
Invasive Alien Species Discussion Paper

Encouraging Prevention, Developing Capacity and Providing Accountability: A Strategy for Addressing International Invasive Alien Species Issues

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Executive Summary

The Interim Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species, developed by SBSTTA pursuant to Decision IV/1, emphasize the importance of international action to prevent introductions, build capacity, resolve issues relating to State and private responsibility for transboundary harm caused by IAS, and improve coordination among institutions addressing IAS. Achieving these objectives will require development of novel solutions to an array of technical and political challenges. This paper suggests a strategy for overcoming these challenges and developing a more efficient, coherent system for managing the international aspects of IAS. To address prevention issues, the strategy proposes pathway Codes of Conduct accompanied by an incentive system of pathway user fees. To address capacity building, the strategy proposes that the majority of these fees be used to implement national strategies addressing IAS issues. To address State accountability issues, the remainder of the user fees would be used to fund an international, no-fault insurance fund, accessible by States harmed by transboundary movements of IAS. Access to the fund would not require States to identify the source of harm or show causation. The final section of the paper suggests how these elements might be woven together with existing international arrangements to create an integrated, coordinated system. Further discussion among Parties and observers will determine the extent to which implementation of the necessary measures can be achieved through the CBD, other existing instruments, informal agreement, or adoption of a new legal instrument. The authors invite comments on the proposal, both during and after SBSTTA 6.

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I. Introduction

1. The Interim Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species, developed by SBSTTA pursuant to Decision IV/1 C, are intended to “clarify how key principles supported by international law should be applied to the specific context of alien species” (SBSTTA/6/8/ ¶12). They build on the premise that IAS have a significant and often harmful impact on human health, biodiversity, and national economies, and preventing or mitigating these impacts provides important public benefits (Perrings 2000a, Perrings 2000b at 5). In Decision V/8, the COP urged Parties to apply the Interim Guiding Principles in implementing Article 8(h) of the CBD.¹ This paper proposes one possible strategy for applying the Principles to better manage the international or transboundary aspects of IAS.

2. Although each of the Interim Guiding Principles will be relevant in the design of a comprehensive international/national system for IAS, nine Principles (1-4, 7-11) are of particular relevance for the international aspects of IAS.² Our review of these Principles

¹ Specifically, Decision V/8 “[u]rges Parties, Governments and relevant organizations to apply the Interim Guiding Principles . . . in the context of activities aimed at implementing Article 8(h).”

² It is relevant to note in this regard that the international and national aspects of IAS and IAS management are tightly interwoven. It is well-established that the transboundary movement of people and goods is the driving force behind most biological invasions. But it is equally important to recognize that a biological invasion within any country may have transboundary consequences even if the IAS involved does not leave the country. For example, an IAS may threaten a shared water resource and thus affect regional water security. Or an invasion that seriously damages a heavily traded crop or species may cause shortages in a critical commodity, causing ripple effects throughout the global economy. And most fundamentally, an IAS that is inadequately controlled in an existing range State has a higher risk of spreading into other States, either naturally or through unintentional human transport. An effective system for managing the “international” aspects of IAS must recognize and respond to these linkages and must itself be tightly interwoven with national systems for the prevention, eradication, and control of IAS.

highlights four critical elements for international action: prevention; capacity building; addressing State responsibility and establishing accountability; and cooperation and coordination among States. Although each of these elements poses technical and political challenges, we share the view of Mooney and Hobbs that “there is a growing political will to address this issue in a meaningful way” (Mooney & Hobbs 2000 at 433).



3. *Prevention*—Principles 1, 2 and 7 through 11 urge that primary attention be given to preventing introductions of IAS. Most biological invasions are facilitated by the intentional or unintentional movement of species in international commerce; such movements are at least theoretically subject to human control. By contrast, it is often technically or financially impossible to eliminate an alien species once it has become established. For these reasons, prevention is universally recognized as the most efficient and effective response to the IAS threat. But existing national systems for prevention are overwhelmed by the sheer volume of goods flowing in international commerce. Prevention is further hindered by inconsistencies among the various national and international systems for IAS control. Thus, addressing prevention will require far greater coordination between States.³

4. *Capacity Building*—Principle 9 encourages “capacity-building programs for States that lack the expertise and resources” necessary to prevent alien species introductions or confront IAS challenges. The importance of capacity building to international control efforts cannot be overemphasized; States that lack adequate capacity will both be vulnerable to invasions themselves and create heightened risks for neighboring States and trading partners. Adequate capacity building will require substantial and sustainable flows of financial and technical resources, and a mechanism dedicated to mobilizing those resources.

