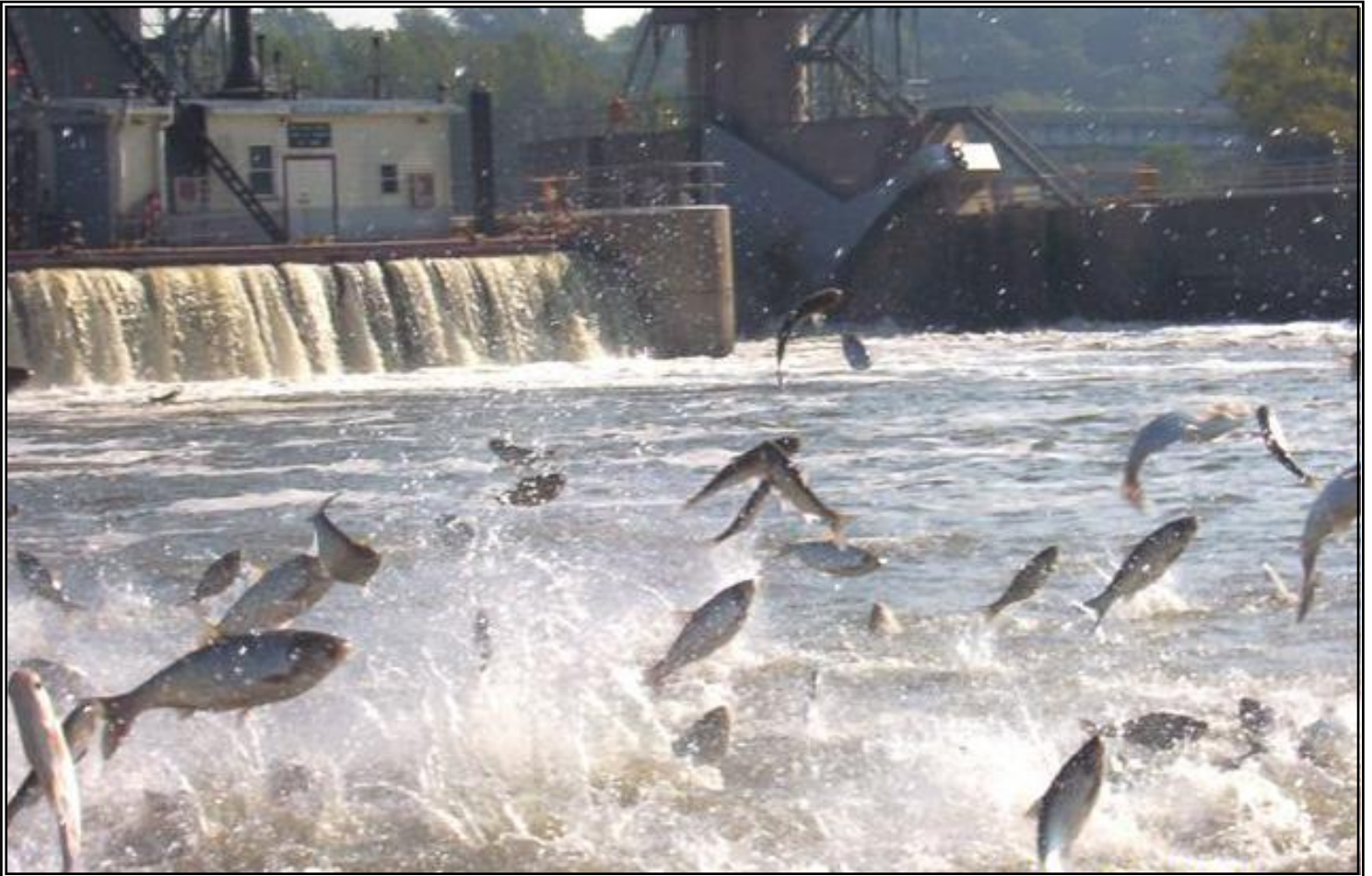


NATIONAL
ENVIRONMENTAL
COALITION ON
INVASIVE
SPECIES

NECIS

STRATEGIC PLAN FOR 2010-2013



Silver Carp; photo credit: Great Lakes Fishery Commission

endorsed by:

