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Community awareness, engagement and participatory workshop report

By Sione Fakaosi and Pelenatita Kara (compilers)

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SPREP
P O Box 240
Apia, Samoa
Ph: (685) 21929 Fax: (685) 20231
Email: sprep@sprep.org.ws
Website: www.sprep.org.ws/iwp

Acknowledgements

This report was compiled by:

Sione Faka'osi
Pelenatita Kara

with contribution from:
'Asipeli Palaki
Netatua Prescott
Lesieli Niu
Semisi Tongia
Takapuna Ika & Sioape Tu'iono

Contents

Abbreviation and Acronyms

NPDT	Nukuhetulu Project Development Team
IWP	International Waters Programme
NGOs	Non Governmental Organisations
PPA	Problem Participatory Analysis
PEC	Priority Environment Concern

1 Background

Tonga International Waters Programme (IWP) has commenced the strategic planning and designing of a pilot project following the selection of Nukuhetulu village in early 2003 to host the pilot project until 2006. In order for the community to actively engage and participate in the design process, it was imperative that they are familiar with IWP and its different phases that would require their involvement. The event was also seen as a good opportunity to introduce some of the participatory tools that will be used during planning, implementation, monitoring and evaluation of the IWP pilot project.

In response to the need for community participation, the Nukuhetulu Project Development Team (NPDT) agreed to organize a workshop that would combine awareness, engagement and participatory activities. The workshop was held at 'A'ake 'oe Fakamo'ui Hall, Nukuhetulu from10–12 September, 2003.

Workshop Venue: *'A'ake 'oe Fakamo'ui Hall, Nukuhetulu village*

The workshop was aimed to:

- raise participant's (particularly those from the pilot community of Nukuhetulu) awareness with regard to the IWP in Tonga;
- actively engage the people of Nukuhetulu village on planning and designing of a pilot project;
- initiate a strong community commitment to work with the Project to address the root causes of waste management problems within the community, through collecting and disposing of non-biodegradable waste.
- install an information board on problematic areas to mark the event as well as providing a warning notice to discourage those that contribute to the problem.

At the end of the workshop, it is envisaged that participants will be able to improve their understanding of the:

- aim, objectives and scope of the IWP;
- different types of waste issues in Tonga, specifically those in their village;
- significance of developing a profile of their community;
- role and level of participation from the community, as one of the primary stakeholders on the pilot project;
- root causes of the problem and what can be addressed at the village with minimal outside influence; and
- options and types of activities that most likely to be implemented by the community.

1.1 Methods of learning

The workshop was arranged to encourage participatory learning among the participants as well as exchanging of information with facilitators. Thus, the sessions were arranged in plenary and in small group activities to maximize participation.

Plenary presentation ranges from 10 to 15 minutes depending on topics. Each session also took advantage of smaller working groups which encourages individual contribution to the discussion. Group presenters were rotated so as to identify those that could be further trained to assist in ongoing social assessment and baseline data activities.

Facilitators were fortunate enough to select from a wide range of equipments and materials to assist them in their presentation. Some of the equipments and materials available included: power-point projector, PA sound system, flip charts, white board, post-its, pens and paper. Group activities and presentations were very dynamic and very informal which promoted free exchange of ideas.

1.2 Structure of the report

The report begins with the background information on the reason for the workshop, its aim and output. It then presents all the individual reports prepared by the facilitators who were involved in the workshop. The facilitator's reports were prepared under the following general format: introduction, methodology, results, challenges or lessons learnt, conclusion and recommendation. This is to reflect on the IWP framework, which orientated towards documenting and sharing of best practices, methodologies and lessons learnt. The workshop was also seen as an initial activity that formally engaged community at the commencement of the pilot project development. Producing a report at the end of the workshop not only documented and presented what has been done but it is also a chance to map out the best way forward.

Following the facilitators reports will be some general concluding remarks on the whole workshop's output.

Attachments at the end of this report are the workshop's program and a list of participants that attended the workshop (Appendix 1 & 2).

The facilitators must be commended and acknowledged for their efforts in presenting the same materials in Tongan to the community during the workshop and preparing their reports in English.

2 Facilitators' Report

2.1 Status of Waste Problem in Tonga

2.1.1 Introduction

Waste Pollution is a world-wide phenomenon, and the Pacific island countries and territories (PICTs), including Tonga, increasingly share this problem. The problem of waste remains a high priority concern in Tonga and one of the major causes of this is poor waste management. Poor management of waste has detrimental effect on the environment and the people and, as such, creates a barrier to economic development. Poor waste management practices occur not only throughout Nuku'alofa, but in many villages throughout Tongatapu including Nukuhetulu. It was also found that poor waste management practices have led to pollution of water resources such as underground water, ocean, and lagoon.

The IWP pilot project has identified two focal areas of action that are vital to the context of and these are waste management in the region and these are ***community-based waste minimization, and protection of freshwater quality.*** In light of these two broad areas, community awareness program through community consultation and training workshops are important tool for proper management of waste within a community.

It was the intention of the community consultation workshop that was held in Nukuhetulu from 10th-12th September 2003, that the whole community of Nukuhetulu should be aware and familiar with waste issues and problems in the village.

2.1.2 Outline of Presentation on Waste in Tonga

- Short introduction on waste in Tonga.
- Definition of waste.
- Waste characterization and type of waste in Tonga.
- Effect of waste on the environment and community (waste problem).
- Waste minimization.
- Lessons learnt and challenges.
- Conclusion.

2.1.3 Methodology

A Competency Based Training philosophy in structuring, documenting, and the delivery of the presentation on the issue was used. Although the subject itself is theoretical and abstract, integration of theory and practice, with an emphasis on applications, was applied throughout the session.

Self-Assessment
Participants were assessed to see if they had learnt what they expected. It was well structured, so that, all participants were self-assessed on whether or not they learnt something from the presentation.

Presentation
The first 20-30 minutes of the session were spent on a presentation about the following issues:

- Brief introduction on the status of waste in Tonga;
- Definition of waste;
- Characterisation and type of waste in Tonga;
- Problems from waste; and
- Waste minimization options.

Facilitator: *'Asipeli Palaki*

Working Group Discussion

Participants were divided into four working groups, 2 for males and 2 for females. Several questions were assigned to be discussed in each group. All groups reported back to the plenary on their findings, lessons learnt, and recommendations. Participants were also given a chance to raise questions and make comments.

Women's group discussing waste issues in Nukuhetulu

Men's group discussing waste issues in Nukuhetulu

Men's group presenter on waste

Women's group presenter on waste

Community clean-up campaign (refer to the report on Nukuhetulu clean-up for photos)
To put theory into practical a clean-up campaign was conducted on the final day of the workshop. All households in Nukuhetulu were told to collect cans, old vehicle parts, bottles, etc. to be taken to the rubbish dump. This type of waste was discussed during the session, and was classified as non-biodegradable waste, or those that take hundred of years to break down.

