



Training workshop report: Invasive plant project management

American Samoa Community College
Mapusaga, Tutuila Island, American Samoa
25 January - 4 February, 2010



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(see also - American Samoa training workshop: Technical Report
<http://issg.org/cii/PII/>)

Funded through a grant from –



Pacific Southwest Region

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SUMMARY

As a result of successful workshops in Palau and Pohnpei, PII was asked to deliver a training workshop for the Forestry Programme of the Community and Natural Resources Division of the American Samoa Community College.

The design, implementation, monitoring and evaluation of priority invasive plant management projects in American Samoa were covered at a workshop at the American Samoa Community College on Tutuila from 25 January to 4 February, 2010. The workshop was based on active learning principles and gave attendees the skills necessary to collect and manage data for project planning, implementation and accountability for successful project management. Participants worked in teams to plan their own priority projects. An efficient and effective data collection and management system that is easy to use and maintain and adaptable to other invasive species projects across the Pacific was further developed.

This was the most successful workshop yet as participants had prepared well for the content areas. Participant evaluations of the workshop gave scores of 100% to questions about the workshop meeting their expectations and whether the methods used in the workshop would help them in their work. Comments offered included *“The workshop presented way more than I expected. It is the best weed training I have taken over the last 12 years.”* and *“The workshop offered a practical approach to weed management.”*



Participants at the end of the training workshop on invasive plant project management in American Samoa. (Photo: Tony Mauga Lei)

Introduction:

Invasive species management projects are usually complex and long-term. Effective project design and implementation is essential to assist managers to monitor and evaluate the effectiveness, efficiency and accountability of a project. Accurate and well-supported evaluations can help funding agencies decide which projects are worthy of ongoing support.

After a successful pilot workshop in Palau (2008), follow-up training in Palau and Yap (2009) and a training workshop in Pohnpei (2009) (see reports at <http://issg.org/cii/PII/>), the Pacific Invasives Initiative (PII) was asked by the Acting Manager of the Forestry Programme of the Community and Natural Resources (CNR) Division of the American Samoa Community College (ASCC) to run a workshop. CNR Forestry invited other agencies and participants for the workshop were selected by their managers.

Workshop partners:

Forestry Programme, Community and Natural Resources Division, American Samoa Community College

Institute of Pacific Islands Forestry, USDA Forest Service

Pacific Invasives Initiative (PII)

Workshop leaders:

Facilitator - Bill Nagle, Pacific Invasives Initiative

Technical Instructor - David Moverley, Te Ngahere Ecological Restoration

Participating Agencies:

ASCC-CNR Forestry Program

Department of Agriculture (DOA)

Department of Marine and Wildlife Resources (DMWR)

National Park of American Samoa (NPAS)

Funding:***Primary***

ASCC-CNR Forestry Program through grants from the USDA Forest Service Pacific Southwest Region

Secondary

Pacific Invasives Initiative, David Moverley, Anne Marie LaRosa, Bill Nagle, National Park of American Samoa

Workshop purpose:

The workshop was designed to -

- Give weed control personnel the skills and confidence necessary to manage invasive plant projects.
- Further develop skills in the collection and management of data for project planning, implementation, monitoring, evaluation and accountability purposes.
- Provide an efficient and effective data collection and management system that is easy to use and maintain and is adaptable to similar projects across the Pacific.

Workshop content:

The workshop was participatory and based on active learning principles. Attendees were encouraged to ask questions and discuss topics amongst themselves in their own language. Introductory power-point sessions showed real examples of the component being addressed

and teams then built up their project workbooks on a computer with the instructors providing individual help where required. A question and answer session followed by a discussion amongst participants concluded each section.

The sections involving human resources, recording, monitoring and evaluation utilised Microsoft Excel spreadsheets and participants created their own human resource chart, work schedule, weed database, and key performance indicators which they used for monitoring the effectiveness and efficiency of their projects.

The workshop took the participants through the principal components of planning, implementation, and monitoring and evaluation, initially focusing on one selected plant pest or site. Each section built on the previous one and used the results of that section to progress to the next one. In this way implementation resulted from planning, and monitoring and evaluation resulted from implementation.

All these sections are inter-connected and develop a robust, well-designed project built on good decision-making and providing measurable outcomes. This gave confidence and motivation to participants in relation to their invasive plant projects. The tools introduced throughout the workshop will be useful for other taxa and other projects requiring sound planning and meaningful results.



Participants on a site visit during the invasive plant project management training workshop in American Samoa. (Photo: A. Driva).

The workshop teams focused on priority weeds, including a newly identified problem, on the main island of Tutuila. Participants worked on planning, designing, implementing, monitoring and evaluating to ensure that success of their projects can be measured. Forestry staff from the Manu`a Islands, where the invasive plant problem is currently less serious but effective biosecurity measures are required to prevent new incursions, also participated.

Invasive plant management projects of each of the four teams were reviewed and revised: CNR Forestry, *Castilla elastica*; DOA, *Cuscuta campestris*; NPAS, *Falcataria moluccana*; DMWR, *Spathodea campanulata*. Other invasive plants were also discussed (see Appendix 1 for full list of names). Local knowledge and experience was combined with specialist experience to strengthen effectiveness, efficiency and accountability through improved project design, data collection, monitoring, evaluation, and reporting.

An exercise in ranking invasive plants in terms of the seriousness, or potential seriousness was included in this workshop to assist agencies with prioritizing projects. Anne Marie LaRosa (USDA FS) investigated several weed risk assessment systems, including the one developed by Natasha Doherty for Samoa. Workshop participants tested those systems, primarily the one developed for the New Zealand Department of Conservation, to build their own based on their projects (Appendix 2). The final score compared with that given by the American Samoa Invasive Species Team (ASIST) some years previously (Appendix 3).