Defenders of Wildlife
Environmental Law Institute
Great Lakes United
National Association of Exotic Pest Plant Councils
National Audubon Society
National Wildlife Federation
Natural Areas Association
The Nature Conservancy
Union of Concerned Scientists

The following organizations endorsed this strategic plan and can be contacted for more information:

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NATIONAL ENVIRONMENTAL COALITION ON INVASIVE SPECIES

STRATEGIC PLAN FOR 2010-2013

Executive Summary

Invasive species are causing dire impacts on vital environmental, economic, and other interests in the United States, and these problems are expected to worsen in an era of climate change. The continuing failure of policy makers to fill legal gaps and enforce existing policies has left the country vulnerable to further harmful invasions. Due to growing awareness of these vulnerabilities, there are clear opportunities to make major policy reforms in the near future. The NECIS 2010-2013 Strategic Plan provides a vision and detailed work plan to obtain key policy reforms and promote adequate funding needed to protect the United States from invasive species.

NECIS promotes sound policy to prevent harmful non-native or invasive species from being introduced, becoming established, and spreading in the United States.

To accomplish this vision, NECIS promotes needed legislation, regulation, and funding by engaging in a combination of analysis, media work, advocacy, education and outreach, and alliance-building. This work is organized around five inter-related campaigns focusing on:

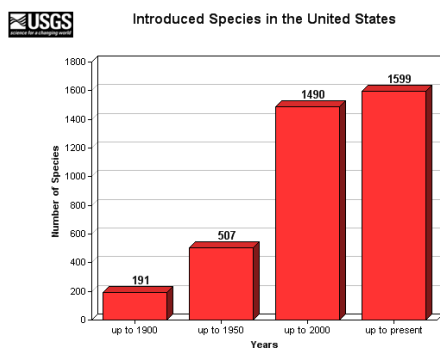
- aquatic invaders;
- plant invaders;
- forest pests and pathogens;
- animal invaders and associated pests and pathogens; and
- climate change and invasive species.

NECIS organizations collectively have the expertise and commitment to transform invasive species policy under this Strategic Plan. With new funding, the NECIS leaders committed to this vision can achieve goals that will finally push the invasive species issue past the tipping point so that success becomes a reality.

Introduction

Invasive species – harmful non-native plants, animals, and pathogens introduced to the United States directly or indirectly by humans – are altering our ecosystems dramatically, causing serious economic impacts and triggering public health crises. For example, invasive species are partially to blame for the plight of about half of U.S. endangered species. In the United States alone, economic costs and damage related to invasive species are estimated at more than \$100 billion annually. Property damage is widespread, and invaders undermine efforts to conserve natural habitat and maintain the productivity of agriculture, forests, and fisheries. Many Americans have been sickened or killed by recent pathogen invasions, such as West Nile virus.

Fig. 1



(graph created: 3/11/2010 11:08:38 AM by the United States Geological Survey)

The number of non-native species in the United States continues to increase. Our invasive species problem is not going away on its own.

however, are inadequate to limit these invasion pathways and rapidly respond to new invasions that do occur.

Dramatic reforms are needed and ideas for real reform are already on the table. A scientific review by the Ecological Society of America provides a hopeful vision of where the United States can go if we choose to employ the latest scientific tools for cost-effective prevention of new invasions.¹ What is missing, according to the Ecological Society's analysis, is an effective effort "to pressure the federal government to more effectively manage this threat."

The National Environmental Coalition on Invasive Species was created to fill that gap.

