



United States General Accounting Office
Washington, DC 20548

September 5, 2003

The Honorable James Inhofe
Chairman
The Honorable James Jeffords
Ranking Member
Committee on Environment and Public Works
United States Senate

The Honorable Michael D. Crapo
Chairman
The Honorable Bob Graham
Ranking Member
Subcommittee on Fisheries, Wildlife, and Water
Committee on Environment and Public Works
United States Senate

Subject: *Invasive Species: State and Other Nonfederal Perspectives on Challenges to Managing the Problem*

Invasive species—harmful, nonnative plants, animals, and microorganisms—are found throughout the United States and cause damage to crops, rangelands, waterways, and other ecosystems that is estimated to cost in the billions of dollars annually. In addition to their economic costs, invasive species can have a devastating effect on natural areas, where they have strangled native plants, taken over wetland habitats, crowded out native species, and deprived waterfowl and other species of food sources. Scientists, academicians, and industry leaders have all recognized invasive species as one of the most serious environmental threats of the twenty-first century. More specifically, conservation biologists ranked invasive species as the second most serious threat to endangered species after habitat destruction. In June 2003, we testified before the Senate Subcommittee on Fisheries, Wildlife, and Water concerning invasive species issues reported in our October 2002 report.¹ We also provided testimony on the partial results of our

¹U.S. General Accounting Office, *Invasive Species: Federal Efforts and State Perspectives on Challenges and National Leadership*, [GAO-03-916T](#) (Washington, D.C.: June 17, 2003). U.S. General Accounting Office, *Invasive Species: Clearer Focus and Greater Commitment Needed to Effectively Manage the Problem*, [GAO-03-1](#) (Washington, D.C.: October 22, 2002).

spring 2003 survey of state agencies involved in efforts to address invasive species and members of the Invasive Species Advisory Committee (ISAC).²

This report provides the final results of our survey and focuses on state perspectives on (1) gaps in, or problems with, federal legislation addressing invasive species, (2) barriers to managing invasive species, (3) effective leadership structures for addressing invasive species, and (4) integrating federal aquatic and terrestrial invasive species legislation and the potential gains and drawbacks of such legislation. We also obtained ISAC members' views on these issues. To obtain these perspectives for our report, we surveyed the state agencies typically involved with invasive species—agencies responsible for agriculture and fish and wildlife—and members of the ISAC. We sent one survey to at least two agencies in each of the 50 states and the District of Columbia and another survey to each of 24 ISAC members. We received 70 responses from state officials representing a total of 45 states and 16 responses from ISAC members. See enclosures I and II for state and ISAC surveys with aggregate responses by question. We also interviewed officials in four states—California, Florida, Hawaii, and Michigan—chosen because of their geographic location, active invasive species efforts concerning both aquatic and terrestrial invasive species, or the number of invasive species management challenges they face. We conducted our work from April 2003 through September 2003 in accordance with generally accepted government auditing standards. Because we did not conduct work at federal agencies, we did not obtain comments on this report. See enclosure III for details on our scope and methodology.

Results in Brief

State officials identified several legislative gaps or problems with existing legislation intended to address invasive species. A key gap noted in legislation addressing both aquatic and terrestrial invasive species is the lack of requirements for controlling invasive species that are already established or widespread. State officials said that if there is no federal requirement, there is often little money available to combat a species and that such a requirement would raise the priority for responding to it. For example, one state official complained about the lack of a requirement to control Eurasian ruffe, an invasive fish that has spread throughout several of the Great Lakes and caused great harm to native fisheries. Also, over one-half of the state officials responding to our survey said that international trade agreements make it difficult to regulate products that may introduce invasive species because, for example, the trade agreements do not consider invasive species. In addition, over one-half of the state officials who responded to questions about legislation on aquatic invasive species identified

²Executive Order 13112 created the National Invasive Species Council, which is composed of 11 federal departments and agencies, to provide national leadership on addressing invasive species and to develop a plan for managing them. It also established the ISAC, a federal advisory committee established to help the federal government develop and implement a national management plan.

gaps with ballast water requirements. For example, many officials cited as inadequate the current federal standards for ballast water, which impose requirements on ships entering the Great Lakes but not other U.S. waters.

State officials also identified several barriers that make managing invasive species difficult. The barrier that state officials identified most frequently was the lack of federal funding for state invasive species efforts. For example, states were concerned about not having sufficient funds to create management plans for addressing invasive species and for conducting monitoring, detection, inspection, enforcement, and research activities. In addition, state officials were concerned about insufficient public education and outreach efforts as well as the lack of control measures and cost-effective controls for invasive species.

State officials' opinions on effective federal leadership structures for managing invasive species varied. State officials most frequently identified the National Invasive Species Council (Council) specifically authorized in legislation as an effective leadership structure for managing invasive species, although many state officials thought that continuing with the Council as currently established by executive order would also be effective. While the Executive Director of the Council told us that they have had adequate authority to carry out the responsibilities set forth in the executive order, she noted that clear legislative authority would strengthen their efforts. Similarly, officials from the Department of Agriculture, Department of Defense, and Environmental Protection Agency who are departmental liaisons to the Council, noted that legislative authority, depending on how it was structured, could be useful in carrying out the responsibilities of the Council. Fewer state officials identified having a single federal agency responsible for all invasive species or separate federal agencies responsible for aquatic and terrestrial species as effective structures.

State officials' views also varied on whether to integrate federal legislation on aquatic invasive species with legislation on terrestrial invasive species. The greatest number of state officials responding to our survey were in favor of integrating legislation, but the margin compared with those who did not favor integration was relatively small. Many state officials indicated that the possible gains of integrated legislative authority would be an increased focus on invasive species pathways, as opposed to specific species, and increased coordination between federal agencies and states. The possible drawbacks most often identified by state officials included concerns that a single piece of legislation would not be able to address all possible situations dealing with invasive species, and that aquatic and terrestrial invasive species programs would have to compete for scarce resources.

Background

As we have reported in the past, the impact of invasive species in the United States is widespread, and their consequences for the economy and the

environment are profound.³ Invasive species affect people's livelihoods and pose a significant risk to industries such as agriculture, ranching, and fisheries. The cost to control invasive species and the cost of damages they inflict, or could inflict, on property and natural resources are estimated in the billions of dollars annually. For example, according to the U.S. Department of Agriculture (USDA), each year invasives such as the Formosan termite causes at least \$1 billion in damages and control costs in 11 states; if not managed, fruit flies could cause more than \$1.8 billion in damage each year.⁴ Invasive species continue to be introduced in new locations, with recent examples including the northern snakehead fish in Maryland, the emerald ash borer in Michigan, and the monkeypox virus in the Midwest.

Invasive species may arrive unintentionally as contaminants of bulk commodities, such as food, and in packing materials, shipping containers, and ships' ballast water. Ballast water is considered a major pathway for the transfer of aquatic invasive species. Ballast is essential to the safe operation of ships because it enables them to maintain their stability and control how high or low they ride in the water. Ships take on or discharge ballast water over the course of a voyage to counteract the effects of loading or unloading cargo and in response to sea conditions. The ballast that ships pump aboard in ports and harbors may be fresh, brackish, or salt water. These waters could potentially contain organisms that could then be carried to other ports around the world where they might be discharged, survive, and become invasive. Other invasive species may be introduced intentionally; kudzu—a rapidly growing invasive vine that thrives in the southeastern United States—for example, was intentionally introduced from Japan as an ornamental plant and was used by USDA in the 1930s to control soil erosion.

Federal agencies implement a variety of invasive species-related programs and activities pursuant to their specific missions and responsibilities. USDA, for example, spends significant resources on prevention and control activities for invasive species that harm agricultural and forest products. USDA is also responsible for preventing infectious diseases, some of which are considered invasive, from spreading among livestock. States also play a major role in addressing invasive species, either through their own programs or through collaboration with or funding from federal programs. State programs and the amount of resources expended on them vary considerably. Typically, state agencies that address agriculture and fish and wildlife are involved with managing invasive species.

In response to concerns that the United States was losing the battle against invasive species, President Clinton signed Executive Order 13112 in February 1999 to prevent the introduction of invasive species; provide for their control; and

³U.S. General Accounting Office, *Invasive Species: Federal and Selected State Funding to Address Harmful Nonnative Species*, [GAO/RCED-00-219](#) (Washington, D. C.: August 2000).