5. *Accountability*—Principle 4 urges all States to recognize the risk that they may pose to others as potential sources of IAS and reminds States of their responsibility, consistent with Article 3 of the Convention, “to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.” Imposing traditional concepts of liability responsible for the transboundary impacts of IAS would require overcoming significant and potentially insurmountable technical and political obstacles. Establishing and allocating responsibility for particular biological invasions, in a world where a species may enter a country many times through

³ As the United States noted in its Draft National Management Plan for Invasive Species: “The global dimensions of the invasive species problem have increased with expanded trade and travel. Any realistic effort dealing with prevention . . . must include international measures and international cooperation.” US National Invasive Species Council, “Draft Management Plan, Meeting the Invasive Species Challenge” at 14 (October 2000).

many trade routes, would involve tremendous uncertainties and high transaction costs. Many States are understandably leery of any attempt to do so.⁴ For this reason, a system to address accountability issues and remedy harms without inquiry into State responsibility or fault would be highly desirable.

6. *Cooperation and Coordination*—In addition to urging support for capacity building, Principle 9 emphasizes the importance of cooperative action among States. And indeed, implicit throughout the Guiding Principles is the recognition that greater coordination is needed to achieve the objectives they set forth. To date, the challenges of IAS have been addressed in a piecemeal way—by different institutions, for different objectives, under disparate and sometimes conflicting rules and regimes. As a result, “[t]here are gaps, overlaps and inconsistencies in existing instruments at all levels” (Doc. SBSTTA/6/7 at 2). This lack of coordination is a serious and significant impediment to both the efficiency and the effectiveness of IAS prevention measures. An effective international system will advance principles for addressing existing inconsistencies and provide a framework for coordinated, coherent action to address all aspects of the IAS threat.

7. In an effort to advance discussion on the international aspects of IAS and build on the Guiding Principles, we offer the following proposal, which outlines a coordinated plan of international action. For each of the elements noted above, the paper discusses current challenges, offers a potential solution, and identifies potential issues and concerns. In the final section, on “Coordination,” we describe how the elements can and should be woven together into an integrated system.

8. Because “both the causes and consequences of alien species introductions are international in character,” it is beyond dispute that “[i]nternational action is necessary to deal with the problem, backed by internationally agreed legal instruments” (Shine et al. 2000 at 13). Further discussion among Parties and observers will determine the extent to which implementation of the necessary measures can be achieved through the CBD, other existing instruments, informal agreement, or adoption of a new legal instrument.

II. Preventing Introductions

Pathways Approach

⁴ For example, New Zealand has observed that State responsibility “is a particularly difficult principle to implement” in the IAS context and that it is “necessary to consider the mechanism by which the State would exercise its responsibility.” New Zealand Comments on the Interim Guiding Principles on Alien Invasive Species, at 2 (Oct. 8, 2000).

9. To date, the most common approach to preventing introductions has been to target individual species for quarantine or inoculation (Toolkit at 31). This approach has proven costly, time-consuming, and inefficient. As the volume and variety of species in trade increases, the proportion of species and shipments that can be managed within existing systems is rapidly decreasing. Moreover, species-based quarantine and inoculation systems are ill-equipped to anticipate risks before harm actually occurs, or to address the unintentional introductions that comprise the majority of IAS introductions.

1. Because of these weaknesses, we embrace the GISP proposal that the best approach to preventing international movement is to identify and encourage practices that reduce movement of IAS via major pathways (Toolkit at 31). A pathways focus is both possible and desirable.⁵ Focusing on pathways provides a more efficient allocation of limited resources and makes at least a moderate level of control technically and financially achievable. At the same time, a pathways focus will provide greater certainty for the regulated community and a more equitable allocation of the burdens associated with prevention.

Codes of Conduct

⁵ GISP has observed, for example, that “[r]isk assessments can be done for pathways as well as individual species” (Toolkit at 31).

