Seeds of Knowledge

Contributing to Climate Change Solutions

UNEP

MDG:F

MDG ACHIEVEMENT FUND

Seeds of Knowledge: Contributing to Climate Change Solutions

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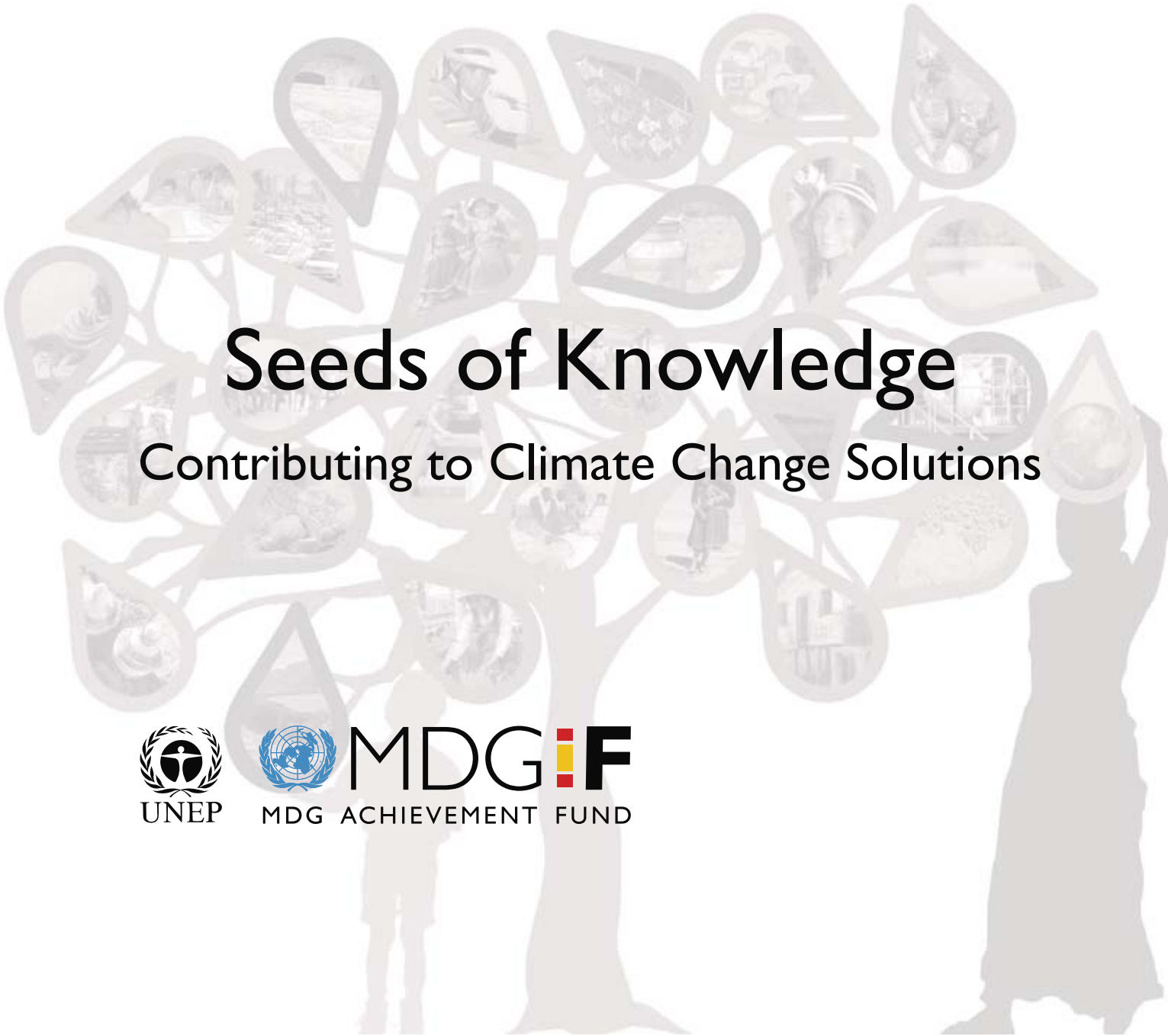

