An International Perspective

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Invasive species are an international problem. This is an easy statement to accept, indeed it is almost a truism. But to say that invasive species are a shared problem between countries would not be as accurate. To the limited extent that nations have now reacted to the invasive species, they have done so in a largely unilateral manner, with national surveys, identification and closing of pathways of entry, local eradication, and control. There are some good reasons for this approach. The international threats posed by invasive species are often highly asymmetrical, and an invasive species is usually not a problem in its country of origin. In the agricultural sector, where most of our experience of invasive species problems currently resides, a strongly national focus is further encouraged by competition in international trade.

So why should countries like the U.S. make it a priority to work with other countries to address invasive species problems? One answer is that increasing trade is rapidly turning local invasive problems into global ones. For instance, in recent decades, once-restricted agricultural pests like white flies and leaf miners have become established in most countries. For these problems, new international research cooperations return to each participating country the benefits of global level of investment. For many countries facing new invasive species problems, successful programs of prevention or management elsewhere may be easily transferred. In this way, the Philippines, Sri Lanka, and Kenya have recently benefited from the Australian experience in managing the salvinia water weed. Finally, where an understanding of an invasive species in its area of origin helps prevention or management; e.g., through discovery of specific biological control agents, countries stand to gain from reciprocal research arrangements which acknowledge that each will eventually be a source of invasive species problems for the other.

On a broader scale, the benefits of international cooperation reflect the extent to which invasive species now affect cooperation in other key areas, such as trade, development and environmental conservation. International cooperation to meet growing world fuel and food needs through reclamation of degraded lands, reforestation, and irrigation now recognizes alien invasive species such as pasture and water weeds as threats to this process. With respect to conservation, invasive species are now recognized as a major threat to species survival, perhaps second only to habitat destruction in many countries.

The important role of international cooperation in invasive species problems was flagged in Article 8h of the Convention on Biological Diversity, which calls on parties to the Convention to "prevent the introduction of and control or eradicate those invasive species which threaten ecosystems, habitats, or species." Little international progress was made in this area, however, until the Norway/UN Conference on Alien Species in 1996, at which representatives of over 80 countries assessed the global magnitude of the problem and its implication for the first time. At this meeting, the Global Invasive Species Programme (GISP) was born with its objectives:

- To assemble and make available best practices for the prevention and management of alien invasive species.
- To stimulate development of new tools in science, policy, information, and education for addressing these problems.

GISP comprises an international team of biologists, natural resource managers, economists, lawyers, and policy makers, many from American institutions. They manage and contribute to a number of projects, including assessing the current knowledge base (distribution of invasive species, pathways of introduction, human dimensions of the invasive species problem), early warning systems, economic analysis, legal instruments, management of invasive species, and educational programs. Work in these projects takes various forms, from international meetings to development of practical toolkits and databases. GISP operates as a component of an international program on the science of biodiversity, DIVERSITAS, and is coordinated by the Scientific Committee on Problems of the Environment

(SCOPE) in conjunction with three international bodies which share a commitment and capacity in invasive species problems, the World Conservation Union (IUCN—formerly known as the International Union for Conservation of Nature and Natural Resources), CAB International (CABI) and the United Nations Environment Program (UNEP). In addition to the contributions of participants and coordinators, GISP receives financial support from the Global Environmental Facility (GEF), International Council of Scientific Unions (ICSU), and National Aeronautics and Space Administration (NASA).

While many aspects of GISP are relevant to the subject of this workshop on invasive species databases, two projects are of particular importance: Early Warning Systems led by the Invasive Species Specialist Group (ISSG) of IUCN; and Management of Invasive Species led by CABI Biosciences of CABI. The Early Warning Systems project has two elements:

- A review of invasive databases worldwide with a plan to publish in 1999.
- Development of pilot international invasive species databases at a regional level with an emphasis on small island developing states (SIDS) in the Pacific and Indian Oceans. Plans are to complete this activity in 2000.

In parallel to these GISP-related activities, ISSG is developing a pilot database called "World's Worst 100." Its objective is to create and test useful format and content for awareness-raising and publicity on invasive species. It will focus arbitrarily on just 100 invasive species selected across all taxonomic groups as global threats to biodiversity. This database will be published in early 2000 and made available on the Internet. The project is financed by Foundation Total.

Other ISSG activities relevant to databases on invasive species are its operation of an Internet listserver on aliens (Aliens-1) and publication of a biannual newsletter, *Aliens*. Through ISSG's network of volunteers (currently 95 participants in 26 countries), these activities are given distinctly global perspective.

The GISP project on Management of Invasive Species is developing guidelines or "toolkits" for invasive species prevention and management for national and regional programs with a particular emphasis on the needs of developing countries. Databases and early warning systems will be important elements of these toolkits. Together with the Early Warning Systems project of GISP, CABI Bioscience will convene an expert consultation in early 1999 in Malaysia to design these systems. Inputs will come from invasive species experts, from groups which have implemented national and regional invasive species programs, and from developing country agencies which will be involved in validating and using toolkits. An effort will be made to link the interest of environmental groups and agencies in invasive species problems with the experience of agricultural groups and agencies in this same area. Again, are identified as a focal point for validation of toolkits because of the severity of their invasive species problems and the particular benefits to very small, isolated countries of collective effort and international cooperation.

GISP is a small effort in proportion to the magnitude of its task, and it will benefit greatly from strong national initiatives on invasive species which are prepared to share their outputs with other nations and to enter into international efforts to prevent and manage invasive species problems. Also, there are opportunities to link the GISP initiative with other international activities on invasive species such as those associated with IPPC and the OIE. The national return on such international cooperation should be substantial, and I hope therefore that the U.S. national efforts presented in this workshop on databases will make a major contribution to GISP and to other future initiatives in global invasive species prevention and management.