At the end of the workshop, participants had their own working document which can be updated and added to as capacity is increased or further relevant information is gathered. They had a resource chart, work schedule and weed database they can update and record data into and get performance measures from, and they have a PowerPoint presentation outlining their project to use within their agency or to external funding or other agencies. The participants created all these components for themselves as they worked through the processes. Lessons learned from the workshop will provide a model for other invasive species management projects in the Pacific.



ASCC-CNR Forestry and DMWR staff members cooperate to cross-check location of sites
(Photo: Anne Marie LaRosa)

The workshop has three main elements -

1) Prior to the workshop –

1.1) Participants were sent a pre-workshop questionnaire (Appendix 2) explaining the commitment required (including an agreement signed by managers to complete a follow-up questionnaire after six months of practicing skills learned in the workshop) and to obtain background information about current training and equipment used. All teams provided this information, but not until the workshop was underway and again there was wide variation between teams and individuals in knowledge and skills.

1.2) A pre-workshop preparation sheet was sent to participants to guide them in assembling the project information required for the workshop. For the first time, all teams had put effort into addressing the topics in the preparation sheet prior to the workshop which was a valuable advantage to workshop progress as it allowed more time for on-on-one mentoring and team cooperation.

2) At the workshop –

2.1) The four teams presented work on their projects to provide a thorough understanding of the projects for all attendees. Unfortunately, the planned field visits could not be held until a week later because of the torrential rain resulting from the proximity of Cyclone Nisha to the Samoan archipelago. However, the field visits were still important to the workshop process.

2.2) The specialist instructor presented examples of “old school” and “new school” weed control projects. The examples demonstrated how and why different approaches are used, how they are recorded, how success is measured and the advantages that “new school” methods offer.

2.3) Participants then revised the projects chosen by the teams using the three-pronged approach below (see Appendix 3) and guided by the workbook developed for the workshop:

<u>Planning:</u>	<u>Implementation:</u>	<u>Monitoring and Evaluation:</u>
Objectives	Methods	Success Measures
Target characteristics	Mapping	Evaluation
Project site characteristics	Human Resources	Reporting
Timing	Recording	

2.4) A ranking/prioritization exercise was also held.

2.5) A reporting session on the final day gave attendees the opportunity to present to stakeholders (managers and colleagues from their agencies) the main changes they will make to their projects as a result of the workshop. A discussion on the suitability of the system developed during the workshop for other Pacific nations was also held.

4) After the workshop –

4.1) Participants can contact the instructors for advice as they develop their projects with their new skills and knowledge.

4.2) A follow-up questionnaire will be administered by PII six months after the workshop to check on application of the skills and knowledge.

4.3) Follow-up visits are recommended to institutionalize the learning.

Workshop programme:

January Mon 25	am	Introductions Presentation of participant projects	Powerpoints
	pm	Expectations/ Timetable Introduction to PII and invasive species management	Powerpoints
Tue 26	am	New Zealand experiences and workshop overview	Powerpoints
	pm	Planning (Baseline Information) -Objectives -Plant Characteristics -Project Site Characteristics -Timing	Powerpoints Flip Charts Workbook Computers (1 per group)
Wed 27	am	Planning (Baseline Information) -Objectives -Plant Characteristics -Project Site Characteristics -Timing	Powerpoints Flip Charts Workbook Computers (1 per group)
	pm	Implementation -Methods -Mapping -Human Resources -Recording	Powerpoints Flip Charts Workbook Computers (1 per group)
Thu 28	am & pm	Implementation -Methods -Mapping -Human Resources -Recording	Powerpoints Flip Charts Workbook Computers (1 per group)
Fri 29	am & pm	Monitoring and Evaluation -Measuring success -Evaluating -Reporting	Powerpoints Workbook Computers (1 per group)
Weekend			
February Mon 1	am	Monitoring and Evaluation -Measuring success -Evaluating -Reporting	Powerpoints Flip Charts Workbook Computers (1 per group)
	pm	Site visits	Transport
Tue 2	am	Monitoring and Evaluation -Measuring success -Evaluating -Reporting	Powerpoints Flip Charts Workbook Computers (1 per group)
	pm	Prioritisation - deciding on parameters - developing a system - testing the system - comparison with ASIST list	Powerpoints Flip Charts Workbook Computers (1 per group)
Wed 3	am & pm	Preparation of reports Preparation of presentations	
Thu 4	am	Presentation practice Report to Stakeholders	Powerpoints Flip Charts
	pm	Workshop Evaluation	Workbook Computers (1 per group)

Workshop attendance:

Seventeen people attended most days of the workshop –

Name and Email address	Agency and Position	Other contact details
ASCC Community & Natural Resources Forestry Program		
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Others were able to attend parts of the workshop –

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The ASCC_CNR Forestry team refines their presentation for stakeholders. (Photo: Bill Nagle)

Workshop evaluation:

This was the most successful workshop yet. Most teams had used the pre-workshop preparation sheet, done considerable homework and were ready for action. More than 60% of participants had also completed the pre-workshop participant questionnaire to determine experience, interest in the workshop and agency/manager support (Appendix 2). Of particular value was the fact that three teams had an experienced GPS/GIS member which greatly increased the amount of GIS work that could be done.

The progress of participants was checked informally every day and the workshop was evaluated by questionnaire on the final day. Each participant was asked to score some questions (1 = No, not at all; 4 = Yes, completely) and to provide a written response to others (average scores and full written responses can be seen in Appendix 4). A discussion on the strengths and weaknesses of the workshop was also held on the last day. A list of the points raised is in Appendix 5.

In general, participants scored the workshop very highly and the evaluation clearly shows that the workshop was successful. Most questions received a score above 90% with the lowest score (related to the time available), indicating that the length of the workshop was regarded as too short (Q10 = 85%), although explanatory comments pointed to some of the reasons for that.

The question about the workshop meeting expectations (Q2) scored 100%, as did the questions about the usefulness of the methods learned helping in participant's work (Q14) and the helpfulness of the explanations provided by the presenting team (Q8). Most (81%) of participants said that the workshop was "Very useful" for improving knowledge and 74% said the same for improving their skills (Q13).