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TABLE OF CONTENTS

H.E. Mr. Federico Ramos de Armas, State Secretary for the Environment, Spain

Statement by Spain's State Secretary for the Environment (President of UNEP Governing Council)

In September 2000, the General Assembly adopted the United Nations Millennium Declaration committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have come to be known as the Millennium Development Goals (MDGs). These Goals have achieved important results so that the world has met some important targets ahead of the deadline. The target of reducing extreme poverty by half has been reached five years ahead of the 2015 deadline, as has the target of halving the proportion of people who lack dependable access to improved sources of drinking water. Conditions for more than 200 million people living in slums have been ameliorated, twice as many as targeted by 2020. Primary school enrolment of girls equalled that of boys, and we have seen accelerating progress in reducing child and maternal mortality. However, the progress is still uneven in many areas and much work lies ahead of us to achieve the objectives by 2015.

The Millennium Development Goals tackle many different issues and their implementation involves different UN bodies, including the United Nations Environment Programme (UNEP). Specifically, MDG-7 aims to ensure environmental sustainability, which represents the major interest of UNEP, and sets different targets for this aim such as integrating the principles of sustainable development into country policies and programmes and reversing the loss of environmental resources; significantly reducing the rate of loss by 2010, halving, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation; and achieving, by 2020, a significant improvement in the lives of at least 100 million slum dwellers. Attaining environmental sustainability is a major challenge of the MDGs and is also crucial to ensure sustainable development at a larger scale. Progress on the MDGs can only be sustained by a healthy planet, which is why the MDG-7 is so important.

Since the beginning, Spain has attached great importance to the final achievement of the Millennium Development Goals, with a special focus on implementation. In order to accomplish and accelerate progress on the MDGs at the country level, an international cooperation mechanism, the Millennium Development Goal Fund (MDG-F), was established by Spain with substantial contributions that

reflect the importance that our country attaches to the achievement of the MDGs.

The MDG-F supports national governments, local authorities and citizen organizations in their efforts to tackle poverty and inequality through 130 joint programmes at the country level, organized in eight thematic areas that reflect the priorities of the MDGs. The areas supported by the MDG-F are the following: Children, Food Security and Nutrition, Gender Equality and Women's Empowerment, Environment and Climate Change, Youth, Employment and Migration, Democratic Economic Governance, Development and the Private Sector, Conflict Prevention and Peacebuilding and Culture and Development.

Each of the above-mentioned thematic programme areas is therefore convened by a UN body with the relevant capacity and expertise.

In this regard, UNEP is the convenor of the "Environment and Climate" area of the MDG-F which has had an allocation of US$89.5 million to support 17 Joint Programmes in Afghanistan, Bosnia and Herzegovina, China, Colombia, Ecuador, Egypt, Ethiopia, Guatemala, Jordan, Mauritania, Mozambique, Nicaragua, Panama, Peru, Philippines, Senegal and Turkey. The 17 Joint Programmes under this area constitute 13 percent of all Joint Programmes. The activities under this area contribute to achieving MDG-7 on environmental sustainability, particularly the target of integrating the principles of sustainable development into country policies and programmes and reversing the loss of environmental resources. Mainstreaming issues related to climate change is also the main focus of most of the Joint Programmes under this thematic area, including working with local-level governments and communities on issues such as climate change and its possible effects on agricultural production, tourism and health.

These Joint Programmes also deal with adaptation measures to cope with various issues of climate change. Major concerns in this regard have been community preparedness, food security, land degradation and soil fertility, land erosion and desertification, air pollution, change in native species dynamics, wildfires, drought and flooding, changes in rain patterns, rising sea levels and acidification

All the Joint Programmes will be completed by the end of December 2012. In anticipation of this and to underline the outcomes of this valuable experience at the country level, UNEP is publishing this booklet that compiles the lessons learned from each Joint Programme. This publication, along with other available material, will serve as an important resource to highlight not only the UN Delivering as One Initiative but also the Spanish MDG Fund and South-South cooperation experiences.

