



## **CGAPS Vision and Action Plan**

*2/25/09 draft 2 for comment by CGAPS Participants*

In 1995, 14 state, federal, and private organizations came together to form the Coordinating Group on Alien Pest Species (CGAPS), with the goal of closing gaps in Hawai‘i’s invasive-species prevention and response systems. CGAPS was created explicitly to foster greater coordination of planning and management activities among the numerous public and private agencies and interests responsible for responding to alien pest invasions in Hawai‘i. At that time, no state had a multi-agency executive-level council tasked with improving invasive-species policy and management. CGAPS set a national standard that is now widely followed: today, state-level Invasive Species Councils and Exotic Pest Management Councils are the norm across the United States. Hawai‘i

Institutional barriers have made invasive-species management historically difficult and many gaps yet remain in providing Hawai‘i comprehensive protection from alien pest invasions. Nonetheless, CGAPS has provided the forum where participants made progress toward rectifying this problem in Hawai‘i over the past 15 years. Among the achievements fostered by CGAPS’ cooperative approach are:

- ◆ Formation of rapid-response teams on each major island to identify and eradicate new pests before they spread across the landscape. These Invasive Species Committees (ISCs) have successfully eradicated 26 island-wide occurrences of invasive pests since 1998 and are actively working on several more. The ISCs have provided a unique model for how rapid actions against new pests can save long-term management costs.
- ◆ Formation of the first dedicated aquatic rapid-response team in the world. Marine eradications are extremely difficult, but Hawai‘i’s team has eradicated an illegally released marine aquarium coralimorph.
- ◆ Legislation establishing the Hawai‘i Invasive Species Council (HISC), providing cabinet-level action and coordination on invasive-species management goals.
- ◆ Creation of a program through HISC that funds research into invasive species impacts and tests new management methods.
- ◆ Obtaining from the 2007 and 2008 legislatures a new funding mechanism to pay for cargo-inspection and infrastructure costs.
- ◆ Reducing the risk of the brown treesnake from becoming established in Hawai‘i.
- ◆ Developing a rapid-response plan in the event of incursions by the notorious fire ant *Solenopsis invicta*.
- ◆ Developing EPA-approved control techniques for coqui frogs, successfully eradicated wild populations from two islands, and severely reduced populations on a third.
- ◆ Greatly improving cooperation and planning among State and federal agencies responsible for invasive-species management.
- ◆ There are multiple examples where partnerships and working groups have formed to address invasive species issues, some not directly fostered by CGAPS or its

participants, but that arose because working together has become important for success. For example, there are now nine watershed partnerships that arose because landowners understand the need to protect watershed forests from invasive species.

- ◆ Significantly raising public awareness and concern for alien pest invasions. In 1996, only 29% of Hawai‘i’s residents had ever heard of alien invasive species, compared with over 70% in 2007. Today, 78% of residents view invasive species as a serious problem.

Despite these achievements, much remains to be done to provide Hawai‘i with consistent and effective protection from alien pest species, and it is timely for CGAPS to revisit and re-evaluate Hawai‘i’s remaining biosecurity needs. Further delay in meeting these needs leaves our islands unacceptably exposed to new invasive species and increases the costs associated with containment and damage, all of which harm Hawai‘i’s economy, natural resources, and the health and lifestyle of its residents. Several invasions since 1995, such as coqui frogs, ohia rust, salvinia, nettle caterpillars, and *Erythrina* gall wasps, make this need abundantly clear.

This document identifies ten aspects of biosecurity protection that still require improvement, outlines CGAPS members’ vision of the gaps remaining in Hawai‘i’s protective shield, and lists the actions needed to fill those gaps. Correcting these gaps will continue to be challenging, and it will require sustained political, industry and community support. CGAPS presents this document as a vision of where we, in cooperation with Hawai‘i’s political leaders, managers, and citizens, need to focus our energies in the next several years in order to meet the state’s remaining biosecurity needs. Given current economic troubles, not all of these goals are achievable in the short term, but several are. CGAPS members have identified the following actions as their target goals for the next three years (2009-2011).

## 1. BORDER PROTECTION

**Vision:** Hawai‘i has an effective biosecurity system that is adequately funded and staffed to prevent alien pest species from entering the state, regardless of cargo origin or import pathway.