Comments in response to Q2 included "*The workshop presented way more than I expected. It is the best weed training I have taken over the last 12 years.*", "*The workshop offered a practical approach to weed management.*" and "*... the way we did reports before was hard and sometimes [we] did not understand. Now David & Bill showed us way to make reports and do it in a way we would understand.*"

Comments in response to Q14 (*Will the methods used in this workshop help you personally in your work?*) included "*... this workshop taught me how to build a "WINNING PROGRAM" on weeds. More great things will happen after this workshop.*", "*... the workbook now serves as a guide in planning activities. The information collected from this workshop will assist in better data collection and effective planning.*", "*...if we follow the whole process of managing this will make our job a lot easier.*", "*... now we can plan better ways to work and be sure about what we are doing.*"

The response to Q9 (prior involvement in project planning) showed that not all (63%) of the participants had previous experience. This response, in particular, emphasised the need for this type of training workshop with an applied planning focus and tools that get clear results.

It is not possible in a short workshop like this to address the more complex issues of invasive species management, such as decision theory and economic factors involved in deciding when to stop looking for the invasive, but the tools provided to evaluate each eradication programme are a major step forward.

Achievement of outcomes:

The workshop was designed to -

- Give weed control personnel the skills and confidence necessary to manage invasive plant projects.
- Further develop skills in the collection and management of data for project planning, implementation, monitoring, evaluation and accountability purposes.
- Provide an efficient and effective data collection and management system that is easy to use and maintain and is adaptable to similar projects across the Pacific.

As described above, participants provided positive evaluation of the workshop and asked for follow-up training. Usefulness of the system for other Pacific nations was also discussed and agreed on.

Lessons learned:

All teams appreciated the opportunity to cooperate with other agencies. Having several teams at the workshop provides opportunity for sharing experiences with projects.

The wide variation between teams and individuals in knowledge and skills, particularly in computing proficiency, can be addressed with this individualised team approach to training.

The workshop content is tailored to each team's project and experience and is designed to encourage maximum engagement from participants.

An important strength of the team approach used in this training is that teams can work on their own project in their own language.



Workshop participants discuss the effects of ring-barking (girdling) and herbicide application on *Castilla elastica* during a site visit. (Photo: Bill Nagle)

Next steps:

Several participants asked for follow-up action to build on the successful learning accomplished at the workshop. This would best be done with visits to individual teams in their home territory so that targeted and applied training can be achieved. (Note: Participants from Palau and Yap emphasised the value they received from follow-up visits after attending the Palau pilot workshop in 2008).

The success of the workshop should be shared with other areas of the Pacific and, if requested, workshops can be organised.

Coordinated efforts should be made to provide training throughout the Pacific in other aspects of invasive species management which could not be covered in this brief workshop.

ACKNOWLEDGEMENTS:

Many people contributed to the success of this workshop. It was a cooperative effort and I would like to thank Aufa'i Apulu Ropeti Areta, Extension Program Coordinator and Acting Forestry Program Manager, ASCC-CNR, for commitment, encouragement, organisation and making the workshop happen; Anne Marie LaRosa, USDA Forest Service for commitment, support and participation; David Moverley for agreeing to participate despite the changing schedules; Aufa'i Areta (ASCC-CNR Forestry), Elisapeta Sualevai (DOA), Lainie Berry (DMWR) and Mike Reynolds (NPAS) for allowing staff to participate; Helen, Tony and the ASCC-CNR Forestry team for hosting the workshop and logistical support; managers who attended the Feedback seminar; the USDA Forest Service Pacific Southwest Region for primary funding; and my Pacific Invasives Initiative colleagues for giving me the time to help plan, organise and run the workshop. Special thanks to all the practitioners whose preparation and participation made the workshop a success.



David Moverley (Specialist Instructor), Anne Marie LaRosa (USDA FS, Institute of Pacific Island Forestry), Aufa'i Apulu Ropeti Areta (ASCC-CNR). (Photo: Bill Nagle).

APPENDIX 1

INVASIVE PLANTS DISCUSSED AT THE WORKSHOP

TLA*	Common name	Family	Genus	species
AFT	African tulip	Bignoniaceae	<i>Spathodea</i>	<i>campanulata</i>
CHO	Chromolaena	Asteraceae	<i>Chromolaena</i>	<i>odorata</i>
CLH	Koster's curse	Melastomataceae	<i>Clidemia</i>	<i>hirta</i>
CLQ	Bronze-leaf	Lamiaceae	<i>Clerodendrum</i>	<i>quadriloculare</i>
COL	Chain-of-love	Polygonaceae	<i>Antigonon</i>	<i>leptopus</i>
FAM	Kerosene tree	Fabaceae	<i>Falcataria</i>	<i>moluccana</i>
FSK	False sakau	Piperaceae	<i>Piper</i>	<i>auritum</i>
GDD	Golden dodder	Convolvulaceae	<i>Cuscuta</i>	<i>campestris</i>
HOR	Honolulu rose	Lamiaceae	<i>Clerodendrum</i>	<i>chinense</i>
IMP	Imperata	Poaceae	<i>Imperata</i>	<i>cylindrica</i>
IVG	Ivy gourd	Cucurbitaceae	<i>Coccinia</i>	<i>grandis</i>
LEL	Leucaena	Fabaceae	<i>Leucaena</i>	<i>leucocephala</i>
MEA	Chinaberry	Sapindales	<i>Meliaceae</i>	<i>azedarach</i>
MEP	Merremia	Convolvulaceae	<i>Merremia</i>	<i>peltata</i>
MEQ	Melaleuca	Myrtaceae	<i>Melaleuca</i>	<i>quinquenervia</i>
MIK	Mile-a-minute	Asteraceae	<i>Mikania</i>	<i>micrantha</i>
OCT	Octopus tree	Araliaceae	<i>Schefflera</i>	<i>actinophylla</i>
PRX	Praxelis	Asteraceae	<i>Praxelis</i>	<i>clematidea</i>
PRT	Panama rubber tree	Moraceae	<i>Castilla</i>	<i>elastica</i>
RAT	Rattan palm	Areaceae	<i>Calamus</i>	spp.