¹ The Ecological Society of America is a NECIS member. Its position paper was published in March 2006 and is online at www.esa.org/pao/esaPositions

I. What is the National Environmental Coalition on Invasive Species?

The National Environmental Coalition on Invasive Species - NECIS - was created in 2003 to provide a united environmental and scientific voice on invasive species policy. Aimed at leveraging limited resources and catalyzing real action, we remain the only partnership of major environmental groups tackling invasive species policy.

“Scientists are speaking with one voice, saying that we need stronger policy to prevent the introduction and spread of new invasive species. Our coalition is focused on achieving that goal.”----Phyllis N. Windle, Ph.D.,
Union of Concerned Scientists

As of 2010, the 16 organizations that now belong to NECIS represent more than six million members and supporters and hundreds of thousands of grassroots activists and experts. However, most of our organizations devote only part of one staff position to invasive species policy work and few of us have budgets specifically dedicated to this issue (Appendix 2).

NECIS leaders include scientists, lawyers, lobbyists and activist-organizers with many years of experience on invasive species policy. We provide expertise in key areas, including protecting natural areas from weeds, blocking new forest pathogens, screening imports for invaders, and managing ballast water. Collectively NECIS leaders have decades of policy experience. We meet monthly, collaborate and share ideas through a dedicated listserv, and maintain a website (www.necis.net).

NECIS promotes sound policy to prevent harmful non-native or invasive species from being introduced, becoming established, and spreading in the United States.

II. NECIS Members' Achievements

Since its establishment in 2003, NECIS and its members have had a number of successes in the legislative and regulatory arenas.

Legislation

- helped draft, review, and pass specific legislation on brown tree snakes; nutria; mute swans; and an electric fish barrier between the Mississippi River and the Great Lakes;
- critiqued federal legislation pertinent to ballast and pre-import screening, laying the foundation for public involvement in the legislative process nationwide;
- worked for funding bills to include more money for forest pest problems, like Asian long-horned beetles and sudden oak death;
- testified at Senate and House hearings on behalf of broad invasive species legislation, including formation of the Department of Homeland Security, aquatic invasive species, and pre-import screening for non-native animals;
- organized an annual invasive species education day in Washington, DC, for dozens of participants to brief staff on Capitol Hill and push for policy reforms.

Regulation

- improved requirements for how commercial vessels manage their ballast water;
- critiqued proposed Coast Guard rules to establish and implement the first-ever national standards for discharging ballast water;
- supported key provisions of U.S. Department of Agriculture's proposed rules for preventing invasive plants, pests and diseases from entering the country through nursery imports;
- helped strengthen international guidelines on invasive species within the Convention on Biological Diversity and the International Maritime Organization.

Outreach and Alliance-building

- created outreach tools, including press releases, video, websites, and state-based factsheets for more than 26 states;
- organized a new group of activists, who repeatedly sent thousands of communications to federal regulators, legislators, and high-ranking agency officials;
- mobilized over 11,000 activists to pledge not to move firewood – to slow the spread of non-native forest pests and diseases;
- recruited influential scientists to meet and work with congressional staff to improve specific legislation;
- conducted very successful national outreach campaigns for stakeholders to formally comment on proposed regulations for plant imports, as well as ballast regulations;
- raised the profile of invasive species impacts affected by the International Plant Protection Convention;
- helped strengthen regional standards and coordination affecting invasive plants and plant pests under the North American Plant Protection Organization
- published action plans for transitions between administrations and congresses

Analysis/Research

- published comprehensive information on more than a dozen states' invasive species laws, as well as regional approaches, which highlighted model approaches, recent trends, and federal lags;
- analyzed strengths and weaknesses of a dozen states' legal and administrative capacity to respond quickly to new plant pest introductions;
- contributed to the forthcoming *Encyclopedia of Invasive Introduced Species*, a monumental work being published by the University of California Press;
- advised the National Invasive Species Council and encouraged implementation of its National Management Plan;
- prepared publications on impacts, law, and policy for several international bodies, including the Council on Environmental Cooperation under the North American Free Trade Agreement (NAFTA);
- organized the first ever international conference on "best practices for pre-import screening of live animals in international trade," at the University of Notre Dame, which convened 30 experts from around the world and led to an influential report published by the Global Invasive Species Programme;
- advised aquatic invasive species task force panels on cooperative approaches to invasive species prevention, resulting in adoption of new policies.

