



International Strategy for Disaster Reduction



Linking Disaster Risk Reduction and Poverty Reduction

Good Practices and Lessons Learned

*A Publication of the Global Network of
NGOs for Disaster Risk Reduction*

2008



United Nations



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Please send your feedback and suggestions, including further case studies for consideration, to:

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Disclaimer: The information and opinions expressed in this publication do not necessarily reflect the views of the UN/ISDR secretariat.

Foreword

Disasters are often portrayed as acts of nature, or of a natural order. Yet this is mostly far from reality. The major factors influencing disaster risks are human and social vulnerability, matched with the overall capacity to respond to or reduce the impact of natural hazards. Poverty is therefore a major factor increasing disaster risk, by increasing vulnerability to disasters and reducing existing coping capacities. It is only by addressing these two issues together that we can make the difference between a community trapped in a grinding poverty cycle, and one with secure lives and livelihoods.

Another patch of common ground is that the poor suffer the most from disasters.¹ 94.25% of all people killed by disasters in from 1975-2000 were low income or lower-middle income people. The poorest people comprised 68% of deaths from disasters . These plain numbers are an indictment of socio-economic inequality, and a telling signpost to where disaster risk reduction must concentrate its efforts as of moral necessity. Furthermore, drought, cyclones, and flood seasons are repeatedly depriving the poor of their assets, livelihoods, and labour force, all too often locking them into endemic poverty cycles.

Even in the poorest communities, however, there is a wealth of knowledge and experience on how to break this negative feedback cycle. From this set of good practices, for instance, water and environmental management emerge as a very prominent link between disaster risk reduction and poverty reduction. The examples of drought risk reduction initiatives highlighted in this publication are equally inspiring, and make intuitive sense. There is a need to further promote these initiatives, so that they can be scaled up or replicated on a wider scale.

This publication has been precisely developed with this purpose in mind. We hope that it will inspire further practical action at the community level, and raise awareness on this critical issue.

Mr. Sálvano Briceño
Director,
United Nations, secretariat of the
International Strategy for Disaster Reduction

¹ 20th Century Asian Natural Disasters Data Book, Asian Disaster Reduction Center (ADRC), August 2002.

Preface

Natural hazards, which are becoming more intense and frequent, have a devastating impact on the world's poor. A large-scale hazard that hits a highly vulnerable community with low capacity to cope, reverses hard-won development gains, entrenching people in poverty cycles, and increasing vulnerability. How to break these cycles is a huge challenge for governments, development practitioners and societies as a whole.

Sustaining and protecting livelihoods of the poor and marginalized is a way to tackle poverty. This, however, is a huge task for poor communities, especially those that are vulnerable to natural hazards.

In this context, the Special Unit for South-South Cooperation in UNDP is pleased to co-facilitate South-South knowledge development and solutions exchange for disaster risk management. This publication captures good practices and lessons learned in linking disaster risk reduction and poverty reduction from Asia, Africa and Latin America. It provides us with a glimpse of how non-governmental organisations are able to undertake projects and programmes that tackle both disaster risk reduction and poverty reduction at the same time.

The cases presented show that communities' disaster risk reduction efforts in mitigation, preparedness, networking, local level insurance, shelter protection and water provision help contribute to poverty reduction. Similarly, it is noteworthy that poverty reduction efforts such as job and livelihoods creation and protection can help reduce disaster risks.

It is therefore the Special Unit's privilege to continue the partnership with the secretariat of the International Strategy for Disaster Reduction in the publication of this series, and to continuously identify and share good practices on disaster risk reduction that benefit poor communities. This reinforces the link between activities that reduce disaster risks with poverty reduction initiatives. This link is vital for the achievement of sustainable development goals, particularly at the community level.

Mr. Yiping Zhou
Director,
Special Unit for South-South Cooperation, UNDP

Introduction

This is the second publication of the Global Network of NGOs for Disaster Risk Reduction, a network of national and international NGOs and civil society organisations working on disaster risk reduction². A first publication, entitled *Building Disaster-Resilient Communities - Good Practices and Lessons Learned*, was published by the Global Network in June 2007 to make the case for increased community-oriented disaster risk reduction action.

Building on last year's effort, the present publication seeks to highlight initiatives that have successfully linked poverty reduction and disaster risk reduction in various parts of the world. It features several projects and programmes that show how disaster risk reduction can be integrated into poverty reduction initiatives (or vice-versa) to help reduce the vulnerability of the poor and protect their livelihoods and development gains.

Disaster risk reduction and poverty reduction have also been selected as the theme of the 2009 Global Assessment Report on Disaster Risk Reduction that will be produced by the UN/ISDR system for the second session of the GP/DRR³. Some of the case studies included in this publication will also feed into the 2009 Report, and will contribute to the analysis of the disaster risk/poverty interface.

For ease of reference, an abstract is provided at the beginning of each good practice, and all are presented in a format that helps the reader to locate a particular section of the case study (lessons learned, potential for replication, and so forth). A specific section, entitled 'The Initiative's Contribution to Poverty Reduction', describes how poverty reduction is approached and achieved by the initiative. Lastly, contact details are provided at the end of each case study for those who may wish to seek further information.

Our hope is that these good practices will generate increased interest in the subject among community leaders, implementing agencies, policy makers and other stakeholders. Above all, it is hoped that they will inspire the replication of initiatives that reduce poverty and build resilience among the world's most vulnerable communities.

Ms. Feng Min Kan
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² For more information on the Global Network visit: <http://www.unisdr.org/ngos>.

³ The "Global Platform for Disaster Risk Reduction – GP/DRR" is the main forum for representatives of governments, UN agencies, civil society organizations and the private sector to address disaster risk reduction issues (<http://www.preventionweb.net/english/hyogo/GP/>).

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Bangladesh



Risk reduction boosts livelihood security in disaster-prone district

Supporting communities affected by river erosion in Bangladesh

Practical Action - Bangladesh



'Flood-friendly' agriculture:
A way to manage
food insecurity

Abstract

Natural hazards, vulnerability and people's suffering are a part of life in Gaibandha, one of Bangladesh's most disaster-prone districts. In remote northern Gaibandha, located at the confluence of the two major rivers of Tista and Brahmaputra, riverbank erosion leads to permanent loss of land for cultivation and shelter. People often have to live in areas with minimal or no basic services such as safe water, sanitation, health and education.

The district's remoteness and the complexity of its problems result in social marginalization, child labour, exploitation, child marriage, early pregnancies and human rights violations. Ill health, malnutrition and mortality rates are high among women and children. Men migrate to other areas in search of employment, leaving women and children at home more vulnerable. In 2004, Practical Action Bangladesh initiated a five-year alternative risk reduction and management project to address disaster and development issues, particularly among disadvantaged communities living on the edge of mighty rivers. The project also seeks to develop a sustainable model for replication in other parts of the country.

The project has increased the earning capacity of over 20,000 households and developed innovative technologies in areas such as disaster warning, rapid evacuation, housing and sustaining livelihoods. The beneficiaries now have a range of mechanisms to cope with disaster risk and poverty in a sustainable manner. Their average income has risen and men's migration has reduced significantly.

The Initiative

This is an alternative disaster risk reduction and management project focusing on extremely vulnerable communities affected by river erosion and flooding in Gaibandha District, north-eastern Bangladesh. The project aims to reduce the vulnerability of men, women and children to the physical, social, economic and political effects of river erosion, flooding and other natural hazards.

Initiated on 1st April 2004 and continuing until March 2009, this five-year project has the following objectives:

- Poor women, men and children living on vulnerable riverbank lands are better prepared to withstand the impact of recurrent natural hazards.
- People displaced by river erosion have access to basic services (food, shelter, water, health and education) through the development of cluster villages and multi-purpose shelters.
- People displaced or at risk of being displaced by river erosion, have alternative livelihood options (i.e. new income-earning opportunities).
- Improved social, civil and political rights for disadvantaged men, women and children affected by river erosion and regular flooding.

So far, the project has targeted over 20,000 households. This amounts to some 100,000 direct beneficiaries and over 500,000 indirect beneficiaries. Over 67 per cent of them are women.

With funding from the Big Lottery Fund UK⁴, the project is being implemented by Practical Action Bangladesh in 30 union⁵ locations, under four highly disaster-prone upazila (sub-districts) in the northern district of Gaibandha. The four highly disaster-prone sub-districts are: Gaibandha Sadar, Sunderganj, Shaghata and Fulchari.

Five local partners, along with a Practical Action Bangladesh expert panel, are involved in implementing the project on the ground. The project is supervised by Practical Action Bangladesh in direct collaboration with five local NGOs, and is linked with relevant government line departments and administrative bodies.

To date, the project has successfully built the alternative livelihood skill capacity of over 20,000 targeted households. Systematic monitoring, evaluation and impact assessment have shown that the 20,000 beneficiaries' livelihood patterns, access to basic services, food consumption and average incomes have changed very rapidly. Since 2004, the average income has risen from below US\$300 to US\$450 (where US\$1,570 is the highest for agro-processing households). Resource-poor and vulnerable communities now have access to common property, particularly to public water bodies and sand bar islands.

Also, the project has identified and explored a number of new technological options, including: floating vegetable gardening; crop production in barren sand bars through pit cultivation techniques; cage aquaculture; community-based cold protection mechanism; integrated model housing through cluster villages and multi-purpose shelter development; community-based extension system; and a community-managed rapid evacuation system throughout the project areas (over 1,600 km²). The project has also generated over 100,000 days of work for unemployed rural men, women and young people.

Based on its impacts and visibility, the project was awarded a Gold Prize of the Asia-Pacific Forum for Environment and Development (APFED) Award 2007.

⁴ Big Lottery Fund UK (BIG) is a UK grant-making organisation created by the UK government on 1st December 2006.

⁵ A "union" is an administrative unit below the upazila (sub-district) and above the village.

The Initiative's Contribution to Poverty Reduction

Gaibandha District is located in northern Bangladesh at the confluence of two major rivers: Tista and Brahmaputra. This location makes the area vulnerable to disasters, due to flooding and river erosion. Frequent disasters make life in the area much more difficult than in the rest of country, depriving residents of land, employment opportunities and basic services.

As a result, local populations live below subsistence level. They often have to live where there are minimal or no basic services, such as safe water, sanitation, health and education. Communications are extremely poor. The remoteness of the district and the complexity of its problems result in a high degree of social marginalization, child labour, exploitation, child marriage, early pregnancies and violation of human rights. Women and children are the most vulnerable, as men migrate in large numbers in search of employment and livelihood security.

To cope with their situation of both extreme poverty and disaster risk, the communities generally depend on external relief and rehabilitation after a disaster. Vulnerable community members are also forced to engage in indentured labour for their survival.

The 20,000 households targeted by the project were a highly disadvantaged segment of the community. After losing their lands and shelters permanently in the river, the communities relocated to the flood protection embankment where there were no basic services, employment opportunities or secure livelihood options. The project's comprehensive approaches have helped them secure access to income and basic services such as shelter, health, education and food. Highly diversified and alternative risk reduction strategies and income opportunities have been explored throughout the command areas (over 1,600 km²) with proven results and visible impacts on the communities' lives and livelihoods. The project beneficiaries now have a range of innovative mechanisms to cope sustainably with disaster risk and poverty, which has significantly reduced migration.

To help manage and minimize disaster risk, the project has developed participatory technologies all over the command areas and in the district. The major risk reduction and livelihood strategies are:

- Providing access to improve livelihood knowledge, skills and information through capacity building training and demonstrations of off-farm and on-farm based technologies.
- Developing infrastructure services and facilities such as multi-purpose shelters, cluster villages, community clinics, schools, safe water and sanitation.
- Establishing community-based early warning and rapid evacuation systems.
- Ensuring better access to common property resources, and to social, civil and political rights.

The project works directly with the communities to reduce poverty, disaster risk and vulnerability, by building capacity through technological and social interventions. The interventions include:

- Flood-friendly agriculture, fisheries and livestock resource management.
- Flood-resistant housing and multi-purpose shelter development.
- Alternative income generation through light engineering training.
- Small enterprise development through small businesses, and agro-processing for added value (which has created better access to common property resources, ensuring legal rights).
- Influencing policy makers to recognise successful practices for national and international dissemination.

In combining disaster risk reduction with poverty reduction, the project has used comprehensive disaster risk reduction strategies, shifting relief-dependent attitudes towards long-term disaster risk reduction, management and planning. Additionally, the project worked to motivate local, national and international agencies to mainstream disaster issues into development practices for the sake of effective and long-term sustainable solutions.

In a nutshell, the project has demonstrated a number of ways to help communities reduce their vulnerability to disasters, which also help them overcome chronic poverty and social problems. It has also developed people's capacity to cope with frequent natural hazards, and to adapt to climate change.

The Good Practice



The project can be described as good practice because it has developed a very effective risk reduction and management model, as well as a number of innovative pro-poor-based natural resource management technologies. These technologies were designed for wider impact on the poor and naturally disadvantaged communities not only in the project areas, but also in other districts and regions.

The project also developed innovative ideas and models on risk reduction and management, climate change adaptation and natural resource management issues. Innovative ideas included:

- The development of a model cluster village to resettle communities displaced by river erosion.
- The development of multi-purpose shelters to accommodate affected communities hit by flood disasters.
- The establishment of a community-based rapid evacuation system to minimize community risk and vulnerability.
- The development of unique, low-cost and pro-poor technologies such as agricultural production on barren sand bars, floating gardens and cage aquaculture.
- Improved access of marginalized people to basic rights (health, education, sanitation and legal rights), particularly for women and children.

All the above ideas, innovations, knowledge and learning strongly motivated community members, policy makers, development practitioners, donors and other stakeholders both at the local, national and international levels. The project also influenced the development of a new policy for poor people living on the edge of mighty rivers in Bangladesh.

The project was shared at a number of international forums to influence policy makers and development practitioners in building awareness of climate change issues. These included World Water Week 2007 and the House of Lords event for the Oxfam 'Make Poverty History' campaign in the United Kingdom, as well as other events at Sheffield University (UK), the British parliament, the German and Belgian parliaments, and the Plenary Meeting of the Asia-Pacific Forum for Environment and Development (APFED) in China.

Lesson(s) Learned

Key lessons learned from the project are:

- Participatory plans and community-driven approaches are of the utmost importance for achieving objectives and goals.
- Adequate technical and social knowledge and skills are necessary for overcoming challenges.
- An integrated development approach is needed for tackling complex situations involving poverty and disaster risk.
- Adequate administrative support is needed to meet targets on ground.
- Equal participation of stakeholders is needed to achieve goals.

The major challenge for this project was:

- How to secure enough funding to replicate the above ideas and reinforce existing knowledge.

To improve similar projects in the future, a donor and development consortium could, jointly with the government, review the impacts of the project and develop a comprehensive programme for rapid dissemination of the evidence-based results in similar geographical areas.

Potential for Replication

The project has initiated a very comprehensive disaster risk and poverty reduction strategy, aiming to develop a sustainable model for replication in other parts of Bangladesh, particularly among disadvantaged communities living on the edge of mighty rivers. Replication could be easily achieved in other parts of the country with a tiny amendment to national policy, and channeling of national and donor funding to relevant development initiatives.

To replicate the project in a different context, the approaches require minor adjustments to fit the context and situation, provided that funding is available and relevant policies are in place.

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Bolivia



Community preparedness for emergencies helps reduce poverty

Developing vulnerable communities' emergency preparedness in drought-prone southern Bolivia

Care International in Bolivia



A demonstration project carried out by Care International in Bolivia

Abstract

Unlike other regions of the Central American state of Bolivia, the Chaco, in the southern part of the country, is a flat, drought-prone territory of scrubland and thorny trees. Until recently, its rural communities were not prepared for emergency situations, resulting in the loss of livelihood assets such as homes, livestock and crops during disasters. Such losses aggravated poverty and, in some cases, triggered migration. The poorest people were most affected.

To cope with the impact of disasters on their livelihoods, the communities would seek assistance from municipal governments and local organisations, in addition to inter-family solidarity and networks that were often their first survival mechanisms.

In the light of this situation, Care International in Bolivia implemented a 14-month initiative to develop community emergency preparedness with a risk management approach, targeting 5,500 community members and involving 500 people including municipal and school officials.

Although the initiative was not a development project, it helped reduce poverty by minimizing disaster impact on the vulnerable communities' economic, social and natural capital.

The Initiative

The initiative seeks to help vulnerable communities prepare for emergency situations. Its main goal is to help develop strategies that enable the communities, government institutions and other actors in five municipalities of the southern region of the Chaco, to respond to disasters and prevent their harmful impacts, mainly caused by drought. Unlike the other regions of the country, the Chaco of Bolivia (a continuation of the Gran Chaco of Paraguay) is a plain of scrubland and thorny trees.

The initiative was implemented from February 2006 to April 2007 in the following communities of five municipalities located in three departments (regions):

- Department of Chuquisaca: the rural communities of El Zapallar, Pampas de Heredia, El Yaconal and Alto Divisadero in the Municipality of Monteagudo; the rural communities of Ity, Montegrando and Cumandayti, as well as territorial organisations in urban areas and the Neighbours' Committees of Santa Cruz and San José, all in the Municipality of Villa Vaca Guzmán; and the rural communities of Huayaca, Santa Rosa, Yaperenda and Villa Mercedes in the Municipality of Huacaya.
- Department of Santa Cruz: the rural communities of Kuruyuki and Kurupaiti in the Municipality of Lagunillas.
- Department of Tarija: the rural communities of Caigua and Taiguati as well as municipal associations in the Bolivian Chaco, municipal governments and coordination with the Civil Defence, all in the Municipality of Villamontes.

Targeting 5,500 community members and involving 500 people, including officials from municipal associations, municipalities and local schools, the initiative was implemented by Care International Bolivia, with funding from the latter, DIPECHO⁶, Care Netherlands and municipal governments.

⁶ DIPECHO: Disaster Preparedness, European Commission Humanitarian aid Office.

The Initiative's Contribution to Poverty Reduction

The targeted communities were not prepared for disasters, resulting in the loss of livelihood assets such as homes, livestock and crops. These losses affected the communities' productive base, aggravated their level of poverty and, in some cases, triggered migration. To cope with poverty aggravated by disasters, the communities needed to seek assistance from municipal governments and local organisations, especially for food and water. This was on top of their usual first lines of response to ensure availability of basic commodities, namely inter-family solidarity and networks.

In the light of this situation, the initiative sought to develop emergency preparedness in the communities through the following steps:

- Incorporating a Risk Management Approach (RMA) into development planning.
- Training and providing equipment to volunteer groups.
- Working with teachers to incorporate RMA into classroom teaching.
- Undertaking risk analysis of the communities' watershed management practices, and helping to improve them.
- Carrying out demonstration projects.
- Disseminating and exchanging experience.