* three-letter-abbreviation (for data recording purposes only – not the standard taxonomic abbreviation/symbol; e.g. <http://plants.usda.gov/index.html>)

APPENDIX 2

Weed Prioritisation - modified from NZDOC Weed Risk Assessment
(Peter A. Williams, Melanie Newfield: A weed risk assessment system for new conservation weeds in New Zealand. SCIENCE FOR CONSERVATION 209, Department of Conservation, New Zealand)

Section 2. Impacts	sum 2.1 to 2.4 5 7
<i>A. Interactions</i>	
2.1 Maximum size of mature individual plant (small = 1, Medium = 2, large = 3, very large = 4, largest = 5)	1 to 5
2.2 Totally taking over sites, or covers native species to form canopy	1 or 0
2.3 Growth appears faster than associated native species	1 or 0
2.4 Life-span of species: <5 yrs, 5-20 yrs, >20 yrs	1 to 3
Section 3. Chance of spreading	sum 3.1 to 3.9
<i>C. History and distribution</i>	
3.1 Length of time in country: <5 yrs = 2, 5-20 yrs = 5, 20-50 yrs = 8, >50 yrs = 10	2,5,8,10
3.2 Weed potential only recently recognized (<5yrs)	2 or 0
3.3 Number/size of infestations: one small (8), several small/single large (4), numerous small (2), numerous large (0)	4 to 1
<i>D. Dispersal and persistence</i>	
3.4 Species hard to detect before it reproduces	1 or 0
3.5 Produces viable seed	2 or 0
3.6 Seed dispersed primarily by: small birds, bats, or wind (2), large birds or passive/accidental dispersal (1)	2 or 1
3.7 Minimum time to maturity <1 year = 3, 1-5 yrs = 2, >5 yrs = 1	3 to 1
3.8 Long-lasting seed bank (<1 year = 1, 1-5 yrs = 2, 5-20 yrs = 3, >20 yrs = 4, dont know = 4)	1 to 4
3.9 Juveniles common within 100 m of parents	1 or 0
3.10 Dispersal distance (long-distance is common = 2, close = 0)	2 or 0
Section 4. Public attitudes	sum 4.1 to 4.4
<i>E. Cultivation and perceptions</i>	
4.1 Present as: mass plantings (3), frequent smaller plantings (2), infrequent small plantings (1), not planted (0)	3 to 0
4.2 Species being sold or distributed: > 3 = 3, < 3 = 2, 0 = 0	3, 2, 0
4.3 Does any part of the plant have uses?	1 or 0
4.4 Does it have unpleasant features?	1 or 0
Section 5. Control techniques available	(not included in total score)
5.1 Yes or no, but a decision not a score	Yes or No

APPENDIX 3

Weed ranking - modified from NZDOC Weed Risk Assessment

(Peter A. Williams, Melanie Newfield: A weed risk assessment system for new conservation weeds in New Zealand. SCIENCE FOR CONSERVATION 209, Department of Conservation, New Zealand)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1																					
2	1.0*	8 - high	14 - high	7 - high	18 - high	18 - high		7 - high	15 - high	24 - high/ reject		10 - high	19 - high	21 - high/ reject			18 - high		11 - high	27 - high	
3	2.1	5	4					3													2
4	2.2	1	0					1													1
5	2.3	1	1					1													1
6	2.4	3	3					2													1
7	Σ	10	8					7													6
8	3.1	10	4					2													1
9	3.2	0	2					0													1
10	3.3	0	2					0													4
11	3.4	1	0					1													1
12	3.5	2	2					2													2
13	3.6	2	2					2													2
14	3.7	2	1					1													2
15	3.8	2	2					2													2
16	3.9	1	1?					1													2
17	3.10	2	1					2													2
18	Σ	22	16					13													19
19	4.1	1	1					0													2
20	4.2	3	0					0													0
21	4.3	0	0					0													0
22	4.4	1	1					1													1
23	Σ	5	2					1													3
24	TOTAL**	225	130					92													98
25	ASIST rank	1	2	3	4	5	6	7	8	9	10	11	12	NR	NR	NR	NR	NR	NR	NR	NR

QUESTIONNAIRE TO DETERMINE EXPERIENCE AND INTEREST IN THE WORKSHOP AND AGENCY/MANAGER SUPPORT

Weed management project design and implementation workshop American Samoa, 25 January – 5 February, 2010

PRE-WORKSHOP QUESTIONNAIRE

INTRODUCTION:

This workshop is for people with responsibility for field work, entering/managing data, or making project decisions. The workshop will focus on priority weed projects; designing, implementing, monitoring and evaluating to ensure success. It will give weed control personnel the skills and confidence necessary to collect and manage data for project planning, implementing, monitoring, evaluating and accountability purposes.

Your required contribution -

1) Please bring data to the workshop, e.g. historical records for two or more of your weed control sites from the beginning to the present, previous reports you have written, etc. This information will form the basis of the workshop.

2) Please prepare a brief presentation to the group describing your project(s) (e.g. species, methods, resources, plans, how you implement your plan, what you record, what you do with the records, how you measure success, how you present your results).

3) It is expected that attendees will create and, after the workshop, maintain a spreadsheet/database (on computer or paper) of project records to assist continuing management efforts.

3) We would like to get feedback on the workshop after you have had a chance to implement the learning. Would you agree to write a brief summary six months after the workshop? **YES** or **NO** (please circle one).

4) Please list previous weed management training.

5) What do you most want to gain from this workshop?