III. Five campaigns to transform invasive species policy

NECIS has become a respected voice among decision-makers and the media, and we have made incremental progress on important issues. However, invasive species are too often seen as a regional problem requiring local, regional, or species-specific reactions, even though many real solutions are national in scope. Long-term success in shaping better invasive species policy will require significantly greater resources to make progress. We have come together to develop this shared Strategic Plan for 2010-2013 to identify the positive transformations we can achieve if individual NECIS groups receive needed financial support.

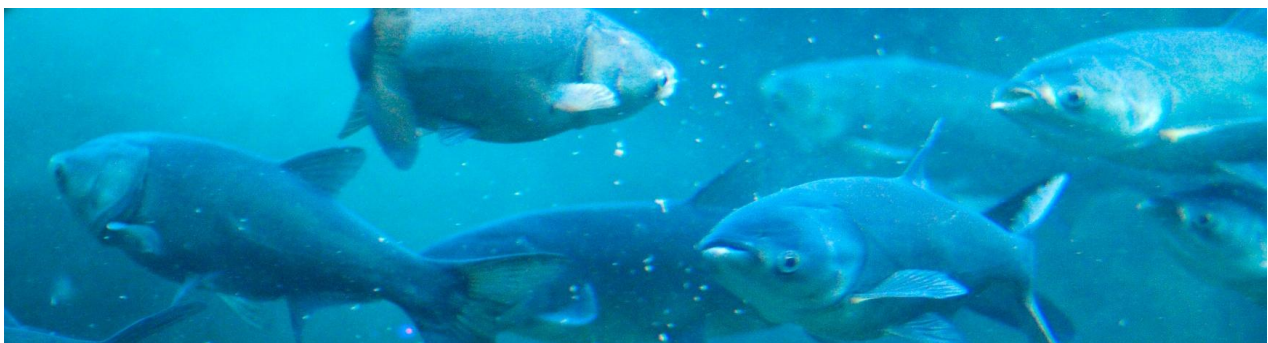
NECIS members have come together to advance the critical priority of:

Preventing introduction and spread of invasive species by identifying and filling legislative and regulatory gaps, ensuring full implementation of current laws, and developing and disseminating key messages on invasive species threats.

Success in achieving this vision is focused on achieving victories in five interrelated campaigns: 1) aquatic organisms, 2) invasive plants, 3) forest pests and pathogens, 4) animals and associated pathogens, and 5) the interaction of climate change and invasive species.

Distinct campaigns are essential because of the structure of the legislative and regulatory systems governing each area. Most of our effort is directed at U.S. federal policy because incoming trade and travel are the sources of most of our new invaders, and interstate commerce helps them spread rapidly across the country.

“We face different challenges in the aquatic and terrestrial realms and for plants, animals, and their pests. But there are clear opportunities to improve policy in each area – and transform our world for the better.”
---- Read Porter, *Environmental Law Institute*



Asian Carp; photo credit: Kate Gardin

A. Aquatic Invaders

The introduction and spread of invasive species decreases the diversity and abundance of our native aquatic life and threatens human activities that depend upon native biodiversity of those resources. Aquatic invasive species are introduced to the United States through intentional and unintentional pathways ranging from importation for trade and aquaculture to hitchhiking on ships. Once here, these species spread widely through numerous human and natural pathways.

Maritime shipping is a severe threat to native aquatic biodiversity. Ships from around the globe introduce non-native species into U.S. waters via discharge of ballast water and the organisms transported on their hulls (biofouling). For example, vessels from foreign ports continuously release non-native species, such as the green crab, into San Francisco Bay. As a result, 90% of the species in the bay now are non-native. The Great Lakes and other vulnerable waters face the same future unless we secure effective laws and regulations that mandate effective, enforceable standards for how incoming ships manage their ballast water and address biofouling.

