LIVE&LEARN
Environmental Education

# Research and Analysis of Perceptions

**Promoting community resilience to Climate Change, by the introduction and dissemination of conservation agriculture, through Island Women's Development Committees, in five islands in Baa Atoll in the North Province of Maldives**

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# CONTENTS


ACRONYMS ..... 3

**Part 1. INTRODUCTION ..... 4**

Context ..... 4

Rationale for the Research and Analysis and Perceptions ..... 5

**PART 2. RAP METHODS ..... 6**

Target groups ..... 7

Themes & Key Research Questions ..... 7

Research Approach ..... 9

**PART 3. FINDINGS ..... 10**

Participation ..... 10

Perception of the Environment ..... 11

Perception of the community on climate change ..... 12

Environmental and social problems faced by communities ..... 12

Environment and Livelihoods ..... 13

Environment and Culture ..... 18

Perceptions of stakeholders on Critical Environmental Issues in their community ..... 19

Governance and leadership issues in the communities ..... 20

Critical thinking and problem solving in Environment Education ..... 21

**PART 4. RECOMMENDATIONS AND CONCLUSIONS ..... 22**

Key Findings ..... 22

Contextual Findings ..... 23

Considerations for Innovative Environmental Education Tools ..... 23

Scope for Innovative Tools ..... 25

Underlying Principles for Innovative Tools and Methodologies ..... 25

**PART 5. The Way Forward ..... 26**

Annex 1: Community Profiles ..... 27

Annex 2: RAP Facilitator's Guide ..... 28

# ACRONYMS

## List of Abbreviations

| | |
|---|---|
| **AEC** | Atoll Ecosystem Conservation Project |
| **AO** | Atoll Office |
| **CCHDC** | Center for Community Health and Disease Control |
| **EPA** | Environmental Protection Agency |
| **IDC** | Island Development Committee |
| **IO** | Island Office |
| **IUCN** | International Union for Conservation of Nature |
| **IUCNSL** | International Union for the Conservation of Nature Sri Lanka |
| **IWDC** | Island Women's Development Committee |
| **Live & Learn** | Live & Learn Environmental Education |
| **LOAM** | Lanka Organic Agriculture Movement |
| **MFF** | Mangroves for the Future |
| **MOFA** | Ministry of Fisheries, Agriculture and Marine Resources |
| **PO** | Provincial Office |
| **UNDP** | United Nations Development Programme |
| **UNICEF** | United Nations Children's Fund |


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# Part 1. INTRODUCTION

## Context

The Republic of Maldives (hereafter referred to as Maldives) is a small-island developing nation, consisting of 1,190 coral islands with a total land area amounting to less than 300 $km^2$, scattered across 26 natural atolls within a territory covering over 90,000 $km^2$, located in the Indian Ocean about 750 km off the south west coast of Sri Lanka. Maldives extends for over 900 km from Seenu Atoll, 0°34' south of the Equator, to Haa Alifu Atoll 7°10'north of the Equator. The 26 natural atolls are grouped into 20 atolls for administrative purposes, which in turn are organized into seven Provinces. The capital – Male' is located towards the center of the archipelago, with an administrative atoll capital in each of the 20 atolls. The country has a total population of 298,968 people and an average population density of 1,037 $km^2$, however 34.6% of the population live in the capital Male' (Census 2006). Maldives is an independent sovereign republic, with the President as the head of the government. The country held its first multi-party elections in 2008, in which Mr. Mohamed Nasheed was elected as the President. Prior to that, the country was run by the former President Mr. Maumoon Abdul Gayoom from 1978-2008; a period during which the country registered great strides in socio-economic development, although large social inequalities were and remain a key challenge.

Prior to the December 2004 tsunami, Maldives witnessed annual average economic growth rates of 7% per annum. The GDP of the country declined by -4.6% during 2005, along with significant decline in tourist arrivals. In 2006 growth rates stabilized to pre-tsunami levels, largely owing to the strong rebound in the tourism sector from the 2004 tsunami, registering a growth of 42% in tourist arrivals. However, with the onset of the global economic down turn since mid-September 2008, the tourism sector saw a slow down, leading to below average growth rates. Nonetheless, growth projections estimate that GDP will pick up by 2.9% in 2010 and 3.8% by 2011 (Maldives Partnership Forum – March 2009). Maldives has a Human Development Index for 2009 of 0.771, ranking it 95th out of the 182 countries. Social indicators have improved steadily, with falling infant mortality rates, expanding school enrolments, and rising literacy rates. Incidence of absolute poverty is low. However, large inequalities in service availability and infrastructure within the country have resulted in a pull towards the economic center – Male'. It is one of the most densely populated capitals in the world; with sever congestion, social and economic problems.

The main types of habitats found in the Maldives are coral islands, coral reefs, sea grass and mangrove areas (State of the Environment Report 2004). The coral reefs, which are the principal component of the Maldives' rich and diverse marine eco-system, cover a total area of 8,920 $km^2$, making it the 7$^{th}$ largest in the world. Beach erosion is the most immediate environmental issue facing the islands of the Maldives, affecting both the growth and stability of the reefs and the island structures. Maldives is also threatened by the vulnerability to climate change and sea level rise, and remain a key advocate on the global front in raising awareness about the threats facing small-island nations as a result of global warming and sea level rise. Maldives is a party to the United Nations Framework Convention on Climate Change (UNFCC) and was one of the first countries to sign the Kyoto Protocol. A National Implementation Strategy for Climate Change was adopted in 2001.

The potential of agriculture in the Maldives is concentrated in 36 islands in which only 33 islands have land area in excess of 1 sq. km, and three with the area larger than 3 sq km. Agriculture is important as approximately two-thirds of the population of the Maldives resides in rural areas and over one-quarter of the rural labour force is engaged in agriculture with approximately the same number engaged in fisheries. Only about 10 percent of the total land area has been estimated as suitable for farming. In recent years, some crops such as watermelon, cucumber and papaya have been newly introduced for the domestic market and tourist resorts. In addition, commercial egg production has

been introduced targeting to increase its demand in the resorts in islands, and goat raring for commercial purposes for sales in the local market.

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The soils in the Maldives is reported to be of poor quality due to its porous nature, and low cation exchange capacity (CEC) leading to deficiency in nitrogen and potassium. Salinity and low water holding capacity (WHC) lead to water stress which is the main constraint to crop cultivation. Salinity and low water holding capacity (WHC) lead to water stress which is the main constraint to crop cultivation. Groundwater aquifers formed by accumulation of recharged rainwater on top of the saltwater are found in all the islands. These aquifers normally lie at a depth of 1-1.5 meters below the surface. The thickness of an aquifer is normally dictated by several factors including net rainfall recharge, size of the island and permeability of water through the soil column. Since these parameters vary from island to island, the quality of the aquifer also varies from island to island. Moreover, proximity of the aquifers to the surface also makes them highly susceptible to pollution and contamination from human activities as well as possible salt water intrusion due to soil erosion. Thus, availability of groundwater as a freshwater resource is also limited (adapted from the draft agriculture development Master plan 2010-2025)

## Rationale for the Research and Analysis and Perceptions

On 1st May 2010 the International Union for the Conservation of Nature (IUCN) approved a Project for US$ US$284,265.00 equivalent for Promoting community resilience to Climate Change, by the introduction and dissemination of conservation agriculture, through Island Women's Development Committees, in five islands in Baa Atoll in the North Province of Maldives. The Project's Objective is to initiate practical action and ensure future action is planned by Island, Atoll and Provincial stakeholders and in particular by island women, to strengthen community resilience to Climate Change in five islands in Baa Atoll, in the North Province by December 2012. Three Component Objectives will each contribute to the realization of the Project's Objective. Under Component 1 of the Project Live & Learn will work to ensure that all Island, Atoll and Provincial Stakeholders continue to support and promote new strategies to strengthen community resilience to Climate Change in the North Province by June 2012 (Component Objective 1). The Activities, Outputs and Outcomes delivered by Live & Learn under Component 2 will introduce Climate Change resilient conservation farming practices to five islands in the Baa Atoll supported by product and market diversification improving local access to foods and household income by June 2012 (Component Objective 2), while under Component 3, the Project will seek to strengthen the role of IWDC in promoting community resilience to Climate Change in 05 Islands in Baa Atoll by January 2012 (Component Objective 3).

This Research and Analysis of perceptions specifically applies to the following findings to pave the way for the development of toolkits and document community perceptions with regard to Climate Change, conservation farming supported by product and market diversification. The toolkits on conservation farming and market diversification would be developed as a training of trainers (TOT) guide to facilitate the trainers to implement training in the respective communities. The TOT package will be designed to suit the needs of the community facilitators.

# PART 2. RAP METHODS

This Research and Analysis of Perceptions (RAP) is a social investigative research method, which aims to assess community perceptions on issues relating to sustainable development and then use these perceptions in shaping effective tools to change knowledge, attitude and practices. Live & Learn has developed and tested the RAP in Melanesia, Cambodia and the Maldives, where it has been highly effective in creating an environment for community mobilization and empowerment.

