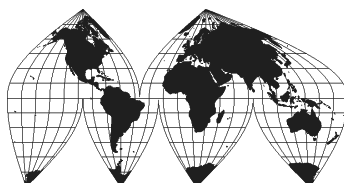


**Information Paper**

March 2001

**Sixth Meeting of the Subsidiary Body on  
Scientific, Technical and Technological Advice****(Montreal, Canada, March 12-16 2001)****Global Invasive Species Programme**

Since 1997, a coalition of scientists, economists, lawyers, social scientists, conservationists, and resource managers have worked together to develop a new comprehensive strategy for addressing the growing problem of the adverse effects of invasive species<sup>1</sup> on both our natural as well as managed ecosystems. It now has been well documented that invasive species are the second greatest threat to biological diversity globally and the highest threat on many island systems. There are also enormous economic losses incurred due to the impacts of invasive species. The Convention on Biological Diversity (CBD) recognizes the importance of this global issue and calls on contracting Parties to: "prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats and species" Article 8 (h)). SCOPE, along with partners from the United Nations Environment Programme (UNEP), The World Conservation Union (IUCN), and CAB International (CABI), is engaged in an innovative program on invasive species. This initiative, the Global Invasive Species Programme (GISP) is a component of DIVERSITAS, an international programme on biodiversity science.

*GISP is funded by the Global Environmental Facility, UNEP with additional support from UNESCO, the Norwegian government, ICSU, NASA, La Fondation Total, The David and Lucile Packard Foundation, U.S Environmental Diplomacy Fund and the John D. and Catherine T. MacArthur Foundation. GISP is a component of DIVERSITAS, an international programme on biodiversity science.*

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<sup>1</sup> This program is concentrating on invasive species, those aliens or non-indigenous species that disrupt ecosystem processes, thereby threatening biological diversity, health and economies.

# GLOBAL INVASIVE SPECIES PROGRAMME (GISP)

(A collaboration between SCOPE, IUCN, CABI and UNEP)

(04 October 2000)

**Comments provided by GISP on the Interim Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species (Decision V/8, Annex I), provided pursuant to Decision V/8 (5)**

## Overall comments relating to wording/text

- (1) SBSTTA may consider clarifying the purpose of these guiding principles.
- (2) SBSTTA may consider whether further guidance is required for each of the guiding principles.
- (3) A possible source of confusion may be in the use of "guiding principle" which may have different possible interpretations. Another term could possibly be considered (for instance "guidelines").

## Overall challenge

- (1) Overall, one of the challenges related to the invasive alien species issue is the variability between different States and/or regions relating to e.g.:
  - ❖ Awareness of invasive alien species as an issue
  - ❖ Priority of invasive alien species as an issue
  - ❖ Legal and institutional frameworks
  - ❖ Availability of resources and capacity at their disposal in dealing with the issue
  - ❖ Knowledge base
- (2) The above means that the formulation of the interim guiding principles needs to be done in the awareness that, in reality, States' practical abilities to deal with the invasive alien species issue will vary considerably, at least in the short and medium term.

## Annex I

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### INTERIM GUIDING PRINCIPLES FOR THE PREVENTION, INTRODUCTION AND MITIGATION OF IMPACTS OF ALIEN SPECIES

*It should be noted that in the interim guiding principles below, terms are used for which a definition has not yet been developed, pending a decision by the Conference of Parties on the development of a standardized terminology on alien species, as mentioned in paragraph 5 of recommendation V/4. In the interim and for the purpose of these interim principles, to avoid confusion the following definitions are used: (i) "alien" or "alien species" refers to a species occurring outside its normal distribution; and (ii) "alien invasive species" refers to those alien species which threaten ecosystems, habitats or species.*

#### Comments relating to wording/text

The GISP strategy includes definitions which it is hoped may be agreeable to SBSTTA for use in these interim guiding principles. In addition to "alien species" and "alien invasive species" other terms would also need to be defined.

#### A. GENERAL

##### ***Guiding principle 1: Precautionary approach***

*Given the unpredictability of the impacts on biological diversity of alien species, efforts to identify and prevent unintentional introductions as well as decisions concerning intentional introductions should be based on the precautionary approach. Lack of scientific certainty about the environmental, social and economic risk posed by a potentially invasive alien species or by a potential pathway should not be used as a reason for not taking preventative action against the introduction of potentially invasive alien species. Likewise, lack of certainty about the long-term implication of an invasion should not be used as a reason for postponing eradication, containment or control measures.*

#### Comments relating to wording/text

- (1) The interpretation of the precautionary approach/principle in the *interim guiding principles* needs to be consistent with its interpretation elsewhere in the CBD system.
- (2) The inclusion of social and economic risks in the interpretation of the precautionary approach/principle makes this application wider than that of Rio Principle 15, which could increase the probability of future conflict among trading partners and neighbouring States.
- (3) Because a holistic approach is most effective, it is suggested that the risks for human health should also be considered if and when social and economic risks considerations are added to environmental risk considerations.

