the SPS Agreement, must observe the following key principles:

> Harmonization with agreed upon international standards as a basis for SPS measures;
>
> Application of risk assessment procedures based on scientific principles and evidence;
>
> Consistency in the application of appropriate levels of protection;
>
> Use of the least trade-restrictive alternatives; and
>
> Transparency through publication of trade measures.

18. GATS, *supra* note 5, art. XIV(b).

19. SPS Agreement, *supra* note 1, Annex A.

20. EC—Measures Concerning Meat and Meat Products, WT/DS-26/AB/R, WT/DS48/AB/R (Jan. 16, 1998) [hereinafter EC-Hormones]; Australia—Measures Affecting Importation of Salmon, WT/DS18/AB/R (Oct. 20, 1998) [hereinafter Australia-Salmon]; and Japan—Measures Affecting Agricultural Products, WT/DS76/AB/R (Feb. 22, 1999) [hereinafter Japan-Varietals]. The WTO reports on these disputes are available on the WTO website: *World Trade Organization*, *at* http://www.wto.org (last visited Dec. 9, 2002).

21. As summarized by the WTO Panel, the Australian study concluded:

> There was a possibility that up to 20 disease agents exotic to Australia might be present in Pacific salmon products and although the probability of establishment would be low, there would be major economic impacts which could seriously threaten the viability of aquacultural operations and the recreational fishing industries, in addition to adverse environmental impacts on the built environment of Australia. The Report considered that should any of the 20 diseases become established, they would almost certainly be ineradicable.

Australia-Salmon, *supra* note 20, at Panel Report, ¶ 2.30.

*Harmonization With International Standards*

The SPS Agreement defines harmonization as the "establishment, recognition[,] and application of common [SPS] measures by different Members."[22] Where an international SPS standard exists, WTO Members are required to *base* their SPS measures on such a standard.[23] But *basing* an SPS measure on an international standard does not excuse a Member from fulfilling its other obligations under the SPS Agreement. However, if a Member's SPS measure *conforms to* an international standard, the measure will enjoy the benefit of a presumption (albeit one that can be rebutted) that the measure is consistent with the relevant provisions of the SPS Agreement and the GATT. The WTO AB has indicated that a measure in conformity with an international standard is one that "would embody the international standard completely and, for practical purposes, converts it into a municipal standard."[24]

Under the SPS Agreement, international standards, guidelines and recommendations are defined as those developed by international organizations specifically identified in the agreement. The three international standard-setting organizations recognized under the WTO operate under the umbrella of the United Nations (U.N.) Food and Agriculture Organization (FAO).[25] The Codex Alimentarius Commission was established in 1962 as a joint undertaking of the FAO and the World Health Organization. It sets standards on food safety and human health, concerning particularly food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling, and codes and guidelines of hygienic practice.

The International Office of Epizootics develops standards and guidelines on pests and diseases of animals (but not animals themselves as pests). It was created in 1924 to facilitate trade in animals and animal products, with a view both to protect the health of consumers and to prevent the spread of diseases. The International Plant Protection Convention, adopted in 1951,[26] provides a framework for international cooperation to secure common and effective action to prevent the introduction of pests of plants and plant products, and to promote appropriate measures for their control.

For matters not covered by these three organizations, the SPS Committee, which the WTO established to oversee the implementation of the SPS Agreement, may identify additional standards promulgated by international organizations that are open to membership by all WTO Members. More than 50 international and regional instruments, including the Convention on Biological Diversity[27] and the Cartagena Protocol on Biosafety,[28] now deal one way or another with the introduction, control, and eradication of alien species.[29] Nevertheless, the SPS Committee has yet to identify additional organizations as official sources of international standards.

22. SPS Agreement, *supra* note 1, Annex A, §2.
23. *Id*. arts. 3 and 12.4.
24. EC-Hormones, *supra* note 20.
25. SPS Agreement, *supra* note 1, art. 3.4.
26. U.N. FAO, International Plant Protection Convention, Rome 1951, revised in 1979 and 1997 (latest versions not yet in force).
27. U.N. Environmental Program (UNEP), Convention on Biological Diversity (1992).
28. UNEP, Cartagena Protocol on Biosafety, Montreal (Jan. 29, 2002).
29. IUCN Guide, *supra* note 6, at 13 and Annex I.

An international standard can, however, be used either as a shield or a sword against a national SPS measure, depending on the situation. If such a standard exists, a Member may rely upon it to defend a relevant national measure, but the Member may also be called upon to justify any trade restriction based upon a departure from that standard.

Promoting or requiring the use of international standards in the regulation of trade is one means by which the WTO agreements discourage disguised discrimination, encourage trade liberalization, and ease the burden of administering trade rules. In theory, if a standard has received the endorsement of an international body, it is widely recognized as a legitimate means of regulating a genuine threat. If all Members are aware of and seek to apply the same standard, importers and trade officials will enjoy a greater predictability and conformity of regulation. However, as with many environmental and health-based issues, not all governments share the same values or perceptions of risk regarding domestic biodiversity and alien species. This may mean that, as international standards on alien invasive species emerge, they will form around "least common denominator" solutions that place "high standard" countries outside the range of what has been endorsed internationally.