The international community remains fully committed to meet the MDGs and foster sustainable development. This has been recently reaffirmed in the declaration "The Future We Want", adopted during the 2012 UN Conference on Sustainable Development" (Rio+20) last June. In this sense, the Heads of State and Government and high-level representatives remain firmly committed to the full and timely achievement of the MDGs, underscoring that they are a useful tool in focusing the achievement of specific gains as part of a broad development vision and framework for the development activities of the United Nations.

Enormous progress has been made towards achieving the MDGs, which are making a real difference in people's lives and, with strong leadership and accountability, this progress can and must be expanded in most of the world's countries by the target date of 2015. After that date, the post-2015 development agenda will have to be clearly defined in close coordination with the recent Rio+20 outcomes, and efforts to achieve a world of prosperity, equity, freedom, dignity and peace will have to continue unabated. But before that, and as a solid foundation of all future work, we need to make as much progress as possible on the current MDGs. There are still three years to go before the 2015 deadline and further progress will be needed on those targets that have not yet been met.

With that spirit, and as a contribution to this process, UNEP is publishing this booklet as a compilation of lessons learned and a practical example of concrete experiences at the country level. Spain is very proud of its contribution and its good use by, among others, UNEP. Any success story counts.

H.E. Mr. Federico Ramos de Armas
Spain's State Secretary for Environment (President of UNEP Governing Council)

Mr.Achim Steiner, Executive Director of United Nations Environment Programme (UNEP)

Statement by the UN Under-Secretary-General and UNEP Executive Director

When the United Nations established the Millennium Development Goals (MDGs) in 2002, the world rallied around the call to action to dramatically reduce poverty, hunger and disease by 2015. To reach those goals a healthy planet is a prerequisite.

The UN Environment Programme (UNEP) has been working with other UN agencies to achieve the goal that ensures environmental sustainability - MDG-7 - which integrates the principles of sustainable development into national policies in order to reverse the loss of our natural resources, which are ultimately the wealth of the poor.

The Millennium Development Goals Achievement Fund (MDG-F) was established in 2006 to accelerate efforts at the country level for reaching the MDGs. It was an unprecedented opportunity that was made possible thanks to generous funding by the Government of Spain.

UNEP is a proud partner of the MDG-F and the convenor for its Environment and Climate Change programme area. Working together with the UN family, Governments and national partners, UNEP has assisted the implementation of 17 Joint Programmes in Afghanistan, Bosnia & Herzegovina, Columbia, China, Ecuador, Egypt, Ethiopia, Guatemala, Jordan, Mauritania, Mozambique, Nicaragua, Panama, Peru, Philippines, Senegal and Turkey. The Programmes address the impacts of climate change worldwide on poor communities and introduce adaptation and mitigation measures that will protect the vulnerable and ensure sustainable development.

At the center of this effort, and a key legacy of the MDG-F, is the knowledge that has been generated by these Joint Programmes. Through a Wiki, an online interactive website, and innovative methodologies such as Weeks in Focus, UNEP has facilitated the sharing of best practices among the Joint Programmes on cross-cutting environmental issues. This multi-lingual initiative has established a unique virtual 'community of practice' that crosses continents in the search for solutions.

This is in line with the outcome of the UN Conference on Sustainable Development, or Rio+20, which focused the world's attention on practical measures for implementing sustainable development and poverty eradication. It is clear that rapid growth is necessary to meet the urgent development needs of the most vulnerable but growth will not be sustainable in the long run unless it is both socially inclusive and green. UNEP's work on an inclusive Green Economy is evolving in support of these aims to ensure that the earth's natural assets will provide the resources and environmental services that humanity needs for its survival.

As countries gather for the UN Climate Conference in Doha (COP18), we are reminded once again of the importance of sustainable development and the critical need to trigger a new phase of climate action and fill the gaps in the international policy response to climate change. But we need more information and the ability to access and share it. To this end, UNEP is pleased to present this booklet which is a compilation of the lessons learned from each of the Joint Programmes. By sharing the best practices of others, we can contribute to the knowledge that ensures a sustainable environment and ultimately a healthier planet.