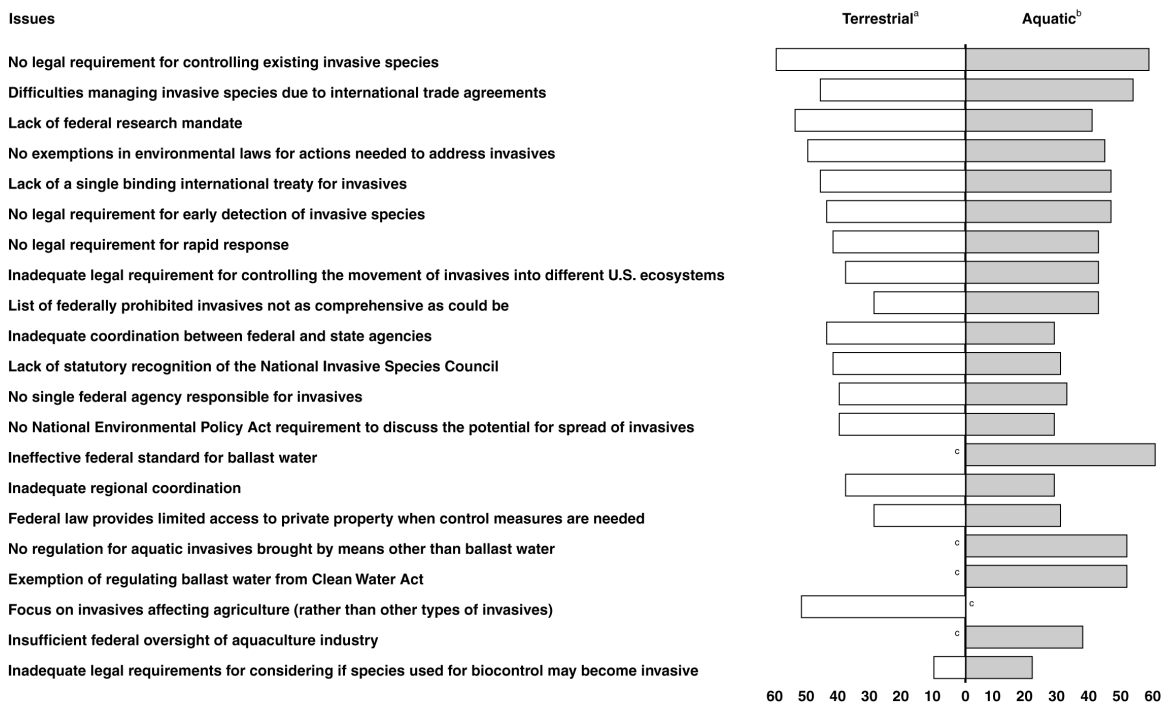
⁴Estimates are in 2001 dollars.

minimize their economic, environmental, and human health impacts. This executive order established the Council, which is now composed of the heads of 11 federal departments and agencies, to provide national leadership on invasive species and to ensure, among other things, that federal efforts are coordinated and effective. The executive order also required the Secretary of the Interior to establish a federal advisory committee (the Invasive Species Advisory Committee or ISAC) to provide information and advice to the Council. To achieve the goals of the executive order, the Council was to develop a national management plan that would serve as the blueprint for federal action on invasive species.

State Officials Identified Several Gaps in Federal Invasive Species Legislation

State officials most often identified the lack of a legal requirement for controlling already-established or widespread invasive species as a gap or problem with legislation on terrestrial invasive species and frequently identified it as a gap or problem with legislation on aquatic invasive species (see fig. 1).

Figure 1: Percentage of State Officials Who Identified Various Issues As “Great” or “Very Great” Gaps in Federal Legislation on Aquatic and Terrestrial Invasive Species



Source: GAO.
^aForty-eight officials responded to this question.
^bFifty-seven officials responded to this question.
^cIssue did not apply to this type of invasive species.

Specifically, state officials said lack of a legal requirement for control is a problem for species that do not affect a specific commodity or when a species is not on a federal list of recognized invasive species. Officials noted that if there is no

federal requirement, there is often little money available to combat a species and that such a requirement would raise the priority for responding to it. For example, one state official complained about the lack of a requirement to control Eurasian ruffe, an invasive fish that has spread throughout several of the Great Lakes and caused great harm to native fisheries. The official compared this with the mandated control program for the sea lamprey that is funded by the United States and Canada. In addition, some state officials said that, in the absence of federal requirements, differences among state laws and priorities also pose problems for addressing established species. For example, problems may arise if one state regulates or takes actions to control a species and an adjacent state does not. Some state officials noted that they believe they have little authority to control or monitor some species and that adopting laws or regulations for specific species, such as those for the sea lamprey, takes time.

Many state officials also noted that there are difficulties regulating products that may contribute to the introduction of invasive species because of provisions in international trade agreements. For example, one state official told us that trucks carrying commercial goods from Canada and Mexico into the United States could bring invasive species into the country because sometimes invasive species issues were not considered when trade agreements governing such international commerce were negotiated. An official from another state provided a good illustration of this with roses from Europe that came into the United States through Canada. The roses were not detained in order to observe them for potentially harmful species, but would have been detained had they been shipped directly from the originating country in Europe. As one state official pointed out, there is an inherent conflict in promoting international trade and trying to prevent invasive species from coming into the United States from foreign countries. This official believes that all trade agreements should address invasive species.

Many state officials that answered questions about aquatic invasive species identified problems with ballast water. Specifically, some state officials complained that treatment technologies, standards, regulations, compliance with reporting requirements, and penalties for noncompliance are lacking, and said that research and legislation are needed to address the problem. As we reported in October 2002, federal regulations for ballast water are not effective at preventing invasive species from entering our waters. Ballast water exchange is only required for ships entering the Great Lakes and does not apply to ships with little or no pumpable ballast water in their tanks.⁵ Officials in several states expressed frustration with the vulnerability to potential invasives created by a lack of effective standards. In addition, one state in the southwestern United States said that with no mandatory ballast water exchange and poor monitoring, invasive species could come into the state not only from South America and other foreign areas, but also from other states with less strict invasive species

⁵Vessels may also retain their ballast on board or use alternative ballast water management methods that must be approved by the U.S. Coast Guard and be as effective as ballast water exchange in preventing and controlling the influx of aquatic organisms. 33 C.F.R. § 151.1510

standards. Some state officials said that federal leadership is essential to provide coordination among states and fund efforts to address ballast water. Although some state officials believe solving the ballast water problem is possible, some pointed to potential difficulties in doing so. Specifically, they noted that some environmental groups are opposed to chemical treatments, while industry groups have objected to the cost of some technologies.

We also analyzed state officials' opinions based on whether they were from a coastal or noncoastal state. Officials from coastal states identified the same gaps discussed above. However, noncoastal state officials identified the inadequacy of biocontrol requirements most often as a barrier for managing aquatic and terrestrial invasive species. Also, noncoastal states did not identify issues related to ballast water as a problem to managing aquatic invasive species.

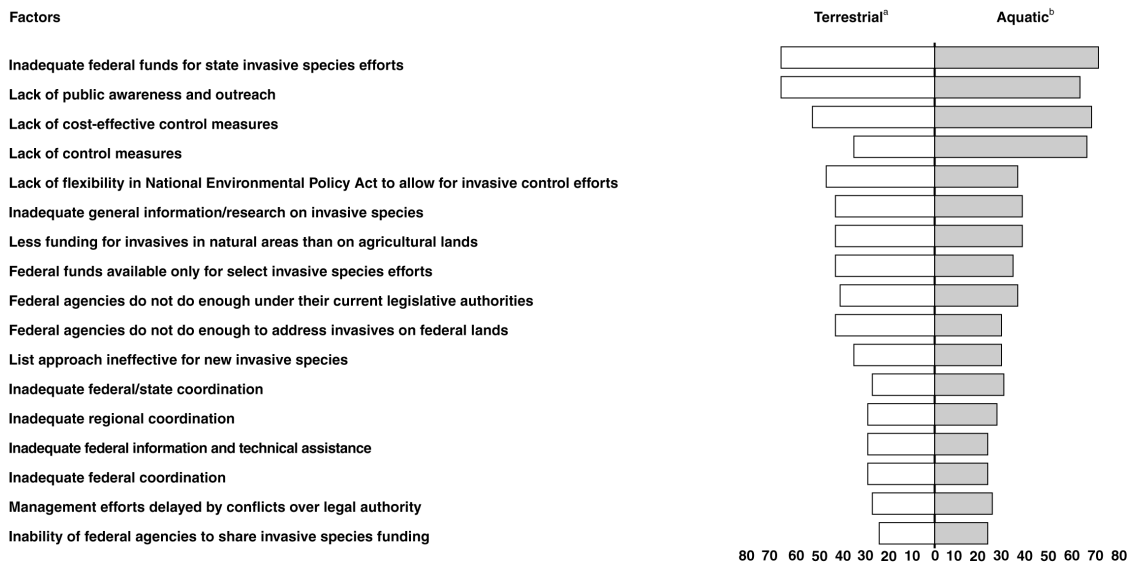
The lack of a legal requirement for a national rapid response system was identified most often by members of the ISAC. The discovery of giant salvinia in the Lower Colorado River in 1999 illustrates some of the difficulties associated with rapid response.⁶ According to one federal official, achieving a "rapid response" to the problem evaporated in the face of funding obstacles among the various entities involved and disagreements over appropriate control strategies and who should be the lead agency. Had immediate action been taken, eradication of this infestation would have been possible. Members of the ISAC also frequently identified the lack of statutory recognition of the Council as a gap in existing legislation. We discuss this issue in a later section.

State Officials Identified Several Barriers to Managing Invasive Species

Inadequate federal funding for state efforts was the barrier identified most often by state officials responding to our survey (see fig. 2).

⁶U.S. General Accounting Office, *Invasive Species: Obstacles Hinder Federal Rapid Response to Growing Threat*, [GAO-01-724](#) (Washington, D.C.: July 2001).

Figure 2: Percentage of State Officials Who Identified Various Factors That Make Managing Aquatic and Terrestrial Invasive Species Difficult as “Great” or “Very Great” Problems



Source: GAO.

^aForty-nine officials responded to this question.

^bFifty-six officials responded to this question.

State officials were concerned about having sufficient funds for inspection and enforcement activities and to create management plans for addressing invasive species, particularly as more states begin to develop plans. State officials also identified the need for additional funds to conduct monitoring and detection programs. Some state officials noted that uncertainty in obtaining grant funds from year to year makes it difficult to manage programs, especially when they rely on grants to fund staff positions. Officials in several states noted that the need for federal funds is more important today because their budgets have been tightened, noting that the lack of funds—federal and state—has contributed to the spread of such invasive plant species as kudzu, autumn olive, purple loosestrife, and saltcedar. For example, an official from one state said that federal funds are needed to address invasive species that cross state boundaries, such as the saltcedar—a riparian plant that spreads as seeds float via rivers across state borders. Another state official said that without adequate federal or state funds, the state has been unable to adequately deal with an invasive weed (rush skeleton) that was identified on about six acres in the 1960s. Partly because the state had limited funds, it only addressed the species one time. The weed now has spread to about six million acres and controlling it will be very expensive. Officials said they would use additional federal funds to hire additional staff to control invasive species, conduct additional research, and increase coordination and public education.