Although this was not a development project, the risk reduction efforts helped reduce poverty by minimizing disaster impact on the communities' economic and social capital through:

- Institutional strengthening: Consolidating institutional structures in local organisational forms by generating appropriate knowledge, tools and methods for a timely response to emergency; establishing alliances with key actors such as the Vice-Minister of Civil Defence and Cooperation of Integrated Development (VIDECICODI), departmental prefectures, municipal governments and community-based committees; establishing structures for emergency preparedness and response through workshops for disseminating legal standards, strengthening existing alliances and the formation of municipal inter-institutional committees; developing community and municipal contingency plans; and strengthening regional civil defence entities.
- Capacity generation: Implementing a training plan to help consolidate a risk management model; forming and training volunteers' groups in first aid; responding to fires and controlling them; training in forest and water management practices, and

damage and needs assessment (EDAN); and using GIS (Geographic Information Systems) as a tool for integrated watershed management.

- Risk mapping: This helped incorporate a visual representation of threats, risks and vulnerabilities into regional and municipal development, territorial development and zoning, and integrated watershed management.
- Formal education: Education, seen as an essential tool for behavioural change, was used to promote a culture of prevention. A guide on the incorporation of risk management as a cross-cutting theme was developed with the participation of key actors. Sensitization and training activities were also carried out with both teachers and students, who eventually organized educational fairs and theatre/puppet festivals, as well as libraries with material on risk management.
- Demonstration projects: These were one of the main prevention activities, and included improving water reservoirs, building a pedestrian bridge, reforesting river banks, protecting an irrigation channel and channelling a stream. The projects helped increase participation in and awareness of the initiative's objectives.

- Dissemination and exchange of experiences: A communication plan was developed and implemented with the following key strategic interventions: sensitization and education, information, visibility and systematization.

The sensitization work promoted the understanding that being trained in disaster preparedness can lead to reduced poverty risks inherent in drought, flooding and fire. The rationale was: the higher the vulnerability, the higher the risk of loss of livelihood assets, the higher the risk of increased poverty. The initiative tried to communicate to the communities that reducing risk to their livelihood assets meant that vulnerability reduction was needed, especially in rural areas, and that more risk-sensitive investments in infrastructure and services were needed in urban areas.

In a nutshell, the initiative helped incorporate a Risk Management Approach (RMA) into local government planning, develop micro-watershed management plans incorporating RMA, reduce crop losses, and improve livelihood strategies among vulnerable families.

The Good Practice

This initiative can be described as a good practice because it helped reduce poverty, with the involvement of key actors such as Civil Defence, municipal governments, some local NGOs and grassroots organisations. The initiative also:

- Respected institutionalized processes of participatory municipal planning and of community organisational structures.
- Combined planning and organisation activities with practices at the community level (e.g. reforestation, cleaning of water reservoirs), and at the city level (e.g. contingency plans, drills).
- Introduced local actors to identification, prioritization, implementation and supervision of mitigation work.
- Implemented demonstrative mitigation works of different costs and sizes in order to show different stakeholders what was possible.
- Promoted the investment of municipal funds in disaster preparedness and mitigation actions.
- Used participatory training methods.
- Used techniques that facilitate reflection on and exchange of experiences (eg. theatre, puppets, poetry, music and game activities).
- Introduced educational units, teachers, and students to risk reduction.



The following factors were key to the success of the initiative:

- Participation of different stakeholders.
- Alignment to Bolivian regulations on risk management.
- Proper use of local perceptions and experiences.
- A highly motivated project team with significant knowledge of the targeted areas.
- Timely availability of resources.

Lesson(s) Learned

Key lessons learned from the project are:

- Respecting local processes of participatory planning ensure ownership of the initiative, the empowerment of social sectors to make decisions related to local planning, and the legitimacy of commitments made.
- The development pattern of local areas is often the main cause of disasters and emergency situations. Thus, it is important to adopt a strategy of local land-use planning, incorporating a risk management approach, in order to mitigate the long-term effects of disasters.
- More efforts are needed to institutionalize capacity building processes for emergency preparedness and response, especially in formal institutions such as Civil Defence. Civil Defence departments should develop policies and guidelines about risk management throughout the country.
- More emphasis should be laid on emergency preparedness, given that institutions tend to prioritize capacity building for response. Overemphasis on response only helps to develop and strengthen a culture of reaction rather than prevention.
- Risk management in municipal planning should be developed from an environmental perspective, which helps plan productive activities and natural resource management that is sensitive to prevention of disasters.
- Establishing agreements with municipal governments and Civil Defence branch offices is of the utmost importance. It allows for clear identification and distribution of roles and responsibilities among stakeholders. It also encourages transparent municipal administration, in coordination with strategic allies.
- It is useful to develop maps of institutions and intervention zones in terms of their contributions to the development of targeted regions. This helps to identify strategic partners and allies, to help promote the continuity and sustainability of the work. This was the case with DED (German Development Service) which committed to

continuing with specific capacity-building work, for instance, in the use of GIS.

- Threat and vulnerability assessments and analyses are important when establishing the historical pattern of disasters. This helps identify and implement mitigation according to knowledge based on past experience.
- Youth participation in the formation of volunteer groups is important: it contributes to the continuity of awareness raising and local capacity strengthening in risk management.

The major challenges for this project were:

- The appointment of a new government delayed the initial stages of the initiative.
- Informing and sensitizing municipal governments - which normally are interested in public works – on the importance of funding risk management activities, and the process involved.
- Communities tend to give priority to ‘actual’, or concretely visible work, rather than training, or establishing committees to raise awareness about existing regulations and standards.

Potential for Replication

This good practice can be replicated in similar contexts using the same strategy and methodological documents. This can be done through risk identification, and by the communities themselves developing risk plans aligned to municipal Annual Operational Plans. The methods and tools generated by the initiative can also be adapted to new contexts.

However, the following socio-economic and political requirements should be kept in mind when scaling up the initiative:

- Socio-economic: It is vital to have local counterparts and real funding commitments that ensure its sustainability.
- Political: As government entities may see the project as competing with their work, it is important to approach them at a very early stage to establish partnership agreements, as well as to make it clear that the initiative also aims to strengthen their roles.

To improve similar initiatives in the future, there is a need to promote stakeholder participation, including at the design stage, and to further evaluate positive and negative experiences.

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El Salvador



National network for DRR helps curb poverty

The National Network for Disaster Risk Reduction in Central America
Oxfam America (In partnership with the National Network for DRR)



A community going over its risk map

Abstract

Poverty is widespread in the Central American country of El Salvador. A 2005 USAID report states that “El Salvador still suffers from poverty, with approximately 49 per cent of the rural population living below the poverty line”, adding that “61 per cent of the rural population has no access to water piped into the home.” This population continues to be at high risk from disasters. A loss of crops or a damaged home is enough push a family into extreme poverty - a lack of resilience prevents real recovery.

After Hurricane Mitch devastated Central America in 1998, regional governments, civil society organisations, NGOs and international NGOs came together to address disaster vulnerabilities in the region. A Regional Network for Disaster Risk Reduction (DRR) was established, along with national networks for DRR in Guatemala, Honduras, Nicaragua and El Salvador. With support from partners including Oxfam America, the El Salvador national network has successfully advocated for government mitigation projects, as well as other prevention and preparedness efforts. A Law for Civil Protection and Disaster Prevention and Mitigation was also adopted in 2005.

The El Salvador national network has contributed to a shift in the political discourse, from a sole focus on emergency response to growing emphasis on prevention and mitigation. This has helped protect the population from the devastating effects of disasters and the burden of recovery that trap them in a cycle of poverty.

The Initiative

The initiative developed a network of Central American civil society organisations and NGOs, which came together to work on disaster risk reduction after Hurricane Mitch devastated Central America in 1998. The objectives of the El Salvador's national network for DRR, known as MPGR in Spanish (Mesa Permanente para la Gestión de Riesgos), can be defined as follows:

- To strengthen local level understanding of and action for DRR.
- To carry out political advocacy from the local to the national level for better policies on disaster preparedness and management.
- To educate its members on DRR and adopt an ongoing process of organisational development.

The initiative was launched after Hurricane Mitch devastated Central America in 1998, when regional governments, civil society organisations, NGOs and International NGOs (INGOs) joined efforts to address disaster vulnerability in the region. One outcome of this post-Mitch process was the creation of national networks for disaster risk reduction in Guatemala, Honduras, Nicaragua and El Salvador, as well as a Regional Network on DRR. The El Salvador national network existed since 1998-1999 and while its form and name have changed over the years, Oxfam America has been supporting it along with the other national networks since 2002.

The headquarters of the MPGR is located in the capital city, San Salvador, but its 20 member organisations work in every region of the country. The member organisations, all of which are national NGOs operating in El Salvador, carry out work that benefits some 175,000 community members indirectly.

The MPGR, the other national networks and the Regional Network for DRR were developed through both national and international efforts. In 2002, Oxfam America decided to help, support and strengthen the networks in an effort to build a stronger culture of disaster risk reduction in the region. The MGPR has received support from Oxfam America, ICCO⁷-KerkinActie (Netherlands) and Catholic Relief Services (CRS).

The initiative has resulted in a more coordinated response to disasters and the empowerment of local communities. It has also allowed these communities to advocate for the assistance to which they are entitled.

⁷ ICCO: Interchurch Organisation for Development Cooperation.

The Initiative's Contribution to Poverty Reduction

Poverty is widespread in El Salvador. While the country is officially a middle-income nation, there is a widening gap between the rich and poor. According to a 2005 USAID report,

“El Salvador still suffers from poverty, with approximately 49 per cent of the rural population living below the poverty line; almost 17 percent of the population is illiterate; the average educational level among the rural population is 3.4 years; and 61 per cent of the rural population has no access to water piped into the home.”

It is this population that continues to be at high risk from disasters, living in sub-standard housing, and exposed to flooding, landslides, mudslides and earthquakes.

Each time a disaster occurs, whether at the local or national level, families and communities that live on the edge of poverty are the most affected. Despite achievements in development, a loss of crops or a damaged house would return them to extreme poverty as they have to struggle to recover from the loss, investing scarce resources in food security or rebuilding damaged houses. Lack of resilience simply does not allow them to recover from disasters.

Prior to Hurricane Mitch in 1998, there was no concerted force advocating for disaster prevention and mitigation, or even effective disaster response in the region. Communities had to face disasters in an isolated manner, with unpredictable levels of

government assistance depending on political will and atmosphere. Now, with the MPGR, there is an active force in El Salvador that has successfully advocated for government mitigation projects, such as building resistant borders along flood-prone rivers, and other prevention and preparedness efforts. Furthermore, the network has also run a successful advocacy campaign for a Law for Civil Protection and Disaster Prevention and Mitigation, which was adopted in El Salvador in 2005. Even though much needs to be done to hold the government accountable to the enforcement of this Law, and reforms that truly work towards disaster risk reduction, these first steps have been a major achievement of the MPGR, in partnership with other civil society actors.

The MPGR has helped shift the political discourse from a sole focus on emergency response to growing emphasis on prevention and mitigation. This has in turn contributed to the protection of the population from the devastating effects of disasters, and the burden of recovery that traps them in a cycle of poverty.

The Good Practice



The initiative is a good practice because in a region like Central America, poverty reduction and social and economic development efforts are thwarted by recurrent disasters. By building local capacity for disaster risk reduction, this initiative contributed to the long-term ability of communities to prepare for disasters. The initiative provided them with a valuable tool to reduce the impact of disasters, and thus continue on a road to development.

Each of the 20 MPGR member organisations is committed to building capacity at local and municipal levels. One key way of building capacity is through formal civil protection committees. By law, these committees must be formed at the local and municipal level to coordinate with the National Civil Protection Service during an emergency. Through the member organisations of the National Network for DRR these committees are formed and trained not only in emergency response but especially in disaster risk reduction.

The initiative also helps advocate for adequate public policies on DRR, which further supports communities to prevent, mitigate and recover from disasters. The MPGR advocates through various channels, including national media houses.

A key factor for the success of the initiative has been the ability of the various member organisations to adopt a common agenda, including a strategic plan, as well as common advocacy and media plans. While many national NGOs work in an isolated manner on disaster response or recovery, it is the collaborative nature of this network that creates enough momentum at the national level to affect public policy, and which can unify concepts and practices at the local and municipal levels to empower communities to take action on DRR.

Lesson(s) Learned

Key lessons learned from the project are:

1. Communities are always the true 'first responders' in emergencies, so it is critical to build their capacity at a local level in addition to supporting DRR networks at the national level.
2. Social pressure and advocacy are key to holding governments accountable and ensuring that they carry out prevention and response.
3. It is critical to build cross-sectoral alliances (e.g. with NGOs, INGOS, churches, social movements) to develop networks that have the scope and strength to survive.
4. Working with local NGOs in local emergencies is a good practice. Needs are often overlooked at an international level in the aftermath of 'small-scale' events, while local NGOs have substantial experience with these situations.
5. Building networks is a long-term effort that requires patience, and commitment to work towards a common agenda.

Potential for Replication

This initiative is replicable, although building networks is not an easy task. The first step is to build relationships with key local actors and partners. It is also important to analyze the local context and social structures.

Another important aspect of this initiative lies in Oxfam America's approach to partners. Oxfam America does not act as a donor from afar, but rather works side by side as a partner and provides ongoing support.

One of the main constraints to scaling-up the initiative, however, is the overall lack of donors that are willing to invest in prevention efforts. Many donors still claim that prevention efforts do not yield sufficient measurable results, even though tangible results can be achieved at the local level.

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Honduras



Reducing vulnerability and poverty through disaster mitigation

The Central American Mitigation Initiative (CAMI)

World Vision - Honduras



School children in Honduras in a drill practice

Abstract

Poverty has reduced community resilience in Honduras, Ecuador and Guatemala to such an extent that poor households and communities are unable to cope with even the smallest shock, let alone a disaster. In turn, such reduced community resilience to disaster has further aggravated poverty. To help break this cycle, the international NGO World Vision initiated a project called the Central American Mitigation Initiative (CAMI) in 1998 in Honduras to help integrate emergency response and disaster risk reduction into development. The project has reduced vulnerabilities, and addressed the causes of disaster and poverty through work on mitigation and livelihoods.

World Vision expanded the project to Ecuador and Nicaragua in 2003, renaming it the Community Emergency Response/Disaster Mitigation Project (CERDM). The second phase of the CERDM project began in 2007 and will extend its activities to Colombia and Guatemala. Efforts are being made to secure funding to implement it in all 14 countries of the Latin American/Caribbean Region.

So far, the CAMI project has established viable mitigation programmes in 291 communities across three countries - Honduras, Ecuador and Nicaragua. Community teams have been recognized by government offices as viable partners in disaster response. The communities demonstrated their ability to respond to disasters, and municipal authorities have incorporated community risk management into their development plans. The project, which is replicable, helps communities identify their risks and vulnerabilities, then find alternatives to reduce them through wealth creation activities.

The Initiative

The Central American Mitigation Initiative (CAMI) seeks to integrate emergency response and Disaster Risk Reduction (DRR) into development, while focusing on the human being as the core element in the organisation, in community participation and in development planning. The project's major goals are to:

- Incorporate risk management concepts into development activities in the targeted communities.
- Strengthen community and institutional leadership capacity for monitoring threats, early warning systems and for planning emergency response.
- Improve community response capacity through forming and training Local Development Committees (CODELs in Spanish).
- Incorporate training and participation of boys and girls enrolled in local schools.
- Reduce the loss of lives and property caused by recurrent natural hazards.⁸
- Reduce vulnerabilities, addressing causes of poverty and disaster through mitigation and livelihood activities.

Implemented by World Vision, CAMI activities began in 1998 in response to Hurricane Mitch in Honduras. In 2003, World Vision expanded the related programme to Ecuador and Nicaragua and renamed it the Community Emergency Response/Disaster Mitigation Project (CERDM).

The second phase of CERDM kicked off in 2007 and would extend its activities into Colombia and Guatemala, training an estimated 6,750 community members to form local emergency committees incorporating CERDM activities, with an estimated indirect impact on 70,000 people. Efforts are also being made to secure funding to implement DRR programmes in all 14 countries of the Latin American/Caribbean Region in which World Vision works.⁹

The CAMI project was implemented in the following areas with each Area Development Programme consisting of around 10 communities.

Working with communities, local governments and the national emergency structures, World Vision's initiative has established viable mitigation programmes in 18 Area Development Programme areas, covering 291 communities in three countries. No statistics have been gathered for Honduras but 10,000 people have benefited in Nicaragua and Ecuador. The following impacts have been reported:

- Women and children have begun participating actively in emergency-related issues.
- Communities became aware of the risks they face, and the potential impact that disasters can have on their livelihoods.
- Capacity for analysis and planning was built through risk and resource mapping.
- Communities, including children, participated in and managed their own disaster mitigation planning and implementation programmes.

CAMI Project Areas in Honduras

COUNTRY	PROVINCE	MUNICIPALITY	ADP
HONDURAS	Valle	Coray	Siria
	Valle	Langue	Valle
		Amapala	
		Nacaome	
	Choluteca	Choluteca	Trapiche
	Choluteca	Choluteca	Cabezas
	Francisco Morazan	Distrito Central	Villafranca
			Brisas del Valle
	Yoro	Morazan	Morazan
		Yoro y Yorito	Yoro
		Yoro	Esmeralda
		Yoro	Jocon
		Renacer	Negrito
	Ocatepeque	San Marcos	
	Francisco Morazán	Curaren	Siria
		Alubaren	
		Reitoca	
		San Miguelito	
		La Libertad	

⁸ Hurricane Mitch alone set back economic development by some 20 years, reducing the country's GDP by 60 per cent. All disasters combined in Central America alone over the last 45 years have affected 10 million people, 57,000 of whom died.

⁹ Mexico, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Colombia, Bolivia, Ecuador, Brazil, Peru, Chile, Haiti and the Dominican Republic.

- Community resources were used in the process.
- Local needs were comprehensively covered, from emergency response to disaster mitigation.
- Emergency response teams and disaster mitigation processes were created and are now starting to be self-sufficient at the grassroots level.
- Community teams have been recognized by government offices as viable partners in disaster response.
- Communities demonstrated their ability to respond appropriately during disasters later on.
- Community Risk Management Plans have been incorporated into Municipal Development Plans in coordination with Municipal Emergency Committees.

Most of the project activities were carried out by local communities and the World Vision National Offices of Honduras, Nicaragua and Ecuador. However, a damage and needs assessment was completed in compliance with the Government of Honduras and in cooperation with other local NGOs. Local government and NGO representatives also participated in community-based training sessions.

As the Area Development Programmes were designed to cover the poorest communities of a region, the project's direct beneficiaries were those most in need. The total number of community leaders trained as direct beneficiaries of the programme was 448. The leaders were then organized into Rapid Response Teams that would assist the 5,044 people in their respective communities.