2.1.4 Result

Table 1. ***Solid Waste, Kind and Composition.***

Type of Waste Found in Nukuhetulu	**Biodegradable Waste in Nukuhetulu**	**Non-Biodegradable Waste**	**Best options for waste minimization and disposing**
1. Garbage *(veve kapisi)* ● *musie* ● *keikeinanga* ● *toumohomoho* ● *efe'i kava* ● *lau'i 'akau*	All Garbage waste		Composting Burning Bury
2. Rubbish *(veve lapisi)* ● *pepa* ● *pelesitiki* ● *milemila* ● *nge'esi kato* ● *toetoenga lalanga*	Some of the rubbish waste	Cans plastic	Incineration Burial Recycling
3. Ashes *(efuefu tofunanga)* ● *efuefu mei he tungaveve* ● *efuefu mei he fei me'a tokoni*	All ashes		Reuse Gardening
4. Animal Waste ● *manu mate* ● *te'e manu* ● *toetoenga mei he fangamanu*	All animal waste		Composting Incineration Burial
5. Road Rubbish *(veve ve'e hala)* ● *taipa* ● *pepa* ● *milemila*	Some of the Road rubbish	cans	Incineration Recycling
6. Factory waste *(veve falengaue* ● *'aisi maumau* ● *puha 'uhila* ● off cut metal ● timber ● tire ● *kongokonga*	Timber	Old vehicle parts Off cut metals Tire Battery	Recycling Reuse Incineration

me'alele			
● Shop waste ● plastic bottle ● box ● *kofukofu pepa* ● container ● cans		Metal Iron Cans	Recycling
8. Demolition waste ● *putuputu'i papa* ● *sima* ● *piliki* ● *pepa*	*Papa* *Pepa*		Composting Recycling Incineration
9. Special Waste ● chemical waste ● pesticide ● oil ● explosive			Incineration
10. Sewage Treatment residue ● septic tank sludge ● bath, washing and kitchen waste	All		Treatment Recycling Composting

2.1.5 Challenges and Lessons Learnt

Time allocation
Time allocated for the session was limited. Waste is a broad subject, and it requires ample time to address. There are areas that need to be further clarified as far as the waste subject is concerned.

Contribution/Involvement
It was basically the same people that contributed during the group discussion and reporting. The whole idea of community consultation workshop is for involvement of all participants, and if possible, the whole community.

Well Equip Facilitator
Facilitators must be well prepared physically, mentally, and spiritually before delivering the session.

Demonstration
One of visualization teaching technique that each facilitator must use is to demonstrate either in picture or any other forms. A picture is worth a thousand words.

Conclusion
The community consultation workshop was well attended and represented. This was a positive sign showing the commitment of the Nukuhetulu community.

The philosophy of competency base training proved to be working as the majority of workshop participants showed competence and fair understanding of the basic waste issues such as: waste type and characterization, problems encounter, options or alternatives to combat waste problems, and sorting of waste.

The community of Nukuhetulu is now aware of waste issues as one of the root causes for the pollution of the water resources around their environment.

There is a good deal of community concern about conducting another training on waste as the issue is one of the hot-spot as far as the IWP is concerned.

2.1.6 Recommendations

- That another follow-up community consultation workshop should be launched at Nukuhetulu to review and expand participants' knowledge of the issues regarding management of waste, particularly those that might be encountered in Nukuhetulu.

- That the same team as of the first workshop be used to facilitate the workshop.

- That few locals should be trained to assist with the waste characterization program and pollution source survey.

- That relevant ministry members should be part of the team.

2.2 Nukuhetulu Community Profile

2.2.1 Introduction

This report covers the inputs by the facilitator to the initial information gathering in the Tonga IWP pilot community of Nukuhetulu. The tasks of the facilitator are to introduce community profiling as a tool for participatory data gathering through:

- explaining and demonstrating of the role of community profiling in planning the Nukuhetulu IWP activities;
- giving emphasis to the importance of community participation in the process of developing community profile; and
- collecting of the initial background information on Nukuhetulu using common techniques and processes for developing community profile.

Tasks: First Input
- In conjunction with the Nukuhetulu Project Development Team (NPDT) and the Tonga IWP Project Coordinator, undertake reviews and discussions on participatory planning process.
- Design a participatory community profile process that involves all sections of the Nukuhetulu community in consultation with the IWP Project Coordinator and other facilitators.
- Review relevant IWP project documents.

Tasks: Second Input
- Conduct a practically based workshop for Nukuhetulu on techniques for community participation in the process of developing a community profile.
- Apply the techniques and the process explained the actual data and information collection through working groups, reporting/sharing and revalidating of working groups' findings.

2.2.2. Activities Undertaken

Design of a Process

Members of the Nukuhetulu Project Development Team (NPDT) in preparation for the community workshop

The NPDT met three times to discuss and design the goals and the process for the workshop.

As this is the Nukuhetulu initial data-gathering phase, the NPDT reviews the process for a participatory planning through brainstorming and allocation of roles to each facilitator. Each facilitator then presents his/her planned input to the NPDT for feedback. This process allowed the facilitators to trial the process, finalized the parameters and sub parameters for the data collection and coordinates their planned activities so each would logically cohere before going to Nukuhetulu.

The Community Awareness Workshop

Objectives
The objectives of the community profile sessions are:

- to raise understanding of community profile and the techniques commonly used for data gathering for community planning;
- to allow the community to confirm/revalidate and bring up to date information on Nukuhetulu recorded from secondary sources which are old or outdated (i.e. last census in Tonga was 1996, cartography map of Nukuhetulu is over 25 years old); and
- to increase the confidence of the community to participate in the designing of a pilot project.

2.2.3 Methodology

Two methods were used in presenting the concept of 'community profiling'. They were presentation of visualization techniques for collection of data, and focused group discussions to carry out data collection demonstrating the techniques presented to the workshop.

Facilitator: *Netatua Prescott*

and age. This is to allow for a 'more open' dominating the discussion. After the working

group discussions, the workshop reconvened, the groups reported back and further discussion was encouraged.

Women's group discussing community history

The facilitator then summarized the session referring to the results of the working groups and the objective of the session.

Men's group presenter of community mapping

Women's group presenter on community history

Materials

- base map of Nukuhetulu;
- flip charts and colour markers;
- white board; and
- overhead projector.

What is Community Profile? and Why is Community Profile Necessary?
The concept of 'community profile' was introduced in the workshop. Three key questions were used to guide the introduction.

- What is community profile?
- Why is community profile important and necessary?
- What are the techniques that could be used in the process of community profiling?

Community Profile is the systematic collection of information about a community, which is conducted in the community during the initial stage of fieldwork. Figure 1 shows the various sectors and interactions between sectors in the community where information could be collected.

The community profile allows the 'research team' to become familiar with community characteristics and issues relating to environmental problems for reference in later phases of the data collection.