“Billions of dollars of economic losses in the U.S. are a direct result of our policies being reactive instead of proactive.

We have cost-effective technologies to keep harmful species out of our water – what we so far lack is the political will to put those technologies to use.”---- Jennifer Nalbene ,
Great Lakes United

Legal authorities governing the intentional importation of non-native aquatic species do not prevent the introduction and escape of invasive species in U.S. waters. The voracious Chinese northern snakehead fish was imported intentionally for food use but now infests the Potomac River and Mississippi River watersheds, dealing a severe ecological and economic blow to prime fishing areas. Similarly, the U.S. has the most diverse freshwater mussel and clam fauna in the world, yet that diversity is critically endangered by the imported

invasive black carp. These harms were entirely foreseeable and preventable had U.S. laws required pre-importation risk assessment.

Once here, the movement of aquatic species is very difficult to control. Navigation canals, waterways, and large water basins across North America have been artificially connected, enabling the rampant spread of aquatic species like the quagga mussel and Asian carp across the country. Restoring natural watershed boundaries can curb the spread of aquatic invasive species.

Aquatic Goal 1. Enact federal legislation or regulations to stop the discharge of aquatic invasive species via the ballast water and commercial shipping vector;

Aquatic Goal 2. Enact federal legislation to regulate the intentional import of live aquatic animals to require proactive screening for potential invasiveness and other harms before import (see also Animal Goal 1); and

Aquatic Goal 3. Secure permanent solution to inter-basin movement of aquatic organisms between the Mississippi Basin and Great Lakes via artificial waterways and canals.

B. Invasive Plants

Invasive plants cost Americans billions of dollars in damages and expenses annually and degrade otherwise pristine natural areas. These impacts and costs continue to grow as invasive plants in the U.S. continue to spread. In addition, imports of risky plants to the United States from around the globe are still largely unrestricted.

A wise approach to preventing new introductions requires strengthening current policy within the U.S. Department of Agriculture (USDA) on plant imports so that only species with little or no risk of becoming damaging invaders are allowed to be brought into the country. When new invasions do occur, managers often lack the funds and personnel to stop the species' spread before they are too widespread to eradicate. Agencies need dramatic increases in funding for "early detection and rapid response" efforts that find and eradicate incipient invaders before it becomes impossible to do so.

"Natural resource managers are forming new networks at the local, state, regional and national scale, making possible the type of coordinated strategic action that is essential to protecting our lands and waters from invasive plants."

---- Damon Waitt, Ph.D.,
*National Association of Exotic
Pest Plant Councils*

It is also critical that the implementation of renewable energy efforts to reduce greenhouse gas emissions does not exacerbate the invasive species problem. In particular, plants considered as crops for biomass or biofuel stock should be screened for invasiveness. The "Climate Change Goal 3" on page 12 addresses this issue.

Plant Goal 1. Reform USDA regulations for importing nursery and other plants (the so-called Quarantine 37) to prevent introduction of potentially invasive plants;

Plant Goal 2. Secure funding to strengthen national early detection and rapid response capabilities for invasive plants.

C. Forest Pests and Pathogens

Controlling the invasion of new forest pests and pathogens depends on whether the United States implements more cautious import policies. If agencies do not adopt more proactive policies, invasive pests and pathogens – on top of other stressors on forest health – are likely to cause new die-offs of plants in North American forests. For example, chestnut blight left the chestnut tree functionally extinct in Eastern forests where it once made up 25-40 percent of woody cover. Pests and pathogens that are likely candidates to cause future massive forest die-offs in our lifetimes include the Sudden Oak Death fungus and the emerald ash borer.