6) What technical resources (e.g. computer, laptop, GPS, software, field notebooks, etc.) do you use to assist with data management? Please bring any of these to the workshop.

7) Please list the major weeds you are working on and the methods and herbicides you currently use.

8) What documentation do you have about the weeds that are of most concern to you? Do you have enough information?

Name and signature.....

Position and Organisation

Name and signature of Manager

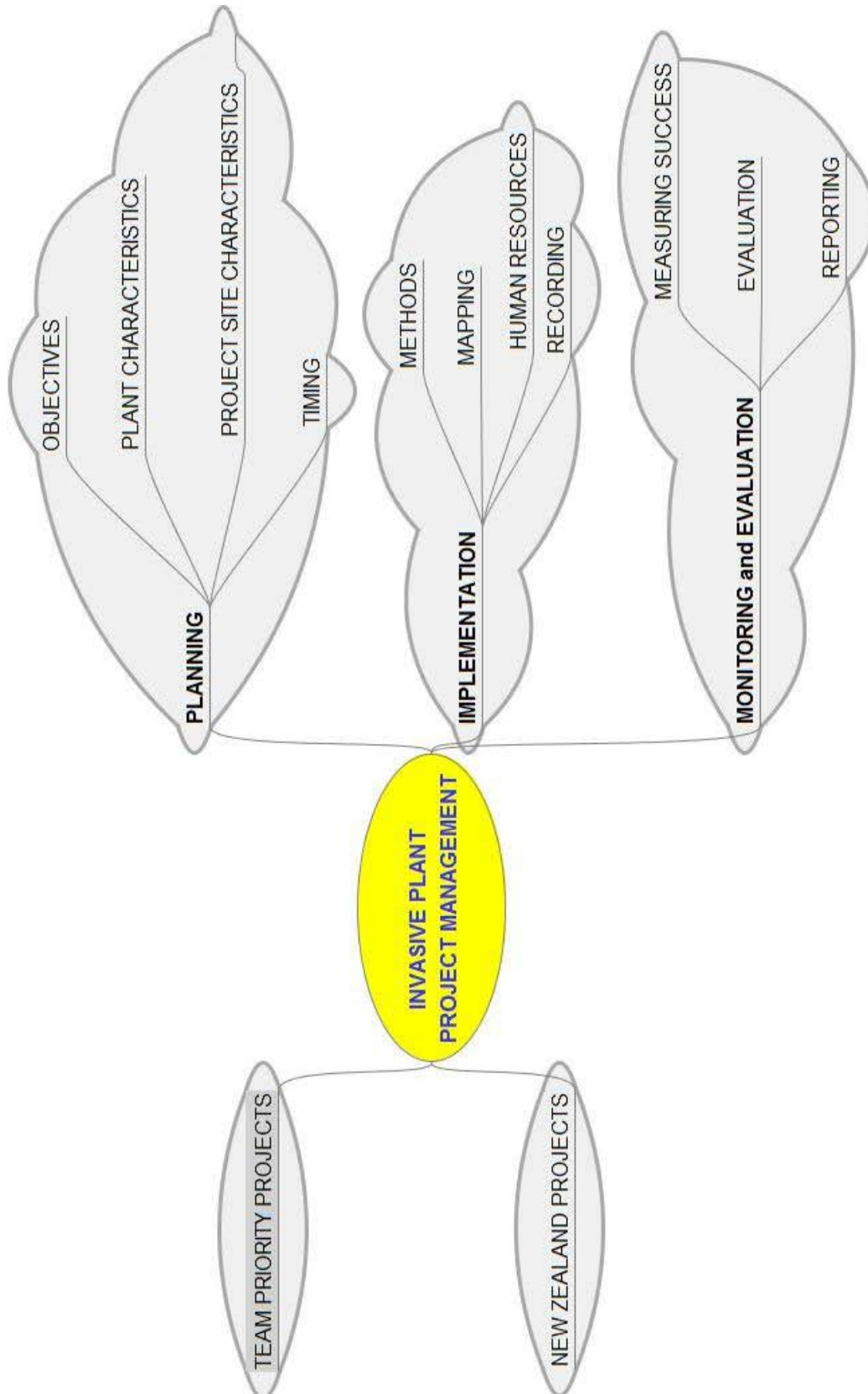
Position and Organisation



Presentation from the Department of Agriculture at the Report to Stakeholders session.
(Photo: Bill Nagle)

APPENDIX 5

WORKSHOP DESIGN



EVALUATION QUESTIONNAIRE
Average scores and verbatim summary of comments

Pacific Invasives Initiative

Evaluation of -
Weed management project design and
implementation workshop



American Samoa, 25 January - 5 February, 2009

We would like you to tell us about the **changes in your weed management project design and implementation knowledge and experience** as a result of the training workshop. Please complete all questions – this questionnaire will help us design better workshops.

<p>1.</p>	<p>What did you expect to gain from this workshop?</p> <p>1 – GIS, GPS. 2 – GPS, GIS. 4 – Weed management, planning, using GPS, mapping. 5 – Knowledge of local weeds and their threat. The most effective ways in which to manage some of these weeds. 6 – I have seen a lot more than I expected. Analysing and presenting result from data from the field is one of the best thing I gain by using graphs, and diagrams. 7 – Knowledge, methods, experience, of how to control different type of invasive weed. 8 – Weed management strategy, planning skills and effective implementation skills. 9 – I expected to gain control methods used in the field for controlling weeds. 10 – The whole process of managing whatever kind of invasive weeds/plants that we have here in American Samoa. 11 – All invasive in American Samoa know how to collecting data and how to plan the field work. 12 – Good partnership with other agencies from our government. Also some new ideas from the presenters from New Zealand. Also help out from Annie Marie Larosa. 13 – GPS, mapping, invasive species in Samoa. 14 – Weed management, eradication, mapping techniques, GPS. 15 – To learn better way to do report and other way to make fieldwork easy. Use other computer software. 16 – Controls methods for invasive weed. Knowledge of other invasive weed.</p>
<p>2.</p>	<p>Did the workshop meet your expectations?</p> <p style="text-align: right;">1 2 3 4</p> <p>Please circle one (1 = No, not at all; 4 = Yes, completely)</p> <p>Please explain your answer –</p> <p>3 – I learning very thing from workshop. 4 – New idea for chemical treatment control. 5 – The workshop offered a <u>practical</u> approach to weed management. 6 – The workshop present way more than I expected. It is the best weed training I have taken over the last 12 years.</p>