Several participatory methods are used to develop the community profile. In addition to focus group format, the primary data source material could be generated by:

- Community mapping, indicating location of community assets, services and problem areas;
- Observational notes and transect walk to obtain general picture of the community and revalidate mapping;
- Ranking exercises for analysing and prioritising community issues;
- Household survey, using questionnaires to list number of people in a household, gender composition of the household, income earners and level of income, access to land and other resources, waste management practices in the household, etc.;
- Listing of formal and informal community institutions;
- Case study of community collective action;
- Institutional diagrams (Venn) and network relationships;
- Developing seasonal calendars to indicate seasonality of livelihood activities and resource use; and
- Community history to compile the history of the community and to share the history and important knowledge about the community.

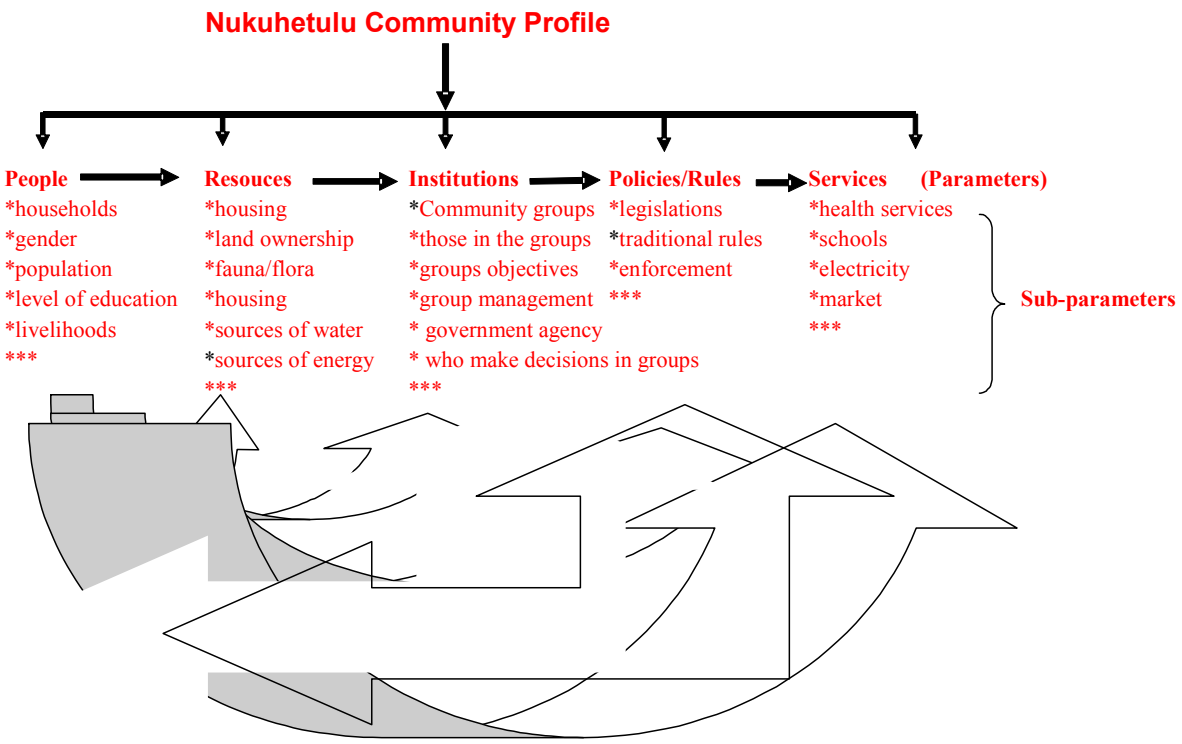
Examples of each technique were given to show the type of information collected and how the techniques could be carried out. The sector (parameters) and sub-parameters of information that could be collected in the community profile process were also explained Figure 1.

Focus Group Activities
The focus group activity aims to:

- practice and re-enforce some of the techniques for participatory community involvement in community profile that were introduced; and
- promote active participation and learning of all participants in smaller groups of the same gender and age.

There were four groups, older men, older women and two groups of youths by gender. The two older groups developed the history of Nukuhetulu and the youths developed a Nukuhetulu map and transect walk.

Figure 1. ***Types and Levels of Information to be collected in the Community Profile.***



*** there are more examples that could be
Arrows - show interrelationships amongst the parameters and subparameters in a community that could create or management issues that a community profile will identify.

2.2.4 Result

Nukuhetulu History

- The men knew more about the original history of Nukuhetulu – the history of its nobles, the meaning of the word 'Nukuhetulu, the mullet fish originate from the pond at Nukuhetulu, the legends of *'Vai ko Lokofa'* and a casuarina tree (ironwood) that reaches the sky, etc.
- Men and women, when presenting, were able to correct dates (i.e. the year when the Free Wesleyan Church was build, when electricity and water reached the village, etc.).
- Last involvement of the Nukuhetulu community in development activities with the assistance from outside (Government and NGOs) were in the 1980s in electricity, water and construction of rainwater tanks.
- Illegal dumping of waste along the Nukuhetulu coast started around 1985 after the road that reaches the mangrove areas was built.
- In the past the village was relatively thriving with life and abundance of resources such as mullet, jellyfish and all sorts to mud shellfish, where as nowadays, those resources are diminishing and can hardly be found.

Community Map and Transect Walk

- After the presentation, the older men and women assisted in locating culturally important landmarks and giving them their proper names (i.e. *Pua ko Vatikano*[1], the oldest water tank in the village, an unused well that is more than 5m deep which is used as a rubbish dump now).
- There is no community waste disposal site.
- The village reckons that the name of the main road (as in the Lands and Survey map) is wrong and should be called the Matafahi Road.

[1] It is customarily in Tonga to give names to important trees that reflect the history of an area or its chiefly title

2.2.5 Challenges and Lessons Learnt

Attempts to unravel major events in the history of Nukuhetulu have proven to be effective in guiding participants to understand and appreciate the linkages between different aspects of their village life: people, resources, institutions, policies/rules and services. The session was also seen as an appropriate way for the elders to share and pass on traditional and historical knowledge to the younger participants. Furthermore, it has helped participants to trace the historical emergence of the waste problem they are about to address.

The mapping exercise and transect walk, on the other hand, not only led the participant's attention to location of the problem, but it has reinforced a sense of pride in the locality for the people of Nukuhetulu.

However, due to time limitation, some of the information needed to complete the present picture of the pilot community could not be collected. This will provide the basis for follow-up activities in the pilot community.

2.2.6 Conclusion

Overall the participatory and consultative workshop on the initial data collection for Nukuhetulu, was highly satisfactory in terms of number of participants and level of participation that contributed valuable information. The community has, it is hoped, gained enhanced self-respect from being listened to, and their views respected, as they are the local environmental experts.

In the light of the above activities, we were able to derive from Nukuhetulu important information critical for the ongoing designing of a pilot project.