Many state officials identified a lack of public education and outreach as another barrier to effectively managing aquatic and terrestrial invasive species. Public education and outreach activities are important components of the battle against

invasive species, as many invasives have been introduced through the activities of individuals, such as recreational boating, and commercially through the pet, live seafood, and plant and horticultural trades. For example, the outbreak of the monkeypox virus that sickened at least 80 people in the Midwest spread from a Gambian rat imported from Africa to be sold as a pet. In addition, invasive plants that grow fast and kill other natural vegetation are often sold in nurseries before their harmful effects are realized. For example, one state official said that plant nurseries in his state sold purple loosestrife for years until its harmful effects were recognized. It is now illegal to buy the plant in the state, but the state does not have funds to educate the public about the harmful effects of the species or the need to control it. An official from another state said that because of limited public awareness of the problem of invasive species, the issue is not on the radar screen of enough elected representatives to ensure adequate funding. Some state officials identified how effective public education programs to increase public awareness of invasive species issues can be. For example, an official from Idaho told us that the state's weed awareness campaign, which was started about 2 years ago, has dramatically increased public awareness of invasive species through television, radio, and newspaper publicity. In addition, the state uses other public outreach efforts, such as setting up information booths at county fairs, and has an active effort to educate its legislature. A state official in Texas told us that the Pecos River Ecosystem Project in the southwestern United States has been successful in educating landowners about saltcedar. As a result, many landowners have stopped using the plant for landscaping and erosion control, and some are beginning to remove it.

State officials also frequently identified the lack of control measures and cost-effective controls as barriers to addressing invasive species. Officials in several states told us that new herbicidal and biological control measures are needed to control invasive species and more species-specific research is needed to identify effective measures, although they recognized that it can be difficult to adopt the new measures. One successful control effort—the sea lamprey control program—costs about \$15 million per year. However, similar control programs for all invasive species would be problematic given the potential cost. Officials in some states noted that it takes a long time to obtain approval to use some herbicides and biological measures, and delays can be costly. In the meantime, officials said invasive species spread—sometimes dramatically. For example, one state official said that in 1999 the state identified hydrilla covering about 23 acres of a lake and control costs for the aquatic invasive plant were estimated to be about \$17,000 at the time. Local groups protested and threatened to sue the city if the herbicide proposed to control the hydrilla was used; the local environmental board did not approve use of the herbicide. Today, the plant has spread to over 300 acres and control costs are estimated to have increased tenfold. Another state official said that because a federal court ruling restricts the use of herbicides near water without an Environmental Protection Agency permit and such permits are very difficult to obtain, the state cannot use herbicides to control Eurasian watermilfoil (an aquatic plant). As a result, control has been slow and costly because the plant must be pulled by hand by divers at a cost of about \$400 per day, per diver.

Another state official said that because existing chemicals are ineffective in controlling kudzu, mechanical control measures, such as mowing, are currently the best available option. However, because the plant spreads so rapidly, mechanical measures are very expensive; the official said that it could cost millions of dollars to remove kudzu in the state. Officials from several states said that more research is needed to identify cheaper control measures.

Coastal and noncoastal states identified similar key barriers for managing invasives. These included inadequate federal funding for state efforts, a lack of public education and outreach, a lack of control measures, and a lack of cost-effective control measures.

In contrast, ISAC members identified different factors as key barriers. For example, members most often identified less funding for invasive species in natural areas than for agricultural land as a barrier to managing invasive species. As previously reported in August 2000, almost 90 percent of the federal funds spent to manage invasive species were expended by the U.S. Department of Agriculture.⁷ We also found that species that threaten agricultural crops or livestock are far more likely to elicit a rapid response than those primarily affecting natural areas.⁸

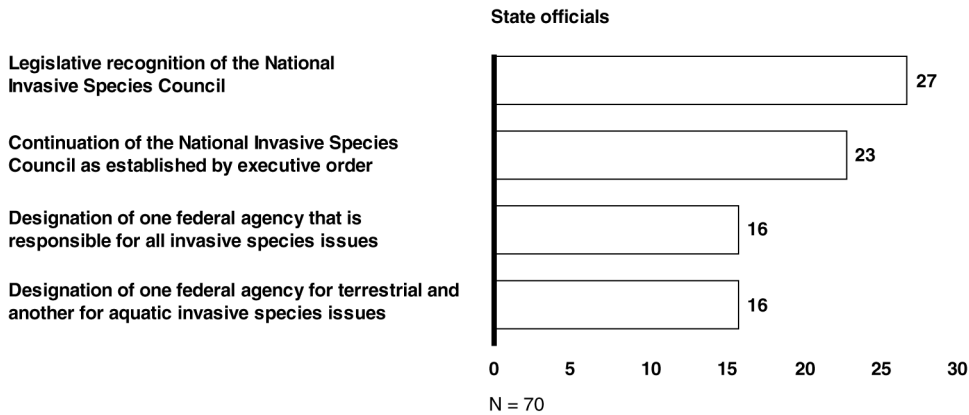
State Officials' Opinions on Effective Leadership Structures for Addressing Invasive Species Varied

Currently, no single agency oversees the federal invasive species effort. Instead, the National Invasive Species Council coordinates federal actions to address the problem. State officials most often identified specifically authorizing the Council in legislation as an effective leadership structure for managing invasive species, although almost as many officials thought that continuing under the current executive order would also be effective. Some state officials identified the designation of a single federal agency with responsibility for both aquatic and terrestrial issues, or the designation of one federal agency for aquatic and one for terrestrial invasive species issues, as effective leadership structures (see fig. 3).

⁷[GAO/RCED-00-219](#).

⁸[GAO-01-724](#).

Figure 3: Number of State Officials’ Who Responded as “Great” or “Very Great” with Regard to the Perceived Effectiveness of Potential Leadership Structures



Source: GAO.

During the work for our October 2002 report, the executive director of the Council noted that legislative authority for the Council, depending on how it was structured, could be useful in implementing the national management plan, which called for the Council to conduct an evaluation by January 2002 of the current legal authorities relevant to invasive species.⁹ Officials from the Department of Agriculture, the Department of Defense, and the Environmental Protection Agency also told us that legislative authority, if properly written, would make it easier for Council to implement the management plan.

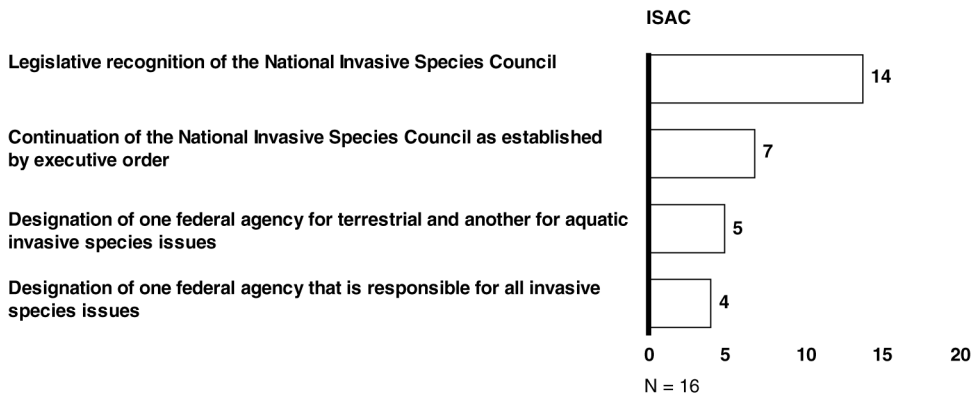
When we analyzed the results of our survey regarding leadership structure by the respondents’ type of agency or whether they represented a coastal or noncoastal state, we found some variation with these responses compared with the overall state responses. Specifically, more state officials representing fish and wildlife agencies identified legislative recognition of the Council as an effective leadership structure, while officials from agriculture agencies were equally split on legislative recognition versus continuing the Council under the current executive order. More agriculture officials identified designation of a single agency responsible for all invasive species issues as an effective leadership structure, while more fish and wildlife officials identified the need for separate agencies—one for aquatic invasive species and one for terrestrial invasive species—as an effective structure. Further, more coastal and noncoastal respondents identified legislative recognition of the Council rather than continuing under the current executive order. In addition, more coastal and noncoastal respondents identified designation of a single agency responsible for all invasive species rather than separate agencies as an effective leadership structure.

Almost all of the ISAC members that responded to our survey identified specifically authorizing the Council in legislation as an effective leadership

⁹U.S. General Accounting Office, *Invasive Species: Clearer Focus and Greater Commitment Needed to Effectively Manage the Problem*, GAO-03-1 (Washington, D.C.: October 2002).

structure for managing invasive species, with half as many identifying authorizing the Council by continuing with the current executive order as an effective structure. A smaller number of ISAC members identified the designation of one federal agency for aquatic issues and another federal agency for terrestrial invasive species issues as effective structures, and the designation of a single federal agency with responsibility for both aquatic and terrestrial issues (see fig. 4).