Achim Steiner
UN Under-Secretary-General and UNEP Executive Director

INTRODUCTION

Lessons from the MDG-F Environment and Climate Change Window: Global Problems and Local Solutions

The MDG-F has funded a wide range of projects intended to advance the achievements of the Millennium Development Goals and the implementation of the UN 'Delivering as One' reform. Under the Environment and Climate Change window of the MDG-F, 17 UN Joint Programmes (JP) developed 53 lessons learned on climate change adaptation at national and local community levels. This booklet describes the experience that was gained and its impact at the global and policymaking levels.

Methodology

The Joint Programme participants wrote lessons learned on topics where they felt they had important knowledge to share. The lessons then went through an interactive and consultative process of review. To ensure consistency, quality and relevance of the lessons, three review criteria were applied:

1. **Context**: a clear definition of the situation from which the lesson originated;
2. **Evidence**: available information that supports the argument of the lesson;
3. **Replicability**: an explanation of the conditions necessary to replicate the lesson in other contexts.

Adaptation

Adaptation as a concept involves a wide range of activities in response to, or in preparation for, climate change. Sensitivity of environments and communities to impending changes results in vulnerability, especially if the capacity to adapt is constrained.

Challenges

The high diversity and complexity of approaches among the 17 Joint Programmes was a strength, representing the different socio-economic, political and ecological contexts of the activities. Some direct impacts of the adaptation work will be visible on a short time scale and work intended to catalyze behavioral or structural change in policies and institutions will take much longer to become evident.

Policy Implications

The cross-sectoral and collaborative nature of the Joint Programmes has provided strong support for tackling climate change adaptation issues at national, regional and local levels. Local ownership of the work being done and of the policy outcomes is essential for successful adaptation.

Partnerships

The diversity of adaption needs requires that a country or community bring a diversity of capacities in order to be successful in adaptation. The Joint Programmes primarily focused on government and non-governmental organizations at the local level; however, it is important to recognize also the role of the private sector in climate change adaptation efforts, particularly given the global force of the Green Economy. It was evident that cooperation among all stakeholders is absolutely necessary when resources are to be shared and when many are asked to exercise new behaviour. The JP partners and stakeholders had a wide range of existing capacity and skills but there were significant gaps. Matching capacity-building and tools for adaptation, like knowledge management, with the roles played by different partners is important for achieving sustainable results.

Sustainability

Ensuring the sustainability of their interventions was a common concern for all Joint Programmes. It became clear that achieving sustainability required use of a participatory approach that included the participation of local communities and governments. This broad participation ultimately was the cornerstone for the local ownership needed for long-term sustainability. The 24 lessons learned that follow are based on country-level challenges and successes achieved in protecting the environment and adapting to climate change. These experiences are also a part of an easy-to-access online knowledge base and are witness to humanity's efforts to adapt to future climatic conditions. We hope readers will find this information useful, will share it and will replicate it in their communities and in their countries.


F:ODM
FONDO PARA EL LOGRO DE LOS ODM
Programa Conjunto
"Gestión Integral y Adaptativa de los Recursos An
para Minimizar las Vulnerabilidades ante el Ca
Climático en Microcuencas Altoandinas
ESCUELA DE CAMPO
PRINCIPIOS

© Integrated and adaptive management of environmental resources and climatic risks in High Andean micro-watersheds/Peru Joint Programme

Capacity Building

Capacity building helps to bridge gaps and strengthen skills and competencies at an individual and institutional level. With enhanced capacities, individuals can build on existing knowledge and learn and adapt to change. Capacity building supports and strengthens institutions in forming sound policies that reflect the needs of the population. The MDG-F project showcases the importance of capacity building for improving the living conditions of local communities and ensuring sustainable development.

