



VANUATU CLIMATE CHANGE AND
DISASTER RISK REDUCTION



LESSONS LEARNED AND BEST
ADAPTATION PRACTICE PROFILE

MERREMIA MANAGEMENT MODEL

Testing and modelling preventative measures to limit the spread and ecological impacts of invasive species

Invasive Species Management Model, by Live & Learn Vanuatu

Merremia Management Model



LIVE & LEARN
Environmental Education

Vanuatu



Erakor House, Erakor Bridge/Korman Stadium



PROJECT BRIEF |

The aim of the EU-funded Invasive Species project is to develop an invasive species management model, test it in the field and if it is effective, replicate it into other parts of Vanuatu, including other Pacific Island countries. The project also looks at providing educational/awareness materials on invasive species and how they impact the environment, social and economic aspects of the community and the nation. Furthermore the project aims to provide appropriate strategies to control each of the key invasive species identified. The project also aims to assist the government to strengthen its capacity to control invasive species.

PROJECT DURATION |

5 years: December 2010 to January 2016.

LOCATION(S) COVERED |

Santo: Lorum & Sarete
Erromango: Ipota & Port Navine
Tanna: Port Resolution

FUNDING |

European Union under its in-country funding programme.

PARTNERS/COOPERATING ORGANIZATIONS|

Lead Agency: Live & Learn

Partners: Department of Forestry, Agriculture and Rural Development and participating communities. Through the National Invasive Species Technical Committee (NISTAC) are Biosecurity Vanuatu, Department of Environmental Protection and Conservation (DEPC) and Fisheries Dept.

Additional key partners: Sanma and Tafea provinces while Dr Kevin Glencross and Dr Geoff Smith of the Southern Cross University and the University of New England in Australia are our technical advisors.

OBJECTIVES & GOALS |

(Overall objective) Increase the quality of information in Vanuatu about invasive species and develop a model to limit their spread and impact.

(Objective 1) A sustainable number of Vanuatu's most critical and globally important island ecosystems are restored.

(Objective 2) Develop, test and apply educational resources to support action on invasive species.

(Objectives 3) Strengthen the capacity of Government to control invasive species.

STRATEGIES & PROCESSES / METHODS |

Phase I, the following activities were planned:

- Identify high priority research needs, especially for species affecting environment and primary production through a Rapid Assessment of Perception (RAP) on Santo, Tanna and Erromango. 250 copies of the RAP will be printed and distributed to relevant stakeholders country-wide.
- Priority areas will be mapped out.
- A detailed profile of key invasive species including *Merremia peltata* will be established.

Phase II, the following activities will be undertaken:

- Current information on invasive species will be strengthened.
- Educational resources will be produced and distributed country-wide. They will include a media guide, a farmer's pocket guide, flipcharts, DVDs and an Invasive Species Management Model. Invasive species' identification posters have already been printed and distributed.

Phase III, the following activities will be carried out:

- National Invasive Species' Action Plan will be established.
- National Invasive Species Coordinating Committee/National Invasive Species Technical Committee had been established.

Phase IV, we will carry out the following activities:

- Merremia Management Model is developed and successfully applied.
- Community members and government staff are trained on the subject.



- Information and an invasive species' database is updated and new outbreaks are reported.
- Merremia Management Model is replicated on other sites.

RESULTS

Phase 1 Research and Assessment

Phase 1 was carried out in 2011 and 2012 whereby a RAP analysis was conducted in the following five sites: Port Resolution, Ipota, Port Navine, Lorum and Sarete. The following sites: Lorum (East Santo), Port Resolution (Tanna) and Ipota (Erromango) were selected as the research locations. The key issues identified are tabulated in Table 1 below.

Table 1 RAP results

Key Issues	RAP Sites				
	Port Resolution	Ipota	Port Navine	Lorum	Sarete
Increasing population	✓	✓	✓		
Invasive Species	✓	✓	✓	✓	✓
Feral animals	✓				
Water availability	✓				✓
Deforestation		✓	✓		
Sandalwood		✓			
Land availability				✓	

Two hundred and fifty copies of the RAP will soon be published and distributed to stakeholders country-wide. A profile of key invasive species, including *Merremia peltata* is also being developed. The document is a progressive document that the Live & Learn Vanuatu, the National Invasive Species Technical Committee (NISTAC) and other stakeholders are putting together. Profiling is still a challenge and is a gradual process because of the vast distances between the Vanuatu islands and the high costs associated with collecting information from islands spread over a vast area of sea and land terrane.

Phase 2 Generating support for management of invasive species

A variety of education materials are being developed to target different audiences. These will soon be printed and distributed to relevant stakeholders country-wide. Identification posters have been produced and distributed to relevant stakeholders. A media guide for journalist and a flipchart is currently being created.

Phase 4 Control of eradication of invasive species

A Merremia Management Model was designed and developed which was peer reviewed by both forestry and weed specialists and soon will be tested in the field.

PLAN & SUSTAINABILITY |

We are working collaboratively with the Department of Forestry, the Department Agriculture and Rural Development and participating communities. Our aim is to source the knowledge and skills from these two government departments and eventually have them assist in the project site maintenance and continuity. We also have capacity building programmes for the participating communities to up-skill them to both maintain the project sites and replicate it. A community development committee (CDC) have been established in each of the project sites to coordinate and provide sustainability to the project.

BEST PRACTICES |

The Management Model we have developed is aimed at suppressing merremia regrowth as well as improving food security and counteracting any negative impacts of climate change. The model is based on an agro-forestry system utilising drought resistant kumala (sweet potato) as a cover-crop. The cover-crop will suppress Merremia regrowth during the early stages of whitewood and sandalwood tree growth. We will use mucuna as our other cover-crop in rotation with kumala to replenish soil fertility.

LESSONS LEARNED |

- Delays in funding request and disbursement has impacted the project implementation. Future funding request must be submitted on time for donor partners to approve and release funds on time.



- The reluctance of a staff member to relocate to a designated project site impacted on the implementation of activities.
- Dealing with communities and landowners at the project sites is complex. To avoid future complications, landowners and communities must clearly understand their role and responsibility in this project. They need clear explanation and assurance of the benefits they will derive from their participation in the project.
- The tightening of Live & Learn Vanuatu's internal procedures to prevent the misuse of project assets.
- Analyse the effectiveness of the management model and replicate it.
- Capacity-train government staff and communities to test the management model.
- Print and distribute educational resources.
- Review the invasive species' national legislations and policies.
- Complete profiling of key invasive species.
- Establish an invasive species' information database.

WAY FORWARD |

- Field test the management model.

For more information

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