*Sufficient Science and Risk Assessment*

SPS measures must be based on "scientific principles." Unless they are in conformity with international standards, as discussed above, measures must be justified by a scientific risk assessment. This risk assessment provides the rationale both for the setting of an appropriate level of protection and for the design of an SPS measure adequate to achieve that level of protection. Decisions adopted by the WTO AB have begun to provide more specific guidance with regard to the elements of a proper risk assessment, as well as the relationship between the risk assessment, the process of establishing the appropriate level of protection, and the final design of the SPS measure. Indeed, the SPS disputes to date have turned in part on both the adequacy of the risk assessment upon which the importing government relied, and the relationship between the assessment and the SPS measures on which it was based.

Under the SPS Agreement, a risk assessment prepared by a Member must do three things:

> 1. Identify the invasive alien species whose entry, establishment, or spread a [M]ember wants to prevent within its territory, as well as the potential biological and economic consequences associated with the entry, establishment, or spread of these invasive alien species;
> 2. Evaluate the likelihood of entry, establishment, or spread of these invasives, as well as the associated potential biological and economic consequences; and
> 3. Evaluate the likelihood of entry, establishment[,] or spread of these invasive alien species according to the SPS measure that might be adopted.[30]

It is not sufficient that a risk assessment merely conclude there is a *possibility* of entry, establishment, or spread of an invasive alien species. A proper risk assessment must evaluate the *likelihood or probability* of entry, establishment, or spread. There should be a rational or objective relationship between the SPS measure at issue and the available scien-

30. Australia-Salmon, *supra* note 20.

tific information. Demonstrating this relationship will depend on the particular circumstances of each case, including the characteristics of the measure and the quality and quantity of the scientific evidence.[31]

Differences in perception lie behind many SPS disputes, as importers and exporters often disagree about whether or not risks associated with particular products are based on "sufficient science." Many international environmental declarations and agreements include the "precautionary principle," which is intended to guide states when developing regulation in contexts where there are significant gaps in scientific knowledge, but where the risks of inaction are, nevertheless, potentially high.[32] The irreversibility or potential irreversibility of the threats posed by the introduction of alien species is likely to raise issues about the applicability of the "precautionary principle."

The application of the precautionary principle has proved particularly controversial in the context of trade. Exporting nations are promoting international trade in a product they have deemed "safe" for sale and consumption at home, and thus tend to resent any implication that their product might fail to meet importers' standards. They presume that the "precautiousness" of an importing government is more likely to be fueled by a desire to protect a domestic industry than to protect consumers, native plants, or wildlife.

When governments have sought to invoke the precautionary principle in an SPS dispute, the WTO AB has recognized that "responsible, representative governments commonly act from perspectives of prudence and precaution where risks are of irreversible nature."[33] The precautionary principle, however, cannot override the procedures for risk assessment required by the SPS Agreement.[34] Provisional measures may be applied where relevant scientific evidence is insufficient,[35] but these provisional measures may not be maintained indefinitely. Additional information for a more objective risk assessment must be actively sought, and the measure must be reviewed within a reasonable period of time.[36]

The SPS Agreement's insistence on "sufficient science" may raise particular challenges for importers seeking to regulate alien introductions. For example in the coddling moth dispute, Japan claimed that "for practical reasons, the importing country was at a disadvantage in respect of the gathering of sufficient information on exotic pests (which did not exist domestically), for varieties that often were not produced in Japan."[37] Japan argued unsuccessfully that because of this asymmetry of information, the exporting government should have the burden of proving that any alternative to the importer's measure would achieve the required level of protection.

31. Japan-Varietals, *supra* note 20.

32. The precautionary principle, as stated in Rio Declaration, Principle 15, holds that "lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation." Rio Declaration on Environment and Development, U.N. Conference on Environment and Development, princ. 15, U.N. Doc. A/CONF.151/5/Rev. 1, 31 I.L.M. 874 (1992).

33. EC-Hormones, *supra* note 20.

34. *Id*.

35. SPS Agreement, *supra* note 1, art. 5.7.

36. Japan-Varietals, *supra* note 20.

37. *Id*. at AB Report, ¶ 4.29.

*Consistency of Application in Levels of Protection*

The SPS Agreement states the following:

> With the objective of achieving consistency in the application of the concept of the particular SPS protection, each [M]ember shall avoid arbitrary or unjustified distinctions in the levels it considers to be appropriate in different situations, if this situation would result in discrimination or a disguised restriction on international trade.[38]

Members must ensure that SPS measures do not arbitrarily or unjustifiably discriminate between Members where identical or similar conditions prevail.[39] These provisions taken together require Members to be consistent when they deal with risk over a range of measures and products.