The research carried out in this RAP will be used to guide in the development of (i) a facilitators resource guide; to advance sustainable development with regard to Climate Change issues facing the communities with a specific focus on conservation agricultural practices in the Maldives. The tools chosen will be based on the tools developed for Climate Change awareness in Solomon Islands by Live and Learn and other resources produced by the Ministries of Fisheries and Agriculture and the communities' existing knowledge base and perceptions along with a review of existing approaches to environmental education. A range of findings emerged from the research that will assist with identification of appropriate tools and methodologies for promoting sound environmental management within the island community in general. This research also forms the base-line for evaluation of project outcomes.

For environmental management to be successful it needs to be informed by an assessment of stakeholder perceptions on related issues. The RAP employed a data collection methodology that was highly participative. Utilizing a combination of participatory mapping and ranking cards the perceptions of the community on Climate Change issues, opportunities for action, comprehension of social/environmental linkages, ability for future's thinking and perceptions of who makes decisions about what is being practised in the 5 communities with agricultural practices were collected. The community members were put in groups comprising members from IDC, WDC, youth groups, farmers, NGO's and community leaders. Interviews with community were also held. An idea of what the community wanted at the end of the project was also addressed in these discussions.

Social research and assessment of perceptions are focussed on individual opinion and comment and therefore this report does not rely heavily on technical information and is not intended to serve as a technical report. The purpose of the report serves primarily as background for the development of appropriate education for Climate Change and conservation farming in the respective five commutes.

## Target groups

Four target groups were identified for the RAP (see below), however these were used as a guide and consideration was given to including other groups that may be representative in the local context.

### Table 1. Target group and participatory method used

| | Ranking | Mapping | Focus | Interviews |
|---|---|---|---|---|
| Farmers | X | X | X | |
| Community leaders | | | | X |
| Women's development committee | X | X | X | X |
| Youth | X | X | X | X |

## Themes & Key Research Questions

*The RAP activities focus on facilitating dialogue and feedback centered on the issues of environment with three linked themes. The themes are further broken down into key research questions and tools that the RAP will seek to involve. The key research questions are very broad and are intended as a general guide for facilitators. In practice facilitation will focus on more specific issues related to the key questions.*

### Research and Appraisal of Perceptions aims to determine:

- How community leaders, religious leaders, youth, and influential people (elders) and women's groups view (perceive) various issues relating to the environment and livelihoods:
- What are the issues?
- What are the opportunities?
- Community ability to solve problems related to the issues?
- Are any special measures taken to minimize the problem or issue?

| Theme | Key Research Questions |
|---|---|
| Perceptions of the environment (environmental discourse) | How do people in the community, farmers and women's groups view (perceive) the 'environment'? (See perceptions of the environment p.18) |
| Perceptions of environment and social issues**. (refer to island development plans and provide them with the draft)**<br>• With water supply?<br>• Waste management?<br>• With ground water pollution from the septic tanks or sewerage?<br>• Drinking water pollution?<br>• Beach and land degradation?<br>• Environmental & health problems | • What are the issues?<br>• What are the opportunities?<br>• Community ability to solve problems related to the issues?<br>• Are environmental monitoring conducted?<br>• Mapping to be used a tool. |
| Perceptions of the environment and making a living**. (refer to island development plans)**<br>• With agriculture, (kinds of agriculture and agricultural crops)<br>• Types of agriculture that they would like and market availability.<br>• Biodiversity and conservation. | • How do community leaders, women and the youth perceive issues (needs and concerns) regarding:<br>• Land use (agriculture, and housing and development work)<br>• Making a living from the land?<br>• Mapping to be used as a tool. |
| Perceptions of the environment and culture **refer to land use plans.**<br>• Places of cultural significance (e.g. Utheemu Gaduvaru)?<br>• Places of natural cultural value<br>• What are the needs and concerns associated with unique plants or animals?<br>• What are the needs and concerns associated with places valued for recreation or scenery? | • How do community leaders, women and youth perceive issues(needs and concerns) regarding:<br>• What are the opportunities?<br>• Community ability to solve problems related to the issues?<br>• Mapping to be used as a tool. |
| Perceptions of decision making and influence (including land use planning issues (**refer to land use plans developed)** | • What is land use planning?<br>• Who makes decisions of how to use the land?<br>• Is it practical to use the land wisely?<br>• Use mapping and ranking |
| Perceptions of community organisation and capacity | • How do community members leaders, women and youth perceive: The organization and capacity of community groups. Development activities and infrastructure management<br>• Ranking to be used as tool |

## Research Approach

Up to 15 representative people will be chosen for the workshop. The workshop groups will include community members (both sexes) and community leaders including members from the women's development committee, island development committee, CBO's, NGO's, youth groups, in the respective community. It is recommended that these groups be separated to encourage active participation from those involved.

Consider the population size of external groups in the community – if the size is large professionals may have an influence on the community, in this instance another representative group may be formed.

Target research groups have been proposed for the RAP (see below), however this should be used as a guide and consideration given to including other groups that may be representative in the local context.

**Target Group 1:** Farmers (in five communities)
Tools:
(i) resource mapping and ranking
(ii) focus group discussion
(iii) qualitative interviews

**Target Group 2:** Community Leaders (in five communities)
Tools:
(i) resource mapping and ranking
(ii) focus group discussion
(iii) qualitative interviews

**Target Group 3:** Women's development committee (in five communities)
Tools:
(i) resource mapping and ranking
(ii) focus group discussion

**Target Group 4:** Youths (in five communities)
Tools:
(i) resource mapping
(ii) focus group discussion

***Mapping:*** The resultant individual maps were collectively discussed with specific focus on; 'what are the issues', 'what are the opportunities', and how do you solve such problems in the community'.

***Ranking:*** Tailor-made ranking cards, detailing issues and needs identified through earlier activities and discussions were created for each community. Using the same sub-groups as for mapping, participants were asked to reach a consensus and rank the issues in priority order and to provide a rationale for their decision. On completion participants collectively viewed and discussed their ranking.

Ranking was also used to elucidate decision-makers within the community. Participants were asked to detail community positions of responsibility, individuals or outside influences that were drivers in decision making for their two highest ranked issued within their own community.

A facilitator's guide was developed to provide researchers with a framework for each activity and to assist in ensuring consistency of the research conducted across the three communities[1].

***Focus questions:*** Three specific questions were presented to participants and used to direct discussion focusing on two key issues for this project; Climate Change and conservation farming.

# PART 3. FINDINGS

The RAP was conducted with a diverse audience from five different islands with the aim of providing an insight into community perceptions on Climate Change and conservation gardening related issues and how such issues impact their lives. The participating communities unanimously highlighted the major issues as being related to Climate Change information, allocation of land for gardening and farming practices and lack of knowhow, skills and resources for agriculture and market linkages.

There was a good degree of overlap between the methods employed and in the responses, which helped to ensure we gained maximum feedback from the participants on their perceptions related to the identified issues and their impact on the environment of the island.

## Participation

The RAP was carried out in communities from five islands with a total of 119 participants: 106 attending group activities and 13 one-to-one interviews. Men and women were represented with 35 males and 71 females participating. The age range of interviewees was 25-60 years with a median age of 40.

### Table 2: Number and gender of participants, by community

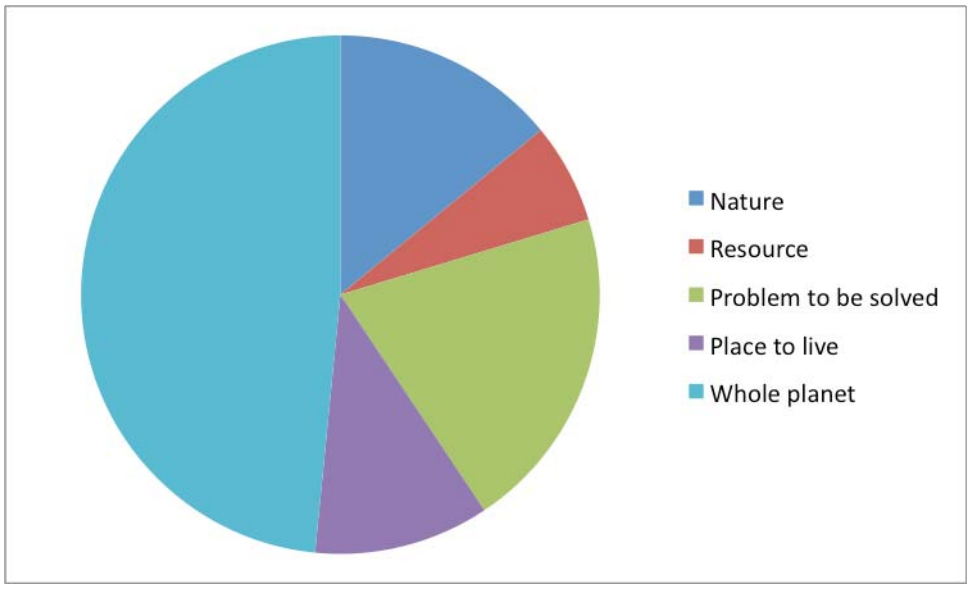
| Activities | Gender | Maalhos | Kudarikilu | Dharavandhoo | Kamadhoo | Kihaadhoo |
|---|---|---|---|---|---|---|
| Group activities | Males<br>Females | 4<br>15 | 11<br>13 | 5<br>14 | 5<br>15 | 10<br>14 |
| One-to-one interviews | Male<br>Female | 2<br>1 | 2<br>1 | 1<br>1 | 1<br>2 | 2<br>- |
| **Total** | | **22** | **27** | **21** | **23** | **26** |

[1] Rapid Assessment of Community Perceptions on Environmental Issues: Research Facilitators Guide. Available on request from Live & Learn Environmental Education, Male Office, Maldives.