2.2.7 Recommendation

The effectiveness of a community-based project depends largely on the level of participation of local people in the community. Therefore, it is important that knowledge and skills learnt in the workshop should be used to apply in actual project planning and follow-up activities. Specific activities include the following:

- Community consultation, revalidation, and the data initially collected at this phase should be an ongoing process in the project;
- Local people have their own sets of issues and priorities, which need to have due weight in the planning and decision-making process of the project;
- They also have considerable traditional knowledge which, if understood, in planning for community based activities, can greatly improve the results;
- Effective community participation requires a learning and action process on the part of the communities, not only identifying problems and possible solutions, but actually taking part in practical actions to solve the problems;
- There should be a formal de-brief for the first Nukuhetulu work where facilitators share their impressions and information gained;
- Subsequent project related activities should be closely spaced, in order to keep the momentum and interest of the community.

2.3 Stakeholder Identification and Analysis

2.3.1 Introduction

Stakeholder Analysis defines the characteristics and interest of stakeholders in the problem, and

assesses the way in which they might be influenced or affected (both positively and negatively) by the project. It is important that we understand the roles and relationships between stakeholders and their relative interests so, we can identify which stakeholders should be involved and who has the capacity to participate.

Stakeholder Analysis was one of the topics covered in the workshop with the objectives:

- to facilitate a participatory process of identifying stakeholders together with the pilot community of Nukuhetulu;
- to enable stakeholders at pilot community to understand their relationship to the project, and how their interest will be affected or influenced by the problem and solution from the pilot project; and
- to carry out a stakeholder analysis, following the stakeholder matrix method in order to gradually map out the importance of multi-stakeholder participation for the success of the pilot project.

It was anticipated that after the workshop:

- the pilot community will identify a list of stakeholder groups in relation to the pilot project;
- the pilot community will understand and rank how stakeholders group are affected by and/or contribute to the problem;
- the pilot community will understand and rank how stakeholder groups are being influenced by and/or contribute to the solution; and
- a stakeholder participation strategy is developed highlighting the roles and relative importance of stakeholder groups to the success of the pilot project.

2.3.2 Methodology

Facilitator: *Lesieli H Niu*

Pl

- Defines stakeholders.
- How to identify them.
- Different levels of stakeholders.
- Why it is important to know these stakeholders.

Group Activities (Stakeholders list)

- Divide participants into four groups, 2 groups each of men and women.The groups had mixtures of youth and older people.
- They were asked to discuss and make a list of all the stakeholders in relation to the problem addressed at Nukuhetulu, i.e. pollution of coastal marine and underground water from waste.

Women's group identifying and analysing stakeholder

Men's group identifying and analyzing stakeholder

Reporting and Discussion

- Report back the results of group activities on developing a stakeholder list and followed by discussion.

Plenary Session

- Explain how the stakeholders are affected by the problem.
- Explain how stakeholders contribute to the problem.

Group Work (Stakeholders affected by and contribute to the problem)

- Go back to their groups with the list of stakeholders identified.
- Discuss the extend of which they are affected by the problem
- Discuss the extent of their contribution to the problem.
- With flip chart and marking pen provided they were asked to draw triangles to represent the extent of how much they contribute to the problem. The size of the triangle is relative to their contribution.
- Use circles to show how much they are affected by the problem. The size of circle is relative to how much they are affected by the problem.

Reporting and Discussion

- Report back the results of the group work on stakeholders affected by and contribute to the problem and followed by discussion.

Women's group presenter on stakeholder analysis	*Men's presenter on stakeholder analysis*

2.3.3 Result

Combining the results of the four group's work, we came up with the list of stakeholders presented on Table 2 below.

Table 2. ***Stakeholder Analysis Matrix (relative to the problem).***

Stakeholder	**Extent of their contribution to the problem**	**Extent of how they are affected by the problem**
Fishermen/women	Moderate	High
Individual Household in Nukuhetulu	High	High
Toulanganga women	High	High
Animal Owners	High	Moderate
Commercial growers	Moderate	Moderate
Folaha Community	High	Moderate
Land Owners in Nukuhetulu	Moderate	Moderate
Village Youth	Low	High
Women's group	Low	High
Nukuhetulu Water Committee	Low	High
International Waters Program	Low	Low
Ministry of Lands, Survey and Natural Resources	High	Low
Ministry of Health	High	Low
Department of Environment	Low	Low
Ministry of Marine and Ports	Low	Low
Shoreline Company	High	Low
Coastal lagoon residents	High	High
Churches in Nukuhetulu	Low	Moderate

2.3.4 Challenges and Lessons Learnt

It is a big challenge to facilitate a workshop with participants of relatively different level of understanding. However, since the workshop was done in Tongan it was relatively easy to bring their understanding to the same level.

Concentration of participants sometimes is disturbed by their legs being numbed due sitting cross-legged for a long period. It was good during the group work that they got the chance to stretch their feet. So, a short plenary session and more group-work where everyone gets to stretch and participate at the same time, is a good presentation strategy.

The group arrangement was good when men and women had different groups so that they can express themselves more openly. The mixing of youth with elder women was not as good, due to young ones not expressing their views as older women seems to talk more. The number in the groups

was small enough, and the discussion was good as some of the points and issues that were not clear during the plenary session were explained during group activities.

2.3.5 Conclusion

In conclusion, the exercise was very helpful and we achieved some of the expected outcomes of the session on stakeholder analysis despite time constraints. The results show that the people of Nukuhetulu were able to develop a list of stakeholders. The session also used the stakeholders list developed to analyze the extent they are being affected and contribute to the problem. The process helps participants to understand that each individual household is one of the main stakeholders that contribute to the problem and they are also affected by the problem to a greater extent.

2.3.6 Recommendation

It is recommended that:

- a follow-up workshop to be carried out to complete the part left to be done by the stakeholder analysis, especially the extent stakeholders influenced and contributed to the solutions, and map out a strategy for those that needed to participate in order for the success of the pilot project; and
- more time should be allocated for the Stakeholder Analysis to complete the whole analysis.

2.4 Participatory Problem Analysis (PPA)

2.4.1 Introduction

As part of the strategic approach adopted by the IWP, one of its initial tasks was to identify Tonga's Priority Environmental Concern (PEC). This was resulted from literature review and stakeholder consultation. The selected national problem, *"degradation of marine and freshwater quality"* was one of the criteria for selecting Nukuhetulu village as the pilot community.

In order for the people of Nukuhetulu to actively engage in the process of designing a pilot project, it is imperative for them to understand the problem they are about to address. Thus, it was essential for them to participate in analyzing the problem.

The main objectives of the PPA session are:

- to facilitate a participatory problem analysis with members of Nukuhetulu pilot community;
- enable stakeholders at Nukuhetulu pilot community to understand and appreciate the importance of identifying different parts of a problem and its root causes by engaging them in the process;
- to further refine the problem analysis tree by taking into consideration the perspectives of community stakeholders.

