AWARENESS STRATEGY

MANAGEMENT OF WATER LETTUCE (*Pistia stratiotes*) AQUATIC PLANT

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1.0 Introduction

Water lettuce is a free floating aquatic plant in rosettes of green leaves, rosettes occurring singly or connected to others by short stolons whose origins are uncertain. It forms large, dense floating mats. The plant can adapt to life in ponds, dams, lakes and quiet areas of rivers and streams, but cannot withstand salt water. Still continue with observation whether it is survive in winter.

Roots numerous, feathery. Leaves often spongy near base, densely soft pubescent with obvious parallel veins, slightly broader than long.

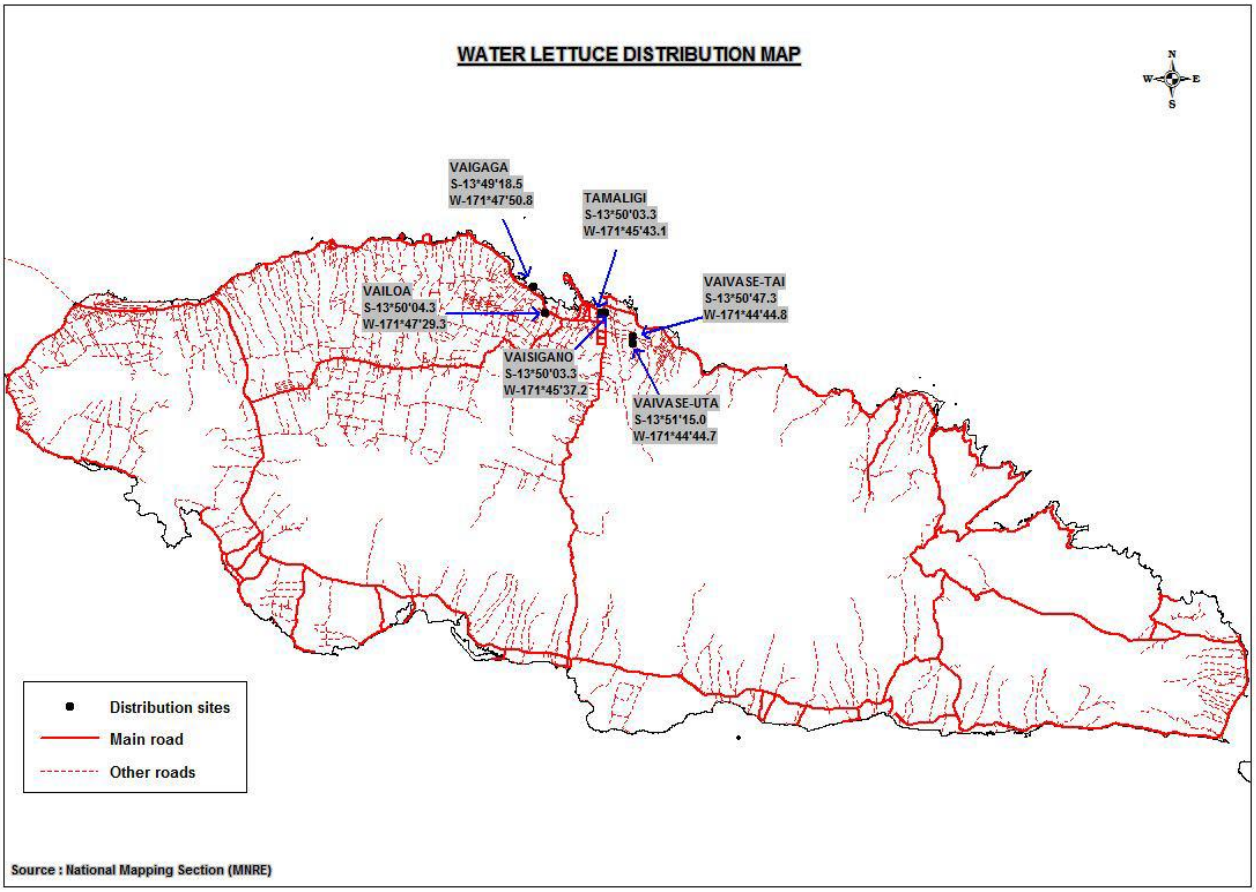
Flowers inconspiceous, clustered on small fleshy stalk nearly hidden in leaf axils, with single female flower below and whorl of male flowers above. Fruit arising from female flower as a many seeded green berry.

Reproduces rapidly by vegetative offshoots formed on short, brittle stolons. Varies seasonally in density of rosettes, from less than 100 to over 1,000 per square metre.

Pistia stratiotes has often been grown as an ornamental in lakes, ponds, aquaria and gardens. It is often used in tropical aquariums to provide cover for fry and small fish. It has medicinal properties and can be used as fodder for cattle and pigs. It can be beneficial in certain instances as it outcompetes algae for nutrients in the water, thereby preventing massive algal blooms. However, these uses cannot compensate for this plant's overall negative impacts.