### **Problem statement**

Two separate agencies are responsible for inspection of goods arriving in Hawai‘i. The Hawai‘i Department of Agriculture inspects domestic cargo and vessels, and has a focus on pests of concern to Hawai‘i, especially insects or plant diseases not yet known to be present in the state. The federal Department of Homeland Security Customs and Border Protection (CBP) is responsible for inspecting foreign cargo and vessels, and has a focus on pests of concern to the greater U.S., which is largely limited to agricultural pests of mainland crops. The U.S. Department of Agriculture Animal and Plant Health Inspection Service (APHIS) plays an important supporting role by conducting pest risk assessments, training CBP personnel, conducting permitting and pre-clearance inspections for products originating in foreign countries, and maintaining a pest database, again with a focus on pests of wide concern across the U.S.

Federal focus on pests of widespread concern across the U.S. means that tropical pests remain largely ignored and are frequently allowed to be imported unhindered to mainland states. Once inside the country, interstate commerce laws provide unhampered access of pests to Hawai‘i via regular trade routes. Further, pests of quarantine concern for Hawai‘i may be

intercepted at Hawaiian ports by federal agents but not acted on by them because they fall outside federal mandates. Hence, federal protection against species of concern to Hawai‘i has historically been limited. We must better coordinate between federal and state inspection programs to ensure that species of concern to Hawai‘i are detected and intercepted regardless of cargo origin and inspecting agency mandates.

In addition, mail is an avenue of smuggling of invasive species into Hawai‘i. Although Federal agents inspect Hawai‘i’s mail bound for California under a special program to protect California agriculture, a symmetrical program to protect Hawai‘i from pests in mail originating on the mainland is lacking. We need symmetrical protection of Hawai‘i from mainland pests. Until the mail is actually inspected, we cannot know the full extent of the pest threat.

Lastly, pests can be smuggled into the state on arriving domestic passengers and baggage.

### **Needs**

- ◆ *Joint federal/state inspection and quarantine facilities for ports on each island.* These will provide workspaces that are conducive to finding and containing discovered pests; that share costs of facilities, technology, and information; and that promote the collaboration necessary to protect Hawai‘i. The 2008 passage of the Hawai‘i Department of Agriculture’s new Biosecurity Program (HRS 150) provides the framework (although not the funding) for these joint facilities and related needs.
- ◆ *A reliable funding system for cargo inspection and quarantine.* In 2008, the Legislature passed the Inspection, Quarantine, and Eradication Service Fee and Charge (HRS 150A-5.3) of 50 cents per 1,000 lbs of incoming cargo, regardless of port of origin, to be paid by the importer. These funds are expected to attract federal matching dollars for new joint inspection facilities, appropriate technology, tools, and staff to be able to inspect a variety of incoming commodities, equipment and vessels via commercial plane and ship, private crafts, and freight forwarded parcels. Although this law has good support from legislators, it is in jeopardy of being weakened, changed or repealed.
- ◆ *A program to inspect First Class mail and parcels.* Statutory authority and funding are needed for such a program.
- ◆ *A more stringent system for inspecting arriving passengers and baggage from mainland ports.*

### **Immediate Actions:**

#### **2. EARLY DETECTION AND RAPID RESPONSE**

**Vision:** Hawai‘i will detect new pest species that have slipped past biosecurity measures and will launch rapid response measures when they are still controllable or eradicable.

#### **Problem statement**

Not all pests can be kept out of Hawai‘i. When prevention fails, the next most cost-effective means of protecting Hawai‘i is to implement a rigorous early detection program with rapid-response capabilities for new invasive insects, animals, diseases, and plants. Although APHIS conducts surveillance activities around ports and some other high-risk locations for some types of pests, current early detection and response efforts are largely species specific, often not coordinated between agencies, and funding for these efforts are primarily via soft money.

Hawai‘i’s assorted invasive species committees also provide some degree of control against a variety of incipient pests, but their operations are fairly small, and the number of targeted species is correspondingly limited. When new pests arrive, they often spread widely before action can be taken because targeted funding for early detection and rapid response is limited. Hawai‘i has no readily available funds for rapid response to new pests, even for pests known to be spreading elsewhere that are expected to arrive soon in Hawai‘i.