## Challenge

- (1) In addition to lack of knowledge, insufficient exchange of information also potentially contributes to uncertainty. Both will need to be addressed, so that all available information is effectively considered in the decision-making processes. Addressing the need for better knowledge and exchange of information will also need to include knowledge and information on technical and other measures that can be taken to put prevention into practice.
- (2) The distinction between unintentional and intentional introductions can be quite vague in reality and change over time.

### ***Guiding principle 2: Three-stage hierarchical approach***

*Prevention is generally far more cost effective and environmentally desirable than measures taken following introduction of an alien invasive species. Priority should be given to prevention of entry of alien invasive species (both between and within States). If entry has already taken place, actions should be undertaken to prevent the establishment and spread of alien species. The preferred response would be eradication at the earliest possible stage (principle 13). In the event that eradication is not feasible or is not cost-effective, containment (principle 14) and long-term control measures (principle 15) should be considered. Any examination of benefits and costs (both environmental and economic) should be done on a long-term basis.*

## Comments relating to wording/text

- (1) Prevention of entry of a new potentially invasive alien species is the first line of defence and a variety of tools can be used (see GISP strategy). Early detection and rapid action are crucial components of prevention of establishment of potentially invasive alien species (once they have entered), and it is suggested to add specific wording on this.
- (2) It is suggested to elaborate the wording "both between and within States", to explain that an alien species is defined in relation to biogeographical areas rather than national (i.e. political) areas and that hence an species can be native in one area of a State while being an invasive alien species if introduced to another area within the same State. Alternatively, this could be clearly explained elsewhere, e.g. in the definitions or terminology section.
- (3) It is suggested to add "invasive" to "alien species" in the third sentence of the principle.
- (4) Presently, many States may not consider an organism as "invasive" until after it has entered their State and caused or threatened to cause harm. It is suggested that it be made clear that for management purposes every alien species needs to be treated as if it is potentially invasive unless and until convincing evidence indicates that this is not so. In addition, the definition of an "invasive alien species " should include not only alien species that are known to be a threat but also alien species that have a high potential to be a threat..
- (5) Realistically, approaches to minimizing the spread of invasive alien species often need to be integrated, rather than strictly hierarchical. For instance, if eradication or control are initiated after detection of an established invasive alien species, prevention continues at the same time (e.g. to prevent further entry).

- (6) Rewording may be considered, specifying that any examination of benefits and costs (both environmental and economic) should consider the values of the full suite of stakeholders, public, and local communities.

## **Challenge**

- (1) There are significant gaps in our knowledge and there is no perfect system for prevention
- (2) Lack of resources may mean that States are not able to take a long term approach.
- (3) When setting priorities for overall management, for instance in a national strategy planning process, eradication or control of particular species already in the State may have to be the top priority short term, even though prevention of further or new invasions may be a priority in the long term.

### ***Guiding principle 3: Ecosystem approach***

*All measures to deal with alien invasive species should be based on the ecosystem approach, in line with the relevant provisions of the Convention and the decisions of the Conference of the Parties.*

## **Comments relating to wording/text**

- (1) Not all measures can necessarily be based on an ecosystem approach (e.g. border control). Suggested wording may include a change from "All" to "Where relevant" and from "based on" to "in the context of".
- (2) This includes agricultural ecosystems and other human managed ecosystems.
- (3) In many instances, ecosystem restoration may usefully be considered in conjunction with mitigation measures to further effectiveness.
- (4) It is suggested States should be encouraged to integrate the issue of invasive alien species in national strategies, including biodiversity strategies.

## **Challenges:**

- (1) Many States lack delineation of their ecosystems and many lack information on what invasive alien species exist in what ecosystems.
- (2) Ecosystems are linked and ecosystems can exist across political boundaries.
- (3) Most States do not have the ability to administer prevention and/or control measures on an ecosystem scale.