## Perception of the Environment

Participants of the RAP held a generally holistic view of the environment, recognizing the all-encompassing relationship of the environment and their lives.

### Figure 1: Participants perception of the Environment




### Box 2. The six viewpoints provided on environmental discourse posters

| | |
|---|---|
| Nature: | The environment is everything around us; where there is nature means there is environment. |
| Resource: | I see the environment as a resource to be managed so that it can provide us with food, materials and medicines. |
| Problem: | I see the environment as a problem, which has to be solved; we need to fix up pollution and overharvesting of our fish. |
| Place to live: | I see the environment as a place to live, to know and learn about, to plan for and take care of. The village and garden is my environment. |
| Whole planet: | I see the environment as the whole planet, where everything is connected and people are part of this system (water, air, plants, animals and people). We must all live together in the environment. |

## Perception of the community on climate change

A National Implementation Strategy for Climate Change was adopted in 2001. The environmental protection policy of the Maldives is articulated in the National Environment Action Plan (NEAP), initiated in 1989. The Environment Protection and Preservation Act were passed by the Parliament in 1993, which provides a legal framework for the protection and preservation of the natural environment. The recently elected new administration is highly committed to environmental issues and on 15 March 2009, the President declared the Maldives' intention of becoming the world's first carbon neutral country. A climate change council has also been set up in order to advise the government on how to implement the carbon neutrality pledge. As a Small Island Developing Nation, with a limited internal market, a narrow and fragile resource base, often difficult inter and intra-island transportation, with high unit costs for social and economic service provision, reducing the country's vulnerability and increasing island community's resilience to external and natural disasters remains the most critical key challenge for the immediate and future development of the country.

The community members were very much aware of the natural disasters because the communities have witnessed the Indian Ocean tsunami in December 2004. However the community members lacked information regarding the changes that are occurring due to Climate Change all around the world and specifically to a low-lying island nation such as the Maldives.

## Environmental and social problems faced by communities

Beach erosion was mentioned as one of the priority issues in B.Kihaahdoo and mining of sand from the different areas of the island was a concern for the community members represented in the workshop. In Dharavandhoo the highlighted issue was that the ground water was getting saline and the issues related to the water lens and its impact on farming and agriculture. In Malhos it was identified that a specific areas of the island the ground water is getting salty. ( Huravee Magu/ Dhekunu) In Kamadhoo water lens is getting salty because of the sewerage system that is laid out is ocean outfalls specially the "*Rashuge Dhekunu sarahadhu"* the southern areas of the island). In Kudarikulu the community members highlighted that Island is eroding and as a consequence some of the protected trees near the beach is becoming extinct

Garbage and waste disposal and drinking water related issues were also frequently mentioned; however the main concern was the ground water lens becoming saline due to sewerage systems and was generally ranked as more important than other issues. The RAP has identified that one of the major areas the program needs to focus on is to introduce conservation gardening methods specifically addressing the issues of water efficiency and introduce more environment friendly gardening and farming practices as outlined in the project document in objective two:- to introduce Climate Change resilient conservation farming practices to five islands in the Baa Atoll supported by product and market diversification improving local access to foods and household income by June 2012.

# Environment and Livelihoods

## A. Distribution of allotment for farmers and other livelihood purposes

Community perceptions on land use planning were consistent and recognized the positive long term benefits that effective planning could bring about.

*"We do not have enough land for our own purposes however there are no rules when allocating land to farmers and since land is scarce there are no land to be allocate for other livelihood activities" (B.Kudarikilu community members)*

*"To make a master plan for the land to be used wisely and use the land in a sustainable manner which would benefit the people of the island and that the development of the island will be positively affected. To provide land for people who are willing and eager to do farming activities and the island office to monitor if the land is used accordingly". (B. Kamadhoo community)*

*To follow the land use plan and stick to the rules determined in the plan which has been developed with the consultation of the community and the authorities to decide how land should be utilized. Community awareness on the benefit of farming is also very critical for the community members to be interested in farming. (B. Dharavandhoo Community)*

Who should decide on how to use land within the islands was less clear: people of the island, atoll chiefs and Ministry of Environment were all suggested, however after discussion it appeared that government sections should play an integral role in land use decision making - alongside strong community discussion and input. The land use plans for the 5 island communities have been developed according to the guidelines of the land use plan developed by the Ministry of Housing and environment.

Responsibility for the management of land has recently been transferred to the Ministry of Housing, Environment. According to the Maldives Land Act of 2002, the responsibility for primary land use planning and management of land at the island level was shared among four ministries as follows:

- Ministry of Housing, Transport and Environment is in charge of the lands in urban areas in (Malé, Villingili and HulhuMalé islands);
- Ministry of Home Affairs is in charge of all lands in the inhabited islands other than Malé, Villingili and HulhuMalé;
- Ministry of Fisheries and Agriculture is in charge of lands in uninhabited islands leased for agriculture and other livelihood purposes; and
- Ministry of Tourism and Civil Aviation is in charge of the islands leased for tourism

The Ministry of Housing and Environment serves as the national focal point for all land related issues. Lands managed by the MOFA include the commercial farms of uninhabited islands leased out

specifically for agricultural development and islands leased under the traditional 'Varuvaa'[2] system. The 'goi'[3] farms are managed and leased by the Ministry of Atolls Development.

- The land tenure regime on inhabited islands is more complex. Entire land on inhabited islands is categorised into: (a) homestead plots, (b) 'goi' lands, and (c) 'faalabba' lands with different rights to use. In the case of homestead plots each family is entitled to a homestead allotment, whose usual extent is 50 ft x 100 ft (approximately 15 m x 30 m). Where land is in short supply, the extent of homestead becomes much smaller, sometimes even without any space for a garden. No rent is paid on these allotments, and all the vegetation including trees grown in the homestead belonged to the owner. The homestead allotment is inheritable under Islamic Law.

- 'Goi' land (on a section of the inhabited island) is rented to the highest bidder. Smaller plots are given for farming. The rent collected from the lessee (by MOFA) is of 1/8 (or 12.5 %) of the value of the crops produced.

- The government land called 'Faalabba', usually located near the village on inhabited islands, is used by the island community members to grow valuables and tree crops with the permission of the Island Counsellor. Half of the trees planted become the property of the State and the remaining half is owned by the grower. A lessee collects the produce of the trees assigned as the share of the Government and the individual planters collect the produce of their respective trees.

- In the 'faalabba' areas, each tree planted has a distinguish mark ('thah') and the trees planted are divided as follows:

  (a) Trees previously owned by the Government and now transferred to the communities;

  (b) Trees owned by different individual growers;

  (c) Trees owned one-half by the Government and one-half by individual growers;

  (d) Trees naturally grown and owned by the island community; and

  (e) Trees belonging to the person responsible for marking of trees (one for every 25 trees stamped).

The island communities also have access to community forest land, where they can grow forest trees or tree crops such as mango, breadfruit, coconut and other fruit trees or practice intercropping with field crops. Apart from backyard garden areas on inhabited islands, people on some islands are also given communal land free of charge for growing annual crops. However, there is no standard rule applied for this type of land tenure; on some islands, for instance, these lots change hand every year, but on some other islands, farmers can hold the land as long as they remain as cultivators. Naturally then, the former very rarely undertake land improvement activities.

The complex and varying land tenure regime, on both inhabited as well as uninhabited islands, has serious implications on development of agriculture as well as agricultural statistics system in the country. (Adapted from the draft agriculture development Master plan 2010-2025)

[2] '*Varuvaa'* is the traditional form of lease, and the extent of which is based on the number of coconut palms in the area. User right of this type of lands remains with the lessee's family even after the demise of the initial lessee.

[3] The large uninhabited areas on inhabited islands are known as '*goi'.*

The study activities revealed that land allocation for farming and other livelihood purposes was a contentious issue among the community members. Some of the key suggestions provided by the communities are as follows:

- To make the best use of the lands areas which are not utilised?
- To stick on the rules of the Land Use Plan
- The government or the head of the island will decide on how to use the land
- To follow the land use plan
- To make the community aware of the benefit that they will get from farming
- The community and the head of the island work together to make the best use of the land.
- Can lend lands for farmers by charging a small amount from them.
- To have a good plan of the land and to have rules for the farmers.
- Stop giving more land for individual households and plant more trees in empty areas where there is enough land.

## B. Networking with government institutions

There were frequent comment and strong opinion relating to the quality and availability of good leadership within the traditional community structures.

All the community members interviewed were of the opinion that there is not much support from the government, except when addressing issues identified by community, for example reduction of beetles', crows and other issues that community has identified, there is no community spirit among most of the community members and people work on an individual basis.