At the end of the PPA session, it is anticipated that:

- the pilot community will understand the root causes of the problem they are about to address; and
- a diagram of the problem tree analysis is refined highlighting those that are caused by the community themselves.

In order to maximize information dissemination and greater participation, the PPA session was conducted in plenary, group activities, reporting and discussions.

2.4.2 Methodology

Plenary

The PPA session commenced with a plenary session aiming to familiarize participants about the context and problems – what are the problems, what are the contributing causes, how did they occur, and why are the problems worsening. A brainstorm exercise was followed to check participants' understanding of the resource degradation issue (focal area) that they are about to work with in the project. The responses proved that the focal area has been well understood - pollution of coastal lagoon and underground water from waste. With that understanding in mind, the session was then proceeded to highlight some of the key steps in PPA. They are as follows:

What is Participatory Problem Analysis (PPA)?
PPA is an effective tool for engaging stakeholders in analyzing the root causes of a problem.

Why conduct a PPA? Why is it important for community to participate in the analysis of the problem?
In attempting to make it clear to the participants, the question was rephrased*: What benefits do we have from community participation?* Due to time constraint, this exercise was on lecture basis. Benefits are as follows:

- To identify the underlying or root causes of the problems;
- Pilot site know more about their own problem (identification of information needs);
- Ownership (lead to increase sustainability);
- Shared responsibility;
- Sustainable outcomes;
- New and more ideas generated;
- Information sharing increase (more people and group informed);
- Achieving people support;
- Partnership formed;
- Education and Capacity building (group receptive to awareness raising);
- Increase knowledge of resource status;
- Information gathering (decisions are based on complete and more comprehensive); and
- Eased implementation.

Other Ideas include the following:

- Correspond with traditional decision-making procedures (and in this way support tradition);
- Essential part of good governance;
- Help government knows the wants and needs of people; and
- Help government protect themselves from unexpected criticism.

The purpose of giving these benefits of participation is to encourage community to participate and to establish positive attitudes towards the project.

How to carry out the analysis?
- Ask "why the problem has occurred and identify the immediate causes of problem?
- Phrase these causes or reasons as problems in the negative sense.
- Working outwards, asking "why" for each of the immediate causes until some basic root causes of the issue is being addressed.

Checking the Logic
After these various reasons are being listed it is important to check the logic in reverse. For example, if the problem is "Community Water Supply Empty" and the answer to "why?" is "No petrol for the machine," then, the reverse check would be a statement that "No petrol for the water motor (machine) is why the community water supply is empty."

Community water supply empty

Moving downward rephrase Ask "why" – e.g., the *Why the community water the supply is being empty?*

Moving upwards, as a statement to check logic-e.g., *no petrol is why community water supply is being empty*

No petrol for the machine

The plenary session ends with brainstorming the participants on the immediate causes/reasons to the problem. The purpose of this activity is to identify four immediate causes/reasons so that each of the four groups should ensure they are working on separate causes/reasons. As a result, these four causes/reasons have been identified: Misuse of Insecticide and Pesticide; Improper dumping of (household) waste; Untreated Animal Waste; and Dumping of sewage directly into coastal lagoon from Industry and nearby households.

Group Activities

This workshop encourages active participation from all the participants. It is envisaged that learning occurs when participants activated their prior or existing knowledge, linking it to new knowledge and making sense of this new knowledge for themselves. The methods aimed at creating practical learning activities that not only achieve the expected learning outcomes but also meet the individual differences and needs of the participants. This complex task becomes much more manageable when other trainers play supporting role during group activities.

Women's group analyzing the problem

Women's group presenter on problem tree

There were 65 participants hoping to represent each household in Nukuhetulu. They were divided into four main groups based on gender and age. It is very important to divide the participants in this way, so as, to avoid the cultural and social constraints that might occur in the mixed groups. This arrangement seems to foster freedom of expression for each participant and, therefore, encourage active participation and contribution to group discussion.

Materials required for group activities includes: pencil, marker pen, flip charts and post-its. Each group would follow and use the information given in the plenary session.

In addition, after identifying the reasons/problems, record them on post-its, move them around if necessary until they are confident about the logic and flow of problems from root causes. Finally, the groups were asked to connect the post-its with lines to show the linkages between causes and effects.

If arrows are inserted then they should ensure that they are heading upwards in the direction of the larger initial problem they are trying to breakdown. Each group was then asked to do a final check on the logic by repeating the question *'why?'* down through the level of causes, as outlined above.