### ***Guiding principle 4: State responsibility***

*States should recognize the risk that they may pose to other States as a potential source of alien invasive species, and should take appropriate actions to minimize that risk. In accordance with Article 3 of the Convention on Biological Diversity, and principle 2 of the 1992 Rio Declaration on Environment and*

*Development, States have the responsibility 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. In the context of alien invasive species, activities that could be a risk for another State include:*

- (a) The intentional or unintentional transfer of an alien invasive species to another State (even if it is harmless in the State of origin); and*
- (b) The intentional or unintentional introduction of an alien species into their own State if there is a risk of that species subsequently spreading (with or without a human vector) into another State and becoming invasive.*

### **Comments relating to wording/text**

- (1) States need to "think beyond their borders" and take actions that would limit the spread of invasive species to other States. However, it is a concern that the wording used may imply unrealistic responsibilities for States, which could potentially lead to conflict rather than cooperation.
- (2) Specific regional cooperation, based on shared borders, or on transboundary biogeographical areas for instance, can usefully complement national approaches. This could include (as appropriate):
  - ❖ Joint or concurrent programmes of eradication or control in neighbouring States where this is likely to be more effective than individual approaches.
  - ❖ Joint management strategies for the protection of islands, lakes, watersheds or other vulnerable ecosystems, where such ecosystems are transboundary
  - ❖ Developing Regional aspects (notification and/or consultation and/or sharing and/or standardising) to complement the national approaches to border control or risk assessment
  - ❖ Research

It is suggested that wording reflecting the above points be included.

### **Challenge**

Relating to paragraph (b): Including regional aspects in risk analysis will be difficult to develop in the short term. In addition, some International instruments (e.g. IPPC) may not currently allow for measures to be based on considerations about risk to other States (instead of one's own).

### ***Guiding principle 5: Research and monitoring***

*In order to develop an adequate knowledge base to address the problem, States should undertake appropriate research on and monitoring of alien invasive species. This should document the history of invasions (origin, pathways and time-period), characteristics of the alien invasive species, ecology of the invasion, and the associated ecological and economic impacts and how they change over time. Monitoring is the key to early detection of new alien species. It requires targeted and general surveys, which can benefit from the involvement of local communities.*

### **Comments relating to wording/text**

- (1) The first sentence could possibly read, "In order to develop..., it is important States document..." And, the second sentence to, "This should document, as possible, the history..."
- (2) The last two sentences of the interim guiding principle may require rewording to fit the format of guiding principles

### **Challenge**

- (1) Many States lack information about the extent and location of invasive alien species and lack an adequate number of trained personnel to conduct the "appropriate" research and monitoring programs.

### ***Guiding principle 6: Education and public awareness***

*States should facilitate education and public awareness of the risks associated with the introduction of alien species. When mitigation measures are required, education and public-awareness-oriented programmes should be set in motion so as to inform local communities and appropriate sector groups on how to support such measures.*

### **Comments relating to wording/text**

- (1) Education and outreach efforts for all aspects of the invasive alien species issue need to be facilitated, not just for the risks of introduction.
- (2) Education and outreach efforts need to consider all stakeholders, public and local communities and adequately consider their different values and beliefs with regard to invasive alien species. This may be especially important when mitigation measures focus on large vertebrates.
- (3) Stakeholders, public and local communities not only need to be informed, but their actual participation should be encouraged and facilitated.

### **Challenge**

- (1) Education outreach efforts need to work from "both directions" - they need to be used to inform stakeholders, public and local communities on how to support measures relating to alien invasive species, and they also need to be used to develop measures that will be supported by the beliefs and values of these and motivate them to take responsibility for their actions.

## B. PREVENTION

### ***Guiding principle 7: Border control and quarantine measures***

1. *States should implement border control and quarantine measures to ensure that:*
  - (a) *Intentional introductions are subject to appropriate authorization (principle 10);*
  - (b) *Unintentional or unauthorized introductions of alien species are minimized.*
2. *These measures should be based on an assessment of the risks posed by alien species and their potential pathways of entry. Existing appropriate governmental agencies or authorities should be strengthened and broadened as necessary, and staff should be properly trained to implement these measures. Early detection systems and regional coordination may be useful.*

### **Comments relating to wording/text**

- (1) In addition to controls for movements between States, some form of internal controls for movement within States is also required, especially relating to geographically or evolutionary isolated ecosystems.
- (2) Control and quarantine measures should be in place at several levels, for instance at the point of origin/export, release/import, for domestic movement and between regional economic integration organisations.
- (3) Many States currently lack resources and capacity to fully apply such border control and quarantine measures. Rewording could be considered for the first sentence to read, "States should implement, to their fullest capacity, border....."
- (4) It may be useful to clarify in the wording that the government agencies or authorities mentioned would not usually have to be newly created, but that existing governmental agencies or authorities, for instance those implementing sanitary, phytosanitary or zoosanitary measures are a starting point. They can over time be strengthened and broadened as necessary.