*"We find it very difficult to deal with the government as it takes a very long time and we have to go on reminding them" (Male One to one interview B. Kihaadhoo)*

a- No unity among the community
b- No good relationship between the community and the chiefs
c- No cooperation from the community
d- Lack of social spirit among the youth
e- No Team effort
f- Community does not cooperate with organised activities
g- Island office does not initiate activities at the community level
h- The Atoll chief is not active in taking initiative in community activities

## C. Lack of resources

Lack of resources has been identified by all the communities as one the major constraints to effectively implement any livelihood activities specifically farming and home gardening practices as a means of their livelihood.

*"We need the resources which are needed for farming. It is very difficult as the resources are not available in the island. Farmers need more training. In our island all most all the households have their own space for farming and so because of this we do not have a good market for the farmers. We do have many resources nearby but they do not buy any vegetables or fruits from our island". (Male One to one interview B. Kihaadhoo)*

*"To provide vacant land using a systematic approach for those interested in farming, provision of required resources and conducting agricultural courses" (Female One to one interview B. Kudarikulu)*

*"The resources needed for farming is not available from the island so the people who have interest in farming face difficulties". (Female One to one interview B. Kihaadhoo)*

## D. Training and capacity building

Training and capacity building has been identified as a key issue to empower the community to take action. The issue of capacity building has been mentioned 16 times during the RAP activity.

*"We need awareness programs, guidance and assistance from the expert and to maintain a policy where we could always do farming and get resources from the island". (Female One to one interview B. Maalhos)*

The following areas were identified as there was a need to strengthen the WDC in financial management and entrepreneurship skills. An organization structure needs to be set up in the women's development committees and the provision of adequate training needs to be provided to the committee members in order to take ownership and sustain the interest on conservation farming and promote environmental friendly agricultural practices which is in line with objective 3 of the project:- to contribute to *strengthening the role of IWDC in promoting community resilience to Climate Change in 05 Islands in Baa Atoll by January 2012* 'Live & Learn will more fully understand the exact training needs of each of the five IWDC' (Output 3.1); 'IWDC will become more effective organizations (Output 3.2); 'Project Inputs delivered by the IWDC will be used by farmers and contribute to the future sustainability of conservation agriculture in the five Islands' (Output 3.3) and 'Project Inputs delivered by the IWDC will be used by women and will contribute to future sustainability of conservation home gardening in the 05 Islands.'

## E. Marketing of crops

Generally there are four main types of markets in the country for agricultural produce trade. Firstly, Male' is the main agricultural market supplying local produces from the islands as well as those imported from abroad. It caters to the demands of about 100 thousand population of the capital, in addition to being a source of supply for the resorts and other atolls.

The second type of agricultural market consists of major regional markets that have evolved due to improvements in communication and transport such as Kulhudhufushi in the Haa Dhaalu Atoll, the designated development centre of the Northern Development Region, and Hithadhoo in the Seenu Atoll, the designated development centre of the Southern Development Region.

Thirdly, resorts in the respective regions also serve as markets for small entrepreneurs and suppliers, whose number has gradually increased with the commercialization of agricultural production. Resorts require regular and reliable supplies of higher quality products and this market is available to those suppliers meeting these criteria.

Finally, there are the rural households of islands and atolls that demand various products.

Even in the absence of a formal agricultural market information service in the country, producers in the main agricultural islands have adequate access to market information mainly due to improvements in mobile phone communication all over the country and possibly due to the small size of the market and limited variety and quantity of local produces traded in the market.

Farmers usually sell their produces at the farm itself to traders or to boat owners, or directly in the nearest market. In the latter case, they carry the produces themselves or through family members to the market. Wholesale buying and selling of local agricultural produces usually occurs on vessels or at the waterfront just off the vessel. Prices received by farmers for their produces depend mainly on transport and handling costs and to some extent on the level of supply in the markets, particularly in the Male' market. As transportation is mainly by sea, poor packaging and handling of the produces and inadequate storage on the vessels could result into significant losses.

Smallholder farmers from smaller agricultural islands also sell their surplus produces in nearby larger islands with high populations using transport means locally available in those islands. In most of the large islands, including the regional development centers such as Kulhudhuffushi , farm produces are traded under trees on waterfronts due to lack of properly organized market places.

There is only one wholesale market in the country, and it is in Malé. The Malé Fruit and Vegetable Market is strategically located on the ocean front attached to the Malé harbour. The market is managed under the general supervision of the Malé Municipality. (Adapted from the draft agriculture development Master plan 2010-2025)

The participants of the RAP had the knowhow of the markets however bringing their produces to the market was very risky and expensive because the products can only be sold at the regional and the central markets. The participants have very little knowledge of and linking it to market chains and buyers of agricultural products. In the North and the South the market demand has been created because of the viability of the population and the number of people visiting these 2 sites on the weekends. The participants were asked if they have discussed market availability with other interested parties and they have answered that they have consulted the NGO's in the island, Committees, Island office and individuals who show interest. However they have not gone beyond their own community organizations to explore the possibility of market availability. *The objective 2 of the project* aims to *ensure that Climate Change resilient conservation farming practices are introduced / extended to five islands in the Baa Atoll supported by product and market diversification improving local access to foods and household incomes*

## F. Awareness and information with regard to farming practices

All the five communities the communities were very interested in farming and making a living out of the products however historically some of these communities have not been farming communities and they were reliant on the other islands which are farming communities in the same atoll for their agricultural produce. Since the whole atoll has changed and tourist resorts have been established in Baa, the communities have felt the need to return back to farming so that they can make an income out of their produce by selling their products to the resort market and the local market.

*"The community is very active and willing to do this work. Water melons, cucumber, and chili, pumpkin, we have been doing this for a long time in the island but require doing this with the help of the resource people. We plant chili in the home garden and water melons and cucumbers are planted in some of the empty houses. Mainly we don't get the help from the head of the office and we don't get help from any other organization either". (Male One to one interview B. Dharavandhoo)*

*Yes, the Women's committee did start to do farming in 2008 and all the islanders were willing to help them but due to lack of the resources available in the island they lost interest and stopped doing their work. (Female One to one interview B. Maalhos)*

***Suggested initiatives that could be taken by the leaders and NGO community to increase awareness on farming practices**:*

- To have the necessary items available in the island (fertilizers, tools)
- To have a separate area for farming
- The community and the head of the island should work together to solve the problems
- To appoint some people to guide the farmers and (these people should be a great help for the farmers)
- The community and the head of the island should work together to solve the problems
- Help from the government.
- To have the necessary items available in the island (fertilizers, tools)

## Environment and Culture

The communities expressed that their islands had culturally significant sites and it was very important to protect the unique plants and animals species found in their own environment.The community members agreed that they were not being taken care of by the community. They suggested that these areas should be preserved as tourist sites for both visitors and the local community. The participants felt that little emphasis on preservation of these sites was given at the community level and therefore there was a lack of positive action being taken. Some of the things that are planted in the island before like lime, stone apple, mandarin, pomegranate, guava are becoming rare because people do not give much attention to these type of fruit trees any more due to this these trees are not seen in our environment now in abundance as before.

The suggestions that were provided form the communities were that the government authorities should assist the communities in taking care of their environment by providing the necessary support such as awareness raising and upskilling the community members. The researchers felt that there was a dire need to conduct an eco system mapping exercise which would assist these communities in identifying the type of life in their island environments and the benefits of preserving these in their own environment. For this purpose with the assistance of the stakeholders a tool has been developed to map the ecosystem, which would be discussed at the atoll and provincial level seminars and implemented during the project period.

Traditional community structures indirectly impact on the environment through inefficiencies and difficulties in environmental management. Understanding community ownership and engaging all levels of society; traditional leaders and marginalised groups, will be essential to ensure strong activity in bringing about the environmental changes communities wish to see. Some of the traditional

livelihood activities such as “Rukuafthi ge masaikaiy” (making household items of the dried palm leaves and palm fronds) might be a dying art.

***Suggested initiatives to create more awareness among the community to preserve the culture:***

- Provide awareness to the community on issues and possible solutions
- Involve and mobilise communities to be active and participate in development activities.
- Link management strategies clearly to the advantages attainable
- Find motivated and active people to work with the community.
- Involve all groups within the community and seek out to involve the community members previously not involved.

## Perceptions of stakeholders on Critical Environmental Issues in their community

Education was perceived as a key tool for improving environmental management. Despite this awareness, to date education has not been used to affect the necessary behavioural changes required for environmental management in the Maldives. Participants expressed a desire for more practical activities to be incorporated into trainings for the community to take action on the critical environmental issues they face.

There is a lack of strategic environmental education being conducted throughout the Maldives. Discussions highlighted that initiatives for environmental management should be taken up by the island or atoll office and that they in turn should collaborate with the CBO’s and other institutions in the community who are active and interested in the field of environmental management. Community members were very much aware of the television and radio programs on environment and water awareness. However, observations suggest that there are very few climate Change and conservation farming awareness materials used on the islands, despite the available opportunity. When enquiring, people said that they have been given materials but they did not last. For example, some awareness sheets were mounted on the walls but soon fell off or were removed. There may be a limited perception of what constitutes awareness and education materials. This is an important consideration for future participatory approaches undertaken with the community. It is very important to take full consideration of what people currently know and believe, in order to identify what might be the most effective tools.