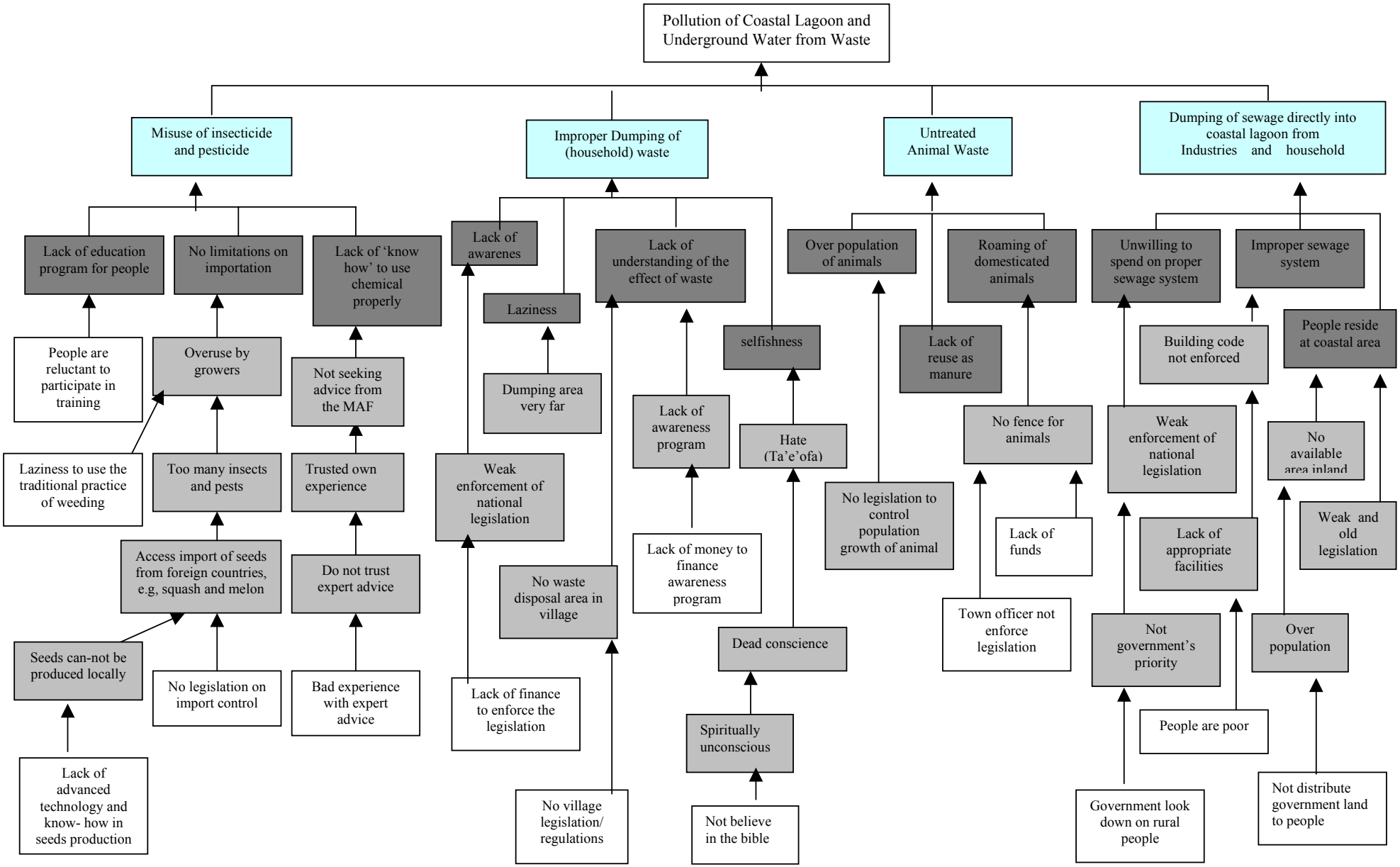
Reporting and Discussion

The final part of the session reconvened everyone. A reporter from each group presented the results of their group activities. This was a good way of getting everyone to double check the results and logic of other group. It was followed by open-floor discussions, comments and questions from the rest of the workshop participants.

Men's group analyzing the problem

Mens' group presenter on problem tree

2.4.3 Result (finding)



2.4.4 Challenges and Lesson Learnt

Almost all participants were aware of the initial problem of waste and its contribution to the pollution of coastal lagoon and underground water. As group activities digs in deeper to find out the root causes of the problem, some realized how much the Nukuhetulu community have contributed to the problem as well as other stakeholders.

Community participation and support for the workshop were unexpectedly high. The participants represented the community quite well in terms of gender and age, where approximately 50% were male and the other were female. Youth and elders were also well represented.

2.4.5 Conclusion

The focal problem has been re-addressed and an attempt was made to pull out the most common root causes to the problem. Seven root causes/reasons were identified:

- Lack of proper management of household waste;
- Uncaring attitude;
- Overuse/Misuse of insecticide and pesticide by growers;
- Lack of community awareness program;
- No community legislation on waste control;
- Weak enforcement of current national legislation on waste; and
- Lack of government allocated funds for the management of waste.

These root causes provided the participants with a clear picture of how much they contribute to the problem as well as how much they could do to minimize the problem.

2.4.6 Recommendation

This report recommends that:

- ongoing community awareness workshops should be conducted, aiming at behavioral and attitude change in order to substantiate the sustainability of the project in the long run;

- local facilitators from Nukuhetulu village should be identified for training in facilitation and participatory skills in order for them to carry on future participatory activities in the pilot community. In that regard, the local trainers will continue to participate by providing backstopping support whenever it is needed;

- a follow-up PPA exercises with Nukuhetulu village should be conducted to refine and reconfirm the results already collected and further solidify the community's understanding of the problem and its multiple causes;

- a separate PPA session for each stakeholder should be considered in order to minimize blaming of each other and finger pointing among the stakeholders on who is responsible for causing and fixing the problem.

2.5 Developing Options/Solutions

2.5.1 Introduction

The people of Nukuhetulu has been keen to start working with the IWP since their selection to host the IWP pilot project. However, it remains a challenge to IWP to explain to the people what the IWP entails, the different stages of the project cycle and to keep their hopes in line with the IWP process.

The objectives of the session on developing solutions are:

- to show participants that problem tree can be converted to an option tree;
- to inform participants on possible options/solutions or activities that IWP can support; and
- to inform participants of activities that they can do themselves and contribute to solving the problem without outside assistance.

It is envisaged that by the end of the session, participants will be able to:

- think positively and logically about the IWP project cycle and processes;
- feel empowered to participate in addressing the problems; and
- have a rough idea of possible options/solutions and what they can do themselves without outside influence to minimize the problems.

2.5.2 Methodology

The session on developing options commences with a plenary presentation on the following issues in this order:

Participants at plenary session on developing options

Women's group discussing options

What is an option/solution tree?

An option/solution tree is an analysis of possible solutions by simply rephrasing negative statements or problems into positive statements or solutions.

Why?

Developing options was introduced to engage participants on analyzing possible solutions based on problem tree. The process helps participants to start thinking logically and strategically on how to come up with realistic solutions based on the understanding of multiple root causes of the problem.

How to develop options/solutions? Checking the logic! Example!

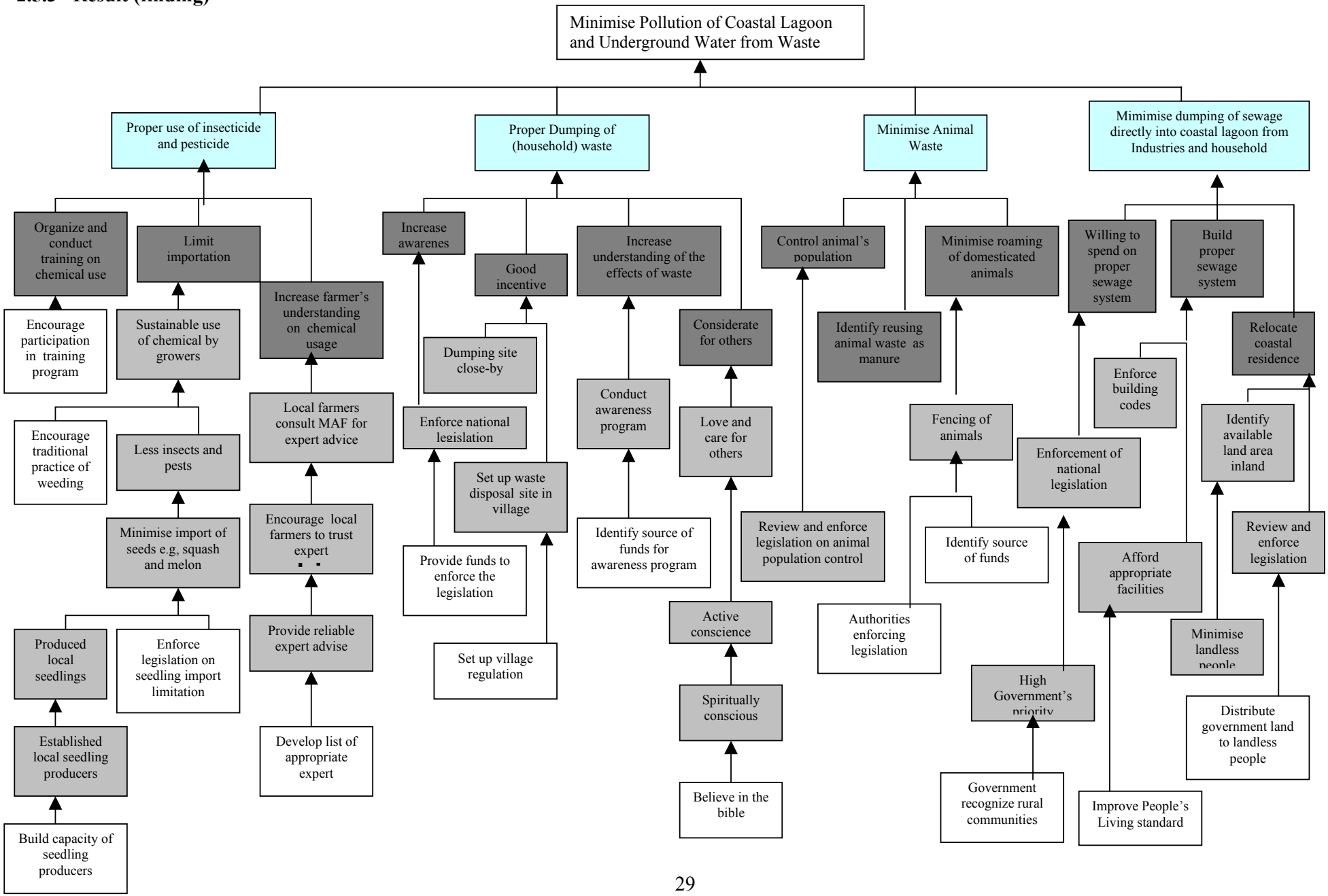
- Review the problem tree by checking the why logic and problem statement;
- Rephrase each negative problem statement into positive statement;
- As you rephrase, check the logic by asking: *If …, Then …,* as you move up the tree; and