Figure 4: Number of ISAC Members’ Who Responded “Great” or “Very Great” with Regard to the Perceived Effectiveness of Potential Leadership Structures



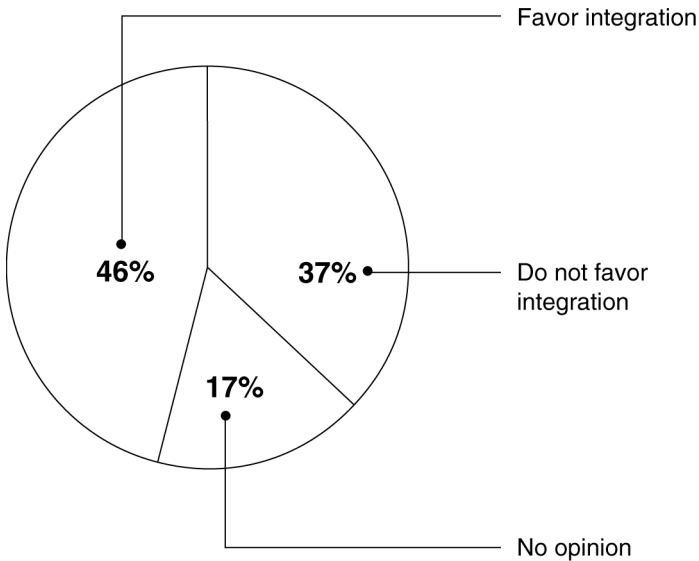
Source: GAO.

State Officials’ Opinions Varied on Whether to Integrate Legislation on Aquatic Invasive Species with Legislation on Terrestrial Invasive Species

Federal officials responsible for addressing invasive species operate under a patchwork of laws where aquatic and terrestrial species are treated separately. Questions have been raised about whether this is the most efficient and effective approach and whether the federal government’s ability to manage invasive species would be strengthened if integrated legal authority addressed both types of invasives. Some believe such an approach would create more flexibility for addressing invasive species; others are concerned that such an approach would disrupt existing programs that are working well.

No clear consensus exists among state officials on whether legislative authority for addressing aquatic and terrestrial invasive species should be integrated. Overall, more state officials were in favor of integrating legislative authority, but the margin over those who did not favor integration was relatively small. Specifically, 32 of the 70 (46 percent) state officials we surveyed said they favored integrated legislation, whereas 26 of the 70 (37 percent) state officials said they did not (see fig. 5).

Figure 5: State Officials' Opinions on the Potential Integration of Aquatic and Terrestrial Invasive Species Legislation

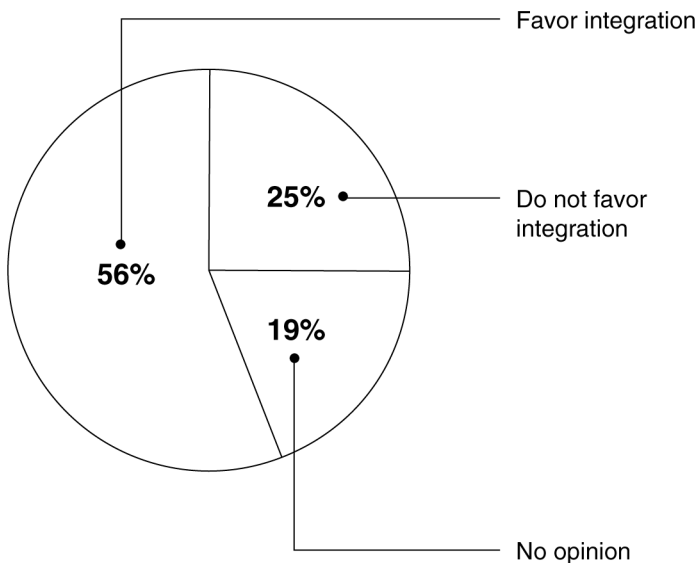


N=70

Source: GAO.

About twice as many of the ISAC members who responded to our survey favored integrating legislation on aquatic and terrestrial invasive species compared with those who did not (see fig. 6).

Figure 6: ISAC Members' Opinions on the Potential Integration of Aquatic and Terrestrial Invasive Species Legislation



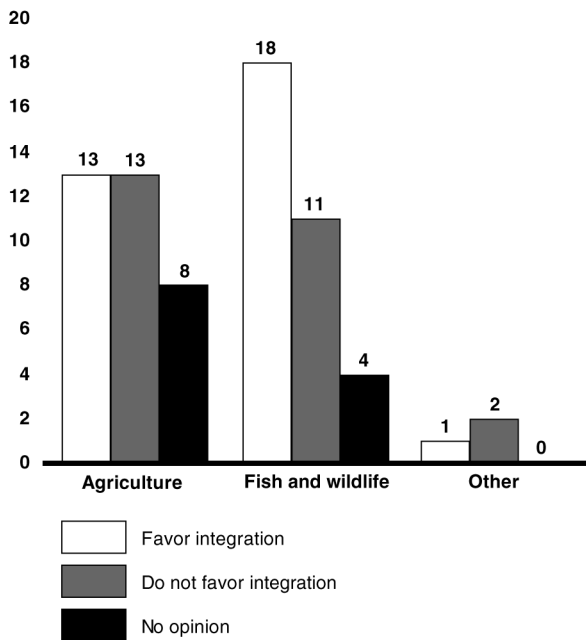
N=16

Source: GAO.

We also analyzed state officials' opinions on integrating legislative authority on aquatic and terrestrial invasive species by the type of agency the state officials

represented—agriculture, fish and wildlife, or other—and the respondents stated area of expertise or knowledge—aquatics only, terrestrial only, or aquatics and terrestrials. When considering a respondent’s agency affiliation, differences in opinion varied slightly. State officials representing agriculture agencies were evenly split on whether they favored or did not favor integrated legislation while more state officials from fish and wildlife agencies favored integration than those who did not (see fig. 7).

Figure 7: State Officials’ Opinions on the Potential Integration of Aquatic and Terrestrial Invasive Species Legislation, by State Agency Type^a



N=70

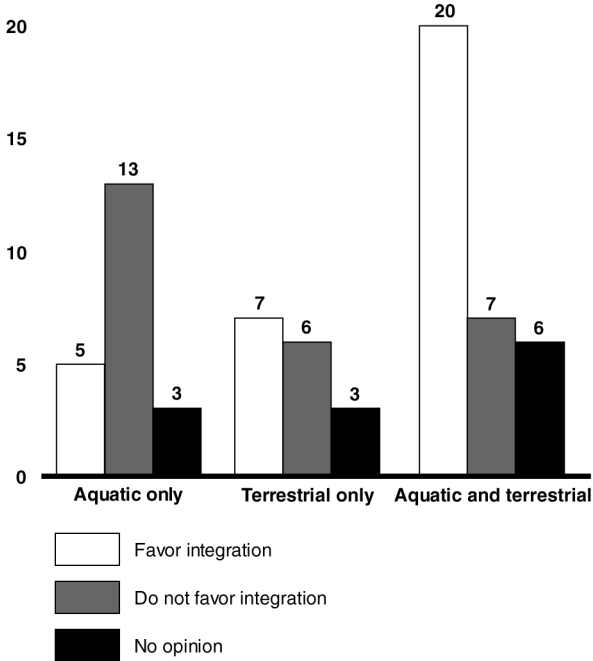
Source: GAO.

^aThirty-four of the state officials that responded were from agriculture agencies, thirty-three were from fish and wildlife agencies, and three were from other agencies that manage invasive species.

Differences in opinion became more distinct when we considered a respondents’ area of expertise. A large majority of the state officials who identified themselves as having expertise solely in aquatic invasive species were against integrating aquatic and terrestrial authority. Conversely, officials with expertise in terrestrial invasives slightly favored integrated authority, but only by a small margin. State officials who identified themselves as experts or knowledgeable in both aquatic and terrestrial invasives favored integrated authority by a large majority (see fig. 8).

Figure 8: State Officials' Opinions on the Potential Integration of Aquatic and Terrestrial Invasive Species Legislation, by Area of Expertise^a

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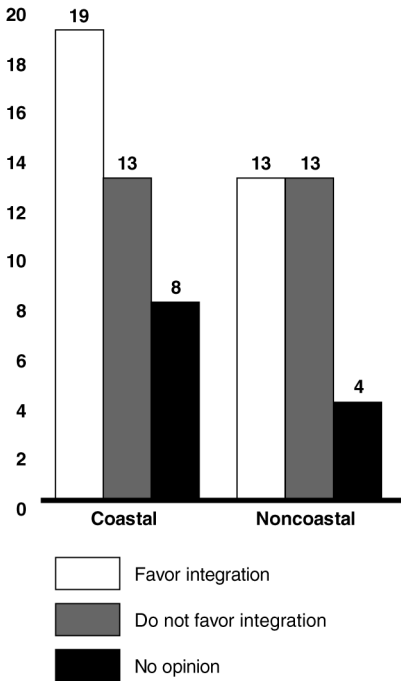
N=70

Source: GAO.

^aTwenty-one of the state officials that responded had aquatic only expertise, sixteen had terrestrial only, and thirty-three had both aquatic and terrestrial expertise.

State officials' responses were also analyzed based on whether the respondent was from a coastal or noncoastal state. More coastal state officials favored integration than those who did not, while officials in noncoastal states were split on whether they favored integrating legislative authority for aquatic and terrestrial invasive species (see fig. 9).

Figure 9: State Officials’ Opinions on the Potential Integration of Aquatic and Terrestrial Invasive Species Legislation, by State Location^a



N=70

Source: GAO.

^aThirty of the state officials that responded to the questions were from noncoastal states, and forty were from coastal states. States bordering the Great Lakes were considered as coastal states.

We also asked state officials about potential gains and drawbacks of integrating federal legislation on aquatic invasive species with legislation on terrestrial invasive species (see table 1).

Table 1: Potential Gains and Drawbacks of Integrating Legislation on Aquatic Invasive Species with Legislation on Terrestrial Invasive Species Identified by At Least 50 Percent of State Officials Responding to the Survey

Potential gains	Potential drawbacks
Better ability to prioritize control actions	Competition for scarce resources
Greater sense of purpose guiding invasives control	Complexity of implementation
Increased federal agency coordination	Difficulty addressing all situations
Increased federal/state agency coordination	Reduction in state authority
Increased focus on pathways of transportation	Reduction in state agency flexibility
Increased funding flexibility	

Source: GAO.

