

Findings of the Vulnerability and Capacity Assessment in Maduvvaree and Meedhoo

Location: Maduvvaree and Meedhoo, Maldives

Date: June, 2006

Sector focus: Multi-hazard risk reduction

Spatial focus: island community

Bibliographical reference

International Federation of Red Cross and Red Crescent Societies, *Findings of the Vulnerability Capacity Assessment Community: Maduvvaree and Meedhoo*, IFRC, Geneva, Switzerland (2006).

Abstract

Maduvvaree and Meedhoo are two of the thousand islands that make up the Republic of the Maldives. This country was among the most severely affected countries hit by the December 26th, 2004 Asian Tsunami. Maduvvaree has a population of 2,015 inhabitants, and a density that is approaching its maximum capacity. Meedhoo hosts 1,725 inhabitants and is a medium sized island in relation to the other Maldivian islands. There are significant amounts of vegetation remaining on Meedhoo, making it a “green island” and an example of sustainable development as it balances its capacities and resources.

The International Federation of the Red Cross and Red Crescent Societies (IFRC) updated their vulnerability and capacity assessment toolkit (VCA) in 2006. To launch the revised toolkit and promote its use, “learning by doing” training sessions with staff, delegates, and volunteers are being conducted with national societies around the world. To systematize good practise and capture the richness of these activities, the IFRC is writing these up as VCA case studies. This report from the Maldives was put together as a “Learning by Doing” activity with two working groups from the two islands and the IFRC in June 2006.

The ‘*Findings of the Vulnerability Capacity Assessment Community: Maduvvaree and Meedhoo*’ focuses on the capacities and vulnerabilities of the two communities, as well as the interaction with the local government. There is an extensive list of priority areas identified, and it will be of interest to see a couple of year’s down the road which ones are implemented and how this transforms the community. Vulnerability and capacity assessment tools included: direct observation, mapping, seasonal calendar, historical charts and visualization, as well as focus groups. The practical application of the tools is not discussed in the document, but rather the findings and analysis of the capacities and vulnerabilities are summarised. There are ambitious lists of activities to address the identified issues in the communities, and specific action plans with timelines to be implemented by

the community with the support of the IFRC. Action plans have been elaborated for water management and quality, Dengue and Chikungunya (mosquito borne illnesses) prevention, and control and erosion awareness.

Since this document is a “learning by doing” report, no particular end users are specified, however it would be useful for **branch and volunteers of the Red Cross and Red Crescent, community development workers, local government and NGOs**. This project will be of particular interest to those working with **island communities**.

Technical description

Hazard/risk type: climate change, storm surge, droughts, heavy rains, cyclones, earthquakes, strong winds, aviation and navigation related hazards, and pandemics such as avian influenza and mosquito borne illnesses (Dengue and Chikungunya).

Type of assessment: Vulnerability and Capacity Assessment (VCA) and actions for transformation

CRA process

The reports were developed with full participation of community members and local administration. There were rigorous selection criteria for the community representatives such as gender balance, having permanent residence on the island, willingness to participate as a non-remunerated volunteer, or being part of a community based organization. Nine members of each community were selected to participate as part of the main VCA working group.

Methods used: Direct observation, key informant interviews, spatial mapping, vulnerability and risk mapping, capacities and resource mapping, seasonal chart, community organizational chart, livelihoods chart, transect walk, historical chart, historical visualization, historical profile, triangulation and focus groups.

Was livelihood analysis used? Yes. Livelihoods were considered through the question: “how do they [the community] cope?” Analysis looked at family structure, diversity of employment opportunities, economics, social cohesion, and land use.

Was external specialist knowledge introduced? Yes, a representative from the IFRC was present to facilitate the “Learning by Doing” project. The IFRC has also been present to support the Maldives through the post-tsunami recovery phase. This has included extensive housing reconstruction, water & sanitation programs and temporary housing for the IDPs. During this VCA, WatSan members together with the DM provided water management training for the water committee, technical training for the operators of the desalination plant, and training for the baseline survey. They also participated as some of the VCA working group.

Vulnerability analysis

There were nearly 20 vulnerabilities identified through the VCA process which covered health, water & sanitation, infrastructure, economic, and environmental concerns.