1. We further believe that the persons responsible for movement of goods are best able to reduce risks associated with goods. To provide guidance to importers, exporters and shippers, GISP has suggested that best practices be identified and elaborated through Codes of Conduct, which would provide blueprints for action within each pathway. Consistent with this suggestion, we propose that the first step in a coordinated plan of action is to develop Codes of Conduct for major international pathways of IAS. Scientists with GISP are working to hone the list of major pathways, some of which have already been identified (pers comm. Greg Ruiz, GISP Pathways Co-coordinator, Jan. 2000).⁶
2. Some major pathways actors have already seized opportunities to provide guidance to industries they represent. Draft Codes of Conduct have been prepared for the Import and Release of Exotic Biological Control Agents (FAO 1995a) and for Responsible Fisheries (FAO 1995b), and ballast water guidelines have been prepared for the shipping industry (IMO 1993).
3. It is worth noting that efforts to develop Codes of Conduct are likely to promote education. Thus, this element also advances Guiding Principle 6, which advocates education and research.

Pathway User Fees

4. The second step toward prevention is to implement measures that encourage pathway actors to implement these Codes of Conduct. Building on recommendations developed and embraced by GISP scientists and others (Bean 1999, Perrings 2000a, and Jenkins 2001) that financial mechanisms be used to motivate behavior, we suggest that a pathway user fee, which would be proportional to risk, and which would function in some respects like a third-party insurance premium, be imposed on each major pathway. Additionally, to encourage each pathway actor to reduce risks associated with his or her activities, we suggest that the pathway actor be given credit for activities to reduce risk identified for his or her pathway. In other words, to the extent the pathway actor can demonstrate compliance with relevant Codes of Conduct—and to the extent these Codes of Conduct result in reduced risk—the user fee should be reduced (Bean at 281).
5. The pathway user fee would have elements of an insurance fund—contributions would

⁶Some major pathways already identified include both intentional and accidental introductions, such as “plants introduced for agricultural purposes,” “pets released into the wild and aquarium trade” and “contaminants of agricultural produce” (Toolkit at 32-45).

be made by entities in rough proportion to the risk of harm their activities pose, and recovery could be made by States impacted by these activities. As will be detailed later, we envision that the funds would be used by States to support capacity building and prevention efforts and to address State accountability issues and remedy harms caused by transboundary IAS.

Issues and Concerns

6. Several questions must be addressed to develop the specifics of the user fee proposal. Among the questions to consider are:

- Assuming we can identify risk associated with a given pathway generally, and agree that the amount of the user fee is tied to “risk,” to what extent will we consider the volume of goods and other factors when determining the final assessment on a given shipment, in a given ballast water container, etc.?
- Will the user fee also be imposed only on intercontinental trade, as one commenter has suggested? Or will it extend to intracontinental trade as well?
- Where will the user fee be assessed—at the point of export or import?

Several individuals have proposed answers to similar funding mechanism questions. Perrings has identified a host of options for imposing user fees on pathways (Perrings 2000a). Jenkins has proposed that fees be imposed on three main categories of intercontinental trade and travel (Jenkins 2001).

7. While we cannot offer answers to these questions here, we offer principles—in Box 1. Summary Recommendations on Prevention—to guide development of such answers and to structure measures to implement user fees. The recommendations in Box 1 also reflect our attempt to address the additional concerns discussed below.