### ***Guiding principle 8: Exchange of information***

*States should support the development of database(s), such as that currently under development by the Global Invasive Species Programme, for compilation and dissemination of information on alien species that threaten ecosystems, habitats or species, to be used in the context of any prevention, introduction and mitigation activities. This information should include incident lists, information on taxonomy and ecology of invasive species and on control methods, whenever available. The wide dissemination of this information, as well as national, regional and international guidelines, procedures and recommendations such as those being compiled by the Global Invasive Species Programme should also be facilitated through, inter alia, the clearing-house mechanism.*

### Comments relating to wording/text

- (1) The global database and database network under development by GISP will include an Early Warning component. It is important that Early Warning capability is widely and freely available.
- (2) Databases are only one part of the information resources to be exchanged.
- (3) It is very important that information is globally available and easily accessible, including in areas with poor internet access, and in languages other than English.
- (4) Rewording could be considered modifying the first sentence to read, "States should support, as appropriate, an inventory and analysis of existing relevant databases and the development of a comprehensive database..."
- (5) Databases need to be standardized and comparable, as well as comprehensive. They also need to have the flexibility to be updated as new information becomes available and use technologies that can be made widely available.

### **Guiding principle 9: Cooperation, including capacity-building**

*Depending on the situation, a State's response might be purely internal (within the country), or may require a cooperative effort between two or more countries, such as:*

- (a) *Where a State of origin is aware that a species being exported has the potential to be invasive in the receiving State, the exporting State should provide information, as available, on the potential invasiveness of the species to the importing State. Particular attention should be paid where exporting Parties have similar environments;*
- (b) *Agreements between countries, on a bilateral or multilateral basis, should be developed and used to regulate trade in certain alien species, with a focus on particularly damaging invasive species;*
- (c) *States should support capacity-building programmes for States that lack the expertise and resources, including financial, to assess the risks of introducing alien species. Such capacity-building may involve technology transfer and the development of training programmes.*

### Comments relating to wording/text

- (1) Rewording could be considered for the first sentence to read : "A State's response may be..."
- (2) Also see comments under guiding principle 4.

## C. INTRODUCTION OF SPECIES

### **Guiding principle 10: Intentional introduction**

*No intentional introduction should take place without proper authorization from the relevant national authority or agency. A risk assessment, including environmental impact assessment, should be carried out as part of the*

*evaluation process before coming to a decision on whether or not to authorize a proposed introduction. States should authorize the introduction of only those alien species that, based on this prior assessment, are unlikely to cause unacceptable harm to ecosystems, habitats or species, both within that State and in neighbouring States. The burden of proof that a proposed introduction is unlikely to cause such harm should be with the proposer of the introduction. Further, the anticipated benefits of such an introduction should strongly outweigh any actual and potential adverse effects and related costs. Authorization of an introduction may, where appropriate, be accompanied by conditions (e.g., preparation of a mitigation plan, monitoring procedures, or containment requirements). The precautionary approach should be applied throughout all the above-mentioned measures.*

### **Comments relating to wording/text**

- (1) Wording: it is suggested to add a specification that it is the importing State that would carry out the authorisation procedures.
- (2) The current wording can be interpreted as meaning that Environmental Impact Assessment is part of Risk Assessment, and a clarification should be included that they are separate procedures - ideally both applied.
- (3) It is suggested that fuller Risk Analysis should be used instead of more limited Risk Assessment. Risk Analysis includes several components, including Risk Identification, Risk Assessment and Risk Management.
- (4) Different cultures/communities will have different relationships with alien species and thus different values that are relevant to assessing risk. States need to be able to apply those different values when determining the risks associated with invasive alien species.
- (5) This principle states “anticipated benefits of such an introduction should strongly outweigh any actual or potential adverse effects and related costs.” How would “strongly” be defined?
- (6) States may wish to review to what extent their existing sanitary, phytosanitary and zoosanitary systems provide a basis for the measures described in this principle.