This study has shown that all five communities had a basic understanding of the issues, but lacked the power and technical knowledge to promote behaviour change. Environmental education activities should seek to empower community members to use their localised technical knowledge to deal with local environmental issues and lead the community in environmental management. **Good education is linked with strategic and positive actions.** The limited state of environmental education in the Maldives makes it necessary to reassess traditional approaches that seek a linear addition of awareness, knowledge, attitudes and skills in order to have sustainable actions. The rapid change in behaviour, as shown with fuel-wood use, emphasises that behaviour change is not necessarily reliant on linear additions in education but can be directly related to incentives.

An important part of the RAP was to assess the existing environmental comprehension of the community members. There are some specific environmental social issues that were highlighted that also show a variation in attitudes within communities.

> *"There is a lack of awareness in the community, so they do not participate in projects. Role of the community in participating is very important in environmental projects. We can get the participation by creating the awareness among the community members" (Participant from one to one interview).*

Environmental education, as a tool for environmental management, was important to identify whether community members make connections between environmental and social issues such as the issue of utilising the limited land area available effectively.

The simple connection, such as the link between the natural environment and the benefits of preserving the fruit trees and promoting farming activities and livelihoods, shows some understanding of the inter-relationships in the environment. The underlying understanding of the carrying capacity of communities based on the availability of salinization of the ground water lens especially in specific areas of the island is also a strong social/environmental link that may facilitate an entry point for action. These are points of knowledge that can be developed and linked with other environmental management considerations.

## Governance and leadership issues in the communities

The participating communities were very concerned with the governance and leadership among the community members especially the NGO's CBO's and the leaders assigned in general. There was a lot of reliance on the government to take all the responsibility for developmental activities. Participants identified that more initiative needs to be taken by a group or an NGO, CBO or island authorities to mobilise the community in solving the community problems.

*"Good leaders need to be in the community. To implement the rules in the community and to tackle the issues of Climate Change, conservation farming and market diversity and other environment related issues". (Male interviewee)*

Coupled with this was the recognition for good coordination, collaboration and communication between all these leadership groups. Several NGOs and CBOs, in addition to standard atoll leaders and chiefs, were present in each community – all need to work together to ensure comprehensive and encompassing development programs.

The economic role of civil society centers on securing livelihoods and providing services and nurturing "social capital" for use in economic settings. In their social role, civil societies can be a reservoir of co-operative values, caring, cultural life and intellectual innovation. In general, it is civic groups that teach people the skills of citizenship and provide a framework for the expression of what they hold in their hearts. Although these economic and social roles are crucial for development, it is civil societies' role in "good governance" that provides the channels through which poor people can make their voices heard in government decision-making, thus helping to promote transparency and accountability, curb corruption, and builds a social consensus in favor of economic reform. (Adapted from- Civil Society: The Development Solution? Working Paper presented at a Civil Society seminar, held at the Institute of Development Studies, Sussex, England, and June 1996).

## Critical thinking and problem solving in Environment Education

Critical thinking and problem solving should take place in an environment in which people can identify, justify and critique cultural and traditional values and practices. In a community setting, this may bring forward conflicting views, which will need to be managed and transformed into positive action. In many cases, innovative approaches that respect local knowledge make it easier for participants to cope with perceived risks involved with behaviour change. A process-based approach to long-term change can be complex, therefore high quality facilitation is essential to implement this approach.

The ability to think critically is essential if individuals are to live, work, and function effectively in our current and changing society. Critical thinking requires community members to ask questions that challenge their thinking. Some examples are: Who makes decisions affecting the environment? Why are they made? Who benefits from decisions? Are the long-term consequences considered? Which decisions promote sustainable development and what opposition are these likely to encounter?

Critical thinking is about asking questions, challenging prior knowledge and learning, and challenging assumptions of our beliefs and knowledge. Critical thinking is about not taking anything at face value; it is about uncovering assumptions and finding underlying meanings.

Communities make choices, evaluations, and judgments every day regarding;

(1) Information to obtain, use and believe,

(2) plans to make, and

(3) actions to take.

Research undertaken in the Maldives indicates that:

Providing experiences in real-life situations or situations that simulate real-life situations increases the probability that skills will be used. Providing modelling of the skills, ample opportunities for practice, and feedback on the effectiveness of the participants thinking are also important considerations. Selection of experiences should be based on the developmental levels of the participants.

# PART 4. RECOMMENDATIONS AND CONCLUSIONS

## Key Findings

- Lack of resources was stated as one of the main obstacles to effectively conduct activities in the communities.
- There is a dire need to establish a system to document the natural resources in the environment.
- Training and capacity building is needed in the areas of farming and livelihood activities.
- Marketing of crops and market diversification has been observed to be very weak and the community needs to be upskilled in these areas.
- Distribution of land for farming and other livelihood activities has been identified as an area that needs to be strengthened by following the land use plans developed in the communities.
- Net working and building relationships with government and other relevant institutions, in the community as well as outside the community was identified by all the 5 communities.
- Enhancement of community awareness about issues and potential projects is essential to maximise community participation and ownership.
- Strengthening the capacity of the organisation such as CBO's NGO's and women's groups was identified as a key area to focus on for the sustainability of the programs in the respective 5 communities.
- Women's development committees are the most active groups in all the 5 communities.
- The ground water in all of the communities were turning saline due to the sewerage systems being laid out in most of the communities and the type of systems that are being laid out are ocean outfalls. The communities' have expressed their concern because the ground water is utilised for all purposes except for drinking.
- The community has suggested that it will be good to involve all the members in the community who are interested in the activities of the project for the community to take ownership of the project.

The issues highlighted by the community members who participated in RAP are addressed in the detailed projects activities. The Project's Main Objective is to ensure that *practical action is initiated and future action planned by Island, Atoll and Provincial stakeholders and in particular by island women, to strengthen community resilience to Climate Change in 05 islands in Baa Atoll, in the North Province by June 2012.* The Project's Main Objective is directly related to three of MFF twelve PoW, namely PoW 9 - Improving community resilience to natural disasters (Project Components 1 & 3); PoW 6 - Promoting civil society awareness and participation in coastal decision making (Project Component 1) and PoW 8- Supporting environmentally sustainable livelihoods among coastal communities (Project Component 2)

## Contextual Findings

The Maldives has a history of challenging environmental management issues and many of these have gained increased attention in the after-math of the 2004 tsunami. Major environmental management issues identified by the government include: climate change, scarcity and pollution of freshwater resources, waste management, air pollution, and biodiversity conservation.

There is a lack of strategic environmental education being conducted in the communities participating in this study and presumably throughout the Maldives. Education activities should seek to empower communities and promote localised technical knowledge to deal with environmental issues. Women and youth should be seen as key stakeholders in any environmental management initiatives.

The Poverty & Vulnerability study highlighted a rapid change in behaviour in regard to fuel-wood use. Restrictions on cutting down trees made the price of wood higher and alternative fuels such as kerosene more viable, thus providing an economic incentive to change from wood to other fuel sources for cooking. The report emphasised that behaviour change was not necessarily reliant on linear additions in education. As such, environmental education in the Maldives should reassess traditional approaches that seek a linear addition of awareness, knowledge, attitudes and skills to bring about sustainable behaviours. Education linked to incentives is equally likely to affect positive behaviour change; education without action is not likely to be effective.

From the information recovered and lessons learnt, future project progression should be viewed as cyclical. Environmental education tools need to be action-oriented, while other, usually linear progressive elements, (knowledge, attitudes, & values) need to be built in so they occur simultaneously to the action. In this way, benefits will be seen directly; thereby providing direct incentive for further actions to be conducted.

## Considerations for Innovative Environmental Education Tools

1. Encourage community participation.
2. Encourage people to think about the future and encourage the development of solutions to problems.
3. Link knowledge to action and change.
4. Address environmental needs and concerns identified by schools and/or communities.
5. Culturally appropriate.
6. Can be developed and implemented within budget in a short period (3-4 months).
7. Link with existing (Government & Non-government) programs & initiatives.
8. Do not replicate projects that already exist.
9. Can be implemented through schools or other existing community organisations.
10. Are sustainable – there are pathways for a community to feasibly implement the projects in the future.
11. Are potential models to adapt and replicate across other Island communities
12. Encourage community led campaigns to empower the youth to be environmental leaders in the communities, (they are the next generation to inherit the island and its environmental state.

## Scope for Innovative Tools

The community members can act as change agents for the communities. There are also a range of semi-government community based organisations such as the WDCs and Youth Clubs. All the schools in the communities researched had environment clubs, which were quite established and active.

Women have a primary role of environmental management in their household and were found to be highly aware of environmental links. The WDCs, community based organisations and PTA in some sites were actively engaged in environmental management activities and played a supporting role in other community initiatives.
Religious education in the schools also plays a significant role in the formation of individual attitudes towards key issues such as health and the environment. Islam points to an appreciation of the world's resources as a fundamental tenet of its faith. Religion plays a major part in daily life with prayer times breaking the day into specific components.

There are significant areas of environmental management on which non-government organisations and donors are working with the government. Environmental management is one such area, with significant external resources being made available to assist the government. There are many opportunities within environmental management for innovative environmental education to be explored. The introduction of conservation farming and market diversification is one area that would link well with education. Current practices of farming and market linkages could also be assessed, in order to develop supportive educational approaches.