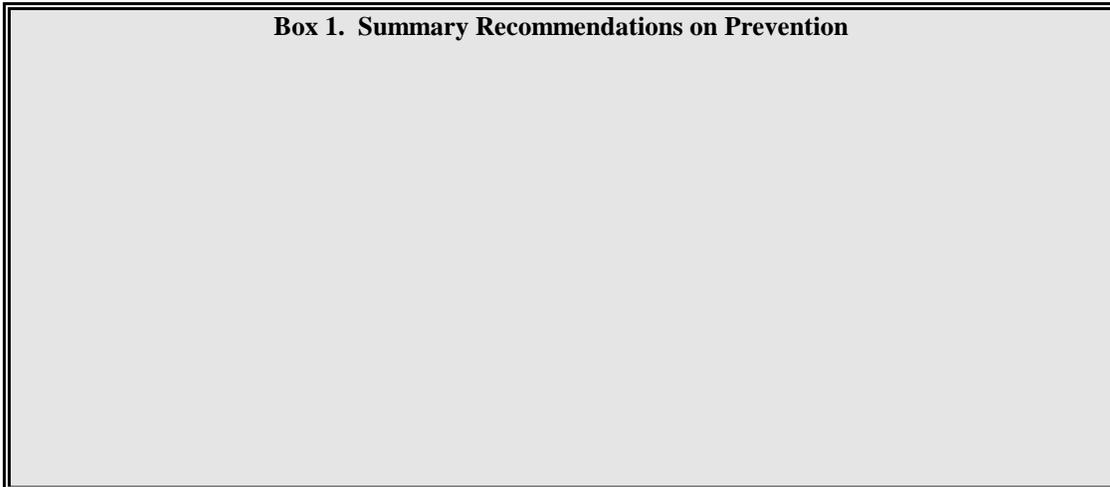
8. To apply the user fee fairly, the system must ensure that the relative impact of the user fee is comparable among consumers in developing and developed countries and small island states. Several options might be considered to address this issue. One option that may benefit developing countries is to require that the risk assessment, to which the user fee amount is tied, consider the likelihood of the spread of the invasive alien species – a factor likely influenced both by the volume of goods imported and the transportation infrastructure. An option which may benefit small island states is to recognize that the diversity of ecosystems is likely to be smaller than in larger continental areas, thus permitting a narrower application of user fees.

9. We believe development of a given Code of Conduct will benefit from the involvement of all stakeholders, including industry representatives, representatives of all legal conventions/agreements that have a connection to the pathway, environmental interests, etc.

10. To maintain the integrity of the user fee process, risk assessment procedures and frameworks must be credible and fair. Critical to motivating development of effective codes of conduct is the accurate and independent assessment of pathway risk in the absence of the Code of Conduct, and an impartial, third-party estimate of the degree to which a proposed Code of Conduct may reduce that risk. We suggest that the relevant risk assessment procedures be developed by GISP, or a similar expert body, to ensure the credibility of the assessments.

11. Developing Codes of Conduct and establishing a user fee system implement many of the Interim Guiding Principles. Notably they implement Principle 7, which directs that States “implement border control and quarantine measures” to ensure that “intentional introductions are subject to appropriate authorization” and “unintentional or unauthorized introductions of alien species are minimized,” and which further directs that measures “be based on an assessment of risks posed by alien species and their potential pathways of entry.” Finally, these measures would satisfy recommendations that parties supply information to the importing/receiving State on the potential invasiveness of the species (Shine et al. 2000).

Box 1. Summary Recommendations on Prevention



International measures to prevent introductions of IAS should:

- Focus on major pathways as sources of invasives;
- Support the right of States to take strong measures to prevent introductions;
- Work with pathway users and other interested parties to reduce risks posed by IAS;
- Provide strong incentives to develop and implement Codes of Conduct;
- Use existing regulatory systems to the extent appropriate;
- Treat pathways fairly and equitably, commensurate with the risk they pose;
- Ensure that risk assessment procedures are developed by an impartial international body;
- Ensure that contribution of Codes of Conduct to risk reduction is reviewed by impartial body;
- Ensure that the relative impacts of user fees on consumers in different states are comparable.

III. Capacity Building

12. We strongly agree with the Secretariat that “the existing capacity to address environmental, economic and social challenges posed by invasive alien species is not sufficient” (SBSTTA 6/8/¶ 4). We further agree that there are important gaps in the tools available to address IAS and in the capacity of countries to utilize those tools (Id.). In a recent survey of parties to the CBD, of the 41 nations responding, 89% said resources were “a limiting or severely limiting factor” in implementation of Article 8(h) (SBSTTA 6/6). The problem is particularly acute in developing countries, where resources are scarcer and IAS problems more closely tied to public health concerns. (Id.)

13. Many States lack the basic technology, information and institutional capacity necessary to respond to IAS challenges. As a crucial first step toward addressing this problem, we propose that a coordinating body (described in greater detail in the “Coordination” section below) facilitate the sharing of technology and information among States, which includes working with and supporting efforts of the Intergovernmental Invasive Species Initiative.