### **Guiding principle 11: Unintentional introductions**

*1. All States should have in place provisions to address unintentional introductions (or intentional introductions that have established and become invasive). These include statutory and regulatory measures, institutions and agencies with appropriate responsibilities and with the operational resources required for rapid and effective action.*

*2. Common pathways leading to unintentional introductions need to be identified and appropriate provisions to minimize such introductions should be in place. Sectoral activities, such as fisheries, agriculture, forestry, horticulture, shipping (including the discharge of ballast waters), ground and air transportation, construction projects, landscaping, ornamental aquaculture, tourism and game farming, are often pathways for unintentional introductions. Legislation requiring environmental impact assessment of such activities should also require an assessment of the risks associated with unintentional introductions of alien invasive species.*

### Comments relating to wording/text

- (1) Many States currently lack resources and capacity to fully apply such and measures. In first instance, they may wish to review to what extent their existing sanitary, phytosanitary and zoosanitary systems provide a basis for such measures
- (2) Environmental impacts assessments are not always associated with legal requirements and the phrase "Legislation requiring..." might hence unduly limit the application of assessments. It is to be hoped that such a practice might also be adopted under "codes of conduct" and other "soft law" tools. It is suggested to reflect this in the wording of the principle.

### Challenge

- (1) These measures require a level of awareness of the invasive alien species issue (by the public and policy makers) that is not (yet) common globally.

## D. MITIGATION OF IMPACTS

### ***Guiding principle 12: Mitigation of impacts***

*Once the establishment of an alien invasive species has been detected, States should take steps such as eradication, containment and control, to mitigate the adverse effects. Techniques used for eradication, containment or control should be cost-effective, safe to the environment, humans and agriculture, as well as socially, culturally and ethically acceptable. Mitigation measures should take place in the earliest possible stage of invasion, on the basis of the precautionary approach. Hence, early detection of new introductions of potentially invasive or invasive species is important, and needs to be combined with the capacity to take rapid follow-up action.*

### Comments relating to wording/text

- (1) Prior Risk Assessment and Environmental Impact Assessments are recommended as part of the procedure leading up to decision making on the use of mitigation measures.
- (2) Inclusion of the wording of "culturally and ethically acceptable" in the criteria may lead to problems if they are used in an unreasonable manner to avoid mitigation. On the other hand, there are many cultural and ethical barriers to establishing mitigation programs and this need to be addressed in order for mitigation to be successfully applied. This will usually require consultation and participation of all stakeholders, public, and local communities.
- (3) Inclusion of the wording of "cost effective " in the criteria may lead to problems if they are used in an unreasonable manner to avoid mitigation.

## Challenge

- (1) Many States lack a variety of techniques for early detection, rapid response, and effective mitigation measures. Where these techniques do exist, they are often not transferred.
- (2) Mitigation measures should be short term or long term as appropriate
- (3) Restoration of native biodiversity may be usefully considered in conjunction with mitigation measures

### ***Guiding principle 13: Eradication***

*Where it is feasible and cost-effective, eradication should be given priority over other measures to deal with established alien invasive species. The best opportunity for eradicating alien invasive species is in the early stages of invasion, when populations are small and localized; hence, early detection systems focused on high-risk entry points can be critically useful. Community support, built through comprehensive consultation, should be an integral part of eradication projects.*

## Comments relating to wording/text

- (1) Inclusion of the wording of “cost effective ” in the criteria may lead to problems if they are used in an unreasonable manner to avoid mitigation.
- (2) Rewording could be considered for the final sentence to read: “Community support, built through comprehensive consultation, is an integral part of achieving successes in eradication projects and should be sought as appropriate.”

## Challenge

See Guiding Principle 12

### ***Guiding principle 14: Containment***

*When eradication is not appropriate, limitation of spread (containment) is an appropriate strategy only where the range of the invasive species is limited and containment within defined boundaries is possible. Regular monitoring outside the control boundaries is essential, with quick action to eradicate any new outbreaks.*

## Comments relating to wording/text

- (1) Rewording could be considered for the first sentence to read: “When eradication is not feasible, limitation of spread (containment) is an appropriate strategy though mainly in cases where the range of the invasive species, either entirely or in a population, is small and can be physically restricted.”

## Challenges

See Guiding Principle 13

### **Guiding principle 15: Control**

*Control measures should focus on reducing the damage caused rather than on merely reducing the numbers of the alien invasive species. Effective control will often rely on a range of integrated techniques. Most control measures will need to be regularly applied, resulting in a recurrent operating budget and the need for a long-term commitment to achieve and maintain results. In some instances, biological control may give long-term suppression of an alien invasive species without recurrent costs, but should always be implemented in line with existing national regulations, international codes and principle 10 above.*

### **Comments relating to wording/text**

- (1) Rewording may be considered for the first sentence to read: "When designing and implementing control measures it is important to emphasize not only reducing the number of invasive alien species, but also on reducing the damage cause by these species."
- (2) We suggest the following additional wording for clarification: " including mechanical control, chemical control, biological control, habitat management and integrated pest management" after "...integrated techniques".