Funds used were from the CAMI project of USAID, with support from World Vision USA and World Vision Honduras as part of its HEA (Humanitarian Emergency Affairs) strategy. The CERDM project is funded through the support of the Government of Australia (AusAID) and the efforts of World Vision Australia. Partners in the project include: Area Development Programmes, civil defence agencies, the Government of Colombia, the Government of Ecuador, the Government of Guatemala, the Government of Nicaragua, the Government of Honduras, Education Ministries, local fire departments, local Red Cross Societies, World Vision Australia and World Vision USA.

The targeted communities have increased their capacity to resist the impacts of disasters. In achieving this, they have gained greater insight into how to address the causes of long-term poverty and under-development, as well as the wherewithal to do so.

The Initiative's Contribution to Poverty Reduction

In the past, poverty in the targeted areas has left households and communities unable to face even the smallest shock, let alone a disaster. Little money was prioritized for healthcare, proper nutrition, education or savings prior to disaster, making households vulnerable. Being in a continual or temporary state of poverty meant that people were not aware of or did not have time to think of risk management, as they were busy trying to provide for their families.

Poverty decreases the bargaining power as well as purchasing power of the poor, particularly in Honduras, Ecuador and Guatemala. The poor cannot buy land on high ground and therefore become squatters in lowlands and riverbeds. This results in strong exposure to coastal storms, and floods from the mountain ranges upriver. Moreover, due to their lack of land ownership rights, they do not have access to municipal government

protection or representation. These vulnerabilities have placed multitudes of the poor at high disaster risk. As a result, disasters have turned their poverty into chronic poverty that exacerbates migration, environmental degradation, poor health and nutrition, squatter settlements and the collapse of family structures. Over time, disasters have reduced community resilience in all its aspects, to nothing.

It should be noted that in the past, these communities did not find it so difficult to cope with disasters. This is because land was cheaper, and they were able to build on higher ground, remaining unaffected by coastal disasters. More recently, the poor and landless were forced to settle in river valleys and lowlands exposed to natural hazards. Before the implementation of the CAMI/CERDM project, these communities coped by temporarily migrating to larger cities, or permanently

to other countries. They also borrowed money from relatives or neighbours for basic food staples and they sold off liquid and productive assets. They were unlikely to initiate any measures to reduce risk or recover on their own, and were mostly described as being in shock, not understanding what the media was telling them to do to respond to disasters. They became heavily reliant on humanitarian aid.

To minimize and manage risks, the project built local capacity at different levels. Targeting adults, new local emergency committees were organized and committees were trained, and communities undertook risk assessments to raise awareness of weaknesses and strengths. At schools, emergency school committees were organized and children were trained in risk mapping, response and first aid. At the local and national government level, a humanitarian assistance network was formed. Local authorities took responsibility for community training, and DRR policies and strategies were mainstreamed at the national level. At the Area Development Programme level, whole communities were trained to implement early warning systems, to better manage water and sanitation, to map vulnerabilities and strengths, and to build leadership capacities.

The key achievements of this project were:

- It encouraged communities to identify their risks

and vulnerabilities, and then found ways to reduce them through wealth creation.

- It raised community awareness of new approaches to risk management and promoted changes in behaviour that will ultimately improve their quality of life.

Poverty reduction was integrated into DRR initiatives, incorporating protection of communities' hard-won economic resources into disaster preparation and mitigation. For example, Area Development Programmes have established Early Warning Systems for Food Crises (EWSFCs) that identify food shortage periods, and forecasts weather for seasonal harvests. This information helps community members make informed decisions about food production, which is their major source of income. Also, local governments incorporate risk management activities into municipal development plans, taking the needs of the poor into consideration.

Integrating poverty reduction into disaster risk reduction has helped reduce the vulnerability of the poor. This has saved lives, reduced migration, better protected the environment, and achieved and protected development objectives from future disaster losses. In light of these successes, funding was secured to extend the project into two other countries - Ecuador and Nicaragua – after a flash flood in the Yacumbabma community in Ecuador and the 2005 hurricane season in Nicaragua.

The Good Practice

As shown by its replicability and improved community and government response to subsequent disasters, the project is good practice. Its success is based on reducing poverty and disaster impact through the involvement of the most important actors: the communities and their governments.

The project is good practice also because it has helped reduce the loss of lives and damage to livelihoods and it has increased the speed and quality of response and rehabilitation activities. This was demonstrated by a dramatic difference between the impacts of Hurricane Mitch and those of Hurricane Michelle. However, some failures have persisted despite the introduction of the project: damage to infrastructure and a rise in illness. Also, the project's weaknesses lie in the implementation of coordination, and sustainability in leadership and training.

Although a significant number of respondents responded optimistically when asked about the continuation of the project without World Vision presence, many people still consider the support of World Vision to be fundamental to their ability to continue the work. This realization has resulted in the strengthening of the CAMI/CERDM project through better coordination with other organisations and agencies.



Lesson(s) Learned

Key lessons learned from the project include:

- The approach requires significant financial and technical investment.
- One of the greatest accomplishments of the CAMI/CERDM project is the targeted communities' heightened awareness of the relationship between disaster management, environmental conservation and agriculture. Further work on sustainable agriculture, economic development, and soil and water conservation could greatly enhance community viability.
- Strengthening networks among grassroots organisations, community-based initiatives, governments and NGOs is key to building resilience.
- Providing training to communities can be done easily; implementing activities in each community context is more difficult. CERDM Ecuador made great efforts to adapt the project materials to indigenous communities. However, it emerged from participants' feedback that some workshop methods and material needed to be revised to ensure relevance and appropriateness. Future funds should be earmarked to develop context-appropriate material, especially for indigenous communities.
- An ongoing evaluation for current and future CERDM projects is essential at all levels. Feedback has proven very useful for improving the quality of aid delivery.
- Better accountability could be achieved by standardizing the reporting format of the project's successes and failures across communities, regions and countries.
- Two-way radios or other communication devices are necessary to establish a channel through which CAMI/CERDM trainers and community members can communicate about activities and needs during an emergency.
- Tangible, skill-based training such as first aid and mitigation activities proved to be popular among the participants: they build confidence and are achievable goals.

Major challenges were encountered at the beginning of the project, as people were not enthusiastic about the idea of reducing risk themselves. Even though attitudes have begun to change, communities continue to struggle to include risk reduction in their annual community plans.

Potential for Replication

As described, this project has and is being replicated elsewhere. Replication in other contexts has been done relatively easily with community input and government participation.

Replication can be encouraged and supported by the success already achieved in the CAMI/CERDM project. Indeed, there is significant political buy-in as well as funding, mainly because of regional similarities as well as similarity in disaster experience within Latin America.

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India



Reducing risk in poor urban areas to protect shelters, hard-won assets and livelihoods

Integrating disaster risk reduction in urban development

SEEDS India (In partnership with the Indian Institute of Public Administration, the National Centre for Disaster Management, the Centre for Development and Emergency Practice - Oxford Brookes University, and the Oxford Centre for Disaster Studies)



The community fire post

Abstract

In two low-income migrant worker neighbourhoods of New Delhi, the socio-economic status of the residents makes them highly vulnerable to frequent fires. This is due to the nature of their housing materials, and their inability to live in less vulnerable areas. In the hot summer season fires destroy their shelters and assets, locking them into a cycle of poverty.

To help minimize and manage risks in the two neighbourhoods, a three-year project was initiated in April 1997 by SEEDS, to help the residents design and commission a community fire post. The fire post provided better fire safety to the entire community.

The project helped the residents protect their shelters, their assets and savings and, in some cases, their livelihoods. Their reduced vulnerability helped them to gradually increase their savings and convert their temporary squatter houses into permanent units.

The Initiative

The initiative is an urban risk reduction project implemented in two low-income neighbourhoods of New Delhi. The main objective of the project is to integrate risk reduction in urban development. The focus is on making the lives and livelihoods of low-income vulnerable urban communities safer. Risk from recurring disasters is a major source of urban poverty, and measures are needed to reduce poverty through risk reduction.

The project was implemented from April 1997 to March 2000 in two communities, both located in Delhi: a low-income neighbourhood in Delhi's old city area, and a slum-squatter neighbourhood located within the river bed of Delhi's Yamuna River. Local community leaders were involved in the project as primary stakeholders, and community workshops were held with their support. Public institutions such as the Indian Institute of Public Administration served as a bridge between the community and government agencies. SEEDS facilitated the process.

The project, which targeted some 1,000 households in each neighbourhood, was funded by the United Kingdom government's Department for International Development (DfID) and implemented by the following institutions: SEEDS, the Indian Institute of Public Administration, the National Centre for Disaster Management, the Centre for Development and Emergency Practice, Oxford Brookes University, and the Oxford Centre for Disaster Studies.

The three-year project contributed to poverty reduction by helping to protect shelters, hard-won assets and livelihoods against recurrent disasters such as frequent fires, promoting education and public health to improve income generation capabilities, and successfully advocating risk reduction at a national policy level.

The Initiative's Contribution to Poverty Reduction

The project addressed urban risk – an issue that is often ignored despite its great threat to the future of the developing world. Half of India is projected to live in cities in the coming decades, and four fifths of people in India's megacities live in sub-standard conditions, subject to poverty and disaster risks.

Residents of the two low-income neighbourhoods in Delhi are economic migrants to the city. Their low socio-economic status forces them to live in highly vulnerable areas, prone to floods and frequent fires due to the nature of their housing materials. In the hot summer season fires would destroy their assets and shelters, locking them into a cycle of poverty.

Although the communities were technically wealthier than they had been in their rural areas, the frequent fires entrenched them in chronic poverty. Basic survival priorities meant that they had been unable to address their vulnerability to disasters.

To help minimize and manage risks, the SEEDS project used its Action Planning methodology to help the community identify and articulate the risks they were exposed to. Action Planning helps communities develop small pilot projects that they can implement with limited funds, to lower risks in their areas. The SEEDS project helped the community to design and successfully commission a community fire post, which improved fire safety for the whole community.

The project served as a good demonstration of a community-led effort that helped protect the neighbourhood residents' shelters, their most precious assets and savings and, in some cases, their lives. Their reduced vulnerability helped them to gradually increase their savings and convert their temporary squatter houses into permanent units.

The Good Practice

The project can be described as a good practice because the community involved was able to successfully identify the key risk to their livelihoods and assets, and to successfully design and implement a practical solution for reducing risk. The fire post that was commissioned, ensured that trained local residents could extinguish any small fire that could threaten to destroy their entire settlement.

Another key success factor of the project was that the community could prepare its own risk reduction plans and implement them with minimal external assistance.

The project also showcased specific socio-economic priorities for low-income migrant workers in urban areas, who migrate to the cities for reasons of economic survival. In the risk identification process, community priorities clearly focused on risks to their livelihoods and assets.

Lesson(s) Learned

Key lessons learned from the project are:

- For poor communities, security of their livelihoods is equally important as the safety of their lives.
- Poor communities do have inbuilt strengths that can help them address their problems, requiring very limited external facilitation.
- Similar projects should be promoted in terms of scaling-up and crossing the critical thresholds of scale, wherein they begin to influence how entire cities function. Pilots need to be converted into norms, and traditional planning systems need to be challenged.

The major challenge for this project was:

- Linking micro-planning with macro-level plans during the project's implementation. This challenge could be met by involving state stakeholders throughout the process.

Potential for Replication

The solution of building community fire posts as a preventive measure against fires is easily replicable. However, the community concerned needs to own and drive the process. In the SEEDS project described above, the community volunteered to train themselves in the use of such fire posts, as and when necessary.

In a practical sense, this initiative can be easily replicated in another context because the community fire post was only a semi-permanent structure, as it was built in an area where public land was 'illegally occupied' by low-income migrants.

To scale up the project, however, some economic and political constraints should be dealt with beforehand. The project can potentially invite objections from public authorities who are not yet sensitized to the issues. Another potential constraint would be to create the political will needed to replicate such an empowering model on a wide scale.

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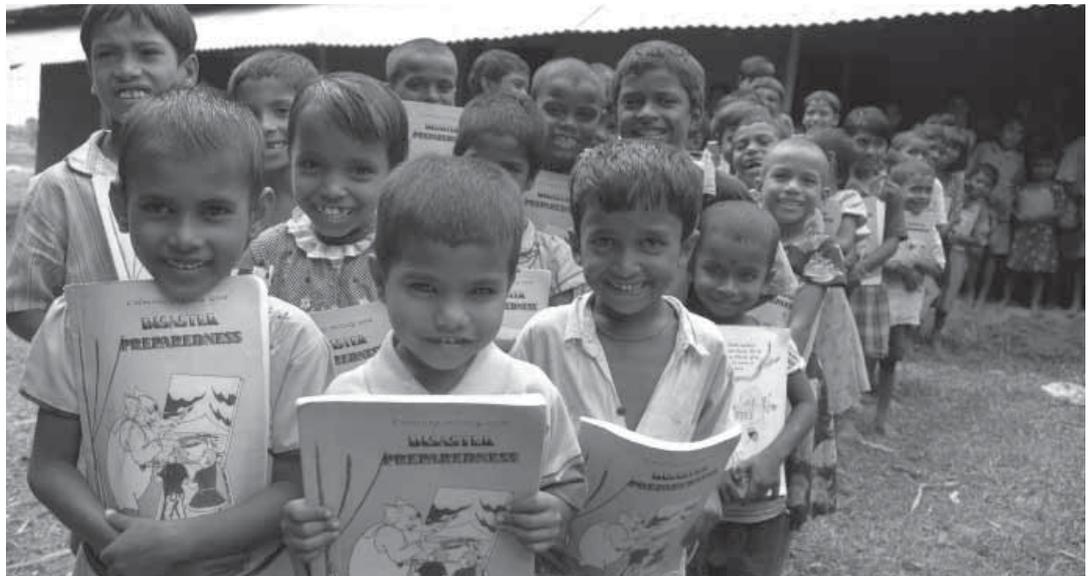
India



Stabilizing livelihoods through community-based preparedness

Community-based disaster preparedness for poverty alleviation

World Vision – India (In partnership with World Vision UK, the Government of India and UNICEF)



Children from the Malda District, India

Abstract

Exposed to floods, cyclones or drought almost every year, Malda District, in north-eastern India, is also plagued by low agricultural production and lack of jobs. This situation has exacerbated migration, malnutrition and other related problems that increased vulnerability to disaster. Marginal farmers and landless labourers, who form over 70 per cent of the population, are the most affected. In February 2006, World Vision India initiated a project aiming to strengthen community disaster preparedness and mitigation, and provide wealth creation and diversification. Targeting 15,000 disaster-vulnerable farmers and marginalized people, with a special focus on children, the project sought to improve livelihoods as disaster risk safeguards.

The special focus on children helped minimize caste exclusion, encouraging community ownership of the project, community participation, and a successful outcome. The targeted communities are now aware of potential risks and are better equipped to cope with disasters. Even though they are marginalized and exposed to repetitive natural hazards, they are now able to stabilize their livelihoods in times of disaster.

The project has helped reduce poverty, disaster risk and vulnerability so successfully that World Vision is now replicating it in all the 92 villages where it operates.

The Initiative

This project aims to integrate emergency response and disaster risk reduction into development in Malda District, West Bengal State, north-eastern India, by targeting the most vulnerable groups through age, gender and livelihood-tailored interventions.

Malda District is one of India's 199 multi-hazard districts. It is known for its exposure to floods, cyclones and drought, as well as heavy seasonal migration. The development focus of the project is on improvement of livelihoods, with the intention of building in disaster risk safeguards.

The main goal of the project is to strengthen community disaster preparedness and mitigation measures, and provide wealth creation and diversification. Its key objectives are:

- To promote disaster awareness activities and foster attitudes of preparedness so that communities can deal with disasters.
- To help community members establish alternative sources of income to reduce their vulnerability to disaster.
- To improve access to and use of appropriate water, sanitation and shelter facilities.

The Disaster Risk Reduction (DRR) component of the project was initiated in February 2006, with training activities held in 2007. The project is expected to be completed in 2008. Its final phase is under way, under which practices are modelled around the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.

The project was implemented in two *gram panchayats*¹⁰ (16 villages) of Gazole Block in Malda District, covering 15,000 community members. Malda is located 300 km north of Kolkata, the capital of West Bengal State, and lies at the junction of the Ganga and Mahanadi rivers. Almost every year the district suffers from one or more disasters, with farmers and marginalized people being the most affected. A recent survey says marginal farmers and landless labourers constitute 78.5 per cent of the entire population of the district.

World Vision India and the Malda Area Development Program are implementing the project with funding from World Vision UK. UNICEF developed and released the 'Colouring Book on Disaster Preparedness'. The Civil Defence Office of the Government of India and the Social Mobilization Office of UNICEF conducted disaster preparedness training courses.

The target groups are farmers and marginalized people, with a special focus on children and women. A total of 15,000 people were targeted. The project has made the following major impacts:

- Awareness of disaster response and preparedness measures have risen significantly in local communities of Malda District. Previously, the district did not take disaster preparedness seriously as they were not exposed to the deadly disasters experienced by coastal regions. Now, after the distribution of newly published disaster preparedness colouring books to elementary school children in schools and youth clubs, even illiterate parents are aware of hazards and disaster risks. As a result, Local Relief Action Teams (LRATs) were formed from village volunteers. The community volunteers include many women, and are trained in first aid, rescue methods, and rescue operations in coordination with the government. Villages in Malda District now even have their own pre-positioning units including non-perishable items, and they are adding more people to their key contact lists. Overall, the communities are now aware of the potential risks and are better equipped to help themselves when a disaster occurs.
- Additionally, livelihood and infrastructure development took place to address some of the economic and physical barriers to disaster resilience. Vulnerability assessments were completed and, as a result, 50 vulnerable

¹⁰ *Gram panchayats* are local government bodies at the village level in India.

families were provided with income-generating activities and 30 of the most vulnerable women were trained on tailoring - as part of the project's skill development training. The project also involved the community in the following activities: renovation of ponds, installation of tube wells, digging of open wells, construction of roads and the building of two relief centres.

- World Vision is working with 50 vibrant children's clubs consisting of children aged six to 18. The clubs equip leaders with knowledge on child rights, specifically the right to survival. Eighty-five teachers were trained in disaster preparedness, and children in nine primary schools are being educated, including with the disaster preparedness colouring book. The leaders work with other children to ensure their rights are respected and enforced through disaster preparedness activities, such as a competition based on the colouring book. Each club has also opened a disaster insurance savings account at a local bank.
- Relationships have been established with the government through ongoing meetings and communications on the project. This has resulted in local governments expressing their good will, and providing support for community capacity training sessions. Government staff members participated in a number of the training sessions, resulting in greater awareness of good practices in disaster preparedness among local government officials and networking between community members, the government and World Vision.