14. Even in those states with relatively greater capacity, however, resource constraints are a persistent hindrance to effective IAS prevention and control (McNeely 2000 at 17). The resources necessary to fully and effectively implement existing systems are often lacking; and funding for the development of new tools and techniques is wholly inadequate.

Capacity Building and Resource Generation

15. The funds generated by the user fee system outlined in the preceding section would provide a source of substantial and sustainable funding for domestic prevention, control and mitigation programs. Within the largest States, such programs might become fully self-

financing.

16. Within developing States, however, the funds generated by user fees may be insufficient to meet the costs of building capacity and maintaining a functioning system. For this reason, we propose that a portion of funds collected by the user fee system within each State be allocated to an international funding mechanism. The fund would be accessible to any developing Party requiring financial assistance to address IAS issues, provided the Party has developed a strategic plan to use the funds efficiently and effectively. (Plans describing how Parties will implement the Convention are already required under CBD Article 6a.)

IV. Accountability without Liability

17. Under international law, States have a general responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment (Rio Declaration, Principle 13). It remains unclear if this principle mandates that States are liable for harms caused by introductions of invasive species into the territory of another State (Shine et al. 2000 at 13). Several States have expressed concern that this would be an unacceptably onerous interpretation of the principle against transboundary harm (State comments on CBD guidelines). Even in the absence of these State concerns, however, it is clear that imposing traditional legal liability for IAS introductions would face particular difficulties. Establishing causation – proving the source of harm – can be difficult, if not impossible. Our abilities to identify and fully understand all possible vector sources are very limited, and the “lag time” that often occurs between the time of establishment and the time of impact of the invasive

International measures on capacity-building should:

- Create a self-sustaining source of funds for capacity-building and IAS prevention;
- Dedicate a portion of funds to international capacity-building measures;
- Ensure that administration of international funds is fair and efficient;
- Require that use of funds is in accordance with strategic plans.

alien species may hinder or prevent the identification of the specific source of harm and damage associated with it.

18. Both concerns – State fears that existing State responsibility requirements might be intolerable and difficulties establishing legal liability for IAS activities - provide compelling reasons to identify alternate approaches to establishing State accountability and allowing

recovery by injured parties. We suggest that one alternative would be to establish an international “no fault” recovery fund with a portion of the pathway user fees collected by States. We envision that any Party significantly harmed by an IAS could access the fund without the need to establish causation or identify a “guilty” State.

19. One caveat would be that no State could seek relief from the fund unless it was collecting user fees and contributing to the fund consistent with international standards. Our intention in imposing this requirement is to prevent States from tolerating “acceptable” rather than minimum risks of introductions as a means of stimulating trade, and then seeking international redress when the consequences of those risks prove unacceptable (McNeely 2000, at 9).

20. New Zealand’s innovative approach to enabling recovery for workplace and automobile injuries, the causes of which are sometimes difficult to establish, could serve as a model for this proposed measure.⁷ Employers and self-employed people pay premiums to cover work-related injuries. Industries are categorized by risk, to which premium amounts are tied. Earners pay premiums to cover non-work injuries. Motor vehicle registration fees and a percentage of petrol sales are used to cover motor vehicle accidents. Anyone injured in an accident in New Zealand is covered and can recover regardless of fault.

21. In the context of IAS activities, pathway actors whose activities pose risks pay the user fees that generate the fund. This arrangement is consistent with the fact that pathway actors, in the aggregate, are the source of IAS and are thus the parties “culpable” for the harms caused by IAS. At the same time, pathway actors are the parties most able to address and control the risks associated with individual pathways and individual shipments. Requiring user fees is thus consistent with the “Polluter Pays” principle.

22. We believe State implementation of this user fee and contribution toward an international fund implements Guiding Principle 4, “State responsibility”, and Guiding Principle 9, “Cooperation, including capacity-building .”

⁷ The fund, managed by New Zealand’s Accident Compensation Corporation, was established by Accident Insurance Act 1998, Accident Insurance Amendment Act 2000, and Accident Insurance Act 2000.