## Underlying Principles for Innovative Tools and Methodologies

The focus of past environmental education approaches in the Maldives has been awareness and knowledge based. Placing greater emphasis on action oriented environmental education is critical to success. Awareness alone does not change behaviours. The promotion of best practices and learning by doing will provide innovative tools for behaviour change, which is the ultimate goal. There needs to be a process orientation to environmental management rather than an output orientation.

The 'building back better' approach that has been promoted by the United Nations for the Maldives and other tsunami-affected countries is a significant and innovative approach that should be further developed. The psychology of taking a negative situation and looking at the positive potential is very encouraging. The Maldives seems to be taking this on board as they are actively increasing environmental management initiatives such as introducing new crops across the country.

The general focus of Environmental Education in the past has been within the biophysical paradigm, exploring environmental linkages and some 'cause and effect' theories. While this paradigm is important and relevant, more attention needs to be paid to the social and economic processes that mediate environmental sustainability. Environmental Education carries the greatest impact when delivered through a socio-economic paradigm, which links to policy, sustainable livelihood and community development in a broader sense.

# PART 5. THE WAY FORWARD

Critical thinking needs to become a key ingredient in all Environmental Education ventures because it questions knowledge and values. When Environmental Education is combined with action-based learning, it requires investigation of local issues and relies on local participants' willingness and skills to enable environmental, social and structural change.

Starting with the learner, we must ensure that there are always one or two clear 'do-able' messages in Environmental Education activities. If efforts are spread too thinly or vaguely over a range of issues, these efforts may fail to induce meaningful action or change. This is especially of concern for short term initiatives

Having fresh and innovative tools is not enough to ensure that students will participate in activities. It is necessary to identify the drivers behind the success so that people engage in activities that target prime community concerns in a meaningful way. Prime concerns are clearly such things as income generation and improved health. Increased knowledge is only actively sought if it can be combined with primary concerns. Realistically, in the community context, members can only have meaningful and lasting redirection toward more sustainable practices if those practices can be directly linked to income generation.

To fully maximise the impact of Environmental Education the tools and methodologies chosen will need to recognise that more attention needs to be given to the link between family level micro-economics and environmental conditions. Attention must be paid to the complexity of human interactions with the environment, including the economic, political, cultural and social systems in which people operate, as well as the natural systems. As a consequence the tools chosen will need to tap into the local economy to make the environmental concerns a priority.

**Catalytic environmental behaviour change will only happen if Environmental Education tools and activities connect to everyday activities that are primarily focused on income generation** from fishing, agriculture and tourism. This project is focussed on raising the awareness on Climate Change issues and linking these issues to income generation through conservation agriculture and market diversification while improving the nutritional status at the family level. Three PoW's out of MFF's twelve PoW, namely PoW 9 - Improving community resilience to natural disasters PoW 6 - Promoting civil society awareness and participation in coastal decision making and PoW 8-Supporting environmentally sustainable livelihoods among coastal communities is directly related to the projects outputs.

There is a need for emphasis on visual tools as, even though the literacy rate is high, there is not a strong culture of reading with most people preferring to watch television. Although posters and billboards are common in the Maldives, few promote the environment and proper environmental practices. Whilst these media may initially seem readily acceptable through their commonality, people were not enthusiastic about getting more posters and therefore alternative visual modes need to be investigated.

Culturally accepted activities and information delivery channels are an important link. Religious education plays a major part in daily life and in the formation of individual attitudes towards key issues such as education, health and the environment. Innovative approaches that respect traditional, cultural and religious knowledge make it easier for participants to cope with perceived risks related to behaviour change. The role of mosques as communal water sites increases their potential to support

environmental education by linking it to people's spiritual learning and their relationship with the environment. To date, utilisation of the mosques for environmental education has not been developed.

# Annex 1: Community Profiles

| Atoll | Island | Geographical Information | Population | Primary Occupation(s) | Educational Status | Health Status |
|---|---|---|---|---|---|---|
| **Baa** | Dharavandhoo | Longitude:73° 07' 50" E ,<br>Latitude: 05° 09' 30" N | 967 | Fishing and agriculture | Up to Grade 10 | 1 health centre |
| | Maalhos | Longitude: 73° 6′ 30″ E,<br>Latitude: 5° 8′ 6″ N | 545 | Fishing and agriculture | Up to Grade 10 | 1 health centre |
| | Kamadhoo | Longitude: : 73° 8′ 10″ E,<br>Latitude: 5° 16′ 59″ N | 420 | Fishing and agriculture | Up to Grade 10 | 1 health centre |
| | Kihaadhoo | Longitude: 73° 7′ 30″ E,<br>Latitude: 5° 12′ 56″ N | 420 | Fishing and agriculture | Up to Grade 10 | 1 health centre |
| | Kudarikulu | Longitude: 73° 4′ 15″ E,<br>Latitude: 5° 18′ 7″ N | 535 | Fishing and agriculture | Up to Grade 10 | 1 health centre |

# Annex 2: RAP Facilitator's Guide

## Building a Sustainable Future: Education for Sustainable Agriculture in the Maldives

### RAPID ASSESSMENT OF COMMUNITY PERCEPTIONS ON ENVIRONMENTAL ISSUES

### RESEARCH FACILITATORS GUIDE
### JUNE 2010 (COMMUNITIES)

LIVE&LEARN
Environmental Education

# Contents

**Purpose** ..... **30**

**Research Approach** ..... **30**

Themes & Key Research Questions ..... 31

**Guidelines for the Facilitator** ..... **33**

Ten Important Guidelines ..... 33

Facilitation Skills ..... 34

Note-taking ..... 34

Self assessment ..... 35

**Activities** ..... **36**

Activity 1 *Resource Mapping* ..... 36

Activity 2 *Focus Group Discussions* ..... 37

Activity 3 *Ranking* ..... 39

Activity 4 *How do you see the environment?* ..... 39

Activity 5 *Perceptions of school organisation and capacity* ..... 40

Community Leaders and teachers - Interviews ..... 41

**BACKGROUND ON PARTICIPATORY TOOLS** ..... **43**

Community Profiles ..... 44

**Appendices** ..... **46**

## Purpose

This guide provides general background material and suggestions to support you in your role as facilitator undertaking a Research and analysis of Perceptions (RAP) with a community. A series of facilitator resources provide specific guidance related to your role, covering topics such as:

- Effective facilitation – what is it and how you can do it,
- Participation – what it is and the tools to do it, and
- Approach – what we hope to do and how.

This facilitator guide has been designed as a general resource that can be used with many approaches; however it is focused on the RAP for developing and revising the existing resources developed for the communities under the TA 4614 and RDP 2, MOFA and the AEC project. The issues and challenges facing each community may not be the same as those in another community; therefore there is scope to be flexible in the approach to the RAP.

## Research Approach

Up to 15 representative people will be chosen for each focus group of the RAP. The focus groups will include farmers, community members (both sexes) and community leaders including members from the women's development committee, youth groups, health assistants and the business people in the respective community. It is recommended that these groups be separated to encourage active participation from those involved.

Consider the population size of external groups in the community – if the size is large professionals may have an influence on the community, in this instance another representative group may be formed.

Target research groups have been proposed for the RAP (see below), however this should be used as a guide and consideration given to including other groups that may be representative in the local context.

| | |
|---|---|
| Target Group 1: | Farmers (in five communities) |
| Tools: | (i) resource mapping and ranking<br>(ii) focus group discussion<br>(iii) qualitative interviews |
| Target Group 2: | Community Leaders (in five communities) |
| Tools: | (i) resource mapping and ranking<br>(ii) focus group discussion<br>(iii) qualitative interviews |
| Target Group 3: | Women's development committee (in five communities) |
| Tools: | (i) resource mapping and ranking<br>(ii) focus group discussion |

| | |
|---|---|
| Target Group 4: | Youths (in five communities) |
| Tools: | (i) resource mapping<br>(ii) focus group discussion |

## Themes & Key Research Questions

*The RAP activities focus on facilitating dialogue and feedback centered on the issues of sustainable development with six linked themes. The themes can be further broken down into key research questions that the RAP will seek to answer. The key research questions are very broad and are intended as a general guide for facilitators. In practice facilitation will focus on more specific issues related to the key questions.*

| Theme | Key Research Questions |
|---|---|
| Perceptions of the environment (environmental discourse) | How do people in the community, farmers and women's groups view (perceive) the 'environment'? (See perceptions of the environment p.18) |
| Perceptions of environment and social issues**. (refer to island development plans and provide them with the draft)**<br>• With water supply?<br>• Waste management?<br>• With ground water pollution from the septic tanks or sewerage?<br>• Drinking water pollution?<br>• Beach and land degradation?<br>• Environmental & health problems | • What are the issues?<br>• What are the opportunities?<br>• Community ability to solve problems related to the issues?<br>• Are environmental monitoring conducted?<br>• Mapping to be used a tool. |
| Perceptions of the environment and making a living**. (refer to island development plans)**<br>• With agriculture, (kinds of agriculture and agricultural crops)<br>• Types of agriculture that they would like and market availability.<br>• Biodiversity and conservation. | • How do community leaders, women and the youth perceive issues(needs and concerns) regarding:<br>• Land use (agriculture, and housing and development work)<br>• Making a living from the land?<br>• Mapping to be used as a tool. |
| Perceptions of the environment and culture **refer to land use plans.**<br>• Places of cultural significance (e.g. Utheemu Gaduvaru)?<br>• Places of natural cultural value<br>• What are the needs and concerns associated with unique plants or animals?<br>• What are the needs and concerns associated with places valued for recreation or scenery? | • How do community leaders, women and youth perceive issues (needs and concerns) regarding:<br>• What are the opportunities?<br>• Community ability to solve problems related to the issues?<br>• Mapping to be used as a tool. |
| Perceptions of decision making and influence (including land use planning issues **refer to land use plans developed)** | • What is land use planning?<br>• Who makes decisions of how to use the land?<br>• Is it practical to use the land wisely?<br>• Use mapping and ranking |
| Perceptions of community organisation and capacity | • How do community members leaders, women and youth perceive: The organization and capacity of community groups. Development activities and infrastructure management<br>• Ranking to be used as tool |

## Guidelines for the Facilitator

When commencing work with the community explains why you are doing the RAP and what it will be used for. People's time is precious, be well prepared and efficient. This also shows respect to the participants.