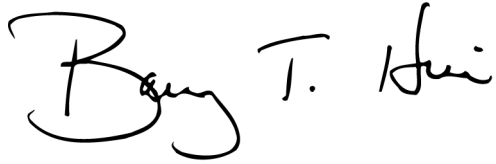
As shown, state officials identified a number of different potential gains and drawbacks. For example, many state officials believed that integrating legislative authority could result in increased coordination between federal agencies and states. Some state officials described the efforts needed to address invasives as requiring broad, interdisciplinary coordination and characterized the current

federal effort as fragmented and ineffective. For example, one state official told us that dealing with multiple federal agencies and multiple levels within an agency makes coordination on invasive species issues difficult, especially when the species cross state boundaries. The official cited, as an example, delays in controlling saltcedar due to local federal officials who opposed control because it might threaten endangered species that were using the plant; regional federal officials subsequently approved the control measures. Another state official said that because the state must deal with numerous federal agencies in managing its invasive species program, communications are sometimes difficult. An official from another state said that because there is no clear federal authority for invasive species, the state does not know with whom it should deal because there are many different agencies and programs involved. Also, many state officials saw an increased focus on pathways for invasive species—as opposed to focusing on specific species—as a possible gain of integrating authority for aquatic and terrestrial invasive species. Such an approach could facilitate more effective and efficient efforts to address invasive species.

Regarding the perceived drawbacks of integrating authority for aquatic and terrestrial invasive species, many state officials said that it could be difficult to address all possible situations for both types of invasive species. Some state officials said the two types of invasives should be handled separately, given the different ecological complexities, pathways of entry and spread, and control methods and expertise needed. In addition, some officials stated that combining legislative authority would result in competition for resources among various invasive species programs. In particular, one official referred to the “issue of the moment” phenomenon, where a specific invasive species becomes the focus of great public attention and receives a large share of resources, while many other species may get very few resources. Many state officials also identified reduction in state authority and flexibility and complexity in implementation as a potential drawback to integrated legislation.

We are sending copies of this report to the Co-Chairs of the National Invasive Species Council. We will also make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staffs have any questions, please call me at (202) 512-3841. Kevin Bailey, John Delicath, Jill Ann Roth Edelson, Byron S. Galloway, Curtis Groves, Trish McClure, Judy Pagano, and Amy Webbink were key contributors to this report.

A handwritten signature in black ink that reads "Barry T. Hill". The signature is written in a cursive style with a large, looped initial "B".

Barry T. Hill
Director, Natural Resources
and Environment

Enclosures



United States General Accounting Office

Survey of State Agencies – Invasive Species Legislative Authority

Introduction

The National Invasive Species Act of 1996 (NISA) is due for reauthorization by the Congress. The U.S. General Accounting Office (GAO), an agency of Congress, has been asked to study how states view federal legislative authority for addressing invasive species. As Congress considers this reauthorization, questions have been raised concerning whether providing overarching, integrated legislation for both aquatics and terrestrial invasive species would be more effective in addressing the problem, rather than the existing separate laws. As part of this study, we are querying officials of the relevant state agencies of all 50 states and the District of Columbia for their opinions regarding federal legislative authority for invasive species. This survey is designed to be completed by the agencies in each state that are responsible for taking the lead in invasive species work.

Your participation is very important and we urge you to complete this questionnaire. We cannot provide meaningful information to the Congress for it to use during its deliberations on the reauthorization of NISA without your responses.

Instructions

Please complete the survey and return it to GAO within 10 days of receipt. We need your responses as soon as possible so we can report our results to Congress in June 2003.

If you complete the electronic survey using MS Word, please do not change any of the questions. Please email the completed survey to GAOInvasives@gao.gov.

If you print out a hard copy of the survey and fill it out manually, please fax your completed questionnaire to Ilga Semeiks at 202-512-4852.

If you have any questions about this survey, please send an email to GAOInvasives@gao.gov or call Ilga Semeiks at 202-512-6013 or Trish McClure at 202-512-6318.

Thank you for your time and assistance.

Please provide the following information in the event we need to clarify a response.

State: _____

Agency: _____

Name: _____

Title: _____

Phone Number: _____

E-mail Address: _____

Enclosure I

Please provide the following information in the event we need to clarify a response.

State: _____

Agency: _____

Name: _____

Title: _____

Phone Number: _____

E-mail Address: _____

SECTION I: This section focuses on your responsibilities in invasive species control and management.

1. For what types of invasive species are you responsible or do you have expertise?

(Check all that apply.)

1. [46] Terrestrial - plant
2. [27] Terrestrial - animal
3. [54] Aquatic

2. Please briefly explain your role in invasive species management.

Enclosure I

SECTION II: This section focuses on the effects of federal legislative authority on invasive species management.

3. In your opinion, to what extent is each of the following a gap in or a problem with federal legislative authority for managing **terrestrial** invasive species? Check one box for each row.

[20] Check here if you are not familiar with terrestrial invasive species issues and skip to Question 4.

[Two additional respondents did not answer these questions. Total responses equal 48, but answers for each question may not total 48 because some respondents did not answer all questions or provided unclear answers.]

Gap or problem	Not a gap	Little extent	Some extent	Moderate extent	Great extent	Very great extent	No basis to judge
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
a. List of federally prohibited terrestrial invasive species is not as comprehensive as it should be	1	2	10	15	8	6	6
b. Often no legal requirements for control if a terrestrial invasive species is already established or widespread	3	3	3	10	15	14	0
c. No single federal agency has overall responsibility for invasive species	7	6	5	11	13	6	0
d. Lack of statutory recognition of the National Invasive Species Council	6	3	7	10	14	6	2
e. No legal requirement for a national rapid response system	1	3	5	18	14	6	1
f. No exemptions in environmental laws, such as ESA, NEPA, and CWA, to allow for rapid response	2	2	4	15	11	13	1
g. No legal requirement for early detection	5	2	6	12	14	7	1
h. Federal law provides limited access to private property when control measures are needed	4	6	9	13	9	5	2
i. No requirement that NEPA statements discuss the potential for introduction or spread of invasive species	4	5	7	10	13	6	3
j. Inadequate legal requirements for the possibility that species introduced for biocontrol may become invasive	11	10	8	11	2	3	2
k. Inadequate legal requirements regarding movement of invasive species across different US ecosystems (i.e., a species native to one area and invasive to another)	5	5	8	12	11	7	0
l. International trade agreements make it difficult to regulate products that may introduce invasive species	2	6	5	7	11	11	5
m. Lack of a single binding international treaty devoted to invasive species	2	3	5	8	17	5	7
n. Inadequate regional coordination	1	4	11	12	11	7	2
o. Inadequate coordination between federal and state agencies	0	5	14	7	15	6	1
p. Lack of a federal research mandate for invasive species	0	2	7	13	16	10	0
q. Existing authority focuses mostly on invasive species affecting agriculture	3	4	10	6	18	7	0
r. Other—please describe and check appropriate box:	0	0	1	0	2	3	0
s. Other-	0	0	0	0	3	8	0
t. Other-	1	0	0	0	2	2	0

Enclosure I

4. In your opinion, to what extent is each of the following a gap in or a problem with federal legislative authority for managing **aquatic** invasive species? Check one box for each row.

[13] Check here if you are not familiar with aquatic invasive species issues and skip to Question 5.

[Total responses equal 57, but answers for each question may not total 57 because some respondents did not answer all questions or provided unclear answers.]

Gap or problem	Not a gap	Little extent	Some extent	Moderate extent	Great extent	Very great extent	No basis to judge
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
a. List of federally prohibited aquatic invasive species is not as comprehensive as it should be	2	4	7	16	13	11	4
b. Often no legal requirements for control if an aquatic invasive species is already established or widespread	3	8	6	7	22	11	0
c. No single federal agency has overall responsibility for invasive species	5	4	15	13	15	4	2
d. Lack of statutory recognition of the National Invasive Species Council	11	4	9	11	14	3	5
e. No legal requirement for a national rapid response system	2	1	7	22	19	5	1
f. No exemptions in environmental laws, such as ESA, NEPA, and CWA, to allow for rapid response	0	2	7	17	13	12	6
g. No legal requirement for early detection	4	2	12	12	20	6	1
h. Federal law provides limited access to private property when control measures are needed	6	11	5	14	12	5	4
i. No requirement that NEPA statements discuss the potential for introduction or spread of invasive species	3	6	7	19	9	7	6
j. Inadequate legal requirements for the possibility that species introduced for biocontrol may become invasive	15	8	9	7	7	5	5
k. Inadequate legal requirements regarding movement of invasive species across different US ecosystems (i.e., a species native to one area and invasive to another)	8	4	7	12	16	8	2
l. International trade agreements make it difficult to regulate products that may introduce invasive species	2	3	3	8	16	14	11
m. No single binding international treaty devoted to invasive species	2	4	6	12	18	8	7
n. Inadequate regional coordination	4	9	14	13	11	5	1
o. Inadequate coordination between federal and state agencies	2	11	15	12	12	4	0
p. Lack of a federal research mandate for invasive species	1	4	10	17	17	6	2
q. No regulation of aquatic invasive species brought in on vessels through means other than ballast water	0	4	4	11	18	11	9
r. Exemption of ballast water from the Clean Water Act	2	2	5	7	14	15	12
s. Ineffective federal standards for ballast water	0	2	2	8	15	19	11
t. Insufficient federal oversight of the aquaculture industry	7	7	7	11	7	14	4
u. Other—please describe and check appropriate box:	0	0	1	1	1	3	0
v. Other-	0	0	1	1	2	7	0
w. Other-	0	0	0	0	1	2	0

Enclosure I

5. Would you favor federal legislation that would integrate the authority to manage both terrestrial and aquatic invasive species rather than the current collection of separate laws?