The Initiative's Contribution to Poverty Reduction

Malda district experiences either flooding, cyclones or drought on an average of every other year, accompanied by increasing levels of poverty. The constant and repetitive disasters have left many families unable to plant even one quarter of their total crops. Without fertile land or crops, the household head migrates. There are mounting problems associated with this exodus of men, particularly for women and children left with a meagre 2000 rupees (US\$50) worth of food for a family of six. Even though food is available, access to it is difficult. Family members who remain behind are unable to meet minimum living standards. Low agricultural production and lack of employment throughout the year have exacerbated migration, malnutrition, school dropouts and other related problems that increase vulnerability to disaster. Furthermore, the actual loss of lives and property has not accurately been calculated, as the government seldom gives heed to the area.

In a nutshell, disaster outcomes have reinforced chronic poverty because of the repeated pattern of disasters, the inability of the poor to recover, and lack of assistance. To implement the project, project communities were identified on the basis of their needs and potential by World Vision India programme managers, and through the Taylor Nelson Sofres¹¹ (TNS) mode of survey reporting. Afterwards, the following strategies were used to minimize and manage risk:

- Providing financial assistance such as grants to the poorest households – specifically, grants for economic activities that would build coping mechanisms and protect livelihoods.
- Increasing the income of the poorest households by generating income opportunities.
- Creating and increasing livelihood assets to ensure sustainable income, through continuous access to micro-finance.
- Training community-based organisations, to improve their capacity for identifying candidates for economic development programmes.
- Establishing occupation and livelihood-based groups.

The project has helped reduce poverty, disaster risk and vulnerability through income-generation activities targeting the most vulnerable and poor. The activities included pond renovation, drinking water purification and relief centre construction.

The approach used to integrate disaster risk reduction into poverty reduction was as follows:

- Carrying out vulnerability assessments that measure economic and environmental factors, and identify capacities for reducing disaster risk.
- Conducting Participatory Learning and Action (PLA) exercises, specifically of village mapping, trend analysis, seasonality and wealth ranking.
- Forming Local Relief Action Teams (LRATs), which are core teams of civil defence officials

¹¹ Taylor Nelson Sofres (TNS) is one of the world's largest market information groups. It is also the world's largest provider of custom market research to many of the world's leading companies. The company is headquartered in London.

and community volunteers trained to respond to disasters.

- Educating people on disaster preparedness and poverty reduction proposals made by stakeholders based on the needs of the communities.

To sum up, it should be stressed that integrating disaster risk reduction into poverty reduction does indeed help reduce the vulnerability of the poor. Experience from the

two years of project implementation shows that without addressing disaster preparedness, poverty reduction can be achieved but could still be destroyed by the next disaster. This is well illustrated by the new situation in Malda District, where the World Vision project communities are now able to stabilize their livelihoods in times of disaster, even though they are victims of marginalization and discrimination, and are exposed to repetitive natural hazards.

The Good Practice



The project can be described as good practice first because of its decision to focus on children. This, in India, minimizes caste exclusion and makes interest spread quickly throughout the community.

Also, the project sought to ensure local ownership through a methodology that values participation and community volunteerism. In fact, community participation was a key success factor, along with competent training staff, and networking with community-based organisations and the government.

Lesson(s) Learned

Key lessons learned from the project are:

- There are many positive compound effects of children's participation in a risk reduction learning process. Experience from the project shows that children can be very powerful change agents or catalysts in the community.
- External aid and traditional community knowledge of agricultural methods are not enough on their own. The project required cooperation and a bottom-up approach to develop the most appropriate strategy for reducing risk.

The major challenges for this project were:

- Communication was difficult because people initially found it hard to understand the difference between relief and preparedness. Time and tangible results were needed to ensure the full participation of the communities in action on disaster prevention, mitigation and recovery.
- Training mostly illiterate people was difficult. Educational tools had to be well illustrated and training had to be hands-on. Similarly, it was difficult to find educated volunteers. Tapping into school staff proved useful.

Similar projects can be improved by:

- Allowing communities to make decisions, even when such decisions are not the most logical or efficient, or are not likely to produce speedy results.
- Addressing disaster risk reduction only after a relationship is established with the community.
- Not addressing disaster risk reduction exclusively: People do not initially show keen interest in the DRR approach because they are used to receiving relief.

Potential for Replication

World Vision's Area Development Programme is replicating the practice in all the 92 villages where it operates. However, it is important that there is community buy-in, that the approach is need-based, seeks to enhance people's capacity, and makes use of local human and material resources. Any project should also make a special effort to involve children and women.

Replication in other contexts too may be done relatively easily with community input and government participation.

Regarding scaling-up, some thought should be given to the following constraints:

- The majority of people have scant physical assets and limited resources for alternative livelihoods.
- Participation can be ad hoc and at times low. This is because people cannot afford to miss work for an unpaid activity. It may require paying missed wages for meeting attendance and participation.
- Working with government agencies can be most challenging because of their particular political agendas. Their vantage point can often highlight people's inabilities instead of their capabilities.
- To work with government agencies, a proper strategy and a proper policy should be in place.

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Indonesia



Clean water as an entry point to risk reduction and poverty alleviation

Reducing flood impacts on community health and livelihoods:

A water well rehabilitation project

Community Association for Disaster Management¹² (PMPB)



Project beneficiaries from the Indonesian province of Nusa Tenggara

Abstract

Flood is a recurrent hazard in the southern part of Belu District in the Indonesian province of East Nusa Tenggara.¹³ Following a major flood in March-April 2006, the Community Association for Disaster Management (locally known as PMPB) carried out a post-disaster assessment. The assessment showed that the affected communities were completely unaware of flood resilience measures.

The area has great agricultural potential but is hampered by people's inability to meet their basic needs, by lack of access to markets, fluctuation of market prices and by lack of clean water. These factors, combined with flood impact, result in marginalization of women, poor health and an endemic poverty cycle. In this context, a simple, feasible and convincing entry point had to be identified to not only reduce flood risk, but also to help break the poverty cycle as a stronger incentive for community participation. PMPB identified water well rehabilitation as the place to start.

The participatory process of developing, commissioning and maintaining water wells weaned the villagers off fatalistic perceptions of disasters and helped them address their vulnerability and economic conditions, which were linked to lack of clean water.

¹² PMPB is a local network of NGOs working on food security, emergency response and disaster management. It is based in the Indonesian province of East Nusa Tenggara.

¹³ Nusa Tenggara is a group of islands located between the Sulawesi islands to the north, Bali to the west and Timor to the east.

The Initiative

Flood is a recurrent hazard in the southern part of Belu District in East Nusa Tenggara Province due to a nearby watershed. Flood waters pollute clean water, resulting in severe shortage of clean water in times of flood. Poorer public health, increased workload for women and disruption of education, are other flood impacts. To reduce vulnerability to flood, a water well rehabilitation project has been initiated in 10 villages of southern Belu District under a CBDRM (Community-Based Disaster Risk Management) framework.

The main goal of the project is to develop the community's capacity to reduce their vulnerability to flood, and increase their readiness to respond to flood events. The objectives are:

- Increase access to clean water sources.
- To enhance community organisation and raise community members' awareness of their surroundings.
- To boost community participation and collaboration in development efforts.

Under the principle that the community should form the basis of the project and is the subject - not object - of the project, the activities focused on:

- Making clean water available even in times of flood.
- Increasing knowledge and practice of health care.
- Community capacity by introducing SPHERE¹⁴ standards and community organisation.

The project was implemented from September 2006 to March 2007. Follow-up activities have been carried out since April 2007 to protect the wells from floods by planting bamboo, bakau (a mangrove plant) and other plants as shelters against flood waters - the plants used being determined by the communities themselves.

The project covered the following 10 villages of Belu District in the Indonesian province of East Nusa Tenggara: Umatoos, Lasaen and Fafoe villages in West Malaka Sub-District; Lawalu, Naimana, Railor and Fahiluka villages in East Malaka Sub-District; and Lamudur, Kleselson and Forekmok villages in Weliman Sub-District.

The Community Association for Disaster Management was involved in the project, and together with the village governance structure, it organized the community to disseminate the activities, appoint water committee working groups, and develop local technical expertise for spreading well development, construction, and maintenance throughout the community. Health officials at sub-district level gathered health-related data, provided chlorine, and developed health promotion materials for the media.

For its part, the government, together with the full range of community stakeholders, contributed to the organisation of the following activities: SPHERE basic training; water committee training; general health training; water and sanitation; and community organisation at sub-village level. The Belu District Health Unit helped check samples in laboratories to ensure the quality of the water to be distributed to the community.

The project helped build wells in 52 sub-villages with funding from Oxfam GB Jogjakarta, covering a total population of 18,027 people (4,418 households).

The project had the following impacts and concrete results:

- The following households in three kecamatans (sub-districts) could access clean water even in times of flood: 4,638 households in Central Malaka; 13,254 households in West Malaka; and 6,725 households in Weliman.
- The negative effects of lack of clean water (e.g. skin diseases and diarrhoea) have been reduced.
- Women could access clean water conveniently as the well points had been agreed upon together with men, and were built next to villagers' houses.

¹⁴ The "SPHERE Humanitarian Charter and Minimum Standards in Disaster Response" is an international initiative launched in 1997 by a group of humanitarian NGOs and the Red Cross and Red Crescent movement to improve the effectiveness and accountability of disaster response.

The Initiative's Contribution to Poverty Reduction

Annual floods in the targeted sub-villages affect the life of villagers because of their devastating impact on agriculture and livestock. Livestock are an alternative source of income in the event of crop failure. The increasingly difficult economic condition of the villagers has resulted in chronic poverty, and dependence on emergency wells because they are unable to build permanent wells.

Following a flood disaster in March-April 2006, PMPB carried out a post-disaster assessment from 21-26 April 2006. The assessment found that the affected communities were completely unaware of flood resilience measures. The three sub-districts had great agricultural potential but were hampered by factors such as people's inability to meet their basic needs, by lack of access to markets, fluctuation of market prices and by lack of clean water. These factors, combined with flood impact, resulted in marginalization of women, poor health and an endemic cycle of poverty.

In this context a simple, feasible and convincing entry point had to be identified to not only reduce flood risk but also to help break the poverty cycle as a stronger incentive for community participation. PMPB identified well rehabilitation as the desired entry point. Initially, the villagers had a fatalistic view of their situation, which was understandable given their experience as objects not subjects of development efforts. But as the project process progressed, and knowledge and moral and material support were given to them, they started gaining confidence, understanding new paradigms about how to cope with disasters, especially self-reliant disaster preparedness.

In a nutshell, the participatory process of developing, commissioning, building and maintaining water wells shifted the villagers' perceptions of disasters away from fatalistic acceptance, and helped them to address their vulnerability and poor economic conditions related to lack of clean water.

The Good Practice

The Project can be described as a good practice because it shows that even a relatively simple and inexpensive activity such as rehabilitating water wells can help shift people's mindset from fatalism and over-dependence to confidence and self-reliance.

Not only did the project help build 52 water wells that can withstand floods, and which produce clean and drinkable water, it also opened the eyes of the villagers to the reality that there was positive action they could take against floods and poverty.

A key success factor in the project was the optimal use of all human resources available: villagers' skills, farmers' groups, women's groups, the village governance structure, sub-district and district officials, and other local public figures, through good communication and coordination.



Lesson(s) Learned

Key lessons learned from the project are:

- Discipline in logistical administration. Efficient, rigorous and transparent logistical administration - from procurement to incoming/outgoing logistics – was vital not only for project success, but also an incentive for community participation, and as a model practice for community maintenance of the water wells.
- Harmonizing planning and field implementation. Not all the plans could be implemented in full, but harmonization between planning and field implementation helped on-the-ground improvisations conform to the project goals and objectives.
- Community dynamics. Human interactions and relations can easily change based on social conditions. A simple example is the setting of well points, which was expected to be democratic and satisfy all community members. The approach was good but depended on community members understanding that consensus sometimes meant concession, and that collective decision could mean individual sacrifice. The prospect of getting adequate wells - through the negotiations involved in the project process – prompted some villagers to accept collective decisions that did not suit their individual preferences.
- Persuasion. To address the villagers' over-dependence on external assistance, PMPB had to convince them that the project activities could not start unless the community began to contribute effectively, e.g. through needs assessment, and approach to indigenous leaders and community leaders.

The major challenges for this project were:

- Cultural/indigenous activities. Many cultural/indigenous activities affected the smooth running of the project process. For instance, funeral ceremonies required the full attention and presence of the family, siblings, friends, colleagues and neighbours of the deceased, as well as other community members, if not the entire community. Project planning had to be readjusted to unpredictable events that were part of community life.
- Community relations. Identifying the most suitable well points in each sub-village was based on community members' consent. For the sake of fairness, the process had to be as democratic as possible but, in many cases, democracy was also understood as a zero sum or 'win-or-lose' game. Within grassroots communities, extra care should be taken to ensure that the democratic process does not produce a too obvious loser or disadvantaged group: this may deal a blow to community relations and affect project implementation. This occurred in Laenblidin sub-village (of Lamudur village) where project implementation was disrupted when the disadvantaged group felt that it had the right to delay the process of well digging. A last-minute consensus-building action had to be taken to reach an agreement acceptable to the parties involved. Another challenge for the democratic process was the considerable influence of community leaders, especially village heads, on the articulated interests or needs of the community. Sometimes, leaders presented their personal interests as collective interests.
- Community-NGOs relations. The three sub-districts targeted by the project were an area of intervention of several NGOs. Each NGO had its own approach with different impacts. Many NGOs used a 'charity' approach that tended to treat the community as passive aid recipients, which encouraged a sense of dependence on external assistance. This 'charitable' role was initially expected from PMPB, and extra communication was needed to mobilize community participation.

In the light of the key lessons and challenges above, similar projects can be improved in the future through better coordination and communication.

Potential for Replication

Using access to clean water as an entry point to disaster risk reduction and poverty reduction is a simple and relatively inexpensive need-based community development effort that is easy to replicate.

However, to ensure its success, a context analysis must be carried out and the project process should involve the community from project design stage, to project planning, implementation, monitoring, evaluation and well maintenance.

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Kenya



Disaster preparedness poised to help reduce poverty in drought-prone area

Community-based rock rainwater harvesting and storage
Welthungerhilfe (German Agro Action)



Water storage tanks under construction

Abstract

Poor communities in Kitui District, eastern Kenya, have no choice but to try to survive in their dry and drought-prone areas, where they are burdened by chronic malnutrition and lack of resources. The current increase in drought frequency and severity has triggered a downward spiral in disaster vulnerability and poverty.

In this context, a 'Community-Based Rock Rainwater Harvesting and Storage' project was initiated in October 2006 by Welthungerhilfe to increase the capacity of the most vulnerable communities to withstand recurring droughts. The project focused on drought preparedness through sustainable access to water, improving health.

The 14-month project was implemented in close collaboration with other initiatives aiming to reduce poverty. Access to clean drinking water was the top priority in the targeted areas, and solving this particular problem was seen as a way to address many other problems. Drought preparedness focusing on access to and availability of drinking water was the best way to begin enabling and supporting poverty reduction.

The Initiative

This initiative is a rock rainwater catchment and storage project funded by the Directorate General of the European Commission for Humanitarian Aid (DG ECHO). It is a drought preparedness intervention for poor drought-affected and underserved communities in arid and semi-arid lands. The initiative aims to improve the availability of drinking water and access to it, even in dry periods, improving public health.

The goal of this rock catchment project is to increase the capacity of the most vulnerable communities of Kitui District in eastern Kenya, to withstand recurring droughts. Its specific objective is drought preparedness through improved sustainable, community-based access to water, and enhanced health.

The project was carried out from October 2006 to 31 December 2007 in Mutha and Ikutha divisions of what was then known as Kitui District, Eastern Province, Kenya.¹⁵ It was implemented with the involvement of drought-affected communities, their chiefs and elders, other relief and development agencies operating in the area, as well as relevant government ministries.

The project targeted over 36,000 men, women and children from water-poor communities that were highly vulnerable to the effects of drought. Implemented by Welthungerhilfe with funding from DG ECHO, the project contributed to the following impacts:

- Drought-affected water-poor communities had at least 3 litres of safe drinking water per person per day, available for at least 90 days of each dry season within walking distance from their homes, at a maximum of 4 kilometres - thus being able to bridge the worst period when surface water surfaces have dried up. This water was for drinking only, not for any other uses, for which there were other, lower quality options.
- The beneficiaries' health improved, particularly where water-borne diseases were concerned. This was a result of improved water access and availability, and improved sanitation and hygiene practices.
- The beneficiaries' drought coping and management capacities have been strengthened.

¹⁵ Kitui District is now newly divided into two districts. The project was carried out in what is now known as Mutomo District.

The Initiative's Contribution to Poverty Reduction

Poor communities have no choice but to try to survive in the driest and most drought-prone areas of East Africa, where they are burdened by chronic malnutrition and a lack of resources. Furthermore, the current increase in drought frequency and severity, which allows for less time for recovery, has triggered a downward spiral in disaster vulnerability and poverty.

In this context, the project was initiated by Welthungerhilfe after more than a year of intensive baseline data collection on the ground, including many community interviews, discussions with stakeholders and reviews of secondary data. The strategies adopted by the project are as follows:

- Strategic positioning of water access points to ensure easy maintenance and sustainability, with great emphasis on rainwater collection and storage in an area with low groundwater potential (any area with seasonal rains of 150 mm and more is suitable for rainwater collection).
- Intensive and highly participatory community involvement throughout the project.
- Community capacity building.
- Intensive training, including on hygiene and contingency water management.

The project was implemented in close collaboration with other initiatives in relevant sectors aimed at reducing poverty. Since drinking water was perceived as the most important problem and top priority in the area, drought preparedness -

mainly focusing on access to and availability of drinking water – was identified as the best starting point for enabling and supporting poverty reduction. As a matter of fact, clean drinking water is vital for maintaining public health, and hence lives and livelihoods. Better water access also frees up community human resources for productive work to maintain livelihoods.

Overall, the project was implemented bearing in mind the fact that sustainable poverty reduction not only involves different sectors, but is also a long-term effort that cannot be dealt with through a one or two-year disaster risk reduction initiative.

The Good Practice

This project can be considered a good practice because it deals with rock catchments, which are a key to the sustainable development of rural community water supply. In this respect, it is worth mentioning that Welthungerhilfe has successfully supported different types of rainwater catchment systems like earth dams and pans, and roof and rock catchments in Kenya and other countries.

Its broad experience reveals that rainwater harvesting and storage, particularly via rock catchments, is:

- Vastly underused in spite of its high potential.
- An advantageous option for supporting community water supply, especially in arid and semi-arid areas with limited rainy seasons and long dry spells.
- An appropriate low-tech and cost-effective technology.
- Yields an enormous potential for decentralized supply of drinking water.

It also emerges from Welthungerhilfe's experience that:

- Decentralized point sources are an excellent option where other options are too expensive or do not exist.
- Communities adopt and 'own' such ideas and approaches immediately.
- Community capacity can be built so that beneficiaries themselves can own, operate, maintain and manage their water.

Key success factors in the project include:

- Intensive and genuine community participation from the assessment stage onwards.
- Close monitoring and assistance by technically knowledgeable staff.
- Deployment of local skilled artisans to remain with the beneficiary communities and guide them throughout their work.