Strengthening capacity for conflict prevention and the protection of natural resources in Peru

© Jaime Sequieros/Integrated and adaptive management of environmental resources and climatic risks in High Andean micro-watersheds/Peru Joint Programme

The Santo Tomás River basin, scope of PC Peru

The Problem

The Santo Tomás River Basin is located between the Cusco and Apurímac regions in Peru. Located in the southern Andean highlands at 3,000 meters, this area is rich in natural resources that are increasingly a source of conflict. The growing extraction of mineral deposits, and resulting negative impacts on water resources and local wildlife, is leading to socio-environmental conflicts. These circumstances are also increasing the vulnerability, of this already vulnerable population, to climate change.

The problems that are emerging include the following:

1. Conflicts caused by the intervention of mining companies in the area;
2. Conflicts related to land control and tenure;
3. Conflicts caused as a result of inequitable access and distribution of water in the local communities.

If the current trend continues, it is likely that in the coming years provinces in this region, like Chumbivilcas, which is one of the poorest in Peru, will become a mining center with increasing socio-environmental conflicts related to the access and use of natural resources such as land and water.

The Solution

It was recognized that effective communication and conflict resolution strategies were necessary to reverse the trend of socio-environmental conflicts. The UN Joint Programme of the MDG-F sought to engage the local authorities and the general public on the prevention and resolution of the increasing number of socio-environmental conflicts. The Joint Programme targeted nine municipalities in the Cusco and Apurímac region and through collaboration with Peru's Ministry of Justice, conducted capacity training on the legal aspects of institutionalization and conflict resolution.

Initially, the UN Joint Programme targeted key stakeholders, including civil society representatives, private entities, and government authorities, with an initiative that would help them to understand, prevent and manage socio-environmental conflicts in the region. Manuals and training material adapted to local conditions were produced and a series of workshops were conducted. In a second phase, and due to great demand from the local stakeholders, additional trainings on the extrajudicial settlement of disputes were conducted and, to that purpose, a module on the management of socio-environmental conflicts in the Andean Region was created.

As a result, for the first time in Peru, there was training and capacity-building on extrajudicial conciliation for socio-environmental conflicts. Forty people were trained including members of local and regional governments. In the end, the UN Joint Programme graduated 36 court conciliators, all of them recognized by the Ministry of Justice of Peru.

The UN initiative also ran 13 workshops on communication and socio-environmental conflict management for over 300 people from nine municipalities in the provinces of Cotabambas and Chumbivilcas in the Santo Tomás River Basin. With capacities strengthened in the techniques needed for the constructive management of socio-environmental conflicts, the local authorities and the general public of the local communities are now increasingly able to work together to prevent future conflicts.

Lessons Learned

Effective communication and capacity building in the field of conflict prevention are both necessary to strengthen the socio-environmental analytic capabilities and communication skills of the local authorities, professionals and inhabitants of these Andean rural communities. While communication itself is important, the capacity building for conflict resolution has helped the different stakeholders to develop an objective analysis of the conflict itself. This has taught them how to prevent, manage and transform the socio- environmental conflicts.

Organizing these activities had to be planned well in advance, taking into consideration key stakeholders as well as the specific needs of the territorial area. Official support and recognition from the authorities is a must. For example, all of the work had to be done with the support of the Office of the Ombudsman and Mediation Center and with the recognition of the Ministry of Justice. To consolidate and ensure implementation of the Joint Programme, an Office of Peace and Prevention of Socio-Environmental Conflicts was created within the Regional Government of Cusco. This has helped to provide legitimacy to activities, as well as long-term institutionalization.

This is a new experience and therefore technical professionals and political support were needed to systematize alternative mechanisms for institutionalizing socio-environmental conflict resolution in the regions and local communities.

Replication

The experience in Cusco and Apurímac regions in Peru could be applied in other regions and localities of Peru. The following steps for replication can also be followed by other countries and areas where there are environmental conflicts.