1. [32] Yes 2. [26] No 3. [12] No opinion

Please explain your answer:

6. What would you like to see gained if there was an overarching federal legislative authority that integrated both terrestrial and aquatic invasive species? *(Check all that apply.)*

- 1. [53] Increased coordination among federal agencies responsible for invasive species response
- 2. [61] Increased coordination between federal and state agencies
- 3. [29] Clearer division of responsibility among federal agencies
- 4. [47] Better ability to prioritize control actions amongst invasive species risks
- 5. [49] Greater sense of purpose or overall objective guiding control of invasive species
- 6. [53] Increased focus on pathways or modes of transport of invasive species
(rather than distinction of terrestrial vs. aquatic or plant vs. animal approach)
- 7. [40] Increased flexibility in using funding for highest priority
- 8. [13] Other—please describe:
- 9. [5] Other—please describe:
- 10. [3] Other—please describe:
- 11. [1] No opinion

Using the numbers from 1-10 above, what in your opinion are the 3 most important gains?
(Enter numbers from above categories in the three boxes below.)

66

64

63

1	15	4	3
2	11	15	10
3	2	2	3
4	10	13	7
5	5	11	7
6	13	9	20
7	3	7	9
8	7	0	1
9	0	1	2
10	0	2	1

Enclosure I

7. What could be the drawbacks of an overarching federal legislative authority that integrated both terrestrial and aquatic invasive species? Please check all that apply.

- 1. [57] Difficulty creating integrated legislation that addresses all situations and all responsible agencies
- 2. [36] Reduction in state authority for controlling invasive species
- 3. [38] Reduction of state agency flexibility in controlling invasive species
- 4. [19] Reduction of federal agency flexibility in controlling invasive species
- 5. [49] Complexity in implementation
- 6. [47] Could result in terrestrial and aquatic programs competing for scarce funds
- 7. [33] Could result in less funding for management of less well-known invasive species
- 8. [34] Could result in loss of specific expertise of the individual agencies that now have authority over specific types of invasive species
- 9. [3] Other—please describe:
- 10. [0] Other—please describe:
- 11. [0] Other—please describe:
- 12. [2] No major drawbacks

Using the numbers from 1-11 above, what in your opinion are the 3 most important drawbacks?
(Enter numbers from above categories in the three boxes below.)

65	63	57
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1	22	6	5
2	16	11	1
3	8	12	7
4	2	2	2
5	7	12	8
6	7	8	14
7	1	7	6
8	1	5	13
9	1	0	1

SECTION III: We now want your views on different options for organizational authority for managing and controlling invasive species.

8. Regardless of whether or not federal legislative authority for terrestrial and aquatic invasive species was integrated, to what extent do you think the following would be effective in managing and controlling invasive species?
(Check one box for each row.)

Options	Not Effective (1)	Little extent (2)	Some extent (3)	Moderate extent (4)	Great extent (5)	Very great extent (6)	No basis to judge (7)
a. Continuation of the current National Invasive Species Council as established by Executive Order	7	10	8	17	15	8	4
b. Legislative recognition of the National Invasive Species Council	7	5	10	15	17	10	5
c. Designation of one federal agency that is responsible for all invasive species issues	18	11	8	17	9	7	0
d. Designation of one federal agency responsible for terrestrial invasive species and another federal agency responsible for aquatic invasive species	18	13	11	10	12	4	1
e. Other— please describe and check appropriate box:	0	0	0	0	1	6	0
f. Other-	0	0	0	0	1	6	0
g. Other-	0	0	0	0	0	3	0

Enclosure I

SECTION IV: We would like your views on invasive species management and implementation problems.

9. In your opinion, to what extent does each of the following factors make it difficult to manage **terrestrial** invasive species? (Check one box for each row.)

[19] Check here if you are not familiar with terrestrial invasive species issues and skip to Question 10.

[Two additional respondents did not answer these questions. Total responses equal 49, but answers for each question may not total 49 because some respondents did not answer all questions or provided unclear answers.]

Factors	Not a factor (1)	Little extent (2)	Some extent (3)	Moderate extent (4)	Great extent (5)	Very great extent (6)	No basis to judge (7)
a. Federal agencies do not do enough under their current legislative authorities	0	2	9	14	13	7	4
b. Federal agencies do not do enough to address terrestrial invasive species on federal lands that affect neighboring areas	2	3	6	9	11	10	7
c. Inadequate information and technical assistance from federal government for preventing, detecting, assessing, monitoring, and controlling invasive species	1	5	14	12	9	5	3
d. Inadequate information and research on terrestrial invasive species in general	1	2	14	10	15	6	0
e. Lack of control measures for specific terrestrial invasive species	1	5	8	17	13	4	0
f. Lack of cost-effective control measures	1	2	11	7	18	8	1
g. Inadequate coordination among federal agencies	1	2	14	13	7	7	4
h. Inadequate coordination between federal and state governments	0	4	17	14	8	5	1
i. Inadequate regional coordination	1	4	12	11	9	5	7
j. Inability of federal agencies to share funds with one another to address invasive species	0	3	7	13	9	3	13
k. Response efforts delayed by conflicts over legal authority	2	3	9	14	9	4	8
l. Less funding for invasive species in natural areas than for agricultural land	2	4	8	10	10	11	4
m. Federal grant program funds available only for specific types of state invasive species efforts	0	5	5	11	14	7	7
n. Inadequate federal funding for state invasive species efforts	0	0	8	6	10	23	2
o. List approach ineffective in dealing with newly-introduced terrestrial invasive species	0	5	12	12	10	7	3
p. Lack of flexibility in NEPA requirements to allow for invasive species rapid response and control efforts	1	1	6	10	10	13	8
q. Lack of public awareness outreach and education	0	1	5	9	14	19	0
r. Other barriers— please describe and check appropriate box:	0	0	0	1	1	5	0
s. Other-	0	0	0	1	3	2	0
t. Other-	0	0	0	0	1	2	0

Enclosure I

10. In your opinion, to what extent does each of the following factors make it difficult to manage **aquatic** invasive species? (Check one box for each row.)

[13] Check here if you are not familiar with aquatic invasive species issues and skip to Question 11.

[One additional respondent did not answer these questions. Total responses equal 56, but answers for each question may not total 56 because some respondents did not answer all questions or provided unclear answers, and one respondent that checked the above box answered these questions instead of skipping to Question 11. While this respondent’s answers are presented below, they were excluded for purposes of our analyses.]

Factors	Not a factor	Little extent	Some extent	Moderate extent	Great extent	Very great extent	No basis to judge
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
a. Federal agencies do not do enough under their current legislative authorities	2	7	8	16	13	8	3
b. Federal agencies do not do enough to address aquatic invasive species on federal lands that affect neighboring areas	3	5	13	7	10	6	13
c. Inadequate information and technical assistance from federal government for preventing, detecting, assessing, monitoring, and controlling invasive species	4	5	16	15	8	5	4
d. Inadequate information and research on aquatic invasive species in general	0	5	11	19	15	6	1
e. Lack of control measures for specific aquatic invasive species	0	3	4	13	25	12	0
f. Lack of cost-effective control measures	0	1	8	8	29	9	1
g. Inadequate coordination among federal agencies	1	3	12	18	9	4	8
h. Inadequate coordination between federal and state governments	1	5	24	9	12	5	1
i. Inadequate regional coordination	3	7	19	9	12	3	4
j. Inability of federal agencies to share funds with one another to address invasive species	1	5	8	15	8	5	14
k. Response efforts delayed by conflicts over legal authority	4	5	7	12	9	5	15
l. Less funding for invasive species in natural areas than for agricultural land	5	5	6	9	14	7	8
m. Federal grant program funds available only for specific types of state invasive species efforts	2	7	5	13	12	7	9
n. Inadequate federal funding for state invasive species efforts	0	0	6	9	14	27	1
o. List approach ineffective in dealing with newly-introduced aquatic invasive species	3	5	10	16	10	6	6
p. Lack of flexibility in NEPA requirements to allow for invasive species rapid response and control efforts	0	4	7	13	11	9	12
q. Lack of public awareness outreach and education	0	3	5	14	14	21	0
s. Other barriers— please describe and check appropriate box:	0	0	0	0	0	3	0
t. Other-	0	0	0	0	2	9	0
u. Other-	0	0	0	0	4	0	0

Enclosure I

11. Overall, what are the **top three barriers** in implementing programs to manage invasive species?

68 responses

67 responses

66 responses

SECTION V: General information

12. Does your state have a comprehensive invasive species council addressing all types of invasive species?

[19] Yes [47] No If yes, please identify the following information about it:

Name of council: _____

President/Chairperson: _____

Phone number: _____ E-mail address: _____

13. Does your state have comprehensive, statewide councils on specific types of invasive species, such as terrestrials, aquatics, plants, or animals?

[36] Yes [30] No If yes, please identify the following information about these councils:

Name of council: _____

President/Chairperson: _____

Phone number: _____ E-mail address: _____

Name of council: _____

President/Chairperson: _____

Phone number: _____ E-mail address: _____

Name of council: _____

President/Chairperson: _____

Phone number: _____ E-mail address: _____

Enclosure I

If you have more than three such councils, please add the same information about them here:

14. Do you have any other comments that you would like to make about these questions, legislative authorities needed to address invasive species, or efforts to address invasive species?