### **Needs**

- ◆ *Create a dedicated invasive-species emergency rapid-response fund similar to the Hurricane Relief Fund.* Availability of such funds will allow for immediate response to new pests as detected, thereby avoiding delays in gaining legislative authorization of new appropriations for each new pest.
- ◆ *Increase surveillance to detect a wider variety of pests.* Surveillance areas should include harbor waters.
- ◆ *Institutionalize early detection of new pests at high-risk locations.* Such locations include nurseries, botanical gardens, zoos, aquariums, aquaculture operations and other facilities that import high-risk cargo or species.
- ◆ *Create and regularly update rapid-response plans for different types of pests.* This will clarify agency roles and response actions and ensure readiness for newly arriving pests.

### **Immediate Actions:**

### **3. FEDERAL LAWS THAT EXPOSE HAWAI‘I’ TO UNNECESSARY RISK**

**Vision:** Hawai‘i will reduce the risk posed by federal laws or agreements that don’t protect Hawai‘i, to ensure the best protection measures from all pests of concern to its economy, environment and people.

### **Problem statement**

Federal interpretation of international trade agreements unnecessarily expose Hawai‘i to foreign pests because they are focused almost exclusively on pests that threaten the mainland. Federal trade agreements and inter-state commerce laws can pre-empt state laws, forcing Hawai‘i to import known pests despite the State’s formal objections. It is possible for USDA to grant Hawai‘i special protection when clear and comprehensive arguments for both agricultural and conservation issues are provided, although this exemption procedure operates on a case-by-case basis, and is extremely time-consuming to satisfy. Hence, that avenue provides minimal protection against the diversity of foreign pests that threaten Hawai‘i.

Appeals have been made to federal agencies and to Hawai‘i’s Congressional delegates to recognize and respond to Hawai‘i’s unique biogeographic position and vulnerability, but action has been limited.

### **Needs**

- ◆ *A federal inspection program protecting Hawai‘i from cargo originating from the mainland.*
- ◆ *Agreement from federal trade officials to negotiate protections from species that threaten Hawai‘i.*

- ◆ *Clarification of how jurisdictions with meaningful biosecurity legislation, such as New Zealand and Galapagos, provide biosecurity while avoiding conflict with international trade agreements.* In this respect, Galapagos may be the most important model because it too is a single province of a larger polity. A commissioned study may serve this need.

#### **Immediate Actions:**

- ◆ Via the CGAPS Steering Committee, develop to the extent possible a consensus regarding what “environmental values” most urgently need protection through strategic regulation of key pathways. One approach could involve embracing the need to protect Hawai‘i’s dominant plant species, such as ohia, koa, aalii, naio, wiliwili, and hapuu. A related approach might be to forecast what species or groups of species will be the most important for restoration efforts to stabilize conservation lands and watersheds in the face of global warming. Other reasonable approaches may exist and, if so, should be considered.
- ◆ Review work to date by USDA and HDOA to identify pathways relating to Hawai‘i’s special protection needs for agriculture and forestry/biofuels.
- ◆ Combine the above two elements in a comprehensive package that can be used to approach the current administration for assistance via the Hawai‘i congressional delegation.

#### **4. IMPORTATION OF INVASIVE PLANTS**

**Vision:** Hawai‘i will be protected from the importation of new invasive plants.

##### **Problem statement**

Hawai‘i laws prohibit the importation of all animals unless they are specifically placed on a list of allowable species. The same precautionary measure is not used for plants, any of which are allowed importation if shipped from domestic ports, as long as they are not on HDOA Noxious Weed or Seed lists. Any plant is allowed to be imported when shipped from international ports so long as it is not on the Federal Noxious Weed or Seed lists. There are more than 250,000 species of plants in the world, and an estimated 10% of those will become invasive if brought to Hawai‘i. Hawai‘i is already overwhelmed trying to manage 100-200 invasive plant species and cannot bear the burden of thousands more. Hawai‘i must institute a proactive, comprehensive risk-management procedure for reviewing plant imports before they are allowed into the state.

With the passage of Act 40 in 2008, we now have the legal authority to restrict the entry of invasive plants into Hawai‘i when shipped from domestic ports, although those same plants would not be restricted if shipped from a foreign port. Also, plants moved to or through Hawai‘i from foreign ports as part of free-trade agreements remain unregulated.