Lesson(s) Learned

Key lessons learned from the project are:

- Rainwater collection and storage for drinking purposes is an ideal drought preparedness tool for arid and semi arid areas that do not have suitable groundwater potential. Currently, Kenya is just using four per cent of its usable rainwater collection potential, even as it is categorised as a chronically water-scarce country, which expects major negative impacts from climate change.
- Intensive community sensitization, mobilization, as well as consistent involvement and capacity building are key to ownership and sustainability.
- As rock catchments depend on suitable geological features, the type of water supply structures involved must be strategically combined with other types of structures – such as protected wells, sand dams, and so forth - so as to ensure a strategic spread of sources in a drought-prone area.

The major challenge for this project was:

- There can be competing demands on beneficiaries' time. The project approach required the beneficiaries to provide all local labour and materials. In the case of rock catchments with water storage tanks, this required a substantial effort on their part. Cash-for-work contributed to address this issue but could not cover the full amount of time required for completion of the work involved. However, these constraints did not diminish the enthusiasm of the beneficiaries in building 'their' rock catchments.

To improve similar projects in the future, additional refresher training and closer involvement of other stakeholders are necessary. To maintain the success of this project in replication, community mobilizers should travel frequently to the field, at least twice a week.

Potential for Replication

It would be very easy to replicate this project elsewhere if funding was available. In fact, Welthungerhilfe is already replicating this approach in some neighbouring districts. Replication of this project in a different context, however, would require careful assessment of local social, political, and cultural patterns.

While scaling up the project, the following financial, technical and political constraints should be expected:

- Funding.
- Suitable geological features.
- Availability of technical expertise in remote rural areas.

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Liberia



Reducing flood risk through a job creation scheme

Integration of mitigation activities into a labour-intensive infrastructure programme in Liberia

Mercy Corps



Drain cleaning to reduce potential for flooding and improve sanitation

Abstract

Heavy rains occur regularly in the West African state of Liberia, yet drainage systems have not been maintained for decades due to factors including lack of funds, years of neglect and misrule, and the civil war. As a result, flooding has triggered recurrent disasters in both rural and urban settings. Cleaning the drains was not a priority for government officials or citizens, since nobody had the required resources. However, after the international NGO Mercy Corps raised the possibility of cash-for-work options, government officials embraced the idea.

In September 2006, a one-year project was launched in five counties to clear and rehabilitate drainage systems. This significantly increased the flow of rainwater and reduced the risk of localized flooding and related health risks.

The project also addressed local needs, including providing clean water through water well rehabilitation and improving market access by clearing roads and constructing small bridges. In addition, the work involved contributed to short-term employment through the creation of cash-for-work jobs.

The Initiative

This initiative is a flood risk mitigation project to clear and rehabilitate drainage systems. Even though floods trigger recurrent disasters - due to the heavy rains that regularly occur in Liberia - drainage systems have not been maintained for decades, for reasons including lack of funds, years of neglect and misrule, and the civil war.

The main goal of the project is to provide the country with a visible benefit of the new post-conflict era of democratic government, by creating jobs for rural Liberians through infrastructure programmes and roadside brushing.

The project began in September 2006 and was completed in September 2007. It was implemented in Sinoe, Grand Gedeh, Grand Bassa, Margibi, and Montserrado counties, including Buchanan and Kakata cities, in western and west-central Liberia.

The infrastructure work was planned in consultation with county officials, and the project worked with community youth clubs that had been supported in earlier projects.

Targeting unemployed rural individuals, the project was implemented by Mercy Corps under a UNDP grant funded by the World Bank. It reduced flood risks, improved the infrastructure of rural Liberia, and generated more than 17,800 days of employment.

The Initiative's Contribution to Poverty Reduction

Before the civil war the drains were cleaned regularly with public resources, but since then many years of refuse and mud have blocked the drains and created both a health and safety hazard. The targeted communities ignored the problem because nobody had the required resources to deal with it. Cleaning the drains was simply not a priority. However, after Mercy Corps discussed the possibility of cash-for-work options with government officials, the latter were enthusiastic about the idea.

In Buchanan and Kakata cities, reducing flood risks involved improving drainage by removing truckloads of debris. This significantly increased the flow of rainwater through the drains, and reduced the risk of local floods and related health risks linked to poor sanitation.

The project also addressed local needs, including the provision of clean water through water well rehabilitation, and improved market access through clearance of roads and construction of small bridges. The project activities were an integral component of the infrastructure programme adopted in response to requests from local officials, and the Mercy Corps grant contract with UNDP was adjusted accordingly.

The work reduced risk and vulnerability by addressing a public health hazard that had the potential to flood homes and markets. The project introduced elements of sustainability by working through local governments and by leaving tools and materials (e.g. shovels, wheelbarrows, boots and gloves) with government departments. It also contributed to short-term employment through the creation of cash-for-work jobs for several weeks.

The Good Practice

This project can be regarded as a good practice because it was responsive to the priorities of the targeted communities. This boosted project ownership, making it easy to improve local knowledge of natural hazards during the mitigation efforts.



The project was also very popular with both officials and unemployed youth because of its job creation potential. It met the double objective of creating income and achieving work that benefits the public. Government officials expressed satisfaction over the attainment of the two objectives in a single project.

A major challenge during project implementation was the donor's reluctance to allow Mercy Corps to sub-contract local government authorities.

Lesson(s) Learned

Key lessons learned from the project are:

- No matter how much training is provided to communities in Liberia, it is unlikely that technical skills such as well maintenance can be transferred without extensive involvement and constant monitoring.
- Local officials, including development superintendents and engineers, should be consulted and used as much as possible.
- INGOs such as Mercy Corps should be allowed to sub-contract local government authorities, who normally have a good understanding of local needs and priorities, and should be regarded as reliable and trustworthy partners.
- To increase the impact of similar projects in the future, further drainage and cleaning should be undertaken in small and medium cities. The project's activities were only addressing the tip of the iceberg.

Potential for Replication

The project methodology can be easily replicated in other contexts, but can only serve as a short-term measure because it is not sustainable. If implemented on a larger scale, these employment creation programmes require a clear exit strategy, to reduce potential labour market distortions.

The best option to sustain this project is to empower both the government and civil society to accept responsibility for keeping the drains clean.

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Malawi



Drought mitigation initiative brings relief to poor farmers' assets

'Building Disaster Resilient Communities'

Christian Aid (In partnership with the Evangelical Lutheran Development Service - ELDS)



A pipeline channeling water for domestic use and irrigation

Abstract

Many poor families in Phalombe District, southern Malawi, are dependent on rain-fed agriculture for their basic nutritional intake, and financial assets are either non-existent or very limited. In times of drought, they are forced to sell their assets to purchase food. This depletes their asset base which then needs to be replenished.

Another coping strategy employed is migration of male family members, for example, to Mozambique. This exposes the men to risks such as HIV/AIDS and exacerbates drought impact on those left behind.

In January 2007, the Evangelical Lutheran Development Service (ELDS) initiated a community-based pilot drought mitigation project targeting some 100 poor rural families in the district. The Project, which is part of Christian Aid's ongoing global project 'Building Disaster Resilient Communities', tackles the water supply problem by channelling mountain spring water for irrigation, and providing better access to drinking water.

The project has directly improved the food security of the poor families throughout the year and particularly in times of drought. By addressing the key problem of asset depletion among poor families in times of drought, the project directly intervenes in the food budget and ensures that families have a stable nutritional intake throughout the year.

While the project was initially designed as a drought mitigation initiative, it has become clear that the risk reduction work directly contributes to poverty reduction by ensuring that the families' productive assets are protected and continue to generate income during crises.

The Initiative

The initiative is a pilot drought mitigation project that seeks to reduce the negative impact of repeated droughts and erratic rainfall in eight villages of Phalombe District, southern Malawi, by channelling mountain spring water for irrigation, and providing improved access to drinking water. The pilot project is part of Christian Aid's global project 'Building Disaster Resilient Communities', which was launched in January 2006. Activities in the eight villages began in January 2007 and they were completed in March 2008.

Traditional leaders, elders and key community members in the eight villages were involved in the required initial consultations on the project. Communities were involved as a whole during the in-depth vulnerability and capacity assessment process, and during planning. All beneficiaries – some 100 poor families – are participating in the implementation.

This project was co-funded by the UK government's Department for International Development (DfID) and Christian Aid. The implementing agency was the Evangelical Lutheran Development Service (ELDS) with support from Christian Aid.

The project directly improved the food security of some 100 poor families throughout the year and particularly in times of drought. By addressing the key problem of asset depletion among poor families in times of drought, the project directly intervened in the food budget and ensured that families had a stable nutritional intake throughout the year. While the project was initially designed as a drought mitigation initiative, it has become clear that risk reduction work directly contributes to poverty reduction by ensuring that productive assets of farming families are protected and continue to generate income during crises.

The Initiative's Contribution to Poverty Reduction

The poor families in Phalombe District struggle with food security at regular intervals during the year. Many families are dependent on rain-fed agriculture for their basic nutritional intake, and financial assets are either non-existent or very limited. Therefore, in times of drought, affected families' lack of purchasing power leads to crisis situations, tipping whole communities over the edge.

In fact, the repeated occurrence of droughts and erratic rainfall in the district has led to an endemic cycle of poverty, where poor families are repeatedly forced to sell off their assets in order to purchase food that they have not been able to harvest themselves. In this way, their asset base is depleted and needs to be replenished on a regular basis without reducing their vulnerability and poverty.

Poor communities have tried their best to cope with their situation, which combined disaster risk and poverty. In addition to selling off their assets (e.g., chicken, livestock, radios, and bicycles) when drought strikes, another coping strategy is migration of male family members, for example to Mozambique, exposing men to risks such as HIV/AIDS, and exacerbating drought impact. For communities left behind with fewer human resources, fetching water involves walking more than three kilometres up a mountain range to collect water from three mountain springs.

To help minimize and manage risks, the ELDS/Christian Aid pilot project activities, designed and implemented by the communities, focused on building pipelines that would channel water from the nearest spring in the mountains to the affected communities so that they could use it both for domestic use and for irrigation. The ELDS contributed materials, the community members contributed labour, and the local government contributed technical expertise for conducting the necessary surveys, designing the pipelines and the irrigation system.

The result was an irrigated land of about 10 hectares. Even though this may not sound much, as people generally have very small land holding in this area, it meant that some 100 families were benefiting. Calculations based on past years have shown that a harvest of maize from about 0.1 hectares, grown with improved seed and timely fertilizer application, can feed a family of six for about eight months. In a very good year, the harvest can last through the year, but that is not always (and increasingly less) the case.

The project also provided seeds and fertilizers, plus storage structures to store maize, and support in post-harvest pest control. This work was based on experience with grain banks that communities have constructed in the region, which have been successfully used to store and treat maize with post-harvest pesticides. The families who were part of this initiative in the last year still have grain from last year's harvest.

The fact that irrigation added another cropping season to the annual cycle means that even in poor years, the second harvest ensures food security for families who would otherwise have been exposed to the risk of hunger. Additionally, enhanced food security means that families can hold on to their productive assets and reduce their vulnerability to future droughts by accumulating small surpluses to be sold on local markets.

The time saved by women by not collecting water from the mountain spring, can now be used productively for child care and to engage in community organisations. As the community installed four points in the pipeline from which to draw water, women also do not have to queue and wait as long as before.

Apart from the women, elderly people in the communities have also benefited directly from the improved access to water for domestic use. The elderly - many of whom look after orphans of relatives and who have nobody to support them in their daily chores - often could not tackle the three kilometre walk into the mountains to fetch drinking water and were dependent on (polluted) shallow wells or favours from neighbours.

This initiative identified opportunities to reduce the poor families' vulnerability to drought as well as protecting their productive assets, directly contributing to poverty reduction. This would not have been possible without comprehensive capacity and vulnerability assessments being conducted in a participatory manner, and after much training, sensitization and reflection by project staff.

As well as protecting productive assets, the communities are also expecting less dependency on volatile price markets. As farmers in the district usually sell their produce at the farm gate, they are often forced to sell their harvest below the actual market prices. During lean periods, the price of staple foods, in particular of maize, can become unaffordable, which had forced poor families to resort to eating wild fruits, and becoming vulnerable to malnutrition.

The Good Practice

This pilot project can be described as a good practice because it reduces vulnerability to both disaster and poverty, with the participation of the beneficiaries themselves key to its success.

Keys to the success of the project were:

- The process: Existing opportunities were identified in a participatory process of analyzing capacities and vulnerabilities of the communities and the most vulnerable households. These were then used as a starting point for action planning.
- Involvement of local leadership and local government: Entry into the community was through traditional leaders, the chiefs. They were key to mobilizing the communities and were responsible for calling meetings and organizing work so that progress was not dependent on the implementing agency. Also, the local government was directly involved from the start, including in the assessment process, the design and implementation of the project, contributing their technical expertise.
- Addressing root causes through a process of learning: During the project, the rationale of drought mitigation through irrigation supply was broadened as participatory analysis, planning and implementation allowed communities to identify direct links to poverty reduction. Thus, avoiding asset depletion became an integral part of the project design.
- Addressing the potential of conflict by an inclusive approach: An area was defined for irrigation, based on the irrigation capacity of the stream. While the identified land was held by specific members of the communities, it was agreed that they would continue to use it during the rain-fed cropping season, but that the land would be divided up equally among communities and members during the irrigation season. In this way, the communities ensured support from and benefits for all families involved.

Lesson(s) Learned

Key lessons learned from the project were:

- Through the participatory vulnerability and capacity building process, communities realize what opportunities exist within their areas and in their villages. They start thinking about things that they themselves can do instead of relying on external analysis and support.
- Initiatives identified by community members themselves have a much greater probability of being seen through and being sustainable. The contribution that communities gave in working on carrying the pipes up the mountains and overseeing the construction of the pipeline has been substantial.
- Involving local government from the start (i.e. during the assessment phase) helps secure their support and contribution in implementation. Enough time needs to be given to the initial phases to get every relevant individual in the respective departments (in this case the Ministry for Irrigation and Water Development) on board.
- Being inclusive and involving community members without direct access to arable land ensured broader support and greater benefit. While the identified land was held by specific members of the communities, it was agreed that they would continue to use it during the rain-fed cropping season, but that the land would be divided up equally among communities and members during the irrigation season.

The major challenges for this project were:

- The soil in the area was very stony, which seemed to limit the participation of some communities and community members who did not have access to productive land, and therefore would not have benefited from irrigated agricultural production. Therefore, it was agreed to earmark plots on the irrigated area for those families during the irrigation season only. The chiefs agreed to continue leaving the land for private use during the rainy season but to distribute it during irrigation season to include other community members and villages from the surrounding areas. In this way, broad support and greater benefit was ensured.
- The sustainability of the initiative is a key challenge as the provision of seeds and fertilizers was initially organized by the implementing agency. To address this issue, the villages built grain banks but also opened accounts with local banks. Seeds and fertilizers are now given to farmers on a revolving basis and they make payments to the joint bank account. The account is then used to pay for new seeds and fertilizers in every season. The communities wish to upgrade this system by introducing high value crops such as vegetables into the production cycles, and a seed bank to consolidate the system and produce a surplus.
- Furthermore, while seeds and fertilizers are readily available in the area, marketing of their produce is more difficult for local farmers. Usually they sell to intermediate buyers who then sell on to urban markets, with farmers losing out on price. By working together within the community, farmers could do joint marketing to increase their bargaining power and negotiate better farm gate prices with middlemen. The project staff and some community members would even like to improve direct access to markets, particularly for vegetables such as cabbage.

Potential for Replication

The participatory, reflexive and integrative approach of the project is easily replicable. However, the activity of providing irrigation is dependent on whether an adequate water source is available, in this case the mountain springs.

Key to the success of the project is not simply the provision of pipes, but above all the process of analyzing risks with the communities: looking at what risks exist, what threatens their livelihoods, and how such threats could be reduced using existing capacities and opportunities.

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Malawi



Livelihood initiative helps poor women build community resilience

Livelihood diversification project through micro and medium-scale enterprise development for poor women

Tearfund (In partnership with River of Life Relief and Development - ROLDD)



A member of the 'Sekandikudyele' group with a juice extracting machine

Abstract

Chididi Village, in southern Malawi, has been devastated by frequent droughts in the last seven years, resulting in chronic food insecurity among the poorest. With each drought year, the villagers have taken increasingly extreme measures, including selling livestock and household assets to buy food. Men started migrating to neighbouring Mozambique or to towns to find work, and returned home infected by HIV which they passed on to their wives. With time, due to illness, the main bread-winners could no longer work. Many elderly women have been left to look after their orphaned grandchildren - who they marry off early if they cannot afford to keep them in school. As a result, these households became dependent on yearly food aid.

In early 2006, Tearfund¹⁶ initiated a livelihood diversification project through micro and medium-scale enterprise development for poor women in the village. The initiative was taken following a risk assessment that identified low agricultural productivity and lack of alternative livelihoods as the sources of growing poverty and vulnerability.

¹⁶ Tearfund is a UK-based Christian relief and development agency working with a global network of local churches to help eradicate poverty.

The project has enabled some women to build fortified houses with iron roofing from the proceeds of the businesses. Others have invested into agriculture and reported bumper harvests that have made them food secure, selling excess crops to aid household asset recovery and buy items like soap and clothes. Girls are kept in school longer, thanks to the money earned from the businesses.

The community members are confident that they can now deal with shocks, as they now have a coping mechanism.

The Initiative

This is a livelihood diversification project through micro- and medium-scale enterprise development for poor women in an area where the main livelihood – agriculture - is frequently hampered by droughts. Local varieties of fruit trees are grafted with hybrid varieties that produce more juice and can withstand drought. The fruits (mangoes, pineapples, lemons and papaya) are then juiced, bottled and sold. Poor women have been mobilized into groups of 15, and linked to a Government of Malawi scheme that provides loans for fruit extracting machines.

The goal of the project is to make communities in and around Chididi Village in Nsanje District (southern Malawi) resilient to shocks and disasters, through poverty reduction.

The objectives of the project are:

- To diversify household income so that when harvests are insufficient, poor families can have cash to buy food.
- To increase cash income for critical non-food items.
- To aid the asset recovery of beneficiaries who over time have had to sell assets to survive droughts/food insecurity, and have no current means of coping with future disasters.
- To halt the migration trends that exacerbate the incidence of HIV/AIDS in the area.

The project began in early 2006, targeting 100 extremely vulnerable households in and around Chididi Village. The households were identified following a thorough disaster risk assessment process, and targeted vulnerable women who were the poorest of the poor, including the elderly and those infected or affected by HIV/AIDS. The project is still under way with a view to scaling it up into neighbouring communities.