Thank you for your participation in this survey. Your comments, along with those from agencies responsible for controlling and managing invasive species in other states, will help to inform the Congress in its decision-making on invasive species legislation.



United States General Accounting Office

**Survey of the Invasive Species Advisory Committee
on Invasive Species Legislative Authority**

Introduction

The National Invasive Species Act of 1996 (NISA) is due for reauthorization by the Congress. The U.S. General Accounting Office (GAO), an agency of Congress, has been asked to study how states and stakeholders view federal legislative authority for addressing invasive species. As Congress considers this reauthorization, questions have been raised concerning whether providing overarching, integrated legislation for both aquatics and terrestrial invasive species would be more effective in addressing the problem, rather than the existing separate laws. As part of this study, we are querying members of the Invasive Species Advisory Committee (ISAC) and officials of the relevant state agencies of all 50 states and the District of Columbia for their opinions regarding federal legislative authority for invasive species. This survey is designed to be completed by members of the Invasive Species Advisory Committee.

Your participation is very important and we urge you to complete this questionnaire. Your responses to this survey will help us to provide meaningful information to the Congress for it to use during its deliberations on the reauthorization of NISA.

Instructions

Please complete the survey and return it to GAO within 5 days of receipt. We need your responses as soon as possible so we can report our results to Congress in June 2003.

If you complete the electronic survey using MS Word, please do not change any of the questions. Please email the completed survey to GAOInvasives@gao.gov.

If you print out a hard copy of the survey and fill it out manually, please fax your completed questionnaire to Ilga Semeiks at 202-512-4852.

If you have any questions about this survey, please send an email to GAOInvasives@gao.gov or call Ilga Semeiks at 202-512-6013 or Trish McClure at 202-512-6318.

Thank you for your time and assistance.

Please provide the following information in the event we need to clarify a response.

Name: _____

Affiliation: _____

Title: _____

State: _____

Phone Number: _____

E-mail Address: _____

Enclosure II

SECTION I: This section focuses on your role within the Invasive Species Advisory Committee (ISAC).

1. For what types of invasive species do you have knowledge or expertise?
(Check all that apply.)

- 1. [8] Terrestrial - plant
- 2. [5] Terrestrial - animal
- 3. [10] Aquatic

2. Please briefly explain your role in invasive species management and on ISAC.

Enclosure II

SECTION II: This section focuses on the effects of federal legislative authority on invasive species management.

3. In your opinion, to what extent is each of the following a gap in or a problem with federal legislative authority for managing **terrestrial** invasive species? Check one box for each row.

[5] Check here if you are not familiar with terrestrial invasive species issues and skip to Question 4.

[Total responses equal 11, but answers for each question may not total 11 because one respondent provided unclear answers.]

Gap or problem	Not a gap	Little extent	Some extent	Moderate extent	Great extent	Very great extent	No basis to judge
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
a. List of federally prohibited terrestrial invasive species is not as comprehensive as it should be	0	0	0	2	3	6	0
b. Often no legal requirements for control if a terrestrial invasive species is already established or widespread	0	0	1	1	1	7	0
c. No single federal agency has overall responsibility for invasive species	0	0	2	1	3	5	0
d. Lack of statutory recognition of the National Invasive Species Council	0	0	0	1	5	5	0
e. No legal requirement for a national rapid response system	0	0	0	0	3	8	0
f. No exemptions in environmental laws, such as ESA, NEPA, and CWA, to allow for rapid response	0	1	1	1	4	3	1
g. No legal requirement for early detection	0	0	0	2	4	5	0
h. Federal law provides limited access to private property when control measures are needed	1	1	0	2	3	2	2
i. No requirement that NEPA statements discuss the potential for introduction or spread of invasive species	0	0	1	3	1	5	1
j. Inadequate legal requirements for the possibility that species introduced for biocontrol may become invasive	0	0	0	3	6	1	1
k. Inadequate legal requirements regarding movement of invasive species across different US ecosystems (i.e., a species native to one area and invasive to another)	0	0	0	1	3	7	0
l. International trade agreements make it difficult to regulate products that may introduce invasive species	0	0	0	1	3	6	0
m. Lack of a single binding international treaty devoted to invasive species	0	0	1	1	2	5	1
n. Inadequate regional coordination	0	0	0	1	5	4	1
o. Inadequate coordination between federal and state agencies	0	0	0	1	7	3	0
p. Lack of a federal research mandate for invasive species	0	0	0	3	5	3	0
q. Existing authority focuses mostly on invasive species affecting agriculture	0	0	1	0	6	3	0
r. Other—please describe and check appropriate box:	0	0	0	0	0	3	0
s.	0	0	0	0	2	4	0
t.	0	0	0	0	0	1	0

Enclosure II

4. In your opinion, to what extent is each of the following a gap in or a problem with federal legislative authority for managing **aquatic** invasive species? Check one box for each row.

[5] Check here if you are not familiar with aquatic invasive species issues and skip to Question 5.

[Total responses equal 11, but answers for each question may not total 11 because one respondent provided unclear answers.]

Gap or problem	Not a gap	Little extent	Some extent	Moderate extent	Great extent	Very great extent	No basis to judge
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
a. List of federally prohibited aquatic invasive species is not as comprehensive as it should be	1	0	1	1	3	5	0
b. Often no legal requirements for control if an aquatic invasive species is already established or widespread	1	0	0	1	5	4	0
c. No single federal agency has overall responsibility for invasive species	1	0	0	1	4	5	0
d. Lack of statutory recognition of the National Invasive Species Council	0	0	1	1	2	7	0
e. No legal requirement for a national rapid response system	0	0	0	2	2	7	0
f. No exemptions in environmental laws, such as ESA, NEPA, and CWA, to allow for rapid response	0	1	3	2	1	4	0
g. No legal requirement for early detection	0	0	0	3	3	5	0
h. Federal law provides limited access to private property when control measures are needed	2	1	0	2	4	1	1
i. No requirement that NEPA statements discuss the potential for introduction or spread of invasive species	1	0	2	1	1	5	1
j. Inadequate legal requirements for the possibility that species introduced for biocontrol may become invasive	1	0	1	3	3	2	1
k. Inadequate legal requirements regarding movement of invasive species across different US ecosystems (i.e., a species native to one area and invasive to another)	1	0	1	3	1	5	0
l. International trade agreements make it difficult to regulate products that may introduce invasive species	1	1	0	1	4	4	0
m. No single binding international treaty devoted to invasive species	0	1	0	4	3	3	0
n. Inadequate regional coordination	1	1	1	1	3	3	1
o. Inadequate coordination between federal and state agencies	0	1	0	2	6	1	0
p. Lack of a federal research mandate for invasive species	0	1	1	2	3	4	0
q. No regulation of aquatic invasive species brought in on vessels through means other than ballast water	0	0	1	1	4	4	1
r. Exemption of ballast water from the Clean Water Act	2	0	1	0	2	3	3
s. Ineffective federal standards for ballast water	0	1	0	0	6	4	0
t. Insufficient federal oversight of the aquaculture industry	1	0	0	1	4	4	1
u. Other—please describe and check appropriate box:	0	0	0	0	0	2	0
v.	0	0	0	0	1	3	0
w.	0	0	0	0	0	0	0

Enclosure II

5. Would you favor federal legislation that would integrate the authority to manage both terrestrial and aquatic invasive species rather than the current collection of separate laws?

1. 9] Yes 2. 4] No 3. 3] No opinion

Please explain your answer:

6. What would you like to see gained if there was an overarching federal legislative authority that integrated both terrestrial and aquatic invasive species? *(Check all that apply.)*

- 1. 15] Increased coordination among federal agencies responsible for invasive species response
- 2. 15] Increased coordination between federal and state agencies
- 3. 13] Clearer division of responsibility among federal agencies
- 4. 13] Better ability to prioritize control actions amongst invasive species risks
- 5. 14] Greater sense of purpose or overall objective guiding control of invasive species
- 6. 12] Increased focus on pathways or modes of transport of invasive species
(rather than distinction of terrestrial vs. aquatic or plant vs. animal approach)
- 7. 11] Increased flexibility in using funding for highest priority
- 8. 4] Other—please describe:
- 9. 2] Other—please describe:
- 10. 0] Other—please describe:
- 11. 0] No opinion

Using the numbers from 1-10 above, what in your opinion are the 3 most important gains?
(Enter numbers from above categories in the three boxes below.)

15	15	14
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1	5	2	0
2	2	4	2
3	0	3	1
4	3	0	1
5	1	2	2
6	2	1	4
7	0	2	3
8	2	0	1
9	0	1	0

Enclosure II

7. What could be the drawbacks of an overarching federal legislative authority that integrated both terrestrial and aquatic invasive species? Please check all that apply.
1. [12] Difficulty creating integrated legislation that addresses all situations and all responsible agencies
 2. [2] Reduction in state authority for controlling invasive species
 3. [2] Reduction of state agency flexibility in controlling invasive species
 4. [3] Reduction of federal agency flexibility in controlling invasive species
 5. [11] Complexity in implementation
 6. [10] Could result in terrestrial and aquatic programs competing for scarce funds
 7. [6] Could result in less funding for management of less well-known invasive species
 8. [8] Could result in loss of specific expertise of the individual agencies that now have authority over specific types of invasive species
 9. [3] Other—please describe:
 10. [0] Other—please describe:
 11. [0] Other—please describe:
 12. [0] No major drawbacks

Using the numbers from 1-11 above, what in your opinion are the 3 most important drawbacks?
(Enter numbers from above categories in the three boxes below.)

	15	14	12
1	5	2	3
2	1	0	0
3	0	1	0
4	1	0	0
5	3	4	3
6	3	3	2
7	0	2	1
8	0	2	3
9	2	0	0

SECTION III: We now want your views on different options for organizational authority for managing and controlling invasive species.

