



APFISN WORKSHOP  
on  
Forest Health Technology and Phytosanitary  
Standards

BEIJING, CHINA

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By

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Ministry of Natural Resources and Environment

SAMOA

## The 4 STRATEGIES and ACTIONS

### Strategy 1. Manage established invasive species

Objective : *To develop appropriate programs and procedures to minimize the impacts of established invasive species by eradicating them where practicable, or otherwise managing them*

**Actions:** 1. Identify the existing invasive species in Samoa

2. Undertake a preliminary assessment of potential, economic and social impacts and social values of each of these invasive species.

3. Determine and map where possible the current distribution, past spread, and potential future dispersal.

4. Identify key areas, species, communities, crops and other resources which must be protected from the spread of invasive species.

## STRATEGIES and ACTIONS – cont.

### ▪ Strategy 2. Promote Public support through awareness

Objective : *To enhance the knowledge and understanding of the Samoan*

*community to increase levels of compliance and support for preventing the introduction of invasive species that have not yet reached Samoa, and managing those already existed.*

**Actions:** 1. Undertake preliminary public awareness activities, utilizing television radio, newspapers, and also posters and fact sheets.

2. Conduct workshops of key stakeholders to determine the extent of their knowledge of invasive species.

3. Enhance awareness of relevant legislation and enforcement.

Strategy 3. Prevent the introduction of new invasive species.

Objective 1: *To strengthen the existing Import Risk Assessment (IRA) procedure and associated import protocols for proposed new introductions.*

- Actions:**
1. Develop and introduce Environmental Impact Assessment (EIA) procedures for proposed imports of new organisms.
  2. Continue to strengthen the IRA process
  3. Implement necessary training and capacity building programs to support IRA process.
  4. Review and update the Pest List (Quarantine section) and Biodiversity database to ensure information remains current.

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Objective 2. *To review and enhance the Emergency Response Plan (ERP) to ensure an immediate and effective response to the detection of any potential invasive species.*

- Actions:**
1. Revise the existing ERP and associated protocols to ensure that appropriate actions are initiated immediately following the detection of potential invasive species.
  2. Recommend legislative amendments to ensure effective support for the ERP.
  3. Develop a comprehensive illustrated manual that covers the key invasive organisms of most concern to Samoa.

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**STRATEGY 3 – cont.**

Objective 3: *Enhance the current inspection and surveillance systems and procedures for potential invasive species*

- Actions:**
1. Identify all likely entry pathways and relative risk for entry
  2. Assess the adequacy of current surveillance for high-risk invasive spp.
  3. Conduct an audit of current skills and experience, identify important gaps and recommend appropriate training for border control, quarantine and general surveillance.

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**WHAT IS BEING DONE?**

**INTERNATIONAL LEVEL**

- **CONVENTIONS** (WSSD, WFS, Agenda 21, World Heritage Convention, RIO, CBD, IPPC resulting in 8 MEA's for Pacific Island Countries)
- **MULTIGOVERNMENT ORGANIZATIONS** (UNDP, UNEP, GEF, FAO, WB, ADB)
- **NONGOVERNMENTAL ORGANIZATIONS** (WWF, IUCN, CI, TNC, GISP, CEPF, etc.)
- **NETWORK (TECHNICAL) GROUPS** (Pestnet, Aliens, PILN, etc.)

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**WHAT IS BEING DONE?**

**REGIONAL LEVEL**

- **SPREP**
- **USP**
- **SPC**
- **AID DONORS NZAID, AUSAID**
- **NGO's (FSPI, etc.)**

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**NATIONAL LEVEL**

- Ministry of Natural Resources, Environment and Meteorology, Division of Environment & Conservation (MNREM/DEC ) and Division of Forestry
- Ministry of Agriculture and Fisheries (MAF)
- Ministry of Works, Transport and Infrastructure (MWTI, PUMA Section) & Ministry of Education (NUS)
- NGO's (Women in Business and Development, Siosiomaga Society, METI, etc.)