Involved in the project are the following stakeholders: Tearfund's partner River of Life Relief and Development (ROLDD), the district office of the Malawian Ministry of Agriculture, community development and extension workers, and communities in and around Chididi Village, including women's groups. The government provided the loan for the juice extraction machines under an existing scheme, and ROLDD facilitates the project and helped organize the community members to access the scheme. Community development extension workers provide recipes for different types of juices.

The project is a Tearfund disaster risk reduction initiative funded by the UK government's Department for International Development (DfID) and the Food Security/DRR Consortium in Malawi - of which ROLDD is part.

Regarding the impacts of the project, early indications are that:

- The project reversed migration trends by 20 per cent in the first year, as men used to migrate to Mozambique during the hunger gap to find work and send limited remittances home.
- Vulnerable girls were kept in school for a longer time with the help of money earned from the businesses. These were typically girls orphaned and raised with grandparents, who were forced into early marriage as there was no money to educate them.
- The targeted families' nutrition improved, as the grafting has ensured fruit harvests even after drought seasons when fruits have usually been dry and unpalatable.

- The women's groups are able to sell fruit tree seedlings, graft trees for others for a fee and buy fruits from surrounding communities, positively affecting others who are not direct project beneficiaries.
- Some women have been able to build fortified houses with iron roofing from the proceeds of the business. Others have invested in agriculture, such as in better quality seeds and fertilizers, and have reported bumper harvests that have made them food secure. Excess crops produced have been sold to aid household asset recovery, such as buying livestock, furniture, or buying items like soap and clothes, and food of their own choices such as cooking oil, sugar, tea, milk and others that are seen to be luxuries.

The Initiative's Contribution to Poverty Reduction

Chididi Village has been devastated by frequent droughts since the major drought of 2001. The community became dependent on food aid, as chronic food insecurity set in. With each drought year, more and more extreme measures were taken, including selling livestock and household assets to buy food, thereby sinking communities deeper and deeper into the poverty trap. Men started to migrate to neighbouring Mozambique or to towns to find work, and returned home having contracted HIV – which they then passed on to their wives. This added to the complexity of the issues as with time, due to illness, the main breadwinners could no longer work on-farm or off-farm. Many elderly women have been left to look after their orphaned grandchildren who they marry off early if they cannot afford to keep them in school. These households became dependent on yearly food aid.

The area had benefited 20 years earlier from a fruit seedling distribution project, and so those who cared for their seedlings had a variety of fruits available; but these trees had not until now been recognized as a resource that they could exploit to diversify their livelihoods. Furthermore, during drought, fruits are dry and unpalatable. During a Participatory Assessment of Disaster Risk (PADR), poor agricultural productivity resulting from drought and lack of alternative livelihoods were identified as the source of increasing poverty and vulnerability. The causes of inadequate productivity were said to be increased frequency and severity of drought.

As part of its risk management plan, the Tearfund project prioritized agricultural strengthening and livelihood diversification through micro and medium enterprise development. Local resources or capacities identified included the fruit trees, among others. The fruit trees were grafted with hybrid varieties that produced more juice even during droughts. In 2006 and 2007, the trees produced an abundance of fruits, and these fruit trees will also be irrigated during seasons of reduced rainfall.

The project helps reduce poverty and disaster risk and vulnerability by the following means:

- Households with one or more members in the women's groups have a cash income to keep children in school, to build permanent houses, to buy new assets, food of their choice and other non-food requirements. The project is taking households out of the poverty trap. Those who, through money raised in the business, bought good quality seeds and fertilizers were able to have bumper harvests in the 2006-2007 season; which means they did not buy food all year, and were able to sell excess to invest into other areas. If this upward trend continues, the community will no longer be considered poor. The groups involved also want to invest in treadle pumps so that they never rely on rain-fed agriculture again, which they see as the source of their poverty and food insecurity.
- In addition to this, the community members are confident that they can now deal with shocks, as they have recovered assets that they can sell to take them through disaster periods, whilst knowing that they will buy back these assets with money made from the business. This means they have a coping mechanism that they did not have before.
- The resulting empowerment has led community leaders to stop asking for handouts, instead stating that they have capacities to address their own issues – but just need support where their capacities are exceeded.
- In this case, the starting point was disaster risk reduction. Through risk assessment, it was recognized that poverty was the main source of vulnerability; therefore, to reduce risk, people had to be taken out of poverty.

The Good Practice

The following observations and facts make the project a good practice:

- Diversification of household income is an important way to reduce poverty, which is the underlying disaster risk factor. It is also a means of developing coping mechanisms for the poor when their livelihoods are frequently affected by hazards.
- A medium-scale enterprise like this that involves groups and provides employment to many, positively affects the community faster than micro- or individual-scale enterprises. Furthermore, it is less likely that such an initiative would fail, as the temptation to eat into capital gains when household level issues arise, is minimized. In micro- and individual-level enterprises, illness or other unexpected needs force entrepreneurs to spend money meant for investment, terminating business. This is unlikely to happen as there is peer accountability in groups.
- Targeting the most vulnerable - poor women - who are affected by chronic food insecurity, is good practice. Disaster hits the poorest hardest. Women and children bear the brunt of the hunger gaps, as men migrate to find work and are not always so affected.
- This particular enterprise is not labour intensive and even the elderly and people living with AIDS can take part.
- Fruit grafting with hybrid varieties provides an alternative food source where previously fruits would have been unpalatable during droughts.
- Not introducing new fruit tree varieties entirely, but using existing drought-resistant varieties and helping them become more productive, ensures prudent environmental stewardship.
- The project was able to identify local capacities and local resources that the community could exploit to increase their resilience to drought. Looking outside the community would have made the project more complex.
- Through propagating fruit seedlings, the project contributes to reforestation in the area, and increases consumption of vitamin-rich fruits.
- The project is addressing both poverty reduction and disaster risk reduction issues, creating resilient communities.



The key success factors in the project are:

- New skills are being taught to women's group members, including new recipes, basic business management skills, leadership skills, and so forth. This has led to financial and social empowerment.
- Having a disposable income means that beneficiaries can buy their preferred food items and are able to buy essential non-food items and assets. Two grandmothers looking after their orphaned grandchildren, say they can now send their three grandchildren to school from the proceeds of the business.
- Working with multiple stakeholders, and linking communities with government schemes for maximum benefit, will ensure sustainability of support beyond the project lifetime. Each stakeholder brings in different expertise and knowledge that holistically build capacity in the community.
- Others are indirectly benefiting with a new market created for their fruits.
- Increased fruit consumption for the people living with AIDS will contribute to healthier lives.
- Local markets are available, including local schools and hospitals, where the juice can be sold – without travelling long distances to find markets.
- Bank accounts have been opened by the groups, and for many this is their first introduction to the banking system.

Lesson(s) Learned

Key lessons learned from the project are:

1. This project has confirmed the importance of thorough risk assessment to highlight the intricate relationship between poverty and vulnerability.
2. Communities often have unexplored resources that they can use to begin micro- or medium-scale enterprises. These businesses, when supported by NGOs, can bring about more transformation at household level than other interventions. Transformation at household level very quickly has a positive affect on the entire community as new opportunities are created for others.
3. Livelihood diversification initiatives must not be done in isolation from other initiatives, but in addition to the strengthening of existing livelihoods. The principle of diversification is that households must not be dependent on only one source of income, so that when one source is destroyed by a hazard, there are alternative incomes to fall back on.
4. One well thought-through enterprise can create work for an entire community. As this initiative grows, the original groups will seek to concentrate on only producing the juice. They will pay others to collect and prepare the fruits – travelling out to neighbouring communities to buy fruits; those with fruit trees will earn an income from selling their fruits; others will be encouraged to set up micro businesses by buying the bottled juice at wholesale prices and taking it to markets outside the vicinity of the community to sell at retail prices; other groups may become the middlemen – travelling to the city to buy bottles and labels at wholesale price and supplying the groups at a profit. Others still could concentrate on the grafting and raising of seedlings to sell to surrounding villages and beyond. All this can stem from one initiative, and competition need not arise.
5. As far as possible, it is good to work closely with existing government departments and personnel, and link communities with existing government schemes. Involving government staff also provides an opportunity for them to learn new approaches and new ways of thinking that they may not have been exposed to. As a result, NGO interventions can become successful models that government can replicate and scale-up elsewhere.

The major challenges for this project were:

- The groups have found local markets, but are operating below the capacity of the machines. The abundant availability of fruits means that they can produce more, if other markets at district level are identified. This would require more support from ROLDD and other supporting institutions.
- Bureaucracy at the Malawi Bureau of Standards means that a similar group would find it difficult to gain accreditation. The groups received accreditation through the active facilitation of the Tearfund partner, which was required to make numerous trips and kept waiting for significant lengths of time during each visit to the bureau. If the groups had to travel from such a remote location and spend many days in the city without support, they would have given up.
- Bottles, preservatives and labels have to be ordered from Blantyre, the nearest town; and linking the group members with the supplier has been a challenge.
- The illiteracy of some group members had potential to cause problems, particularly in understanding incoming, expenditure and profit margins as well as labelling information for them to communicate to customers.
- The juice extracting machines have been loaned and these loans need to be repaid over time. Unless productivity is increased and new markets found, this may be a problem in the medium to long term.
- Scale-up of this particular initiative could result in competition, and scarcity of raw materials, that is, fruits. Micro- and medium-level enterprise development therefore needs to be creative in identifying different enterprises for different groups.

To improve similar projects in the future, business skills and literacy training will be provided before the equipment loans are disbursed. This will minimize misunderstandings.

Where appropriate, groups will also be encouraged to start saving for at least six months to build group cohesion, and instill money management discipline. However, when dealing with the poorest of the poor, this may not always be possible.

Potential for Replication

Replicating this project in the country depends on the availability of natural resources existing in the community. In this case it was fruits, but it could be other resources like gum trees that can be injected to produce more gum for sale, or an existing skill that is used to produce unique products.

To replicate the project in other countries, government departments have different schemes that communities can be linked to, in order to access credit for different individual household level businesses. However, if as a group they are able to leverage bigger loans, then with support from community groups, they can take on medium-scale enterprises like this which provide employment for many, and quickly have a positive effect on the entire community.

Regarding scale-up, there are some economic and political constraints that need to be taken into consideration. These include dependency on outside facilitation at every stage: to apply for the equipment from government, to register with Standards Bureaus, to find markets, and to order materials - in this case, bottles, labels and preservatives. Policies and entitlements may be in place but are often inaccessible to the very people they are supposed to serve, either because of literacy barriers, investments required for start-up (including travel costs) and corruption.

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Mozambique



Protecting livelihoods with local warning and response systems

A programme of the National Master Plan for Disaster Risk Management and Reduction

InWEnt¹⁷ (Capacity Building International)

(In partnership with the National Disaster Management Institute of Mozambique - INGC¹⁸)



A local Disaster Management Committee in Moma

Abstract

Mozambique is one of the poorest countries in the world and one of the most frequently and worst affected by natural hazards. Most of its people depend on subsistence farming that is highly vulnerable to floods, cyclones and droughts. Moreover, poor housing, lack of education, shortage of health services and poor communication and transport facilities make the population particularly vulnerable.

In 2000, the heaviest rains in 50 years, combined with four cyclones, led to an unprecedented flood disaster that left some 800 people dead and some 4.5 million affected. This disaster, as well as others in the following years, reinforced the already existing cycle of poverty, and eroded development gains. No warning system was in place, and it is only recently that efforts were made to develop systematic coping mechanisms and strategies.

In June 2007, a programme was launched by the country's National Disaster Management Institute (INGC) to help build disaster-resilient communities, as part of its National Master Plan for Disaster Risk Management and Reduction. The programme seeks to reduce community vulnerabilities through mechanisms such as local disaster management committees and local warning and response systems. It is expected that by November 2008, the programme will have supported some 60,000 community members living in high-risk areas.

¹⁷ InWEnt: Internationale Weiterbildung und Entwicklung.

¹⁸ INGC: Instituto Nacional de Gestão de Calamidades.

The Initiative

This programme is part of the official 10-year National Master Plan for Disaster Risk Management and Reduction of Mozambique's National Disaster Management Institute (INGC). It aims to strengthen the population's ability to protect themselves by providing practical information on disaster risk reduction strategies, while also building up efficient local warning and response systems.

A number of the country's most vulnerable communities were identified and encouraged to form local Disaster Management Committees (DMCs) of 20 to 25 members. Members have specific roles and are trained in different fields of disaster reduction. Some members ensure crucial early warning information reaches the right communities, authorities and relief agencies. Others are trained in evacuation, first aid, shelter and relief. Simulation exercises are carried out on how to prepare for and respond to floods, cyclones and earthquakes.

The programme also includes identifying evacuation routes, developing risk maps, designing community emergency plans and approaches that educate community members to better understand and respond to specific threats. A partnership with the Mozambican Ministry of Education has been established to integrate Disaster Risk Reduction (DRR) into school lessons and school infrastructure.

After a preparation period, the first activities were rolled out in June 2007 with a series of consultative workshops with authorities, community leaders and other key community members. Developing and setting up DMCs is still underway, with 34 DMCs established and trained so far. The plan is to ensure that all communities exposed to disaster risk are covered by the programme.

The programme is implemented nationwide in Mozambique. InWent (Capacity Building International), a German organisation focusing on capacity building, supports INGC in six districts of the three northern provinces of Nampula, Cabo Delgado and Niassa. The six districts - Moma, Mecufi, Nacala, Lago, Aldeia Sassalane and Metanculo - were identified as very poor and particularly vulnerable to disasters such as cyclones, floods and earthquakes. The programme is implemented by INGC with assistance from InWent and financial support from the German Ministry of Foreign Affairs.

Prior to these programme interventions, the targeted communities had never received information and training on DRR. Some 50 people have now been trained in each of the three provinces in disaster risk reduction, awareness-raising and developing local warning and response systems. It is expected that by November 2008 some 60,000 community members living in high risk areas will have been supported by the programme. InWent programme support is guaranteed until November 2008, after which there will be an assessment, and project extension will be considered.

Overall, the project helps build stronger community cohesion and increased self-confidence. It also assists local populations to become hands-on activists to protect their communities, in addition to improving disaster preparedness and reducing loss of life, property and livelihoods.

The Initiative's Contribution to Poverty Reduction

Mozambique is one of the poorest countries in the world and one of the most frequently and worst affected by natural hazards. Most of its people depend on subsistence farming that is highly vulnerable to floods, cyclones and droughts. Disasters threaten lives and an already precarious food supply. Moreover, poor housing, lack of education, shortage of health services and poor communication and transport facilities make the population particularly vulnerable.

In spring 2000, the heaviest rains in 50 years, combined with four cyclones, led to an unprecedented flood disaster that left some 800 people dead and some 4.5 million affected. This disaster, and others in the following years, not only reinforced the already existing cycle of poverty, but also eroded development gains. No warning system was in place and communities that were already extremely poor suffered further loss of their meagre assets, such as houses, stocks and crops. It is only recently that efforts were made to develop systematic coping mechanisms and strategies, minimizing risks and making the population less vulnerable to disasters.

In the past, the population was exposed to disaster risks with no strategy to protect themselves and their belongings. Now there are strategies in place to form

local DMCs, and develop a warning system to guide the population and inform authorities and relief agencies. These initiatives are building up the capacity of local populations and empowering them to play a proactive role in ensuring the security of their families and livelihoods.

Also, a participatory approach has been adopted which not only minimizes disaster risk and vulnerability but also poverty risks. It builds upon best practices learnt from other successful interventions in flood-affected areas in Mozambique, which have been adapted and enhanced for maximum effectiveness. Moreover, as mentioned, the project also results in stronger community cohesion and increased self-confidence, assisting local populations to become hands-on activists in the protection of their communities. This sense of activism and confidence also benefits community life beyond the specifics of disaster mitigation.

At this stage, it is still too early to judge the extent of the intended impact of improved disaster preparedness, reduced loss of life, property and livelihoods. The results of this long-term approach will be visible only after a period of time, particularly during the next floods, cyclone or earthquake.

The Good Practice

The project is good practice because it uses a participatory approach to build upon the capacity of local populations, and empowers them to play a proactive role in ensuring the security of their families and livelihoods. The benefits of the approaches are easily demonstrated to participants, encouraging 'buy-in'. It is cost-effective and has been adapted from other effective interventions elsewhere in Mozambique. Furthermore, it is easily transferable and can be adapted to other regions and countries.

Interviews with members of local DMCs demonstrated that people were highly motivated to take over the responsibility of protecting themselves wherever possible. This is a precondition of sustainability and one of the key impacts of the programme. Additionally, the simulations of cyclones, floods and earthquakes provided much needed and highly useful opportunities to put theory into practice. More training and simulations have been requested by DMC members.

A key success factor of this initiative is the direct involvement of local populations, which are best placed to identify multiple disaster risks. Coupled with the tangible benefits brought to the communities by effective disaster response, this resulted in a highly motivated target group of beneficiaries. Selected participatory approaches ensured that provincial district and community actors were all actively involved in the development of the programme. Furthermore, more training, refresher courses and simulation exercises will be conducted to ensure continuity and sustainability of the knowledge gained.

Lesson(s) Learned

Key lessons learned from the project are:

- Communities need to be mobilized to accept and own mitigation activities.
- Involvement and integration of local government officials, elders and community leaders into the process and in the development of risk reduction plans is essential.
- The community itself is a key agent of disaster preparedness. Once involved, people are highly motivated to protect themselves.

The major challenges for this project were:

- Complex local dynamics.
- Lack of resources. Sustainability means long-term investment and training, which can be costly.
- Poor infrastructure undermines access to and supervision of remote areas.
- Competing priorities within the Mozambican government's development agenda placed a squeeze on both technical/administrative capacity and on access to resources.
- The country's size and demographic make-up means that some areas have low population density. Coupled with the accessibility and remoteness issue mentioned above, this means that investing in disaster mitigation and response in such areas is not always perceived as cost effective.

Potential for Replication

The programme can be easily transferred and adapted to other countries with disaster risks. Similar examples exist already in Bangladesh, Honduras and Costa Rica.

Replicating the programme in another context requires the involvement of community workers trained in disaster risk reduction as well as in the use of appropriate materials (such as megaphones, radios, and first-aid kits) depending on the given context. Moreover, political will is needed at the national level, as well as at the provincial and district levels, to mobilize the population to take care of themselves as much as possible.

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Nepal



The shallow tube well: A tool for fighting drought and poverty

Livelihood-centred approaches to disaster risk reduction

Practical Action - Nepal (In partnership with MADE/Nepal)



A reliable harvest due to improved irrigation

Abstract

In some parts of the Chitwan District in southern Nepal, drought-prone communities face two major disaster risks: not enough water, and too much water. Due to poverty, they are compelled to live at the confluence of two rivers where they are extremely vulnerable to flood and water inundation. Meanwhile, their agriculture is still primarily dependant on seasonal rainfall, meaning hot and dry summers cause massive crop losses through drought.

Few coping strategies have been available. In good seasons, when rain was enough for summer crops to be grown, food was stored for the inevitable monsoon floods. In poor seasons, wage labouring was the only option available.

