

## Twenty Third SPREP Meeting of Officials

4-6 September 2012  
Noumea  
New Caledonia

### **Agenda Item 11.2: A Broad Look at the Impacts of Invasive Alien Species and Collaborative Pacific Efforts to Prevent Them (A paper submitted by USA)**

#### **Purpose**

1. The paper presents a brief summary of invasive alien species (IAS) on Pacific islands, demonstrates the direct linkage of IAS to critical Pacific island issues, emphasizes the importance of coordinated efforts to address IAS issues and highlights some proactive efforts to address IAS concerns in the region. It seeks the Meeting's endorsement of Resolution 7 from the 17<sup>th</sup> Micronesian Chief Executives' Summit.

#### **Background**

2. IAS are recognized as a major cause of ecological and economic damage worldwide. A 2001 study by Cornell University scientists estimated that the global cost of IAS impacts (for all taxa of organisms – including pathogens) is over 1.4 trillion U.S. dollars every year – representing over 5% of the global economy. Due to their small size, isolation, high levels of endemism and limited capacity to manage IAS threats, the impacts of IAS on islands are often more severe and immediate than that seen on continents. For example, the majority of extinctions on the planet have occurred on islands (95% of bird extinctions, 90% of reptiles, 69% of mammals and 68% of plants) with most of these extinctions caused by IAS, such as feral goats, rats and snakes. In fact, two-thirds of global bird extinctions over the past 200 years have occurred in the Pacific. Fortunately, many of the same characteristics that make islands so susceptible to invasive species damages often give islands more effective options to prevent, mitigate or remove IAS incursions.

3. Efforts to prevent or mitigate IAS damages directly underpin efforts to address other global issues such as climate change adaptation, food security, conservation of biodiversity and critical habitats, and sustainable green economic development. These issues are of particular importance to Pacific islands.

- **Climate Change Adaptation:** IAS can increase the vulnerability of ecosystems to other climate-related stressors and also reduce their ability to sequester and retain greenhouse gases. Climate change impacts, such as warming temperatures, more frequent extreme weather events and changes in carbon dioxide concentrations, are likely to increase opportunities for IAS because of their adaptability to disturbance and to a broader range of bio-geographic conditions than endemic species which have evolved in comparative isolation. Warmer air and water temperatures, along with increases in trade and movement of people, may also facilitate movement of species along previously inaccessible pathways of spread, both natural and human-made. This vicious cycle between IAS and climate change could seriously undermine efforts to develop adaptation capacity in the most vulnerable of areas – such as Pacific islands.

- **Food Security:** IAS from a variety of taxa (including insects, weeds, fungi, bacteria, viruses, fish, mammals and snails) already significantly reduce food production around the world. This can be an especially large problem on Pacific islands where land is often in short supply and many communities rely almost exclusively on local agriculture, horticulture, forestry, fishing and wild harvests for their food production. Two notable examples of IAS impacts to food security are the taro blight of the early 1990's and the more-recent accidental introduction of the African land snail – both having devastating impacts on the cultivation of taro.
- **Biodiversity:** IAS are widely regarded as the number one threat to biodiversity on islands and the number two threat worldwide (after habitat loss). In the Pacific, infamous examples such as avian malaria in Hawaii and the brown treesnake on Guam have resulted in the extinction or extirpation of dozens of species. On islands worldwide, IAS have caused 90% of bird extinctions, 57% of mammal extinctions and 80% of mollusc extinctions. Many countries, including islands, are now also recognizing the link between biodiversity conservation and ecotourism, providing additional impetus to manage the impacts of invasive species on unique and fragile ecosystems.
- **A Sustainable Green Economy:** The UNEP working definition of a green economy is “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.” Pacific islands, per the upcoming SIDS side event at the Rio+20 meeting, realize that “Pacific island nations have the challenge of protecting and conserving their ocean resources while also needing to sustainably develop and manage these resources to address growing national debts and rising poverty levels.” Addressing food security, biodiversity and natural resource and habitat health are critical components of a sustainable green economy – especially in the context of climate change. These linkages show that preventing IAS incursions and mitigating the impacts of those that already exist can directly benefit any efforts to address these allied critical issues.

4. Preventing establishment is the most cost-effective way to minimize IAS impacts to these critical issues. This is best accomplished through a program called biosecurity. Biosecurity is a multi-level, multi-disciplinary, collaborative program to prevent the introduction and establishment of new invasive species. With adequate infrastructural support, biosecurity can often be more effective and more easily implemented on islands due to the relatively few ports of entry, small land areas and lack of land borders with other nations and states.

#### **Current Key Activities to Address IAS in the Pacific**

5. A number of regional and sub-regional IAS coordinating groups have been developed in the Pacific. These groups enhance communication, efficiency and effectiveness of the various IAS efforts in the region and sometimes provide direct expert advice on IAS issues to the highest level or regional decision-makers. Examples include:

- **Pacific Invasives Partnership (PIP):** The Pacific Invasives Partnership is the Invasive Species Working Group of the Roundtable for Nature Conservation in the Pacific. PIP is a partnership of agencies working on invasive species in two or more countries or territories of the Pacific. Its core functions are regional-scale coordination of agencies and ensuring that its members provide invasive species services to Pacific countries and territories. United States agencies are active members of PIP.