International measures on accountability should:

- Spread burdens fairly among actors whose activities pose significant risk of harm;
- Recognize that exporters may have the most control of risks for *unintentional* introductions;
- Recognize that importers may have the most control of risks for *intentional* introductions;
- Ensure that States equitably share responsibility for addressing IAS harms;
- Recognize our limited ability to identify sources of harm;
- Avoid inefficiencies associated with allocating responsibility for harmful invasions post hoc.

V. Coordination

23. Implicit throughout the Interim Guiding Principles is the need for greater cooperation among States and closer coordination of IAS prevention and control measures. As noted by Shine, et al., “jurisdictional boundaries within which legal systems operate seldom correspond to those of ecological units. [Moreover,] sectoral legal approaches often prevail over integrated ones. As a result, the need for inter-jurisdictional cooperative management agreements and for mechanisms to operate cross-sectoral integration is acutely felt, both within national boundaries and between States” (Shine et al. 2000 at 31).

24. Many institutions and agreements are making valuable—and, indeed, invaluable—contributions to the prevention and control of species invasions. Moreover, the International Maritime Organization and the International Plant Protection Convention, among others, have established wide-ranging regimes that are well-integrated with national institutions and structures for preventing IAS. These regimes, and the institutional experience and knowledge which they possess, must necessarily play a central role in future efforts to improve the IAS system.

25. But, as the Secretariat has pointed out, most of the dozens of agreements and voluntary codes that address potential invasives “are specific to a sector, taxonomic group, type of environment or type of harm” (SBSTTA/6/7 at 5). Binding standards are lacking in nearly all major sectors, in most geographic regions, and with respect to many potentially harmful taxa and potentially vulnerable ecosystems. This piecemeal approach has produced inconsistent policies and legal requirements, large gaps in coverage, redundant regulatory systems and inequitable treatment of pathways (SBSTTA/6/7 at 2; IUCN 2000 at 10-20).

26. The uncoordinated manner in which IAS continues to be approached at different levels and within different sectors “makes it difficult to implement a cross-cutting approach to the issue, and coordinating processes are needed at and between these levels and sectors to

ensure sectoral consistency and more efficient use of available resources and tools” (SBSTTA/6/7 at 2). Thus, the fundamental “task facing policy makers is how to strengthen capacity to protect native biodiversity against invasion impacts without adding extra complexity or unnecessarily duplicating what already exists” (SBSTTA/6/8/¶5).

27. Correcting the failings of the existing IAS system will require more than simple gap-filling measures, however. In a system that is already heavily splintered and marked by competing bureaucracies with divergent missions, corrective efforts that focus only on gap-filling will exacerbate existing systemic problems and engender new ones. In the absence of some coherent, unifying approach, sector and taxon-specific standards will continue to proliferate in an ever-widening array of institutions and fora. Rather than improving efficiency or reducing complexity, this proliferation will lead to endless, widely-scattered negotiations, multiplying bureaucracies, and increased jurisdictional conflicts. As each new “gap” is revealed, a new round of negotiations will have to be undertaken to address that gap; accordingly, issues of institutional jurisdiction and treaty-consistency will have to be debated time and time again. These debates will create institutions, rules and bureaucracies that will diverge, rather than converge, over time. Such an approach will inevitably result in needless duplication and waste, and, more seriously, in the proliferation—rather than eradication—of gaps and loopholes.

28. We believe what is needed is a unifying policy to guide future IAS measures, and a mechanism for weaving together existing institutional arrangements into an organized and efficient network. We believe the CBD is most likely to be the most appropriate venue for the development of both the policy and the mechanism. In fact, much of the necessary work has already begun.

A Unifying Policy on IAS

29. To ensure that IAS efforts in different institutions do not undermine one another, it is important that States adopt a unifying policy to guide the adoption of measures across institutions. The Interim Guiding Principles are a step in this direction and adherence to these Principles across regimes would be a positive development. We consider two of the Guiding Principles of particular importance in ensuring consistency between institutional measures that address IAS: the precautionary approach set forth in Principle 1, and the ecosystem approach adopted in Principle 3 and elaborated in Decision COP V/6.