This provision is likely to prove controversial for the simple reason that governments rarely regulate with perfect consistency. Regulatory challenges tend to arise in an ad hoc manner, as scientific understanding of a risk and the public and political pressure necessary to respond to it emerge. Regulatory responses depend upon government priorities, the strength of vested interests and choices about the application of limited resources.

While it may be reasonable to assess consistency of regulation within a narrow range of regulatory activity, the broader the range of activity, the more likely that inconsistencies will arise. In Australia-Salmon, the AB assessed the consistency of import bans on fresh, chilled, or frozen salmon with regulations designed to regulate imports of herring, cod, haddock, eel, sole for human consumption; herring for use as bait; and live ornamental fin fish. It found that this broad scope of comparison was justified when situations "involve *either* a risk of entry, establishment[,] or spread of the same or a similar disease, *or* a risk of the same or similar 'associated potential biological and economic consequences.'"[40] This approach presents an opportunity to encourage a broad range of alien species regulation, on the basis that piecemeal approaches could provoke WTO challenges. However, if the requirement of consistency is interpreted too strictly, it could prevent the development of regulation in an incremental manner.

The Australia-Salmon dispute also highlighted the need for regulators to avoid depending too heavily on the mere "exoticness" of an SPS threat to justify onerous restrictions at the border. One of Canada's many allegations was that Australia had failed to put in place internal regulations consistent with those required at the border for those disease agents that were exotic to some parts of Australia, but endemic to others. The measure failed for other reasons, but the arguments raised suggest that once an alien species has been introduced, border controls should be combined with internal efforts to eradicate or control the spread of the threat.[41]

*Alternative/Less Restrictive Trade Measures*

Reflecting the jurisprudence developed under the GATT, a national SPS measure must not be more trade-restrictive

38. SPS Agreement, *supra* note 1, art. 5.5.

39. *Id*. art. 2.3.

40. Australia-Salmon, *supra* note 20, at 44, AB Report, ¶ 146.

41. *Id*. at 116, AB Report, ¶ 13.

than is necessary to achieve the appropriate level of protection.[42] A measure is deemed trade-restrictive if there is another, available SPS measure, which, taking into account technical and economic feasibility, would achieve the appropriate level of protection without restricting trade as much as the contested measure.[43]

In Australia-Salmon, the fact that the relevant measure, which would have required the heat-treatment of fresh salmon, destroyed the intended end use of the product helped support a conclusion that less trade-restrictive alternatives (such as testing and quarantine) could have achieved the same level of protection. If the measures were directed at banning the introduction of an alien species as the product itself, it is difficult to imagine a more trade-restrictive alternative to an outright ban on the trade.

*Transparency*

Members are required to notify other countries in advance, except in emergency situations, of any new or changed SPS measure that could affect trade, and to solicit comments from trade partners on the proposed measure. These notifications are publicly available documents, and each Member must establish an office to respond to requests for more information. Furthermore, to enhance transparency, WTO Members must promptly publish all SPS measures in a manner that enables interested Members to become acquainted with them.[44] This ensures protection against disguised barriers to trade.

## Conclusion

The SPS Agreement constitutes an elaborate attempt to reconcile national interests to protect human, animal, and plant health with trade interests. It highlights the need for Members to harmonize their approaches through competent international organizations. At the same time, it recognizes the difficulties of this approach and the sovereign right of Members to establish their own priorities and adopt their own national SPS measures as long as these measures are based on adequate scientific information.

The two cases involving alien species that have come before the WTO thus far have resulted in protective regulations being struck down, primarily on the basis of insufficient scientific evidence and unacceptable risk assessments. While in both cases the importing government's cases were quite weak, there are nonetheless some grounds for concern that strict interpretations of WTO rules could work to limit or chill the development and application of progressive alien species regulation.

At present, the SPS Agreement is the only international legal instrument in force that governs trade-related aspects of alien species regulation, and that is backed by a compulsory dispute settlement system. Its science-based disciplines, and relatively narrow interpretation of the precautionary principle may well restrict the discretion of national governments to design aggressive regulation in this area. The SPS Agreement's deference to international standards does, however, provide an additional incentive for agreeing multilaterally to specific international rules to prevent the spread of alien species through trade.

The rules and guidelines concerning alien species developed in the context of the Convention on Biological Diversity (CBD) may be particularly significant in the future. In 1998, the Conference of the Parties (COP) requested the CBD Subsidiary Body on Scientific, Technical, and Technological Advice (SBSTTA) to develop "guiding principles for the prevention, introduction, and mitigation of impacts of alien species."[45] As requested, the SBSTTA has developed the *Interim Guiding Principles for the Prevention, Introduction, and Mitigation of Impacts of Alien Species*. Governments particularly concerned about alien species regulation may wish to support and promote this process with a view to creating more latitude to regulate alien species in a precautionary manner when acting in the face of scientific uncertainty.

42. SPS Agreement, *supra* note 1, art. 5.6.

43. Japan-Varietals, *supra* note 20; Australia-Salmon, *supra* note 20.

44. SPS Agreement, *supra* note 1, art. 7 and Annex B.

45. Decision IV/1, 1998.