In March 2007, Practical Action launched an initiative to increase communities' social and economic capacity to respond to and cope with drought, through more resilient livelihood options. The initiative focused on establishing shallow tube wells. A shallow tube well is a tube or pipe vertically set into the ground at a depth of six to 18 meters, which suction-lifts water from shallow aquifers. The shallow tube wells have enabled the communities to reduce their vulnerability to drought while increasing their incomes, making them more resilient to other disasters.

The Initiative

This initiative was one of the elements of a project called 'Livelihood-Centred Approaches to Disaster Risk Reduction'. Its main goal is to increase the social and economic capacity of vulnerable communities to respond to and cope with drought through more resilient livelihood options.

The initiative establishes shallow tube wells in drought-prone communities. It started in March 2007 and is still underway in Ward numbers 1 and 2 of Megghauli Village Development Committee (VDC¹⁹) in Chitwan District, southern Nepal. A shallow tube well (STW) is a tube or pipe vertically set into the ground at a depth of 20 to 60 feet (6 to 18 metres) to suction-lift water from shallow aquifers.

Due to the installation of STWs, the targeted drought-prone communities in the southern Nepal district have been able to increase their incomes while reducing their vulnerability to drought. Using irrigation, farmers are now able to grow profitable crops even during the dry season, on land previously left fallow and unproductive for part of the year. Increased income means that these communities can better withstand the impact of natural hazards.

The project activities were implemented through locally-established Project Implementation Committees (PICs), which represent the users of the tube wells. One hundred vulnerable households of Megghauli VDC were targeted, with one tube well for 12 households.

The initiative is managed by Practical Action – Nepal, implemented by a local partner NGO, MADE/Nepal (Multi-Dimensional Agriculture for Development) with funding from the UK government's Department for International Development (DfID), Conflict and Humanitarian Fund (CHF).

¹⁹ VDCs are the smallest units of Nepal government administration.

The Initiative's Contribution to Poverty Reduction

The communities, largely comprised of poor Kumal and Tamang tribes, face two major risks: disasters due to lack of water, and disasters due to too much water. Due to their poverty, they are compelled to live at the confluence of two rivers where they are extremely vulnerable to flood and water inundation. Agriculture supplemented by fishing is their main livelihood. In recent years, climate-induced disasters have increased in frequency and severity, affecting their agricultural productivity and threatening their livelihoods. Despite their closeness to the two rivers, their agriculture is primarily dependant on seasonal rainfall. A hot and dry summer causes massive crop losses through drought; heavy rainfall and flood during the rainy season exacerbates their misery.

Few strategies have been available to reduce the risk of natural hazards. In good seasons, when adequate rain enabled summer crops to be grown, food was stored for the inevitable monsoon floods. In poor seasons, wage labouring was the only option available.

In consultation with the local district development committee (DDC), the field team of the Livelihood-Centred Approaches to Disaster Risk Reduction project approached the communities to plan disaster risk reduction and poverty reduction strategies. During the planning meetings, the communities unanimously asked for irrigation support, to enhance their livelihoods through more productive agriculture. Through a series of community discussions and technical studies, the project team concluded that installing STWs would directly help them mitigate the impact of drought while strengthening their livelihood strategies, thereby making them more resilient to other disasters.

This small step has significantly increased the confidence level of community members, and brought enormous changes in their way of thinking. Farmers are enthusiastically initiating vegetable growing during the season when they previously had to leave their farms fallow. In the past, farmers often had to sow or transplant their crops with some delay due to the

late onset of rain, which severely reduced yields. Now farmers discuss in groups and allocate days for each and every family to use the STWs, so that they can plan their crop sowing and transplantation accordingly.

Commenting on the ongoing change, Community Leader Min Bahadur Tamang said:

“It was shameful for us to ask for support in irrigation while living in the river delta, but this was our primary need. In one spring in this area, over 50 hectares of maize died after flowering due to prolonged drought. In coming years, however, we can tackle this problem by irrigating our crops and protect them from dying.”

The Good Practice

The good practice is that this activity is community owned and initiated. Following a vulnerability and needs assessment, the communities themselves identified the small size of their land holdings, their dependence on adequate and timely rain, and the impact of drought as major constraints to both their ability to earn a living, and to survive the impacts of natural hazards such as seasonal flooding.

Key to the success of the initiative is the involvement of the communities at all stages, from planning to implementation of the STWs. Irrigation helps by intensifying the agricultural productivity of their limited land, increasing income while contributing to reduced vulnerability and poverty. While the longer-term impacts of the activity are still emerging, farmers have been encouraged to adopt more profitable farming ventures such as vegetable production for marketing locally.

Lesson(s) Learned

- The key lesson is to involve the community in the identification, planning and implementation of appropriate activities which reduce their vulnerability while enhancing their income earning capacity.
- The major challenge was to secure community contribution. As Practical Action and the partner NGO were working with the poorest of the poor community, they had nothing to contribute to this initiative in the form of cash. The community did however provide all the unskilled labour for the implementation of the project.
- Similar initiatives can be improved by ensuring that targeted community members are trained to maintain the pumps.

Potential for Replication

This initiative can be easily replicated in a different context provided that strategies to achieve its goals are appropriate, sustainable and relatively low cost. In particular, it can be replicated in areas where water tables are high, where the majority of the population depends on rain-fed agriculture, and where small-scale irrigation is an appropriate technology.

However, since this is a relatively high-input initiative, a larger community contribution should be expected when working with relatively well-off communities.

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Pakistan



Integrating disaster risk reduction into post-disaster livelihood rehabilitation

The Concern Worldwide Pakistan Programme (CWPP)
*Concern Worldwide - Pakistan*²⁰ (In partnership with HAASHAR)



One of the affected villages of Mansehra District

Abstract

Poverty and the associated lack of preparedness for disasters contributed to major loss of life, severe damage to property, and trauma in a northern Pakistan village of Mansehra District, one of the areas most affected by the 2005 South Asia earthquake.

The earthquake depleted human resources and destroyed property and essential infrastructure, increasing dependency, reinforcing chronic poverty among the poorest, and temporarily forcing others into poverty. Limited capacity to cope with future disasters needed to be addressed.

In January 2007, Concern Worldwide initiated a livelihood rehabilitation project into which disaster risk reduction was integrated. The project, still under way, has helped restore people's lives to normal and restart their businesses, as well as reducing their vulnerabilities. Their resilience to disasters has increased, as has the sustainability of their livelihoods.

²⁰ Concern Worldwide is a non-governmental, international, humanitarian organisation dedicated to the reduction of suffering and working towards the ultimate elimination of extreme poverty in the world's poorest countries. It seeks to help people living in extreme poverty achieve major improvements in their lives.

The Initiative

This initiative is a livelihood rehabilitation project that incorporates disaster risk reduction. The major goals and objectives of the project are to reduce the vulnerabilities of some earthquake-affected communities in northern Pakistan, build their capacity to cope with future disasters, as well as empower them and strengthen their livelihoods.

The project, which was launched in January 2007, is still underway in Miel Batt Village in Siran Valley Tehsil²¹ in Mansehra District, one of the areas most affected by the 2005 South Asia earthquake in Pakistan's North Western Frontier Province (NWFP).

The project involves, through a participatory process, the Concern Worldwide Pakistan Programme (CWPP) and the local NGO HAASHAR, as well as the targeted communities.

Targeting some 80,000 people affected by the 2005 South Asia earthquake, the project focused on a village of 950 residents. It is implemented by Concern Worldwide and HAASHAR, with funding from the European Commission (EC).

The following impacts have been made by the project:

- The lives of people affected by the earthquake have been restored to normal and their businesses restarted
- The vulnerabilities that resulted in people becoming displaced have been reduced.

²¹ A Tehsil is an administrative unit hierarchically above the city, town or village.

The Initiative's Contribution to Poverty Reduction

Poverty and the associated lack of preparedness for seismic events contributed to the vulnerability of local communities, resulting in major loss of life, severe damage to property, and trauma. The 2005 South Asia earthquake increased the level of poverty, depleted human resources, and destroyed property and essential infrastructure in the project area. Livelihoods and social life were curtailed, resulting in reduced capacity to cope, and increased dependency. The earthquake reinforced existing chronic poverty among the poorest and temporarily forced others into poverty.

Overall, there was limited capacity within the communities to cope with future disasters, and they lacked awareness and preparedness. To help address the situation, the Concern Worldwide project built the disaster risk reduction capacity of the communities through training, establishing community organisations (COs), and advancing structural work such as cut-off drains, protecting walls, placing gabions, building irrigation channels, constructing water supply schemes, protecting water resources, providing agriculture inputs,

empowering women through vocational training and tools, and restoring access to markets.

The project:

- Promotes action on livelihood diversification as a strategy to reduce vulnerabilities.
- Educates stakeholders and communities on how to integrate disaster risk reduction into livelihood activities.
- Provides sources of income outside high-risk areas.
- Targets the poorest and most vulnerable - women, disabled people, landless, orphans and minorities - to help reduce their vulnerabilities to disasters.

Integrating disaster risk reduction into livelihood-related activities has helped protect the poor from displacement, and restart their normal lives. The project also helped restart agriculture, livestock and small enterprises. The communities' capacity to cope with future disasters increased, along with their resilience and the sustainability of their livelihoods.

The Good Practice

This project is a good practice because it addresses both vulnerability to disasters and poverty in an integrated manner. It has also helped other communities to have easy access to markets and safe passage.

The major success factors in the project are:

- The cut-off drains, which worked well and reduced landslide risk and vulnerability, and brought the communities' displacement to an end.
- Broad community participation and close coordination with local government authorities and line departments.



Lesson(s) Learned

The major lesson learned from this project is that integrating disaster risk reduction into rehabilitation efforts can help protect people from disaster risk.

Major challenges of this initiative were related to logistics issues such as working in a difficult, high-altitude terrain. These challenges were, however, overcome through community participation and contribution.

Potential for Replication

It should be relatively easy to replicate this project elsewhere by ensuring a participatory process and utilizing local knowledge and skills. Community mobilization, awareness and meaningful participation of all stakeholders will help manage it properly.

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Peru



Good irrigation enhances climate change adaptation and boosts harvest

Mainstreaming livelihood-centred approaches into disaster management

Practical Action (Soluciones Prácticas) – Peru

(In partnership with Huaraz Provincial Government, the Ministry of Agriculture, and the National University of Santiago)



Appropriate irrigation techniques promote good water management

Abstract

The people of the rural centre of Coyllur, in western Peru, are mostly farmers. Farming takes place on steep land, with few attempts to control erosion. Irrigation, where available, is by flooding with little terracing. Extensive clearance of indigenous vegetation has further destabilized the land. Intense rainfall in the wet season leads to extensive soil erosion, and the destabilized slopes exacerbate landslide risk. The dry season is lengthening, impacting on crop yields.

Poor housing and plots in high-risk areas have led many people to migrate from the countryside to the city, seeking employment. Those remaining have adopted increasingly unsustainable farming practices in a desperate bid to survive. There is no local knowledge on steep land cultivation or appropriate irrigation technologies.

In March 2006, Practical Action initiated a project in the area to improve the population's welfare by protecting their livelihoods from weather threats (such as frosts and heat waves), as well as earthquakes, floods, landslides and mudslides - all of which had a direct impact on their agriculture-based livelihoods. The project is part of a programme called Mainstreaming Livelihood-Centred Approaches into Disaster Management.

Through training and climate change adaptation strategies, the Project has demonstrated that low-cost irrigation techniques make better use of water, increase production and generate higher returns. The techniques also help solve problems linked to slope cultivation, such as soil erosion, landslides and flooding.

The Project, which is still under way, has enabled the population to reduce their vulnerability to drought and landslides, protect their livelihoods from the impacts of disasters and climate change, and improve their economic and social conditions.

The Initiative

This initiative is part of a programme called Mainstreaming Livelihood-Centred Approaches into Disaster Management. The main objective of the project is to improve the rural population's welfare by protecting their livelihoods from climate change and disaster impacts, through training and climate change adaptation strategies including better land management and the introduction of better irrigation techniques.

The project, initiated by Practical Action – Peru, kicked off in March 2006 and it is still under way in western Peru in the populated centre of Coyllur in Huaraz District, Huaraz Province, Ancash Region. Coyllur is located in the upper part of the geographical area of Quillcay Sub-Basin River, Santa River Basin, stretching from 3,200 m to 5,668 m above sea level.

Direct project beneficiaries are 40 families in Coyllur; indirect beneficiaries are all the 130 families of the local community. To run the project, coordination has been established with the Mayor, and the chairman and other top leaders of the farmers' community. The project involves developing irrigation systems in two parcels of community land and with three individual families.

The project is being implemented by Practical Action – Peru, with funding from the UK government's Department for International Development (DfID) Conflict and Humanitarian Fund (CHF). Throughout the development of the project, alliances have been made with several sectors of Huaraz Provincial Government, the Ministry of Agriculture through PRONAMACH (National Watershed Management Programme), and the National University of Santiago which provided advice and support during the training days.

Farmers were initially reluctant to change their habits and customs with respect to planting their crops. However, the project has demonstrated that using low-cost irrigation techniques, prepared with minimal resources, help make better use of water, increase production, generate higher returns and reduce conflict with neighbouring communities. The irrigation techniques also help solve problems associated with slope cultivation such as soil erosion, landslides and flooding.

Appropriate irrigation techniques have won the support of local authorities and are now being promoted at district and provincial levels for inclusion in the decentralized participatory budget process.

The Initiative's Contribution to Poverty Reduction

The local rural population in Coyllur is predominantly agricultural. Farming takes place on steep land. There are few attempts to control erosion, and irrigation, where available, is by flooding with little terracing. Extensive clearance of indigenous vegetation has further destabilized the land. Intense rainfall in the wet season leads to extensive soil erosion, and destabilized slopes exacerbate landslide risk. The dry season is lengthening, impacting on crop yields. There is no local knowledge on steep land cultivation or appropriate irrigation technologies.

The project identified the following hazard risks in Coyllur: earthquakes, floods, landslides, thunderstorms, strong winds, weather threats (frosts, heat waves) and mudslides - known in the area as llocllas. These events are a consequence of both inappropriate farming methods and climate variability, impacting directly on the population's agriculture-based livelihoods. In addition, poor housing and plots in high-risk areas led many people to migrate from the countryside to the city, seeking employment. Those remaining adopted increasingly unsustainable farming practices in a desperate bid to survive.

To help the population, local initiatives have been developed to cope with some of the impacts of climate change and other local risks, such as making fires to ward off frost damage, identifying escape routes in the event of an earthquake, landslide-safe areas for school construction, and mobilizing and training volunteers for search and rescue. A few local initiatives that mitigated disaster risk while also reducing poverty were put in place.

Participatory workshops identified ways to fight against the effects of climate change, reduce the impact of other hazards, and reduce poverty. The population showed their willingness to work in a participatory manner to improve their situation. Community leaders, officials and ordinary men and women came together to learn techniques of irrigation management, pest control, sustainable shifting cultivation and appropriate systems of water use.

As expensive irrigation technology was beyond local resources, the people combined both sophisticated and common, locally available materials to develop appropriate systems. This improved productivity and reduced the people's vulnerability to disasters. At the same time, the people's organisational capacity was strengthened, also a key asset in their fight against poverty.

A crucial factor in this process was the actual demonstration of different irrigation systems. Demonstration plots showed that appropriate irrigation techniques promoted good water management, helped disease management, preserved soil nutrients, and reduced risks of the soil erosion which used to put their precarious infrastructure at risk. The population became confident that these techniques would generate more income, guarantee crop quality and improve their welfare and safety.

The Good Practice



The project is a good practice because:

- It tackles water shortage which is a recurrent problem in the area. This is a problem that is exacerbated by poor management and lack of knowledge.
- The new irrigation techniques contribute to reducing both disaster risk and poverty by improving productivity and reducing the community's vulnerability to disasters.

Key success factors in the project are:

- The involvement of the community in activity planning.
- Their recognition of their problems and identification of alternatives.
- Recognition of existing capacities within the community.
- Relations of trust between the community and Practical Action.
- Technical support in implementing the project.
- Strengthening the local leaders' capacity and legitimizing their leadership during the process.
- A clear vision of a sustainable outcome for the project.

Lesson(s) Learned

Key lessons learned from the project are:

- Rural community members are like Saint Thomas Aquinas: for them, 'seeing is believing'. Theory needs to be shown to work in practice, otherwise people will not get involved.
- Disaster Risk Management (DRM), as a concept, may not be easy for poor communities to fully grasp at first. However, the linkage between DRM, livelihood protection and economic improvement, can be easily understood and accepted.
- Lack of economic resources and the need to keep bread on the family table, means the uptake and implementation of innovative can be slow, and sometimes unsuccessful.
- It is necessary to understand the local realities. Community knowledge, acquired with experience and over time, must be respected.
- Community members are the only ones who really know what their resources are. No outside professional, technical or specialist can fully understand the problems of the community and alone propose viable alternatives.
- Professionals collect, systematize, guide and reinforce the learning of the community members. They do not generate it.
- There was a lot of mistrust of foreign people within the targeted community. They seem to have been misled very often and became suspicious of suggested changes.

The major challenges for this project were:

- The community had no financial resource to contribute but was aware that it could contribute natural and organisational resources. Encouraging them to contribute was not an easy task - one had first to be accepted by them and win their trust.
- After accepting and trusting Practical Action, the community placed great expectations on the organisation. It was and is important to manage expectations and trust to avoid frustrations on either side.
- The community is eager to learn and participate as long as the project provides real and meaningful changes. Extra effort has been taken and is being taken to ensure that the project produces changes that are not only real and meaningful to outside observers, but above all felt to be real and meaningful by the communities themselves.

To improve similar projects in the future, it is necessary to engage the beneficiaries from the very beginning. Engaging them genuinely means helping them recognize that they are important, that they have duties but also rights, that they are all first-class citizens with the right to live in dignity.

Potential for Replication

The project is easy to replicate as long as the starting point is recognition of the local problem affecting the community, followed by a harnessing of community will to improve their living conditions.

If the context is different but the problems are similar and the population is dependent on agriculture, then the methodology needs to be modified to suit the new context and perhaps invite greater participation from women and young people.

For the sake of more sustainable replication, there is a need to empower the community, incorporate the project into local and regional development plans, and translate the plans into concrete projects that improve the living conditions of the poorest.

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The Philippines



Linking income, environmental care and disaster preparedness

Strengthening community resilience: Linking livelihood and environmental management

Center for Disaster Preparedness (CDP)

(In partnership with Buklod Tao²², Inc.)



One of the Buklod Tao community members

Abstract

Banaba, in the outskirts of Manila, is a village of the urban poor that is plagued by flooding, improper waste disposal, poor sanitation and hygiene, unemployment, and high population growth. Poverty drives many residents and 'informal settlers' to live by an increasingly eroded riverbank and in flood-prone areas.