##### **Needs**

- ◆ *Institute a proactive, comprehensive risk-management procedure for reviewing plant imports before they are allowed into the state.* A weed-risk-assessment system has been shown to be functional within Hawai‘i and easily applied.
- ◆ *Work with industries and the public to promote compliance and cooperation with new procedures.* This is to reduce the chances of smuggling plants and potential hitchhikers.

## **Immediate Actions:**

### 5. AQUATIC INVASIVES

**Vision:** Hawai‘i will have an effective biosecurity system that prevents aquatic invasive species from entering the state and spreading.

#### **Problem statement**

Recent surveys by the Bishop Museum’s Hawai‘i Biological Survey documented nearly 350 new marine and brackish water species in Hawai‘i. Most of these were accidental introductions via ballast water, ballast sediments, or hull fouling. Hawai‘i’s first administrative rules on ballast water went into effect in 2007 to help reduce the risk of species introduction via ballast water, although they do not apply to all vessels that carry ballast. Nor is there technology available to ensure optimal protection from ballast-water species. All military vessels are exempt from State ballast-water rules, although there are military protocols for reducing risk via ballast. On a national level, the Environmental Protection Agency is advancing the National Pollutant Discharge Elimination System that could help regulate ballast procedures for a wider array of exempt vessels, but rules are not yet in place. There are no rules or procedures regarding hull fouling for vessels or private craft. Hawai‘i is currently working with stakeholders to voluntarily implement best-management practices and to address high-risk vessels and events on a case by case basis, but protection from vectors of marine invasives remains spotty.

#### **Needs**

- ◆ *State regulations to protect against hull fouling.* These would include reporting, compliance verification, and enforcement requirements for all incoming vessels
- ◆ *Development of a vessel quarantine and decontamination facility.*
- ◆ *Development of a State system to verify ballast water exchange or sterilization for all incoming vessels.*

#### **Immediate Actions:**

- ◆ Best management strategies for ballast water and hull fouling using the model of the Papahānaumokuākea Marine National Monument policy of zero tolerance for aquatic invasive species and 100 % inspection of all vessels going there

### 6. INTERISLAND SPREAD OF PESTS

**Vision:** Each island will be protected from alien pests present on other islands.

#### **Problem statement**

Inter-island spread of invasive species remains virtually unregulated. The Hawai‘i Department of Agriculture conducts visual inspection of potted plants and propagative plant parts, but does not inspect all fruits, cut flowers, foliage, seeds, or animals. Other invasive pests move in non-agricultural commodities or are deliberately transported by travelers; both of these go uninspected.

#### **Needs**

- ◆ *An efficient and comprehensive inter-island cargo-inspection system.* The 2008 passage of the Biosecurity Program provides HDOA the ability to require detailed manifests of inter-island cargo. Protecting the funding for this action (Needs point 1, second bullet) will allow HDOA to better identify which inter-island shipments require inspection.
- ◆ *Risk assessments for inter-island movement of pests that are present on one or a few islands.* Part of these assessments should include development of risk-mitigation procedures and rapid-response measures in the event of spread.
- ◆ *Increased public awareness to reduce spread of species between islands.*
- ◆ *Screening of materials carried by passengers of air flights and ferries.*

### **Immediate Actions:**

## 7. CAPACITY TO CONTROL WIDESPREAD PESTS

**Vision:** Hawai‘i will have the capacity to control the widespread pests that cause unacceptable harm.

### **Problem statement**

Capacity to mitigate the effects of widespread pests is limited because of the large number already causing damage in Hawai‘i, the larger number established but still expanding their ranges, and the limited resources available to respond to these species. Control is largely limited to a few species that cause the greatest economic or environmental damages to landowners, whether public or private. Comprehensive control of an array of invasive pests, or management to reduce disturbance regimes that favor certain invasive species remains of limited scope.

We expect existing programs will continue to exclude or control invasive species in limited, high priority areas. However, some invasive species require additional control methods to limit harm across vast landscapes, and other species require the de novo development of control techniques.