8. Regardless of whether or not federal legislative authority for terrestrial and aquatic invasive species was integrated, to what extent do you think the following would be effective in managing and controlling invasive species?
(Check one box for each row.)

Options	Not Effective	Little extent	Some extent	Moderate extent	Great extent	Very great extent	No basis to judge
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
a. Continuation of the current National Invasive Species Council as established by Executive Order	0	2	4	3	3	4	0
b. Legislative recognition of the National Invasive Species Council	0	0	1	1	5	9	0
c. Designation of one federal agency that is responsible for all invasive species issues	2	3	4	3	2	2	0
d. Designation of one federal agency responsible for terrestrial invasive species and another federal agency responsible for aquatic invasive species	1	3	4	3	5	0	0
e. Other— please describe and check appropriate box:	0	0	0	0	0	1	0
f.	0	0	0	0	0	1	0
g.	0	0	0	0	0	0	0

SECTION IV: We would like your views on invasive species management and implementation problems.

Enclosure II

9. In your opinion, to what extent does each of the following factors make it difficult to manage **terrestrial** invasive species? (Check one box for each row.)

[5] Check here if you are not familiar with terrestrial invasive species issues and skip to Question 10.

[Total responses equal 11, but answers for each question may not total 11 because some respondents did not answer all questions.]

Factors	Not a factor	Little extent	Some extent	Moderate extent	Great extent	Very great extent	No basis to judge
[Note: Some respondents left some factors blank.]	(1)	(2)	(3)	(4)	(5)	(6)	(7)
a. Federal agencies do not do enough under their current legislative authorities	0	0	1	1	5	4	0
b. Federal agencies do not do enough to address terrestrial invasive species on federal lands that affect neighboring areas	0	0	1	2	3	5	0
c. Inadequate information and technical assistance from federal government for preventing, detecting, assessing, monitoring, and controlling invasive species	0	0	1	3	5	2	0
d. Inadequate information and research on terrestrial invasive species in general	0	1	2	2	4	2	0
e. Lack of control measures for specific terrestrial invasive species	0	1	3	0	6	0	0
f. Lack of cost-effective control measures	0	1	2	2	5	1	0
g. Inadequate coordination among federal agencies	0	0	0	2	4	4	0
h. Inadequate coordination between federal and state governments	0	0	1	2	5	3	0
i. Inadequate regional coordination	0	0	1	2	4	3	0
j. Inability of federal agencies to share funds with one another to address invasive species	0	0	1	3	5	2	0
k. Response efforts delayed by conflicts over legal authority	0	0	1	1	6	2	1
l. Less funding for invasive species in natural areas than for agricultural land	0	0	1	1	3	6	0
m. Federal grant program funds available only for specific types of state invasive species efforts	0	0	2	2	2	4	1
n. Inadequate federal funding for state invasive species efforts	0	0	0	1	3	6	1
o. List approach ineffective in dealing with newly-introduced terrestrial invasive species	0	0	0	1	3	5	1
p. Lack of flexibility in NEPA requirements to allow for invasive species rapid response and control efforts	0	1	0	2	4	2	2
q. Lack of public awareness outreach and education	0	0	0	0	6	5	0
r. Other barriers— please describe and check appropriate box:	0	0	0	0	0	1	0
s.	0	0	0	0	1	0	0
t.	0	0	0	0	0	0	0

Enclosure II

10. In your opinion, to what extent does each of the following factors make it difficult to manage **aquatic** invasive species? (Check one box for each row.)

[5] Check here if you are not familiar with aquatic invasive species issues and skip to Question 11.

[Total responses equal 11, but answers for each question may not total 11 because one respondent provided unclear answers.]

Factors	Not a factor (1)	Little extent (2)	Some extent (3)	Moderate extent (4)	Great extent (5)	Very great extent (6)	No basis to judge (7)
a. Federal agencies do not do enough under their current legislative authorities	0	0	2	0	5	4	0
b. Federal agencies do not do enough to address aquatic invasive species on federal lands that affect neighboring areas	0	0	0	2	5	2	1
c. Inadequate information and technical assistance from federal government for preventing, detecting, assessing, monitoring, and controlling invasive species	0	0	2	3	3	2	1
d. Inadequate information and research on aquatic invasive species in general	0	0	0	1	5	5	0
e. Lack of control measures for specific aquatic invasive species	0	0	2	1	3	5	0
f. Lack of cost-effective control measures	0	0	1	1	5	4	0
g. Inadequate coordination among federal agencies	0	0	0	4	3	4	0
h. Inadequate coordination between federal and state governments	0	0	0	3	5	3	0
i. Inadequate regional coordination	0	1	1	3	4	2	0
j. Inability of federal agencies to share funds with one another to address invasive species	0	0	2	2	6	1	0
k. Response efforts delayed by conflicts over legal authority	0	0	0	0	6	4	1
l. Less funding for invasive species in natural areas than for agricultural land	0	1	0	0	5	5	0
m. Federal grant program funds available only for specific types of state invasive species efforts	0	1	0	3	3	3	1
n. Inadequate federal funding for state invasive species efforts	0	1	0	2	3	5	0
o. List approach ineffective in dealing with newly-introduced aquatic invasive species	0	0	1	1	4	5	0
p. Lack of flexibility in NEPA requirements to allow for invasive species rapid response and control efforts	0	1	2	3	2	3	0
q. Lack of public awareness outreach and education	0	0	2	2	3	4	0
s. Other barriers— please describe and check appropriate box:	0	0	0	0	0	0	0
t.	0	0	0	0	0	0	0
u.	0	0	0	0	0	1	0

Enclosure II

11. Overall, what are the **top three barriers** in implementing programs to manage invasive species?

16 responses

16 responses

16 responses

[Note: No questions 12 and 13.]

SECTION V: General Information

14. Do you have any other comments that you would like to make about these questions, legislative authorities needed to address invasive species, or efforts to address invasive species?

[Empty response box]

Thank you for your participation in this survey. Your comments, along with those from other ISAC members and state agencies responsible for controlling and managing invasive species in other states, will help to inform the Congress in its decision-making on invasive species legislation.

Enclosure III

Scope and Methodology

At the request of the Chairmen and Ranking Members of the Committee on Environment and Public Works and its Subcommittee on Fisheries, Wildlife, and Water, U.S. Senate, we obtained the perspectives of state officials responsible for managing terrestrial and aquatic invasive species and Invasive Species Advisory Committee (ISAC) members on the (1) gaps in, or problems with, federal legislation addressing invasive species, (2) barriers to managing invasive species, (3) effective federal leadership structures for addressing invasive species, and (4) integrating federal aquatic and terrestrial invasive species legislation, and the potential benefits and drawbacks of such legislation.

To obtain the perspectives of state officials and ISAC members, we distributed two surveys: one was sent to agencies that manage and control invasive species in the 50 states and the District of Columbia, and the other was sent to 24 ISAC members. An E-mail was sent to each participant describing the survey and asking them to identify any other agencies that might manage invasive species. Through information from this introductory E-mail, prior GAO reports, and ISAC's Web site, a survey was sent to one agriculture agency and one wildlife agency and/or additional agencies that manage invasive species for each state. Because surveys were sent to all states and ISAC members, there are no sampling errors. However, the practical difficulties of conducting any survey may introduce errors. Measurement errors are introduced if difficulties exist in how a particular question is interpreted or in the sources of information available to respondents in answering a question. In addition, coding errors may occur if mistakes are entered into a database.

We took extensive steps in the development of the surveys, the collection of data, and the editing and analysis of data to minimize total survey error. To reduce measurement error, we conducted pretests with four states (California, Florida, Hawaii, and Michigan) and a member of the ISAC to make sure questions and response categories were interpreted in a consistent manner. The four states were chosen based on their active invasive species program consisting of both aquatic and terrestrial invasive species and their geographic locations. Based on the pretests and comments received from the states and the ISAC member, we made relevant changes to the questions. Copies of the state and the ISAC surveys, along with the results to each question, are in enclosures I and II, respectively. In addition, we edited all completed surveys for consistency and, if necessary, contacted respondents to clarify responses. All questionnaire responses were double-key entered into our database (that is, the entries were 100 percent verified), and a random sample of the questionnaires was further verified for completeness and accuracy. In addition, all computer syntax was peer reviewed and verified by separate programmers to ensure that the syntax was written and executed correctly.

We made extensive efforts to encourage respondents to complete and return the questionnaires, including sending up to four electronic reminder E-mail messages to non-respondents, and calling state agency officials directly. Our efforts yielded responses from 45 states and 16 of 24 ISAC members.¹ These groups were analyzed and their results presented separately. We did not receive a response from any of the agencies that manage or control invasive species from Connecticut, Maine, Montana, New Jersey, North Carolina, and the District of Columbia.²

In addition to data on state programs obtained through our survey, we obtained information through interviews with officials from state agencies that manage and control invasive species. We selected a nonprobability sample of states to obtain information on programs and perspectives. We selected these states because of their geographic location, active invasive species efforts concerning both aquatic and terrestrial invasive species, or the number of invasive species management challenges they face. In some cases, we also called survey respondents to obtain specific examples or explanations for certain responses. We also discussed the results of our survey with the Executive Director of the National Invasive Species Council.

We performed our review from April 2003 through September 2003 in accordance with generally accepted government auditing standards.

(360379)

¹There were actually 25 members of ISAC, however, one ISAC member was also a state official. We only sent this person a state survey, not an ISAC survey. Therefore, we reduced the total number of possible ISAC responses from 25 to 24.

²After the delivery of the testimony on June 17, 2003, we received responses from Montana and New Jersey. However, we excluded these because of the possibility that the responses might have been influenced by the testimony.

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