30. The importance of the precautionary approach has been widely recognized in international agreements and decisions over the last decade, and we will not here repeat the

arguments which support that approach. But it is worthwhile to emphasize the particular relevance of the precautionary approach in the context of IAS, in which uncertainties abound and in which the environmental, economic and human health consequences of even a single introduction can be staggering. In light of this potential, it is critical that lack of scientific certainty not be used as a reason for not taking preventive action or as a basis for undermining protective measures adopted by States. As previously noted, the spread of IAS within any one State may have adverse consequences on many States; thus, IAS is a context in which a high level of governmental risk aversion is not only to be tolerated, but encouraged. Adherence to the precautionary approach across regimes is thus essential to ensuring that measures taken by States to prevent IAS introductions do not subject them to liability elsewhere.

31. The CBD elaborated and adopted the ecosystem approach in Decision V/6, and has incorporated that approach into the Interim Guiding Principles. The ecosystem approach informs us that because our natural resources are interrelated – impacts to land resources, for example, can result in impacts to water resources - their protection requires a coordinated and integrated management strategy (Dec. V/6). In the absence of such a coordinated strategy, the effectiveness of protection efforts will be impaired.

32. At the same time that it encourages closer coordination and integrated strategies, the ecosystem approach recognizes that management activities should occur at the lowest appropriate level. As noted, “the closer management is to the ecosystem, the greater the responsibility, ownership, accountability, participation, and use of local knowledge” (Dec. V/6, Princ. 2). This finding suggests that efforts to coordinate international action should utilize, to the extent possible, existing conventions and regulatory systems, particularly those closest to the issues to be addressed. In developing and implementing IAS measures, however, regulatory bodies should consider how the strategies they adopt may effect IAS control efforts for other sectors and ecosystem components, and should strive to support—rather than undermine—those efforts.

A Coordinating Institution for IAS

33. We propose that a single institution be tasked to coordinate and facilitate IAS activities across sectors, promoting effective management activities among existing conventions and at the lowest appropriate level. The CBD seems the logical choice for this task since its mandate is broad enough (Article 8h) and it is serving this function for various aspects of IAS efforts already. For example, the CBD Secretariat has been asked to develop international standardized terminology in collaboration with the FAO, IMO, UNESCO, GISP and other relevant secretariats (Shine et al. 2000 at 30).

34. The coordinating body would be responsible for identifying institutions engaged in IAS activities, facilitating information exchange among those institutions, and coordinating efforts to address IAS sources and risks in the most appropriate forum. The coordinating

body would also work with governments, industries and other interested parties to identify weaknesses within existing systems and suggest measures to address those weaknesses.

35. Because pathways are the common factor in IAS efforts, regardless of the species being traded or the area protected, one possible avenue for coordination among agreements is to identify priority pathways and the regimes that might contribute most effectively to the control of each pathway. For example, the coordinating body could work with GISP and other relevant institutions to identify pathways that affect many jurisdictions, ecosystems and institutional mandates, and to facilitate memoranda of agreement or other tools that would focus control efforts on those institutions best able to address the problem at its source. This would reduce waste and make the most efficient use of resources.

36. To develop Codes of Conduct for a given priority pathway, the coordinating body would identify industry representatives, other interested parties and institutions that have some relationship to the pathway, and facilitate involvement by these groups in development of the Code of Conduct. The coordinating body would not need to be, and most likely would not be, the lead group on development of the Code. This responsibility would devolve to the body that has the most relevant authority for its development, as per the requirement that management activities remain at the lowest appropriate level

37. The coordinating body would serve as the central coordinating authority for State efforts to implement the user fee system. It would also be responsible for managing the international fund described in the preceding sections.

38. By actively coordinating work between different institutions and encouraging adherence to common principles, the coordinating body would ensure that efforts to address each sector are integrated, consistent, and leave no gaps. By relying heavily on existing conventions and management regimes, the coordinating body would ensure that management efforts remain as “close to the ecosystem” as possible and would reduce the likelihood of duplicative bureaucracies.

Any international system should:

- Recognize the right of States to take precautionary measures to prevent introductions;
- Employ “ecosystem approach” to integrate international invasive species activities;
- Address existing gaps and inconsistencies in international IAS prevention and control;
- Establish a system for minimizing future inconsistencies;
- Prevent unnecessary redundancies in efforts and duplicative bureaucracies;
- Ensure that management activities occur at the lowest appropriate level;
- Ensure participation of all interested stakeholders.

We look forward to your comments and questions on the ideas presented here.

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