- Rewrite the statement if the logic does not flow.

After group activities, each group presented their findings.

	
Men's group presenter on options	*Women's group presenter on options*

2.5.3 Result (finding)



2.5.4 Challenges and Lessons Learnt

A clear understanding of the problems and its multiple causes has helped to prevent consideration of pre-meditated solutions. The process, which flows smoothly from participatory analysis, helped participants to understand what can be done to address a particular problem and its root causes.

The session helped participants to understand what the community can do as part of their daily activities, not necessarily with outside intervention and the nature of activities is likely to consider for IWP funding support.

Time limitation has also influenced the outcome of this exercise. More time could have given participants a chance for a complete checking for logic.

It might be too early to conduct the session of developing options but it is important for the community to understand the sort of activities and different stages that IWP follows and the reason it takes that course of action.

2.5.5 Conclusion

One of the reasons for introducing the session on developing options at this stage is to make sure that the community does not raise too many expectations at the beginning of designing the pilot project. Furthermore, understanding different phases of the pilot project and nature of pilot activities will prevent imposing of different agenda on the project.

The session has also encouraged positive attitudes towards the ability of community to address the problem of waste in their village while the IWP takes its course.

2.5.6 Recommendation

This reports recommends that:

- the option/solution tree should be further refined based on a reviewed problem tree analysis; and
- the community should be encouraged to take up more active role in promoting current activities at the household and community level that contributes to the solution.

2.6 Community in Action: Clean-up Nukuhetulu

2.6.1 Introduction

One of the main environmental problems that Nukuhetulu has been faced for the last decade is the increasing amount of solid waste both at the household level, due to lack of proper disposal system, as well as, those dumped onto the mangrove areas. This is why we wanted to participate on the IWP pilot project in order to address our concern for the impact of solid waste on our environment. The community awareness and participatory workshop was seen as a good avenue to mobilize the people in the village to start addressing the problem of waste.

2.6.2 Methodology

The workshop program placed the session on "Waste in Tonga" at the beginning in order to brief participants on the types of rubbish/solid waste that the program needed to sort out, collect and dispose at the official dump. Participants started collecting household rubbish during the first two days of the workshop, before and after workshop sessions.

The clean-up program was divided into three parts:

Collecting and disposing of household waste

Participants, representing each household, were asked to initiate sorting and collecting of only non-biodegradable, and placing them on their front lawn along the main road to be picked up on the final day of the workshop and transported to the official dump at Tukutonga.

Remove waste from mangrove area

Participants were also asked to clean-up the unofficial dumping site at the mangrove area. This site was believed to have started in the mid 1980s, following the construction of the road to Nuku island.

Prepare and Install Information Board

Participants were asked to provide feedback on wording of an information board to be installed at the unofficial dumping site to discourage further dumping of waste onto the area.

2.6.3 Result

Here is a list of the types of waste and rubbish that was commonly picked up both from household and mangrove area (refer to the report on status of waste in Tonga for a more complete list):

- tins (canned food, washing machine, old vehicles, roofing, etc).
- metals (old vehicles, washing machine, fridges, etc).
- plastics (bags, food wrappers, bottles, tiles, etc).
- glass (bottles, windows, etc). and
- clothing, rags, old shoes, etc.

Collected and Disposed of non-biodegradable waste from household

Nukuhetulu's main road prior to waste pick-up

A sample of rubbish to be collected from each household

Removed Waste from Mangrove area

Carefully sorting non-biodegradable waste

A truck full loaded ready to depart to the dump

Painlessly sorting and removing plastics from the mud.

A very degraded sight along the road yet to be picked.

A great job almost done!

Is this the same mangrove area that was full of rubbish?

Prepare and Install Two Information Board

As the first information board states … ***"Please Do Not Dump Rubbish Here".***

Reinforced by the second message … ***"Please Keep This Area Clean at all Time".***

2.6.4 Challenges and Lessons Learnt

The ability of each household to collect only non-biodegradable waste indicates the usefulness of the session on "status of waste in Tonga" and reinforced by the other sessions. They also take this initiative as a good opportunity to work in partnership with the IWP to start addressing the problem of solid waste in their village.

The current waste regulation and collection service is only limited to the urban town of Nuku'alofa. This means that rural villages are responsible for managing their own waste. However, the actual clean-up activity was beyond expectation, both in terms of time taken to do the job, as well as, the amount of rubbish collected from the household of Nukuhetulu. Approximately 32 tons of rubbish were collected from the residential area of Nukuihetulu, while 30 tons from the mangrove area.

The whole event, starting from media exposure of the workshop to clean-up activity and installation of the information board, has hindered further dumping of waste onto the mangrove area. A village member noticed a truck-load of rubbish driving into the mangrove site, the day after the clean-up. But when they checked the site the following day, there was no deposit of waste at all. They concluded that the truck-driver might have arrived at the site to find it clean and may have decided to take his load somewhere else.

The community's perceived their involvement in the project from an utilitarian and practical point of view. Participating in designing a project of their own is new to the community, thus it is important to combine both workshop and something they can easily relate to and be proud of, like clean-up activities.