### **Needs**

- ◆ *Improved State and federal capacity for biocontrol research and testing.* Current facilities accommodate research to control just a handful of invasive pests (such as *Miconia* and wiliwili gall wasp), and each of these projects may last four to ten years. In addition, the Hawai‘i Department of Agriculture facility is woefully outdated and understaffed.
- ◆ *Apply new methods and technologies successfully developed for similar work elsewhere.* This will improve cost-effectiveness and implementation of a wider array of measures.
- ◆ *Develop new control techniques for non-traditional invasive species.* A wide variety of invasive species in Hawai‘i – such as sessile marine organisms, reptiles, or soil invertebrates – have never been the subject of research into control methods anywhere in the world. These species will continue to damage Hawai‘i, and be ignored by managers, unless control methods can be developed.

### **Immediate Actions:**

## 8. BROWN TREESNAKE

**Vision:** The risk of brown treesnakes arriving and becoming established in Hawai‘i will be extremely small.

### **Problem statement**

The impending relocation of U.S. military personnel from Okinawa to Guam will result in an increase in population of approximately 30,000 people, a corresponding increase in civilian and military air and sea travel and military movement, and an anticipated 600% increase in cargo movement off island.

Because these snakes are widespread across Guam, and no viable methods yet exist for significantly reducing their abnormally high populations, management efforts have focused on keeping snakes from leaving Guam. This is done by trapping, visual inspection, and dog searches around ports of exit, freight- and cargo-packing centers, and military bases, an effort that results in recovery of ~4,000 snakes per year. Despite these efforts, snakes continue to make their way into the transportation network, and the impending Guam military buildup, coupled with known programmatic and funding shortfalls, requires immediate escalation of efforts to keep brown treesnakes from being transported from Guam to Hawai‘i or other snake-free islands in the Pacific.

### **Needs**

- ◆ *Snake-interdiction measures and funding in place for all phases of construction, and as standard operating procedures for all future military movement and operations from Guam.*
- ◆ *Additional funding for inspection services for civilian and non-military cargo and craft movements from Guam’s commercial ports.*
- ◆ *Effective methods to control snakes across large landscapes on Guam. This will reduce the risk of snakes entering transportation networks.*
- ◆ *Adequately funded port-of-entry inspection and quarantine measures in Hawai‘i.*

### **Immediate Actions:**

## 9. EARLY-WARNING FOR PESTS NOT YET PRESENT IN HAWAI‘I

**Vision:** Hawai‘i’s network and system will identify pests not yet present and result in risk reduction measures.

### **Problem statement**

Modern information technology allows for proactive identification of a variety of invasive pests that are not yet present in Hawai‘i but may be on the move and invading similar habitats elsewhere. An example would be the *Erythrina* gall wasp, known to be spreading rapidly through the Indian Ocean region and Western Pacific countries in the years prior to arriving in Hawai‘i. Identifying likely invaders and their potential modes of introduction can help inspectors prioritize high-risk commodities or high-risk ports for pre-entry treatment or priority screening.

## Needs

- ◆ *An early warning specialist position to communicate with existing pest networks worldwide to identify potential new invaders and their probable mode of arrival.* This position should communicate directly with inspection agencies to apply appropriate prevention and port-inspection measures and early detection teams.
- ◆ *A communication protocol for sharing early warning alerts with top government officials.* Decisions on the risks or benefits of action or inaction to prevent pests should be shared across agencies and decision makers.

## Immediate Actions:

### 10. SMUGGLING OF PESTS

**Vision:** The risk of new species arriving illegally will be greatly reduced.

#### Problem statement

Smuggled species continue to be a source of some of Hawai'i's greatest potential new pests. In some cases, state and federal laws allow for significant fines and imprisonment, but stringent enforcement is needed, and stiff penalties are rarely sought or imposed in the legal system.

Although more comprehensive inspections at ports, mail centers, and freight companies (Needs point 1) would provide a partial solution to this problem, additional needs exist.

## Needs

- ◆ *Imposition of maximum penalties for those caught smuggling.* Publicity of such events may help deter others, but direct outreach to legal professionals is also required.
- ◆ *Technology to conduct routine tracking of online purchases of illegal species.*
- ◆ *Legal authorities for inspection/quarantine agencies to enforce these laws.*

## Immediate Actions:

*CGAPS is a voluntary public-private partnership working to protect Hawai'i from invasive species.*