	<p>8 – <i>The workshop provided more than what I expected.</i> 9 – <i>It has given me more than my expectations. I learned reliable ways/easy ways for collecting data.</i> 10 – <i>Well over my expectations. Mainly because I had no idea of how, when, what, where, why the whole process of management is of importance.</i> 15 – <i>Yes, because the way we did reports before was hard and sometimes did not understand. Now David & Bill showed us way to make reports and do it in a way we would understand.</i> 16 – <i>I gained more than I anticipated.</i></p>
<p>3.</p>	<p>As a result of the workshop, do you think your Agency is now more able to:</p> <p>Plan an invasive weed control programme?</p> <p style="text-align: right;">1 2 3 4</p> <p style="text-align: center;">Please circle one (1 = No, not at all; 4 = Yes, completely)</p> <p>Implement that programme and record information?</p> <p style="text-align: right;">1 2 3 3.</p> <p>9</p> <p style="text-align: center;">Please circle one (1 = No, not at all; 4 = Yes, completely)</p> <p>Monitor and evaluate the programme?</p> <p style="text-align: right;">1 2 3 3.</p> <p>9</p> <p style="text-align: center;">Please circle one (1 = No, not at all; 4 = Yes, completely)</p> <p>Any comments?</p> <p>6 – <i>The workshop will improve our overall weed management program than ever. The ideas I learn from Bill and Dave are so powerful. From planning to field work to administration skills and presenting result, to get more money for future projects.</i> 8 – <i>Each phase were well planned and focused on the skills we lacked as individuals and as a group.</i> 15 – <i>Very helpful know weed control. Record.</i></p>
<p>4.</p>	<p>What are the main things you learned from this workshop?</p> <p>1 – <i>The important of data collecting, strategical planning, graphing of different invasive species that has been killed in each year (mature, juvenile, seedlings).</i> 2 – <i>Weed management, eradication, strategical planning and collaborative efforts.</i> 3 – <i>What I learned from this workshop is different weeds, and tree. And control weeds, help people they help.</i> 4 – <i>Planning exercise, weed management, using chemical treatment control application, work first to mature plants safety.</i> 5 – <i>The most effective way to manage weeds. How to record only relevant info in the field. How to plan a control project. How to measure/evaluate/present success or failure.</i> 6 – <i>Great skill to prepare, planning, organising human resource, weather, terrain and preparing the worst anytime. Intelligence skills to learn and understand what the enemy weed is doing all the time so</i></p>

	<p><i>that you can overcome weed next moves. Data collection and preparing data is the most presentable way that the message of saving forest can cut through all layers of organisation, government and village politics.</i></p> <p><i>7 – Control methods. Planning.</i></p> <p><i>8 – The most important thing for me was Planning. Good planning results in the success of the project. Other than planning, the next strong point was the partnership between agencies and outside partners.</i></p> <p><i>9 – Planning (dispersal vectors, plant and site characteristics). Implementation (different methods of controlling chemically). Mapping, using charts to verify data collected.</i></p> <p><i>10 – The principal components which are objectives and planning, implementations and monitoring and evaluation.</i></p> <p><i>11 – GIS, GPS, collecting data, plan and more.</i></p> <p><i>12 – Mapping, GPS, planning.</i></p> <p><i>13 – Important point, planning, mapping, graphing.</i></p> <p><i>14 – Important data collecting and strategical planning. Also the important of use of herbicide to eradicate invasive weed or tamaligi.</i></p> <p><i>15 – One thing is using Excel software to do report and other stuff. Second is map making and using GPS.</i></p> <p><i>16 – Map Edit. All the major objectives discussed in workshop. Making graphs.</i></p>
5.	<p>Were you able to contribute your knowledge/skills to the workshop? 1</p> <p style="text-align: right;">2</p> <p style="text-align: right;">3</p> <p>If 'No', what was the reason?</p>
6.	<p>Did the Workbook presented at the workshop help you in working through the design process?</p> <p style="text-align: right;">PI</p> <p>ease circle one (1 = No, not at all; 4 = Yes, a lot) 1</p> <p style="text-align: right;">2</p> <p style="text-align: right;">3</p> <p style="text-align: right;">3.</p> <p style="text-align: right;">9</p> <p>Please explain your answer –</p> <p><i>1 – It really helps our agency by looking forward how to deal with different issues by planning.</i></p> <p><i>3 – Yes, because I can know what to do, the different weeds.</i></p> <p><i>4 – Identification of trees. Spreading of seed by birds and animals.</i></p> <p><i>5 – Very simple, step-by-step approach – a template.</i></p> <p><i>6 – This was a great homework. I spent a lot of time on it but it was worth. It was great so I can use it to study other weed that we will encounter in the future.</i></p> <p><i>7 – Wow, I know a lot of new ideas about invasive species.</i></p> <p><i>8 – The workbook served as a syllabus for our program. It was a guideline and planning book for us...</i></p> <p><i>9 – It helped us follow through step by step on all the different points given/discussed during the workshop.</i></p> <p><i>10 – Yes, I can just pick out a picture or map, graph and elaborate on what your intentions are, what you will use, and keep track of what you do and at the end, evaluate the work that we did, if we did a good job or what needs to be improved.</i></p> <p><i>11 – Timing in work in field.</i></p> <p><i>13 – It really help our agency by looking forward how to deal with different issue.</i></p> <p><i>16 – I was able to follow the days schedule and agenda or topic discussed.</i></p>
7.	<p>Which invasive species management strategy do you think is the most important? (Please choose one and explain your choice.)</p> <p><input type="checkbox"/> Prevention 25%</p> <p><i>5 – You won't spend time and money on something that isn't there.</i></p> <p><i>8 – Prevention was key...if we prevent it/contain it, we'll have better chances at controlling and may</i></p>