- **Micronesia Regional Invasive Species Council (RISC):** RISC was created by the Micronesia Chief Executives to provide the necessary science and insight needed to assist them in making sound decisions on regional defenses against the spread of IAS. Membership is composed of invasive species experts from all nine National, State, Territory and Commonwealth members of the Micronesian Chief Executives Summit (MCES). The primary function of RISC is to provide direct, regionally-coordinated counsel to the Chief Executives on IAS issues. RISC has also been a key proponent in the development of the Micronesia Biosecurity Plan.
- **Pacific Invasives Learning Network (PILN):** PILN focuses on effective invasive species management through a participant-driven network that identifies priority needs of islands, shares skills and resources, strengthens links to technical expertise, and facilitates information sharing in order to accelerate on the ground actions. PILN was established following the 15<sup>th</sup> meeting of the Secretariat of the Pacific Regional Environment Programme (SPREP) members.

6. The United States Government is engaged in many collaborative efforts to promote cooperation on IAS issues and enhance biosecurity in the Pacific. Examples include:

- **The Micronesia Biosecurity Plan (MBP):** In support of the military build-up on Guam, the United States Government (primarily the Department of Defense) has provided over \$4 million to U.S. agencies and local and regional partners to scientifically analyse IAS risks (to Guam, the Commonwealth of the Northern Mariana Islands, the Republic of Palau, the Federated States of Micronesia and the Republic of the Marshall Islands), make recommendations to minimize these risks and collaboratively develop a regionally-vetted, strategic implementation plan. The MBP is the most comprehensive study and plan to prevent and mitigate IAS damages ever attempted, covering all taxa and all Micronesian ecosystems. The U.S. National Invasive Species Council (NISC) is working with regional and international partners such as the Micronesian Center for a Sustainable Future, SPREP, the Micronesia Conservation Trust, the Global Island Partnership, the United Nations Environment Programme and others to highlight the MBP as:
  - A potential model of effective regional collaboration and proactive biosecurity.
  - A comprehensive, risk assessment-based plan that will help inform similar regional efforts in the Pacific and elsewhere.
  - An effective partnership of United States agencies and local, regional and international IAS experts collaboratively addressing a common concern.
- **United States Department of Agriculture (USDA) Pacific Safeguarding Initiative (PSI):** The PSI mission is to strengthen the Pacific Region's safeguarding system via partnerships with countries and non-governmental organizations. The PSI focuses on food and plant pests by detection, prevention, control and eradication of existing threats, and predicting future emerging food and plant pest threats. PSI is currently looking for opportunities to partner with Pacific partners to advance the PSI mission.
- **NISC Pacific Initiative:** Over the past 6 years NISC has provided direct guidance to RISC per a written request by the Micronesian Chief Executives. NISC also provides leadership and coordination for other multi-departmental and multi-lateral IAS activities in the Micronesian region. NISC has expanded that role to work throughout Oceania.
- **USDA Wildlife Services:** Offices based in Guam and Hawaii provide technical expertise to address IAS in the Pacific, especially terrestrial vertebrates, including:
  - Protecting the Pacific region from threats of brown treesnake invasion through a comprehensive interdiction program on outbound transport from Guam.
  - Participating in regional invasive species groups to further knowledge, technical exchange and awareness of invasive species management.

- **United States Geological Survey (USGS):** The USGS conducts research and provides technical expertise on IAS for many Pacific partners. Examples include:
  - Providing the Republic of Palau, Federated States of Micronesia, and the Republic of the Marshall Islands with a variety of brown treesnake support services including monitoring and rapid response training.
  - Consulting in the development of a trapping program that detected and removed an incipient mongoose population from Samoa.

7. **Micronesia Chief Executives Resolution:** The threats of IAS to priority Pacific issues were emphasized in Resolution 7 of the 17th Micronesian Chief Executives Summit in March, 2012. In it the Micronesian Chief Executives, among other things:

- Emphasize the critical threats posed by IAS to Micronesia's island biodiversity, sustainable livelihoods, food security, economic development, human health and adaptation to climate change.
- Direct their staffs to integrate IAS concerns into efforts to address climate change adaptation, food security, human health, conservation of biodiversity and efforts to develop sustainable green economies.
- Resolve to share successes and lessons learned in the development of the Micronesia Biosecurity Plan and highlight the importance of proactive activities with fellow islanders in other regions and the global community.

## Recommendations

8. The Meeting is invited to:

- **note** the immediate and long-term impacts of IAS and the direct linkages of IAS to other critical Pacific issues;
- **note** the utility of regional and sub-regional coordination of IAS efforts to provide efficient and effective coordination and to provide direct expert advice to Chief Executives on IAS issues;
- **note** the invitation to collaborate with and learn from the experiences of the Micronesian Chief Executives, RISC, PIP, Critical Ecosystems Partnership Fund, the United States and many other critical regional Pacific partners on proactive efforts to prevent and mitigate IAS damages through effective biosecurity and collaboration;
- **endorse** Resolution 7 of the 17<sup>th</sup> Micronesian Chief Executives' Summit;
- **consider** resolution 7 of the 17<sup>th</sup> Micronesian Chief Executives Summit in development of their national and regional policies, actions and strategies;
- **consider** the benefits of effective biosecurity and opportunities to learn from and collaborate with regional partners to develop enhanced biosecurity; and
- **consider** the benefits of coordinated efforts to address IAS both on a local and regional scale.