The plant brought in Samoa by gardener for ornamental purposes as it has an attractive broad greenish fan like leaves.

However, during the field survey conducted by the Division of Environment (DEC) under the Ministry of Natural Resources and Environment (MNRE) in November 2012. They spotted the plant nursed by a gardener and distributed to customers, friends and relatives mainly in the urban area shows at the following map:



Map 1: Villages identified nursing the plant

In Map 1, water lettuce is currently confined to small areas in Apia and the main concern of the Ministry, are (1) the fast growing habit of the plant (2) its ornamental values, these will encourage people to spread the plant to other areas of Upolu and other islands of Samoa. Samoa is being blessed by more than 40 rivers, both perennial and annual rivers, once this plant accidentally grows in quiet part of rivers, its impacts will affect quality and quantity of water. Therefore, the Samoa National Invasive Species Task Team (SNITT) and recommendation from community consultations agreed to focus an awareness campaign activity of GEF PAS IAS Project on the water lettuce (*Pistia stratiotes).*

2.0 Communication Goal and Objectives

The overall goal of this awareness strategy is to raise awareness on invasive species focusing on water lettuce.

The goal will be achieved through the following communication objectives:

1. Members of the target groups will be able to identify the weed on sight;

2. Members of the target groups will understand and appreciate the potential harm the water lettuce can do in Samoa;

3. Member of the target groups will have the knowledge and skills to report and/or remove and dispose of the species effectively;

4. Members of the target groups will have the knowledge and motivation to prevent reintroduction of the plant in Samoa or to other areas of the country.

3.0 Target Groups

While it is desirable that the entire public should become aware of and engaged in managing and controlling invasive species, it is recognised that this is a longer term goal. Within the constraints of the available budget, it is proposed that this programme target specific primary audiences which will be capable of either directly taking action or otherwise influencing change.

Secondary audiences will be targeted for awareness raising and longer term sensitization. Based on the information gleaned from the national consultations, the following target audiences have been identified:

<u>Primary Audience (those who can take action)</u>

- Plant nursery owners/managers (florists, farmers)
- Gardeners and landscapers
- Ministry of Agriculture and Fisheries
- Ministry of Natural Resources and Environment;
- Local and overseas Tourists;
- Samoa Tourism Authority;
- Ministry of Women, Community and Development;
- NGOs;

<u>Secondary Audience (those who can help deliver the message)</u>

- School children
- Media (radio, TV, newspaper)
- Communities;

4.0 Messages

The key messages to be delivered are:

a. Water lettuce blocks waterways and freshwater swimming areas;
b. Water lettuce can spread as quickly and cause as much damage as the Giant African Snail;
c. Water lettuce clumps to form up a breeding place for mosquitoes which spread mosquitoes born diseases;
d. Water lettuce blocks light and decrease oxygen which kills freshwater invertebrates in water ways;
e. Water lettuce can minimize the flow of rivers and affects the quality and quanity of water in intakes;
f. Keep it out from unaffected areas;
g. It is easy to remove water lettuce – pull it out, dried, burnt or compost it;
h. It is everyone's responsibility to keep Samoa safe from invasive species;

5.0 Products and Activities

The programme will centre on raising the profile of the species and securing local interest and motivation for action to eradicate the weed.

Products

The following products are proposed:

1. A general ***factsheet*** on the water lettuce in both English and Samoan. The factsheet will describe the species and provide information on removing it and/or preventing its spread. Factsheet will be shared in the affected areas, to all nurseries, at the airport, with Quarantine officials, etc.
2. ***Poster*** based on the fact sheet focused on ease of identification of the species. Poster will be distributed throughout the affected areas and pasted on walls, and disseminated in public events, etc.
3. ***Media stories*** [stories in TV, radio, newspaper, Students' corner (Observer) with a simple competition that requires readers to respond.]
4. Develop a ***powerpoint presentation*** that could be used by SNITT members to give public presentations.
5. ***Certificate*** or award for a champion that a nursery/gardener is invasive free.
6. ***Consultation*** with target farmers;
7. ***T Shirts*** for the consultation participants;

Activities

1. Presentation of stories using media such as radio talk, TV ads and news, newspaper and others;
2. Consultation with the identified communities [name them] – MNRE talks with farmers/community groups; identify the plant; advise on removal; assess post removal;.
3. Field survey and removal of plants by communities;
4. Photographs and video images collated (before and after) for short film;
5. Presentation of awards/certificates;
6. Producing fact sheet and poster;

7.0 Monitoring and Evaluation

The following simple indicators will help assess the overall input versus impact of the programme:

1. Number of posters and pamphlets delivered to individuals, organisations and community groups;
2. Number of presentations on IS made at public events;
3. The number of reports of water lettuce removal;
4. The number of nurseries certified as free water lettuce/invasives;
5. Number of stories in TV, radio and newspaper such as responses to quiz questions or other competition in the Students' Corner.