	<p><i>lead to eradication.</i> <i>9 – Prevention we can do before the weed actually exists, so if we keep weeds out there isn't a need for others.</i></p> <p><input type="checkbox"/> Eradication 31% <i>2 – All individuals must be put at risk at once.</i> <i>4 – Eradication and follow-up before eradication.</i> <i>13 – Eradication project can help to kill invasive species in the forest.</i> <i>15 – So we could kill all invasive in American Samoa and bring back all native tree of American Samoa.</i></p> <p><input type="checkbox"/> Control 44% <i>10 – I think the most important strategy is control. I know for a fact that the invasive species that we already have we cannot eradicate. So we try to control it and prevent it from getting elsewhere.</i> <i>11 – Have to control before it too late.</i> <i>12 – Control before spread all over the island.</i> <i>14 – We cannot eradication or removed all the invasive in American Samoa but we can control by strategical planning.</i> <i>16 – If a species is well established and just now recognized controlling is the best way to do it.</i></p>
<p>8.</p>	<p>Did the explanations of the presenting team help you in working through the process?</p> <p>ease circle one (1 = No, not at all; 4 = Yes, a lot)</p> <p style="text-align: right;">PI 1 2 3 4</p> <p>Please explain your answer –</p> <p><i>1 – Really helpful.</i> <i>4 – Work partnership with other agencies.</i> <i>5 – Any difficult issues were explained carefully and clearly until they were understood.</i> <i>6 – The presenting team are answer all our questions no matter how many time we ask them – they have given their all and really appreciated!!</i> <i>7 – Yes, because each team point out different kind of ideas.</i> <i>8 – Each team contributed to answering unanswered questions for other programs. The presenting individuals better explained and clarify all missing points for every measures.</i> <i>9 – Yes, it helped us focus on a specific weed and then apply to all.</i> <i>10 – Yes, every presenting team deal with their own invasive species thru the same process that was covered during the workshop.</i> <i>11 – Learn how to working together and from each other agency.</i> <i>12 – Different way to focus to do job in the future.</i> <i>15 – They were clear and very understanding make work easy it was helpful.</i> <i>16 – Every piece of information presented was simple.</i></p>
<p>9.</p>	<p>Have you been involved in project planning before?</p> <p>es 63%</p> <p>o 38%</p> <p style="text-align: right;">Y N</p>
<p>10.</p>	<p>Was there enough time to cover all the issues in this workshop?</p> <p style="text-align: right;">1 2 3. 4</p> <p>4</p> <p style="text-align: right;">Please circle one (1 = No, not at all; 4 = Yes, a lot)</p> <p>Please explain your answer –</p> <p><i>5 – There was enough time for repetition of important points, and time left for project presentation prep.</i></p>

	<p>6 – I believe the reason is because the host agency interrupt our workshop and attend their SWARS project. This course should be 2 weeks. It is a technical workshop and need more time to understand it.</p> <p>7 – No, not familiar with the system.</p> <p>8 – Yes, there was enough time... We just needed to limit the “off-the-point” discussions.</p> <p>9 – Yes, there was enough time to go over all the strategies for controlling weeds.</p> <p>10 – Yes, given the amount of time the presenters had, they did a real good job. Job well done.</p> <p>12 – No, need more time, also do in different island.</p> <p>15 – Yes, with all breaks yeah their was enough time to cover all the issues.</p>		
11.	Do you think that invasive weeds can have effects on livelihoods as well as biodiversity?	Yes 81%	No 3 no answer
	<p>Please explain your choice (give examples if possible) –</p> <p>1 – Yes, because the species that we’re focusing on can provide more nitrate into the soil and will effect the watershed and also toxic the coral in the ocean.</p> <p>4 – Yes, cover the growth of the forest.</p> <p>5 – Yes, weeds can choke plantations, reduce native bird/bat populations (food).</p> <p>6 – Yes, invasive is one of the most critical threat to our biodiversity. If we let the invasive to take over, soon we will lose much of our Samoan values and culture.</p> <p>8 – Yes, the invasive weeds now have an effect on the environment. The population can grow and take over spot for native species of the island.</p> <p>9 – Yes, when invasive weeds dominates our native trees, there will be no more animals that are inhabitants of native trees in American Samoa.</p> <p>10 – Yes, some of these invasive plants, like the tamaligi, PRT can take over most of our native trees in the forest, which some we depend on for medicinal usage, building houses and even handicrafts.</p> <p>13 – Yes, the species the focusing that provide more nitrate in the soil and affect watershed.</p> <p>14 – Yes, if we do not eradicate the invasive weed, it will kill the native trees.</p> <p>15 – Well I think if invasive take over our native forest we wouldn’t have much of a forest.</p> <p>16 – Yes, they can change an ecosystem.</p>		
12.	Did the Presenters give clear explanations and instructions for all topics without using too much technical language?	Yes 100%	No
	<p>Any comments?</p> <p>1 – The Presenters was the “BEST”!!!!</p> <p>6 – The Presenters put in a lot of effort to explain important detail in simple term and language. Presenters were also available during breaks and after hour to help us.</p> <p>8 – The only hard thing was the conversions between metric systems...but everything was well-explained despite the differences.</p> <p>13 – Presenters is Best of the Best.</p> <p>15 – Presenters gave clear explanation and instructions. Very understanding.</p>		
13.	How useful was this workshop for improving your knowledge and skills? (Please circle one)		
	Knowledge:		
	ot useful		N
	seful (19%)		U
	uite useful		Q
	ery useful (81%)		V
	6 – Very useful; I say “super, super useful”.		
	Skills:		
	ot useful		N
	seful (13%)		U