In 2007, Buklod Tao (BT), a local environmental community organisation, embarked on an initiative that linked livelihoods, environmental care and disaster preparedness. BT is involved in disaster preparedness and mitigation in Banaba, as well as in the income-earning production of 'Go Bags' (disaster evacuation bags) and life vests for children at risk.

Initiated mainly by mothers who are active members of BT, the initiative involves using recycled and reusable materials to make bags, sun visors, wallets, folders and similar items. BT's male

²² This article has benefited from the inputs of Buklod Tao's Chairperson, Mr. Manuel Abilinales (noli_ab_2@yahoo.com).

members, partner bodies, children and neighbours also contribute to the initiative in their own capacity. BT now accepts bulk orders from various organisations.

The income earned from making the bags and life vests, helps the poor families involved pay for school fees and electricity bills, as well as to meet other basic needs such as food and clothing. A small part of the income goes to the initiative's operational funds. BT received no aid agency funding for this initiative.

As a result, a gradual improvement in environmental care and community safety has been observed. The initiative reduces solid waste, and flood and health risks, while helping to build a culture of safety among adults, youth and children. It is a model of a locally developed, locally led, locally run and locally funded disaster risk and poverty reduction initiative.

The Initiative

This initiative is an income-generating effort linked to and supporting environmental care and disaster preparedness. It has been under way since 2007 in the flood-prone barangay (village) of Banaba, in the municipality of San Mateo, Rizal Province, northern Philippines. It is implemented by Buklod Tao (BT), a local environmental people's organisation involved in disaster preparedness and mitigation.

After community risk assessment and action planning took place in 2006 with community children, BT members started to sew life vests and "Go Bags" (evacuation bags) for children at risk. A visit by BT women members to a women's cooperative which was producing bags, slippers and other products from used aluminium juice packs, opened a window of livelihood opportunities linked to environmental care and disaster preparedness.

In 2007, BT took orders for bags, sun visors, wallets, folders and the like, using recycled and reusable materials. Now in 2008, it has an order for life vests from fisher folk in the municipality of Infanta in Quezon Province, a municipality which experienced flash flood and landslide disasters in 2004.

The disaster preparedness activities have resulted in progressive improvement in community safety and development. There is not much external input provided: BT is able to sustain and add to its community disaster risk reduction activities and, along the way, receives some small amounts of external funding support.

Furthermore, BT's most recent livelihood activities have reinforced its relationships with its partners, and furthered its overall public advocacy goals, through working for disaster preparedness and environmental care in the community. The goals of the livelihood-related activity linked to environmental care can be summarised as follows:

- To foster awareness, among the community members, of the significance of ensuring a healthy and sound environment to achieve a safe and liveable habitat.
- To enhance the community's inherent capacities to reduce their vulnerabilities
- To seize opportunities that allow families to protect themselves and the environment from life-threatening conditions and, at the same time, contribute to meeting family subsistence needs through income-generating activities.
- To advance environment-friendly initiatives to protect the future of coming generations.

The involvement of mothers in producing useful products such as bags and wallets out of used aluminium juice packs and plastic packs (vinegar, soy sauce) actually started in 2005. BT had used this approach as part of its environmental care campaign. Then in 2006, BT was able to improve its production skills to produce life vests, as the community

partner in the implementation of the Child Oriented Participatory Risk Assessment and Planning (COPRAP) research project carried out by the Philippines-based Center for Disaster Preparedness (CDP).

Currently, BT has a wide assortment of products from recycled and reusable materials that it can produce based on orders. From 'Go bags' to bags made out of canvas and recycled plastic wallets, it has now added body bags, envelopes, sun visors and backpacks. The BT women also use canvas from used flour bags. All these are displayed in the BT office and members' homes, easily catching the interest of local and foreign visitors. At present, BT takes bulk orders from different organisations. Even neighbours buy and send them to their relatives abroad. The initiative continues to grow with support from many stakeholders.

Aside from the mothers earning additional income, a small part of the proceeds goes to BT operational funds, which helps to increase the organisation's self-reliance and sustainability.

The endeavour was initiated by local people themselves, particularly mothers in the community who are also active members of BT.²³ During the early months of the initiative, only a few were involved since production was very limited. As time went by, involvement increased. Now, some 15 women members work collectively to meet consumers' demand. Six are involved in sewing and the rest are involved in gathering and cleaning empty aluminium and plastic packs, design, marketing and quality control.

Children in the community, aside from the sons and daughters of BT members, also contribute actively. They voluntarily collect empty juice packs from their schools and communities, and give it to the mothers. Male members of the organisation also play a vital role in product marketing and delivery, as well as in promotional activities.

²³ BT has 130 members, more than half of whom are women.

The Initiative's Contribution to Poverty Reduction

Banaba village has a sizeable population of 'informal settlers'. The village is a typical poor urban community setting. Residents live by a riverbank which continues to be eroded. Problems in this community are flooding, narrow roads, clogged canals, improper waste disposal, poor sanitation and hygiene, unemployment, and high population growth. Poverty drives many residents to live by the riverbank and in flood-prone areas.

BT continues to mobilize the community to join disaster preparedness activities, since the community is at the juncture of the Marikina and Nangka Rivers. Because of hazard monitoring, rescue boats and teams and an emergency operations centre, flooding has stopped killing people in the village. But riverbank erosion has caused many houses to slide and this now poses a serious threat to the entire community.

Disaster risk reduction activities in the community now include work that links improved livelihoods to environmental management. BT members produce evacuation bags, envelopes, wallets, sun visors and other products made with used aluminium juice packs, plastic packs and used flour bags.

In addition to the income earned by women, the community has also acquired skills such as designing, sewing and marketing, as a result of these activities. Notably, investments in linking livelihood and environmental management have a promising future – in terms of natural and built environment protection, as well as in terms of children's and youth's involvement in recyclable material collection. The project reduces solid waste in the community, reduces flood and health risks, and contributes to shaping the behaviour of both adults and the younger generation in disaster preparedness, good stewardship of resources, and environmental management.

Income derived is still small at this stage, as the initiative started relatively recently, but there have been many positive impacts. There is also a potential for more production activities from recycled materials. Word is spreading and there is increasing recognition of the product. In December 2007, BT even had to refuse some orders because they were placed on short notice.

The Good Practice

This endeavour is a good practice because it links livelihood with environmental and disaster management. BT's production of various products from recyclable and reusable materials is an avenue for the flood-prone urban poor to make different stakeholders aware of the important role that environmental protection plays in building disaster-resilient communities. It has made residents strongly aware of the need to practice disaster preparedness and environmental management as part of their daily lives, reducing flood and health risks.



BT has been a consistent example in building on local capacities and progressively improving disaster preparedness and community development. Its effects change not only through words but also through positive actions by individuals and groups belonging to the academic, religious, youth, senior citizen, business and media sectors. The concept of linking livelihoods to environmental management responds to pressing economic needs of the urban poor. In addition to reducing solid waste materials in the community, the products developed out of recycled materials have provided the urban poor an alternative source of income to support the needs of their families. Additional livelihood skills and options have been provided. Although small at the moment, additional funds generated are contributed to BT's operational funds.

Involving youth and children from the primary and secondary education levels also helps sensitize them to the importance of environmental protection, and of working for community safety and development. The disaster preparedness, livelihood and environmental management activities have fostered closer relationships among members of BT and other stakeholders involved. BT has sustained networking with diverse groups and institutions.

The established reputation and the visible accomplishments of BT in Banaba village for over 10 years, was a triggering factor that helped win the trust of their fellow community residents and also the cooperation of different organisations that worked in their area. Multi-stakeholder participation and partnerships have also helped greatly in continuously promoting the work. The youth, women's, elderly, and business sectors became fundamental channels for mobilizing social, human and material support.

There are, however, some constraint factors. Limited support from the government is an issue. BT is trying to influence local government participation while continuing with its disaster risk preparedness, livelihood and environmental care activities. Another constraint is that the mothers are not working on a full-time basis in the livelihood activity. This means that when there are orders on short notice, BT has no other option to refuse them. If more sewing machines were available, more women could be involved in learning how to sew, produce useful recycled products, and improve quality.

Lesson(s) Learned

Four key lessons can be learned from this initiative:

- Starting where the people are and building from what they have is a core principle that should be applied in any development work, including the field of disaster risk management.
- Ownership of an endeavour can easily be achieved if community members themselves are the lead actors and are empowered to value and practice self-reliance.
- Innovative thinking works. Coupled with the values of resourcefulness and creativity, the community was able to produce something profitable from scrap materials perceived by others to be useless.
- Gathering the support of groups coming from different disciplines and lines of work provides a more sustainable opportunity to prosper in the development agenda.

The community has also faced the following challenges when undertaking the initiative:

- There has been lack of adequate equipment and facilities, particularly additional sewing machines and a production area, which could have helped ensure faster and larger-scale production. BT does not have its own machine for making bags, slippers and wallets. Only two of the women members have their own sewing machines, while others rely on sewing machines borrowed from their neighbours.
- The schedule of the mothers is also an issue. Most of the mothers are not involved full time in the initiative because they also have other duties to attend to, particularly responsibilities at home, such as household chores and childcare.
- Skills enhancement training is seen to be imperative for the people involved in the production. Advanced techniques in sewing and designing will improve their work and allow them to attract more buyers. Since there are only six participants who are experts in sewing, training would help to increase the number of knowledgeable individuals.
- BT's disaster preparedness, livelihood and environmental management initiatives will be more effective with closer rapport and coordination with the local government. This will provide an avenue for the people and local leaders to complement their efforts towards the advancement of the community.

Potential for Replication

The initiative is a model of a locally developed, locally owned, locally led, locally run and locally funded disaster risk and poverty reduction initiative. It can, however, be replicated in a different context provided that there is commitment from the community itself (or the community organisation) to mobilize community members and other stakeholders. The presence of a people's organisation with good reputation would help mobilize support and win the trust of the community and other stakeholders.

This said, lack of collaboration between local people and village leaders could be a constraint to scaling-up. Political leaders have to appreciate these community initiatives and take them on for scaling-up to be possible. Local leaders should not look at such initiatives as a threat or competition.

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Tajikistan



FOCUS HUMANITARIAN ASSISTANCE

Saving lives and livelihoods through the power of knowledge

Fostering disaster-resilient communities in isolated mountain environments:
A risk management strategic approach

Focus Humanitarian Assistance²⁴ (FOCUS) – USA

(In partnership with the Aga Khan Foundation – United Kingdom)



Construction of a channel
to reduce the risk of
underground flooding

Abstract

Gorno-Badakhshan Autonomous Oblast²⁵ (GBO) is an isolated mountain area in eastern Tajikistan, the poorest of all the former Soviet Republics. It often takes days or weeks for disaster assistance and relief to reach local communities in the area. In the event of a mudslide, affected families lose their income, as the breadwinner has to stop working in order to repair the family home. Households are then unable to replace their losses. Lack of support for full disaster recovery forces many of them into a cycle of poverty.

To help address the issue, Focus Humanitarian Assistance USA and the Aga Khan Foundation UK developed a Risk Management Strategic Approach in 2003. This is an objective knowledge-based approach that prioritizes those most at risk and seeks to understand the nature and extent of their risks.

²⁴ Focus Humanitarian Assistance (FOCUS) is an international emergency response agency providing humanitarian relief and assistance and disaster risk management for vulnerable communities located primarily in the developing world. Affiliated with the Aga Khan Development Network (AKDN), it has offices in Europe, North America and South and Central Asia.

²⁵ An Oblast is an administrative division in some countries of the former Soviet Union. The word oblast can be translated as "region" or "district".

A detailed community-based hazard, vulnerability and capacity risk assessment was carried out with local communities. The knowledge gained helped some 135,000 community members to acquire better understanding of their risks. It also led to an increased capacity to respond to hazards and a greater ability to recover from disasters.

When one of the FOCUS partner villages was devastated by a series of mudflows on 29 June 2007, the communities were able to relocate quickly to pre-identified safe havens, taking basic items and their livestock with them. They were also able to rebuild their homes and livelihoods within weeks.

The Initiative

This initiative, called Fostering Disaster-Resilient Communities in Isolated Mountain Environments, has two major objectives:

- To scientifically and measurably identify risks faced by communities in mountain areas of Tajikistan.
- To build the capacity of communities, the government and academics to assess disaster risk, prepare against disasters and respond to natural hazards.

Initiated in 2003, the initiative is still under way, targeting 270 communities in Gorno-Badakhshan Autonomous Oblast (GBAO) in the Pamir mountain range in eastern Tajikistan, and involving the following actors: village communities in GBAO, the Committee of Emergency Situations and Civil Defence (CoES) of the Republic of Tajikistan, the governments of GBAO and its districts, the head of the Tajik Department of Geology, the University of Central Asia, and over 10 other scientific agencies in Tajikistan.

The initiative is implemented by Focus Humanitarian Assistance USA (FOCUS USA) and the Aga Khan Foundation (AKF) United Kingdom, with funding from FOCUS USA and the European Commission Humanitarian Aid Office (ECHO).

The target beneficiaries are over 135,000 community members in GBAO, and 100 specialists and technical staff in disaster response agencies and academia. To date, the initiative has achieved the following:

- Over 135,000 direct beneficiaries have developed a better understanding of the risks they face, have an increased capacity to respond to hazards, and have shown a greater ability to recover from disasters.
- A sustainable public-private-community partnership was established, supporting effective early warning of and response to disasters.
- Academic experts have greatly enhanced their capacity for replicating these methodologies in other areas.

The Initiative's Contribution to Poverty Reduction

Banaba village has a sizeable population of 'informal Tajikistan is the poorest of all the former Soviet Republics. The isolated nature of GBAO within Tajikistan means that hundreds of its communities have historically not received timely post-disaster external assistance and relief, in many cases for days or weeks. As a result, when a mudslide damages a home, affected families tend to lose their income, as the breadwinner has to stop working in order to make repairs. If an adult is injured, children often have to stay at home and care for the family rather than going to school. Households that lose their belongings are not able to replace them. Due to lack of full disaster recovery support, natural hazards force many communities into a cycle of poverty. Given the high number of communities at risk, it was necessary to apply an objective knowledge-based approach to prioritize those most at risk and understand the nature of those risks. In 2003, FOCUS adopted a Risk Management Strategic Approach involving teams composed of local earth scientists, engineers, social mobilizers and Geographic Information Systems (GIS) experts. The teams conducted a detailed community-based hazard, vulnerability and capacity risk assessment (HVCRA) in collaboration with village members. The knowledge gained from the HVCRA produced two essential sets of information for decision making: (1) calculated community risk levels; and (2) community hazard and risk maps. With these two essentials, FOCUS prioritized risks and implemented community-based interventions that measurably reduced risk. These included:

- Identifying appropriate safe haven locations.
- Implementing community-based disaster preparedness programmes.
- Installing wireless communication devices.
- Implementing small-scale structural mitigation measures, which also serve as income generation opportunities for communities.
- Building the capacity of the government and academic staff responsible for hazard assessment and disaster response.

The communities now have baseline strength in communal knowledge of disasters, and institutions and systems are in place to better support the communities before, during and after a disaster.

A recent example of the entire process is best identified through the events of 29 June 2007 in the GBAO village of Chokhandez. In the middle of the morning, the village was devastated by a series of mudflows. The village was a FOCUS partnership village and had already developed awareness and received training through the FOCUS Risk Management Strategic Approach. Rain had fallen the night before and throughout the morning, and the villagers knew a mudflow was very likely to occur. They learned this based on the results of the assessment they had conducted with FOCUS. The villagers quickly mobilized themselves, took with them basic items from their homes, and relocated to their safe havens.

The safe havens had been identified through village training sessions. When the first small mudflow occurred, the mudflow channel built by the community with FOCUS support was able to divert the mudflow through the channel and to the nearby river, causing minimal damage and allowing the villagers to evacuate their belongings and livestock safely. As rain continued, a much larger mudflow occurred, which damaged several homes and blocked the main road. However, by this time, community members had already evacuated with basic items and their livestock.

The village also had a radio installed by FOCUS in a safe location identified by the hazard assessment. The community members contacted FOCUS and the CoES, notifying them of the mudslides. A FOCUS disaster response team arrived within hours and was already assisting the community by providing tents and blankets for short-term shelter needs. Government crews were able to re-open the road, and safer reconstruction efforts began within a day with the support of the entire community, FOCUS and the Government of GBAO. Within weeks, the affected households of Chokhandez Village were able to rebuild their homes and economic activities, and normal life resumed.

This example demonstrates how a knowledge-based approach to risk reduction helps save lives and livelihoods, and prevents a community from falling further into poverty. The approach allows communities to recover faster when a disaster occurs.

The Good Practice



To effectively and measurably reduce risk, and build coping capacity, it is necessary to identify risk levels clearly. FOCUS' approach to fostering disaster-resilient communities is through a comprehensive Risk Management Strategic Approach, an approach that can be described as good practice.

The approach applies a community and knowledge-based HVCRA methodology that enables communities, scientists and disaster managers to clearly understand what risks communities are facing, the levels of those risks, and how to mitigate those levels to an acceptable level.

The approach has helped achieve two integral successes:

- Hundreds of communities are now better prepared and are able to respond to disaster situations.
- The CoES and FOCUS can now partner well in emergency response.

The above successes were achieved through a strong enabling environment for all actors involved, which makes the initiative a model Public-Private-Community partnership. Other key success factors include:

- The availability of local scientific specialists capable of learning hazard assessment techniques.
- Strong cooperation between communities and government partners in risk identification and risk reduction processes.
- Commitment from donors to design, develop and test a knowledge-based approach.

Lesson(s) Learned

Key lessons learned from the project are:

- Communities can mobilize and support themselves and be a first strong line of defense against hazards.
- Knowledge, when properly applied, is critical in providing direction for successful risk reduction interventions.
- Disasters and poverty are clearly linked, and complicate the obstacles communities face. These obstacles require comprehensive solutions. FOCUS' Risk Management Strategic Approach is a comprehensive approach that helps reduce disaster risk successfully.

The major challenge for this project was:

- How to secure the strong commitment of all stakeholders involved (communities, governments, donors, the private sector and NGOs). To overcome this challenge, FOCUS did its level best to develop a truly enabling environment for all actors. Indeed, measurable and sustainable results would not have been possible without a strong commitment from all the different players involved.

Potential for Replication

This approach has been developed and repeatedly tested in Tajikistan with the hope that it is replicated in other disaster-prone areas of the world. In fact, FOCUS is already applying it to communities in neighbouring Afghanistan. To support the efforts being made in Afghanistan, FOCUS teams in Tajikistan are working in collaboration with FOCUS Afghanistan to effectively transfer the knowledge and experience gained in Tajikistan.

Furthermore, FOCUS is also developing a guide detailing the steps and resources needed to implement this approach, so that institutions working in other mountainous regions of the world can learn and adapt the methodology to support disaster risk reduction in their areas.

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