**COMMUNITY LEVEL**

- Youth Groups
- Church Groups
- Village 'Aumaga'
- Women's Committee's

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## EXAMPLES OF (IAS) IN SAMOA



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Scarlet Fruited or Ivy Gourd

*Coccinia grandis*

- Intentionally introduced late 1990's and first recognized as an invasive threat in late 2002 (Space & Flynn)
- Plants are dioecious but unfortunately both male and female plants are present in Samoa
- Widespread throughout Apia environs being cultivated by man and now there is evidence being spread by other invasives
- Eradication not feasible
- Investigations into existing biological control options are being pursued



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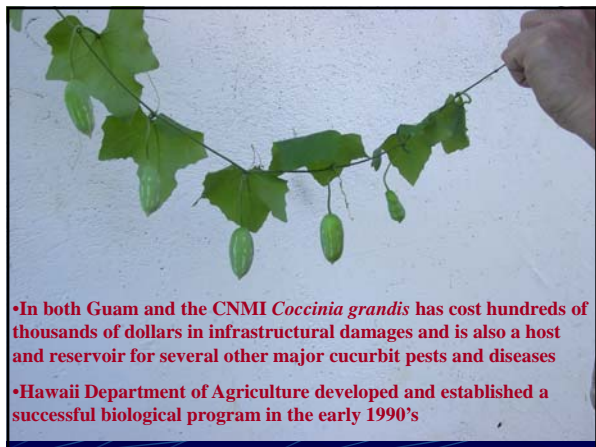
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- In both Guam and the CNMI *Coccinia grandis* has cost hundreds of thousands of dollars in infrastructural damages and is also a host and reservoir for several other major cucurbit pests and diseases
- Hawaii Department of Agriculture developed and established a successful biological program in the early 1990's

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## Wanted

By Division of Environment  
& Conservation  
**FOR  
INVADING SAMOA.  
IVY GOURD**  
Call  
31197 or 31198




**What is it?**

- Ivy gourd (*Cucurbit pepelis*) is an aggressive, climbing vine of 20m, that can climb.
- Leaves: five point, laminate.
- The white flowers have 5 petals.
- The fruits are bright red, 10-15cm long, and weigh 100-200g.
- The gourd is a nuisance weed!

**Why is it a problem?**

- The gourd is an aggressive vine that quickly 'whakes' existing plants and structures like a ladder.
- It can be controlled by regular spraying with herbicides.
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**What is DEC doing about it?**

- DEC is part of the Ministry of Natural Resources, Environment and Conservation, and is working to control the gourd.
- DEC wants to prevent the gourd from spreading.
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- DEC wants to prevent the gourd from spreading.

**What can you do?**

- Report gourd to your local DEC office.
- If you have ivy gourd call DEC.
- Control gourd.
- The gourd produces fruit in a variety of sizes and colors. These fruits are bright red, yellow and green. They are covered in small, sharp spines.
- Control gourd.
- Control gourd.
- Control gourd.

Private Bag, Apia, Samoa  
Telephone: +685 31198 or 31197 Fax: +685 30589  
Email: [nature@dec.gov.ws](mailto:nature@dec.gov.ws)  
Website: [www.dec.gov.ws](http://www.dec.gov.ws)

Ministry of Natural Resources, Environment & Meteorology

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**GIANT AFRICAN SNAIL**  
*Achatina fulica*

- First introduced accidentally to Samoa in 1982 and was successfully eradicated
- Arrived again in January 1993 and unfortunately eradication attempts failed and has now established on both Upolu and Savai'i
- Biological control efforts have been disastrous to native gastropod fauna
- Carrier of human disease



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**TARO LEAF BLIGHT**  
*Phytophthora colocasiae*

- First identified on east coast of Upolu in May-June 1993
- Early eradication efforts failed and a breeding program was required to bring stable food back to Samoan tables
- Devastated major taro export industry
- Taro is now back in the market place




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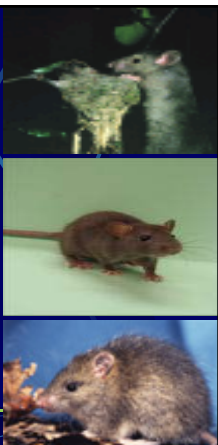
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**RODENT SPECIES *Rattus spp.* & *Mus musculus***

- Samoa has three rats species *Rattus rattus*, *Rattus norvegicus* and *Rattus exulans* and one mouse species *Mus musculus*
- All four species are carriers of human related diseases
- *Rattus sp.* have directly caused or contributed to the extinction of many species of wildlife species throughout the Pacific including birds, small mammals, reptiles, invertebrates, and plants.
- MNREM is undertaking an eradication effort for two of the outer Aleipata islands 'Nu'utele' & Nu'ulua for the protection and restoration of island native bird species




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**THANK YOU VERY MUCH**

**FAAFETAI TELE LAVA**




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