When new invasions do occur, managers often lack the funds and personnel to stop the species' spread before they are too widespread to eradicate. Agencies need dramatic increases in funding for “early detection and rapid response” efforts that find and eradicate incipient invaders before it becomes impossible to do so.

“It is extremely difficult and costly to control invasive species once they become established – our best defense is to apply measures that prevent potential invaders from hitching a ride on imports in the first place.”---- Faith Campbell, Ph.D., *The Nature Conservancy*

Forest Pest Goal 1. Reform USDA regulations for importing nursery and other plants (the so-called “Quarantine 37”) to prevent introduction of plant pests and pathogens;

Forest Pest Goal 2. Intensify national early detection and rapid response capabilities for plant pests and pathogens.



Emerald Ash Borer; photo credit: US Forest Service

D. Invasive Animals and Animal-associated Pests and Pathogens

The United States has a long history of invasive animals being intentionally released or escaping into the wild and causing significant environmental, health and economic problems. Examples include Asian carp threatening the Great Lakes, nutria – huge South American rodents – that destroy coastal salt marshes, European starlings that damage crops and displace native songbirds from nest sites, and giant Burmese pythons attacking wildlife populations in the Everglades. Damaging pathogens, parasites, and pests have accompanied past animal introductions, resulting in outbreaks of Monkeypox, heartwater disease, and West Nile virus.

“There are powerful industries that defend the status quo of allowing unrestricted imports of new species, regardless of their human and environmental impact. As long as that approach wins, Americans will continue to lose at the hands of new invaders.” --Peter Jenkins, *Defenders of Wildlife*

The current regulatory approach is to deny import to a short list of known-to-be-harmful animal species and allow all other species entry. With new global threats like avian influenza, this purely reactive approach is indefensible. The current approach often fails by limiting the import of particular invasive species after the species or pathogens associated with them have already escaped into the wild or when eradication is no longer possible. It also fails because it encourages extensive private investments in newly imported species that subsequently turn out to be invasive. The right approach is to screen animals for invasiveness and new pathogens before they arrive.

U.S. Fish and Wildlife Service inspectors are woefully understaffed to handle the ever-increasing imports from global trade. Only a small percentage of live animal shipments into US ports are inspected each year. Inspections that do occur are unlikely to uncover disease vectors unless they are external and obvious (ticks, for example). And that is only if inspectors have been trained to find them. In cases where clear violations have occurred, inspectors may not have authority to do anything more than confiscate the shipment—one out of the thousands passing through ports every day.

At a broader level, the extensive worldwide traffic in non-native animals recently was identified by an expert group under the Convention on Biological Diversity as the most glaring gap in the international legal system related to trade and invasive species.

Animal Goal 1. Enact legislation to reverse current U.S. law on intentional import of live wild animals to promote proactive screening for potential invasiveness and other harms before import (see also Aquatic Goal 2);

Animal Goal 2. Advocate for stronger agency regulatory involvement and increased funding, staffing, and enforcement to better address the risks of non-native wild animals.

E. Climate Change and Invasive Species

Climate change is projected to promote the spread of invasive species and exacerbate the damage they cause to native species and ecosystems. Scientists expect that many invasive species will gain advantages over native species, facilitated by increased carbon dioxide concentration, more favorable climate, altered disturbance regimes, and increased habitat fragmentation. Furthermore, new pathways for species invasions will appear as climate change modifies natural barriers or causes people to alter existing practices in transit, trade, or land and water management.

Natural resource managers now must plan for adaptation to changing climates. Invasive species prevention and management will be an important element to improving ecosystem resilience in the face of climate change. To date, however, most federal and state government programs have dealt independently with climate change and invasive species. Relatively little attention is given to how policy makers and natural

resource managers can develop integrated approaches to prevent invasive species from becoming established, spreading, and further disrupting and degrading ecosystems that are increasingly vulnerable to changing climate.