There were 5 main vulnerabilities (and ways to address these) prioritized by the VCA working group participants for Maduvvaree:

- ◆ Erosion
- ◆ Prevent water contamination by improving the sewer management system
- ◆ Improve garbage management system
- ◆ Address high population density
- ◆ Upgrade health centre with basic equipment (testing thalassemia, dengue, screening pregnant women, and x-ray facilities)

There were 5 main vulnerabilities (and ways to address these) prioritized by the VCA working group participants for Meedhoo:

- ◆ Community income generating activities
- ◆ Garbage and waste management
- ◆ Job opportunities
- ◆ Erosion and beach zone control
- ◆ Access to safe drinking water

Capacity analysis

Resources available: On Maduvvaree the main occupational activities consist of fishing, farming, working at tourist resorts and a boat factory. On Meedhoo, inhabitants fish, construct boats, are civil servants, and the women weave thatched articles to sell to tourist resorts, process fish, and are employed in the government sector. Children attend school on both islands. There are health centres, water, electricity, internet, sports facilities, and mosques available on both islands. There are also considerable pre-existing social organizations.

Limitations to capacity: This publication is the result of a “Learning by Doing” exercise with the IFRC Disaster Management (DM), WatSan (water-sanitation) and recovery staff, community volunteers and leaders, as well as local administration chief and staff. The exercise took place over a 5-day period that was seen as a major limitation to developing activities and project implementation during the VCA exercise. The IFRC DM and Watsan staff was responsible to follow up with the communities and has developed action plans for Dengue and Chikungunya prevention and control awareness, erosion awareness, and water quality and management.

Action planning and implementation

What actions were actually planned? Extensive lists of actions for transformation are included next to each of the main vulnerabilities identified by each of the communities. Due to the limited time available for this VCA, action plans were not developed during the VCA. However, during follow up visits both communities prioritised again the vulnerabilities and the action of transformation to be started on their own with the support of the Federation DM and Watsan Teams. Specific action plans have been elaborated for Dengue and Chikungunya prevention and control awareness, erosion awareness, and water quality and management.

The outcomes of the VCA in Meedhoo and Maduvvaree have been shared with the National Disaster Management Centre (NDMC), the Atoll Development, Education and Health Ministries, and the UNDP. These outcomes were also the base for the development of the CBDM, which is currently implemented in 11 islands of Kaafu and Raa atolls. Target groups are community and schools.

What actions were actually carried out?

- Dengue and Chikungunya prevention and control activities
- Water quality and management established water committee
- Established Island Disaster Management (IDMC) activities and task force with the role of Disaster preparedness for response and risk reduction
- Start erosion plan with the mapping of the area to plant trees and identification of tree type

Have these actions turned out to be sustainable?

IDMC is a permanent structure in the community and has the role for disaster preparedness for response and risk reduction. The island chief is the chairperson of the IDMC and will ensure the link with the atoll and national DM government structure capacity building.

Task force members and schoolteachers were trained as trainer of trainers for dengue and Chikungunya prevention control.

The established water committee will ensure proper use and maintenance of the desalination plant.

Were there any unanticipated additional benefits of the actions?

According to island chief:

- The VCA has had a positive impact on the community.
- The community has experienced water problems in the past; the new desalination plant has largely addressed these problems. Ongoing monitoring is necessary and there continues to be some challenges with maintenance and operation of the desalination plants during times of need for the community.
- Awareness in the community on strengths and capacities has increased which has brought a huge change in the community's perception on various issues.

According to the Maduvvaree island chief, the island office could better negotiate with government to get:

- A nearby uninhabited island for boat building. The VCA showed that boat building near the shore caused water pollution.
- Sea wall for erosion protection
- Construction of the waste management center by the UNDP

The Meedhoo atoll chief reported that:

- The Government has been doing research and surveys to implement the activities to reduce the issues addressed as vulnerabilities by the VCA.
- Other NGOs are also becoming more involved directly and indirectly.

Limitations on action/sustainability of actions: Actions were classified by the C.I.T. method, which identifies what the community can change themselves, and what they can influence, but require additional input. Levels of external support were categorized as “technical support required”, “financial support required”, and “community work required”. Issues that required exclusive external input were left for later action planning since the level of assistance and support is complicated and high.