2.6.5 Conclusion

The clean-up activity was very effective in mobilizing the community to work together. With the assistance of the IWP in providing transportation, it left them to participate in addressing the waste problem in their village.

The clean-up activity has also triggered a sense of 'waste-watch' among the people of Nukuhetulu. After going through a painstaking process of removing plastics and tins from the mud, they agreed that they not going to sit back and watch others continued to dump waste onto the area again.

The issue of waste collector is of paramount to Nukuhetulu. Some people believed that they wouldn't have collected such a large amount if there were regular waste collector or a nearby dumping site. On the other hand, dumping waste at the mangrove raises the concern for absentee landowners (those that owns tax allotment though residing in Nuku'alofa or somewhere else).

2.6.6 Recommendation

This report recommends that:

- a local mechanism should be activated at the village level to initiate waste watch;
- a consistent system of waste collector should be looked into as part of the pilot project; and
- some alternative waste disposal method and follow-up training should be identified as part of the pilot project.

3 Workshop Concluding Remark

The workshop generated maximum participation from the community, both indoor and outdoor activities. Greater community participation alone can be seen as a positive indicator, especially at the beginning of engagement and pilot project designing phase. The NPDT holds the view that in order for the community to actively engage in the program they need to understand certain aspect of the complicated IWP and its various components. Thus, the workshop has began to develop that understanding and at the same time clarified some of the misunderstanding that would have hindered active participation.

In terms of achieving learning outcomes, all individual reports agreed that starting each session with a brief presentation and followed by small group activities, reporting and plenary discussion was very effective. Most participants were able to contribute ideas to group discussion and the information was further cross-checked during group presentations. One of the elders from the village remarked that the workshop has widened their understanding on how to address the waste problem. The usual and only solution they have known is clean-up campaign. However, the workshop has led them to understand that they are at the center of the problem. In order to successfully address the problem, they must also participate in developing and implementing the solutions.

Using multiple facilitators was also effective as it makes the sessions more interesting and dynamic. Having different faces, voices and techniques keeps the momentum and concentration span of the participants. Experience shows that one or few facilitators often contribute to loss of interest and concentration among the participants.

However, there were some minor interruptions that will be mentioned here. The sitting arrangement was straining for some participants because they were all sitting on the floor and there were no chairs. Some facilitators also felt that participants sitting on the floor while facilitator stands from the front makes it look like they are teachers. The venue's location also posed a few problems as few participants kept disappearing to attend some of their immediate personal or household needs. The facilitator's reports also highlighted the issue of time limitation, which further constrained achieving their expected output.

Each facilitator's report has wrapped up with a set of recommendations to assist in the ongoing process of planning activities for designing phase, as well as, preparing for data collection activities.

Appendix 1

Workshop Program

Program for Community Awareness, Engagement & Participatory Workshop at Nukuhetulu

Time	10 September 2003	11 September 2003	12 September 2003
10.00 – 11.00 am	Opening Program _ Prime Minister's Office IWP Tonga Plenary sessions on: - aims/objectives, Project Cycle, what has been done, upcoming activities and tasks	Stakeholder Analysis-SA Plenary sessions on: - what is a stakeholder and SA? - why conduct SA? - how to carry out a SA? - develop a stakeholder inventory	Selecting Options – Project Mapping - Revisit IWP project cycle - group work on selecting options - expected activities and output - plenary session
11.00 –11.30 am	***Morning tea***		
11.30 – 12.30 pm	Waste in Tonga Plenary and group session on: - types of waste in Tonga - waste impacts on environment - sorting and disposing rubbish	Stakeholder Analysis Group work: - stakeholder analysis exercise - group presentations	Wrap Up – Way Forward - identify and develop an inventory list of activities and tasks that needs to be addressed as follow-up of the workshop - by the community, NPWG and NPDT.
12.30 – 1.30 pm	***Lunch***		
1.30 – 3.00 pm	Community Profile Plenary session on: - village mapping - locate problem area - village/household census	Participatory Problem Analysis-PPA Plenary session on: - what is PPA? - why conduct PPA? - how to carry out a PPA? - why is it important for community and other stakeholder to participate?	Village Clean Up
3.00 – 3.30 pm	***Afternoon Tea***		
3.30 – 4.30 pm	Community Profile - group work on community profile - group presentation	Participatory Problem Analysis Group work: - conduct PPA exercise - group presentations	Village Clean Up

Appendix 2

Participants List

1. *Afu*, Ma'u Kakala
2. *Afu*, Safinati
3. *'Aho*, Mele Sainai
4. *Fa'aui*, Inue
5. *Fakahau*, 'Ema
6. *Fakahau*, Sione
7. *Fononga*, Vaimoana
8. *Funaki*, Tamole
9. *Hala'api'api*, Vahei
10. *Ika*, Glendesi
11. *Ika*, 'Ofa
12. *Ika*, Sione 'Evaleti
13. *Ika*, Sione Fe'iloakitohi
14. *Ika*, Siu-he-lotu
15. *Ika*, Taina
16. *Ika*, Tevita Loti
17. *Ika*, Tiulipe
18. *Kavaka*, 'Ina
19. *Kavakava*, Hamala
20. *Kinikini*, 'Enilose Monu
21. *Lavalu*, Finehika
22. *Lavalu*, Kalama
23. *Lavalu*, Lu'isa
24. *Lavalu*, Manase
25. *Lavalu*, Seluki
26. *Lavalu*, Siueli
27. *Lavelua*, Siu
28. *Lilo*, 'Alofaki
29. *Longokava*, Manase
30. *Longokava*, Tupou
31. *Longokava*, Vili
32. *Lua*, Muli
33. *Manulevu*, Kama
34. *Matafahi*, Hulu (Tukuafu)
35. *Matafahi*, Mapa
36. *Matafahi*, Pisila
37. *Matafahi*, Sione
38. *Matafahi*, Sulieti
39. *Matafahi*, Tupou
40. *Moimoi*, Rev. Siaosi
41. *Mo'unga*, Ha'amala
42. *Mo'unga*, Moli
43. *Mo'unga*, Samiuela
44. *Mo'unga*, Seiloni
48. *'Ofa*, 'Unaloto
49. *Pahulu*, Tamiano
50. *Pau'uvale*, Penisoni
51. *Po'uliva'ati*, Mele'otu
52. *Silinu'u*, Talaivosa
53. *Talasinga*, Ane
54. *Ta'ofi*, Mele
55. *Tonga*, 'Alamoti
56. *Tu'alau*, Lisiate
57. *Tu'alau*, Valeti
58. *Tu'iono*, Pauline
59. *Tu'itavake*, 'Eniketi
60. *Tu'itavake*, Vai
61. *'Uluakiola*, Potesio
62. *Vaipulu*, Loueni
63. *Vea*, 'Enilose
64. *Veaniua*, Tiana
65. *Vincent*, Teu

45. *Mo'ungahelangi*, Falemaama 46. *'Ofa*, Hu'avai 47. *'Ofa*, Sione	