	<p>uite useful (13%)</p> <p>ery useful (74%)</p> <p>5 – Quite useful; If I had a month, I would like to go out into the field to start a control programme. 6 – Very useful; I say “super, super useful”.</p>	<p>Q</p> <p>V</p>
14.	<p>Will the methods used in this workshop help you personally in your work? 1</p> <p>Please explain your answer –</p> <p>1 – Yes, information recording in every day when we’re out in the field. 3 – The weeds and the host plants, if possible, burn at the location. 4 – Chemical treatment control application. 5 – Yes, our director is very keen to begin a programme of invasive species control, so this was a very well-timed workshop. 6 – Yes, this workshop have taught me how to build a “WINNING PROGRAM” on weeds. More great thing will happen after this workshop. 7 – Yes, it help me and my co-workers to identify any invasive weed from introduced into the territory. 8 – Yes, the workbook now serve as a guide in planning each activities. The information collected from this workshop will assist in better data collection and effective planning. 9 – Yes, I will start all my programs with sufficient planning. 10 – Yes, if we follow the whole process of managing this will make our job a lot easier. 11 – Yes, learn from each other agency. 12 – Yes, different method from what we usin sometimes. 13 – Yes, important point every day when we were at the field. 15 – Yes, now we can plan better ways to work and be sure about what we are doing. 16 – Yes, some of the methods presented are currently used in my project.</p>	<p>2</p> <p>3</p> <p>4</p> <p>Please circle one (1 = No, not at all; 4 = Yes, a lot)</p>
15.	<p>What ideas do you have for follow-up training in weed project management?</p> <p>1 – Go back and revisit the site. 4 – Application at the right time. 5 – Perhaps field visits to actual control sites, when projects are up and running. 6 – A follow-up training is a great idea. This will help boost more on-the-ground actions and elevate local knowledge and skill. I support a follow-up training wholeheartedly. 8 – Additional field trips, hands-on experience and site visits. 9 – If we can have another training within 2-3 years and each agency present their species in all the steps used and gained from the workshop. 10 – Be precise, accurate and honest with all that we do, data collecting, mapping using GPS, the schedule and the resources and the tools that we are going to utilize. 12 – When we lost some information or data. 13 – Cutting first before spray. 15 – Think it would be better to work more out in the field then work inside and hand on. 16 – None at this moment.</p>	
16.	<p>Do you have any further comments or suggestions that may help us improve our support to you? (Continue on extra page if necessary.)</p> <p>1 – Expands the workshop. 3 – Yes, I have plant at home. 4 – Need more workshop from 3 of you. 5 – Perhaps be put on a mailing list – <u>NOT</u> another bloody email list – that keeps us updated on invasive species news and resources. 6 – I would like to keep in touch with instructors as mentor. I would like the instructors to (visit) conduct the weed workshop in every Pacific Island countries. This will help save unique native forest and animal of the Pacific region. I wanted to personally thank Bill and Dave for a wonderful two weeks of learning here in American Samoa. I have learned a lot and will put this knowledge to work to help save</p>	

American Samoa.

7 – More training.

8 – I hope that upon completion of this workshop, follow-up work will be done to monitor the effective of this workshop... I thank the presenters for sharing their knowledge and skills with us and hope to learn new things while putting these ideas into action.

9 – More field trips to controlled sites and to the intact forests would help boost the workshop. Hands-on activities.

10 – Each different groups working on their own special projects should be honest with everything they do.

13 – More weeks for the workshop.

15 – I hope we could have another workshop and have it outside. More hands-on, less inside office.

16 – Bring more hats.

THANK YOU for helping to improve this and future training workshops!



The team from the National Park of American Samoa decides on watershed boundaries for their project. (Photo: Bill Nagle)

APPENDIX 7

FINAL EVALUATION - Discussion

Summary of points contributed by groups to evaluation discussion at end of workshop:

<u>GOOD</u>	<u>BAD</u>	<u>SUGGESTIONS</u>
Partnerships with other agencies	Weather	Hands-on activities – videos (before and after), techniques, methods
Planning exercises	Technical difficulties (maintenance)	Field site visits (need more)
Implementations (methods, exercises)	Attendance (participants) – tardy	GPS/GIS, need more trainings
Opportunity to speak (discussions)	Too much “smoke” breaks...	Follow trainings hosted by NPSA
Complete materials, explanatory materials	Same old food...	Travel to other Pacific Island training or at NZ
Creating excel graphs for data	Get ALL members of a team to contribute/present!	Quizzes/definitions
Making graphs	Cold room	Access to computer
Instructors	Weather	Bring Manifold
Participation	Tardiness	Have a microphone
Data (excel)	Long breaks	Laser for PowerPoint
GIS	Invasive weed	Invite other environmental agencies – EPA – for chemicals; DOC – other info; NOAA; CRAG – Coral Reef Advisory Group; Customs
Map Edit	Cellphones	Conversions of metric units
Make new friends	Attendance of participants	Follow-up with field work
Respect of each other	Not enough All Black hat...	Explanation of all relevant agencies working on invasive species in Pacific and beyond
Knowledge of other invasive species	Not enough Feedback questions from participants – Ask questions to participants (groups)	Let participants know how useful workshop is for those <u>not</u> doing weed control, before you show up
Scientist’s knowledge of topic	Making me think too much	Mail vs email
Recording	Pens didn’t work	
Health	Proximity to Visa	
Involvement of participants	Too cold in room	
Real, practical skills	No mates in team for last day!	
Expert knowledge	Making me think too much?	
A template for weed control – can be applied to every species	Where was Americorp? – Tamaligi control practitioners	
Not too rushed; 1 week would have been way too short		
Forced to present a report and talk – Director showed up!		