Indicators

The Dengue and Chikungunya prevention and control plan and the CBDM programme have defined and specific indicators.

This report summarizes the initial analyses of the VCA and does not lay out indicators for activities. Based on the main vulnerabilities highlighted, one could look at the loss of life and livelihood to natural hazards before and after events based on the activities implemented. There were also economic and health activities identified, so one could look at the reduction in rodent populations if a garbage management system is implemented, reduction in rates of dengue fever and Chikungunya, reduction in rates of diarrhoeal diseases if the water and sanitation system is improved.

Contextual notes

Existence/role of prior or contemporaneous conflict? The Maldives gained independence from Britain in the 1960's and had also been under Dutch rule previous to that. In 1968, the sultanate was replaced by a republic, although there have only been 2 presidents since then. In 1988 there was a failed attempted coup, and more recently, the country is embarking on democratic reforms.

Role of displacement/relocation. Many islands were evacuated for the Asian Tsunami on December 26th, 2006. Unfortunately many lives were also lost due to the low-lying nature of the islands and atolls. Maduvvaree and Meedhoo were not affected so IDP camps were established to accommodate respectively 166 and 268 survivors of the tsunami.

Role of prior disaster & prior recovery attempts? Through the VCA process, community members realised they have no preparedness response plans and are unaware, or have limited knowledge of potential disaster risks.

Significant historical, geographic, economic, political, or cultural issues that influenced this instance of CRA and its consequences? None.

Strategic notes

How has this practice of CRA influenced change in policy and practice at the national level?

- the NDMC recognised the importance of the VCA at community level and created baseline data with the VCA outcomes.
- Federation has been asked officially to continue CBDM activities on other islands.
- The CBDM VCA programme is the most effective model among the other agencies to be implemented country wide
- IDMC to be institutionalised within the Government framework and IDMC guidelines shall be approved by NDMC.

How has this practice of CRA influenced change in policy and practice at local level? Local government has recognised the importance to set up DM structures and early warning systems at community level and to link them with the atoll and national level.

How has this practice of CRA influenced the level of organization and solidarity in the locality where it was carried out? Before the VCA there existed a high level of support and solidarity among the community members. The process of the VCA highlighted this as a strong capacity and a point for resilience and coping. The locality also recognised the importance to have an IDMC with the membership of all the community sectors.

Less divided along class, gender, age, ethnic lines? The VCA identified division between the older generation where women weave thatch out of coconut fibres, and men who fish. The younger generations recognize that there are dwindling supplies of coconut and prefer to look to a career in the civil service which is seen as less physically demanding than fishing. There exists a high degree of solidarity among the inhabitants of the islands and they frequently assist each other to cope in times of difficulty such as drinking water salination, and food shortages.

More divided along these lines? None

Are the people living in this area more able to speak out on issues that concern them? Both communities have used the VCA outcome to negotiate better with the government to address solutions for the identified risks and vulnerabilities.

Have new civil society organizations been created directly or indirectly because of this practice of CRA? Significant civil society organizations existed on both islands before the VCA was undertaken. None of these community organisations were in charge of the DM activities, so a IDMC and task force group has been set up with the role of preparing for disaster and initiate risk reduction activities in their island.

Lessons learned

The level of participation and enthusiasm of the participants and community members was encouraging. Each VCA participant detailed three lessons they learned, their three greatest concerns, and their individual commitments for follow up from the assessment. Some of the lessons learned are:

- ◆ VCA is beneficial for learning about how to overcome difficulties through a collective effort
- ◆ Raising awareness about hazards and vulnerabilities, and using the past as a reference point for safely addressing the future
- ◆ Understanding the 'how' and 'why' of dangerous situations
- ◆ Working together and gathering information with the community is a way of empowering the community

Keywords

Livelihood, coping, social organization, climate change, storm surge, droughts, heavy rains, cyclones, earthquakes, strong winds, aviation and navigation related hazards, and pandemics such as avian influenza and mosquito borne illnesses (Dengue and Chikungunya).

Resource person(s)

John Bales, Disaster Management Delegate IFRC 2008-present, john.bales@hotmail.com

Enza Mancuso, Disaster Management Delegate IFRC during VCA, enza.mancuso@hotmail.com