Often research benefits an organization, a government department or a donor and not necessarily the community. Explain from the outset how the RAP approach seeks to benefit the community. Focus on the use of participation to lead to practical and useful initiatives related to environmental management in the community.

### Ten Important Guidelines

To ensure we start from where people are at, and ensuring we address real community needs we always do a RAP before commencing work. Basically the RAP will inform and shape our approaches so it is important it is of high quality and comprehensive. Good facilitation will assist us in getting good data, so here are a few hints for the facilitators:

1. Be clear on what you expect from the participants and let them know how you will conduct the research (a simple outline) and ground rules for the research e.g. no interruption or domination.

2. Be prepared and respect peoples' time. Make sure you are prepared and have all the materials ready.

3. Do no attempt to note-take whilst facilitating. Note taking is a separate job.

4. Use visual aids and examples wherever possible (for example using a map).

5. Do not pay for people to participate but explain how they will benefit from the RAP and the project.

6. A group should not exceed 15 people.

7. During discussion place people in a circle (on the floor, mat or chairs)

8. Often strong characters will dominate the research process. If you have a strong character in the group direct your focus on the quiet persons and allow for their participation. It is acceptable to conduct research according to age, race and gender lines.

9. Conflict and disagreement is okay as long as it is non-personal and directed at the issue at hand.

10. Always keep the **Research Questions** in mind. They are your guide and the data collected needs to answer the questions.

## Facilitation Skills

The following have been identified as important functions for a facilitator:

- Sustain or create interest and mobilize people
- Create a comfortable and open learning environment
- Understand and explore participants' problems and priorities
- Identify and organize learning opportunities for participants' outside their context
- Facilitate dialogue and participatory group decision-making to promote mutual understanding
- Build participants' confidence in experimenting, reflecting and learning from this process
- Provide assistance for solving problems

## Note-taking

Recording the outputs of the facilitated activities can help people to focus. It makes it possible for the group to see how its views have developed and to share experiences with other groups. Importantly, notes can allow the data collected to be compared with other data. Written notes also make it easier to include any initiatives or activities undertaken by the group in a newsletter or on a website, so we can learn from one another and participants see a visible outcome from their activities. Keeping notes also shows that the knowledge and experiences of members is valued.

Having specific staff to act as note-takers allows the facilitator more freedom to follow the flow of the group. Notes could cover such things as:

- What the group covered/discussed – try to get as much detail as possible. Use quotes or key words as prompts to remind you of as much information as possible when writing up the notes
- Key issues / ideas / points of particular controversy – it is important to highlight who specifically states a key or controversial issue. Issues where participants agreed to disagree are also important
- Notes should be taken in the language that is spoken in the workshop, and then translated into English at the soonest convenience
- Translation needs to be done by the note-taker to ensure accuracy of the data. If possible it would be useful to have two note-takers as this will help to ensure quality notes.
- Consider filming or recording the activities if appropriate and if you have access to this equipment. Transcripts can be taken from recordings at a later date and analyzed for important data.

## Self Assessment

The table below outlines a variety of facilitation skills. Read each skill and reflect on how much you have mastered this facilitation skill. Then rank how you *want to be*, keeping in mind the type of activities you will have to facilitate.
Scoring: (1 = poor 2 = so, so 3 = some idea 4 = skilled 5 = highly skilled)

| **Facilitation Skills** | **Rank Now** | **Want to Be** |
|---|---|---|
| 1. Listen attentively | | |
| 2. Observe body language and group interactions | | |
| 3. Ask questions to the group | | |
| 4. Answer questions from the group | | |
| 5. Summarize what somebody has said | | |
| 6. Summarize group discussions | | |
| 7. Give feedback to individuals | | |
| 8. Give feedback to a group | | |
| 9. Be open to receive feedback from the group | | |
| 10. Encourage quiet people to speak | | |
| 11. Encourage dominant people to listen to others | | |
| 12. Facilitate an open discussion in during which all group members can share their ideas and participate | | |

## Activity 1: Resource Mapping

### Objectives

Participants...

- Can see a visual representation of and have an improved understanding of the environmental issues in their community
- Consider issues that are important in the context of their community

### Materials

- Copied hand out – 5 theme areas and short background to project, including contact details. It is important to clarify who we are and what we are doing in their community.
- Butchers paper & marker pens – The land use map designed by the community to be provided including key reference points (Mosques, main road).
- Task cards for the mapping exercise (appendices #1)
- Camera and /or video camera to document activity.

### Time

Approximately 40 minutes

### What to do

- Introduce the session by saying that this approach is designed to gain as much participation from them as possible. Give an overview of the 5 themes and general project approach (handout). We are not donors like Red Cross; we are here to support activities through environmental education. Also emphasize the benefits from the process.

- Place map of the community that they have developed/ region including key reference points. This needs to be in a suitable location for all people to see it and be able to place information on it.

- Start the process by getting more detail on the map – ask about the location of houses, school, mosques, medical centre, etc. Then get the participants to each place their house on the map.

- Divide the participants into three groups and provide each group with a task card and some markers (a different colour for each group). There will be task cards for 3 different themes:

    (i) Environment and social issues.

    (ii) Environment and making livelihoods with emphasis on agriculture.

    (iii) Environment and culture.

Each task card will have questions / ideas for places or events to mark on the map. Ask each group to discuss these and to draw them on the map – they may use a map 'legend' if necessary.

- Allow 20 minutes for mapping. When the map is complete ask each group to explain what they have drawn on the map to the other participants. Ask if anyone would like to add or change anything to the map after each presentation.

## Activity 2: Focus Group discussions

### Objectives

Participants...

- Identify important needs and concerns in the context of their community
- Critically discuss why various needs and concerns are important in the context of their community with the assistance from the island development plans.
- The issues and the opportunities to be taken from the provided plans.

### Materials

- Butchers paper & marker pens – ruled up with headings as shown below
- Camera and /or video camera to document activity.

### Time

Approximately 40 minutes

### What to do

Ask the participants to remain in the same 3 groups as earlier (change the groups only if it's necessary for better group dynamics).

Provide each group with a large piece of butcher's paper ruled up as follows:

| What are the issues? | What are the opportunities? | How do you solve the problems in the community? |
|---|---|---|
| | | |

Ask each group to reflect back on the mapping exercise, this is vital so that a range of issues can be considered in this exercise. Each group will have a different focus:
Prompt the group with the issue of problem solving and give each group a card written, "How is problem solving used with regard to the issues"

Allow each group at least 20 minutes to discuss and produce a list. Then ask each group to present their table to the rest of the group. Allow other participants the opportunity to comment on each issue, and add new issues if necessary.

** Large blank sheets of paper, otherwise known as newsprint*

## Activity 3: Ranking

### Objectives

Participants...

- Critically examine needs and concerns of the community
- Rank the needs and concerns of the community from most to least important

### Materials

- *Issues written on strips of paper (3 sets)*
- Stapler
- Camera and /or video camera to document activity.

### Time

Approximately 40 minutes

### What to do

Develop one list of 'needs and concerns' from the lists generated from the previous activity (if some issues are repeated more than once, collate them into a single issue). Ask the participants to go back to their groups. Provide each group with the issues written on strips of paper and ask them to rank the issues (put them in order) from most to least important according to their opinion.

When the groups have completed the task (and have reached a consensus) ask them to present their ranking to the other groups. They must also provide a rationale or reason for their ranking. If there are too many needs and concerns to rank (e.g. more than 10), then just ask the group to present a rationale for their top 4 or 5.

Allow the other groups the opportunity to ask questions to the group presenting their ranking. Then allow each group to reconsider their own ranking. The activity concludes when all groups have presented their rankings and have had time to discuss and reconsider their rankings based on the dialogue. Ask each group to staple their final rankings onto a piece of A4 paper and collect them for future records.