Federal, state, and local agencies, tribes, non-governmental organizations, and private landowners all play essential roles in addressing invasive species and ecosystem issues. Collaborative programs that link universities, farmers, ranchers, fishermen, conservation organizations, recreational interests, trade and transportation interests, and government agencies are necessary to effectively address the issues. It is critically important to develop policy and practices that strengthen environmental monitoring and management of invasive species to minimize impacts on ecosystem resources as climatic conditions change.

Climate Change Goal 1. Enact climate legislation that includes robust adaptation funding for addressing the combined effects of invasive species and climate change, including prevention, early detection and rapid response, and control;

Climate Change Goal 2. Promote development of federal and state climate change adaptation plans that incorporate strong policies for invasive species prevention, early detection, rapid response, and control; and

Climate Change Goal 3. Promote regulations and policies that prevent or discourage the intentional cultivation and spread of invasive species for carbon sequestration and biomass/biofuel production.

“Climate change is a game-changer for invasive species, and the amplified impact of these invaders can undermine efforts to safeguard our ecosystems in the face of shifting climates. Effective invasive species prevention and control policies are essential components of climate-smart conservation.”--- Bruce A. Stein, Ph.D., *National Wildlife Federation*

IV. NECIS Work Plans for 2010-2013

NECIS promotes sound policy to prevent harmful non-native or invasive species from being introduced, becoming established, and spreading in the United States. NECIS accomplishes these goals through legislation, regulation, promoting adequate funding, education, analysis, media, advocacy, outreach, and alliance-building. Long-term victory in creating those successes will require significantly greater resources.

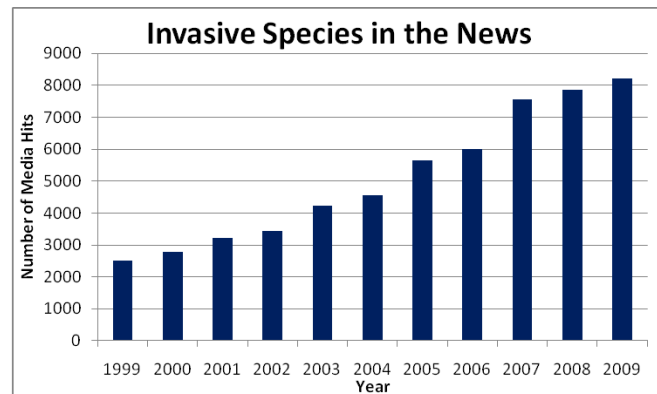
We believe that the campaigns we propose are feasible. Success in achieving a few goals would radically improve specific policies, while success in achieving all goals would leave the United States better able to prevent damaging species from harming our ecosystems and economies.

Our campaigns are built on a mountain of good science. However, campaigns to sway public opinion and decision-makers have to be about more than just hard facts. NECIS campaigns will use and expand policy and technical analyses, and build new media and messaging efforts, grassroots action, alliance-building, and lobbying work. These efforts will build upon an explosion of media interest in invasive species in the last decade (Fig. 2).²

This expansion of NECIS members' capacity will require a significant financial infusion, without which reaching success in each campaign is far less likely. However, the mix of elements – analysis, media, grassroots, alliance-building, and lobbying - differs in each campaign and provides discrete and coherent opportunities for funders to make a difference in combating invasive species.

To define how we are going to achieve our goals, NECIS's leaders have developed joint Work Plans that cover the next three years and are attached as Appendices. They detail the particular tasks or activities to be undertaken, the desired outcome, time frame, responsible parties, and estimated resource requirements to achieve success.

Fig. 2



“Media attention has increased over 300 percent in the past decade, but most stories still focus on single species or regional problems - not solutions. We need strong national legislation and policies to be effective in addressing this growing problem.” ---- Corry Westbrook, *National Wildlife Federation*

² Invasive species related news articles cited in Westlaw and Lexis, 1999-2009 based on data-generating technique found in *Harmful invasive species: legal responses*, M. Miller & R. Fabian, eds. Environmental Law Institute, 2004. Washington, DC.