### Lessons learned from previous RAPs:

*It is important to stress to the participants that there is no right or wrong answer. Some groups hesitate to do the ranking in case they get it wrong. There is no wrong answer – just the perceptions of the participants!*

*Be aware that participants are to have an open minded dialogue or conversation about the reasons for their ranking. This is an activity that can easily turn into a debate where one group tries to beat another. Encourage each group to consider changing their rankings based on reasons from other groups - praise this as a positive thing.*

## Activity 4: how do you see the environment?

### Objectives

At the end of the session the participants...

- Can identify the ways in which they perceive and value the environment
- Consider that people perceive and value the environment in different ways

### Materials

- Posters containing descriptions of different ways that people perceive the environment (appendices #2)

### Time

Approximately 20 minutes

### What to do

Place the 6 'environmental perceptions' posters in separate locations around the room. (See next page for details of the posters). Explain to participants that there are many different ways of perceiving and valuing the environment. Introduce each poster and explain what it means (with examples). Allow the participants to ask questions about the posters.

Ask each participant to think about which environmental discourse (poster) *best* describes the way that they perceive value or feel about the environment. Allow them to move around the room to explore the options and discuss this between themselves. Make sure that the participants understand that there is no correct answer to this task – just individual perceptions. They are likely to identify with more than one poster, however the task is to choose the one that they think fits them best.

When they have made a decision ask them to stand next to the poster that they have chosen. Ask for volunteers to explain to the group why they stood where they stood.

*Record the number of people who have selected each environmental perception.*

## Activity 5: Perceptions of the community on decision making

### Objectives

At the end of the session the participants...

- Consider who makes decisions and finds solutions to the identified problems.
- Record the incentives related to conducting more environmental education activities

### Materials

- 2 x 'Ranking Influence' sheets per participant (see appendices #3)

### Time

Approximately 30 minutes

### What to do

Explain the objectives of the activity. Choose 2 highly ranked issues from the previous activity. Provide each participant with 3 copies of the ranking issues sheets, and ask them to write one issue on each sheet.

Explain how to fill out the sheet by providing an example. Allow participants time to discuss the levels of influence between themselves and to fill out the sheets. Collect the sheets when everyone has finished filling them in.

## Community Leaders - Interviews

Use Semi-structured interviews with teachers and community leaders in each community. The interviews should be conducted on a one to one basis - individual.
Island Chief, Magistrate, Health Worker, member of Parent teacher Association, Business man, Youth Clubs (sports etc), and School Headmaster, teacher. It is also important to be flexible to allow interview of leaders for specific groups such as agriculture or fishing. It is envisaged that there will be 7+ interviews of community leaders in each community. Ensure that men and women are represented.

The focus of the interview is based on the participatory map. Ask the community leader to have a look at the map and see what comments they have about the information.

Before commencing the interview, review the 'tips for conducting an interview' on the following page. You should record detailed notes from the answers to the interview questions in a note book, clearly labeled with date, time, interviewer and interviewee.

### Interview Questions

1. What positive livelihood opportunities has the community been involved with?
2. What are some of the difficulties getting things done in the community regarding the environment and available resources?
3. What resources do you need to become more effective at the at the community level with regard to home gardening?
4. Is the community active on making a living out of agricultural products? (Focus on the last year) What, where & when? Were people from the broader community involved?
5. Which groups are most active in agriculture or home gardening projects?
6. How can we get the community/women's development committees involved in agricultural projects?
7. What marketing channels have the community utilized in the past?
8. What level of dialogue do you have with Government authorities with regard to allocation of plots?
9. What are the constraints to dialogue with the Government authorities?
10. Has any organization worked in agricultural projects with your community? When, why, how, what happened?
11. How would you like to see Live & Learn working with your community?

## Tips for conducting the interview

### Before you start

- Make sure that you introduce yourself properly if you don't know the person you are surveying, try to make them comfortable and build some rapport before starting
- Clearly state the purpose of the survey and give a brief overview of the project.
- Explain that your conversation will be part of the RAP report
- Tell the people how long the interview will take, and make sure that it is a convenient time

### Conducting the Interview

- Begin with some friendly general conversation to help the people feel at ease
- Ask the questions in order and try to keep the conversation to the topic of the question
- Be cautious about asking "why" because it can make people feel like you are passing judgment on them
- Beware of asking the questions in a way that could influence the householder's answers. For example, never ask "Don't you think that …"? This is called a leading question
- Be sure that you have clearly understood the answer. If not, ask the person to repeat the answer. Always ask the person to explain words and ideas that you do not fully understand. Do not assume that you know what the answer is because of your own knowledge and experience
- Avoid passing judgment, giving advice or your own opinion
- Avoid discussions that are not useful. Keep to the topic of the interview

### Closing the Survey

- Ask the person if there are any questions they would like to ask you
- Discuss the next steps

## Background on Participatory Tools

The specifics of the participation method are the tools, often referred to as participatory tools. These are very dynamic and constantly changing with use of different facilitators in different areas and for different focuses. Many manuals have endeavored to give a list of participatory tools or methods. In order to allow for and encourage the flexibility of these participatory tools the following will give a summary of general concepts of the participatory tools.

### Resource Mapping

This tool can be used inside or outside. It is designed to get participants to visually represent an area as they see it. Mapping may not necessarily be about accuracy as it is based on perception. Mapping can serve to highlight group dynamics and perceptions as people discuss the way they see an area. Drawing on the map encourages people to think more about a particular issue and offers another way of expressing their views visually. This tool can be used to promote increased thought and discussion on the issues and help to gain several layers of information in a very useable format.

Where the situation allows it can be useful to start with a walk through of the community – this is typically along a main road and helps people to become engaged in the activity at a more physical level. This can be used prior to or as a ground-truth of the resource mapping exercise. This tool is used to gain physical information about an area, through participant observation and facilitator questioning. It is an external activity where the participants walk along a designated course through an area. The concept is for the participants to consciously look at their physical environment with a key focus such as water, resources, problems, solutions etc.

### Ranking

Ranking allows the participants to work through the issues and as a group prioritise them into a ranked order. This leads to group discussion about perceptions of importance. More issues may also arise as participants explain the importance of different issues. Prior to ranking, the issues need to be highlighted by the group. Listing is a documentation tool that requires the participants to list what they see as the key issues. This tool can be linked to other tools and used to summarize issues for further discussion and/or ranking. It can be important in-group verification of the data collected before it is documented.

### Evaluation

Evaluation is an important part of the process. It provides an opportunity for participants to reflect on their work and their learning. Organisers get feedback about what worked well and any changes that need to be made to the resource materials or how the learning circles are conducted and supported. Evaluation encourages the participants to look at the process and say what they did and didn't like about it and whether they thought it was good or not and offer suggestions. Evaluation is critical and looks at how to enhance the participatory process or tools for future use.

Strength, Weakness, Opportunity, & Limitation (SWOL) is a tool that encourages the participants to assess the positives and negatives of an issue, and look at its potential or limitations. It is specifically an assessment tool, and can be put to good effect in assessing possible activities and evaluating existing activities.

## Background Information

Before conducting research it is important to gain some background on the situation – this is sometimes termed as situational analysis. Importantly, other organisations and institutions have often done much of this work so this is more a review of existing information than the collection of new information. Specific information that is needed to work in the islands includes community, government and organisational information.

IUCN (1995, p5) emphasise the importance of planning for facilitation, and highlight 10 points for effective communication, which include defining of the; area, issues, role and objectives, target groups, modes of communication, message, means and constraints, strategy and format, planning, and evaluation. These are important considerations in determining relevant background information.

## Community Profiles

Before conducting research it important to profile the research community according to below table.

| Name of island | Population | Livelihood/ Socio-economic issues | % pop. with access to safe water | % pop. with access to basic sanitation | Access to health care & education | Role of women / men and youth & other in decision-making |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Perceptions of environment and social issues**. (refer to island development plans and provide them with the draft)**

Place the following on the map:

- Sources of water used by the community
- Places where wastewater is stored or disposed of
- Sources of potential water pollution
- Places where the water or land is polluted
- Places where rubbish is dumped
- Beach and land degradation areas
- Any other places linked with health issues

Perceptions of the environment and making a living**. (refer to island development plans)**

Place the following on the map:

- Agriculture
- Land where agriculture was/is carried out
- Land with gardens or agriculture
- Types of agriculture that they would like and market availability.
- Biodiversity and conservation.

Perceptions of the environment and culture **refer to land use plans.** What are the needs and concerns associated with places valued for recreation or scenery?

Place the following on the map:

- Places where people consider as should be preserved.
- Places where people go hunting or fishing
- Places where people gather medicinal plants
- Places where people go for recreation (eg picnics)
- Places with unique plants or animals
- Places valued for their scenery.

## Appendices: Perceptions of the Environment

| | |
|---|---|
| 1. I see the environment as nature. It is to be appreciated, respected and preserved. | 2. I see the environment as a resource. It is to be managed so that it can provide us with food, materials and medicines. |
| 3. I see the environment as a problem, which has to be solved, we need to fix up pollution, and over harvesting our fish and forests. | 4. I see the environment as a place to live, to know and learn about, to plan for and take care of. The village and garden is my environment. |
| 5. I see the environment as the whole planet, where everything is connected and people are part of this system (water, air, plants, animals and people). We must all live together in the environment. | 6. I see the environment as a community project, it's an opportunity for us to get involved and work together. |