- Development of a baseline study of the situation of the socio-environmental conflict which would include participatory assessments.
- Design an intervention strategy to guide the implementation of the training. This activity should be coordinated with the representatives of the municipalities, for example, the Municipal Environmental Commissions or the Municipal Environmental Management Units. It should also include civil society and private sector representatives.
- It is important to coordinate with the Office of Extrajudicial Conciliation of the Ministry of Justice and with the Ombudsman, or equivalent bodies, in order to conduct a joint extrajudicial conciliators training. This process should be designed to target the municipal authorities, civil society, private sector, as well as university students and the general public.
- Appropriate materials containing the theory and practice of conflict prevention are necessary and should be used in workshops run by experienced professionals.
- Finally, it is important to interact with other relevant stakeholders. The country's Parliament is a key partner, since it can enact the necessary regulations for creating alternative mechanisms for socio-environmental conflict resolution, including environmental conciliation, arbitration and negotiation. All this has to be done with the support by the Ministry of Justice and recognized legal offices.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-CapBuild-Peru

On Joint Programme Peru, please see:
http://wiki.mdgfund.net/ECC-Peru

Strengthening institutional capacity to adapt to climate change in the Philippines

Retrofitted house in Sorsogon City, Philippines

The Problem

Sorsogon is located in the southernmost province of Luzon in the Philippines. Its geographical position - on the Pacific Ocean to the west and east, and the Albay Gulf and the China Sea through the Sorsogon Bay - makes it highly exposed and vulnerable to the growing natural disasters as a result of climate change. In 2006, Sorsogon was hit by super typhoon Milenya that destroyed over 10,000 houses, and again in 2009 by Typhoon Dante which brought heavy rains and massive flooding.

Many of the urban poor of Sorsogon live along the *esteros*, which are rivers and coastal areas highly vulnerable to natural hazards such as typhoons, flooding and storm surges. Most of these areas are made up of informal settlements of shanties, built with light materials that can be easily destroyed and swept away, endangering the lives and livelihoods of the dwellers.

The Solution

Using a communication campaign as well as a participatory planning approach, the UN Joint Programme under the MDG-F engaged the local government and local communities to design a climate change resilient social infrastructure for the vulnerable urban communities living in the *barangays*, or villages, around Sorsogon.

The information campaign raised awareness about climate change and its impact on the livelihoods and housing of the population living near the coastal areas. Considering that climate change is a technical and scientific concept, it was important to popularize the information in order to reach a much wider audience. Materials were produced and distributed to about 64 *barangays* to inform coastal settlements about the impacts of climate change and the need for adaptation measures.

In addition, Automated Weather Stations to improve the planning and monitoring for disaster risk reduction were set up and a number of personnel from the City Planning Office were given training on climate change and disaster risk related subjects.

Throughout implementation, an emphasis was made on developing a participatory approach. By including the community in the planning stages, their needs were taken into consideration.

A pilot scheme resulted in the following:

1. The formulation of a city shelter plan;
2. The site selection and design for a model climate-resilient coastal settlement/community;
3. The construction of a pilot project on climate change-resilient houses;
4. Documentation of a well-designed, climate-resilient human settlement;
5. The formulation of guidelines on green infrastructure.

By engaging the local community and following a participatory approach in designing the adaptive measures to tackle the impacts of climate change, Sorsogon was able to build climate change resilient social infrastructure for the city's vulnerable communities.

There are also local ordinances in place for the development of resilient settlements and the Philippine Institute for Environmental Planning, together with local architects, will help to harness further support to establishing planning standards and guidelines.

Lessons Learned

A key factor for the success of the pilot project lies in its participatory approach and information campaign. There was ownership of the project by the local government as well as cooperation by the inhabitants, who were involved in the planning and implementation process. The campaign also made the target audiences aware of climate change and its potential impacts to their houses and livelihoods thereby motivating them to participate in building resilience.

The sustainability of retrofitting homes was also made possible by providing subsidies and establishing an acceptable repayment scheme for those who participated. Only half of the total cost of retrofitting will be collected in installment payments from the owners of the retrofitted houses. The amount collected will then be used to retrofit other vulnerable houses.

It was also recognized that displacement is clearly not always the solution, even in such vulnerable areas. It was found that retrofitting housing structures will work best especially for socialized housing units where dwellers own, or have the opportunity to own, their houses. For informal settlements, where the dwellers tend to move, or are relocated, facilitating a participatory process to define resettlement agreements guided by the local government authorities worked best.

Replication

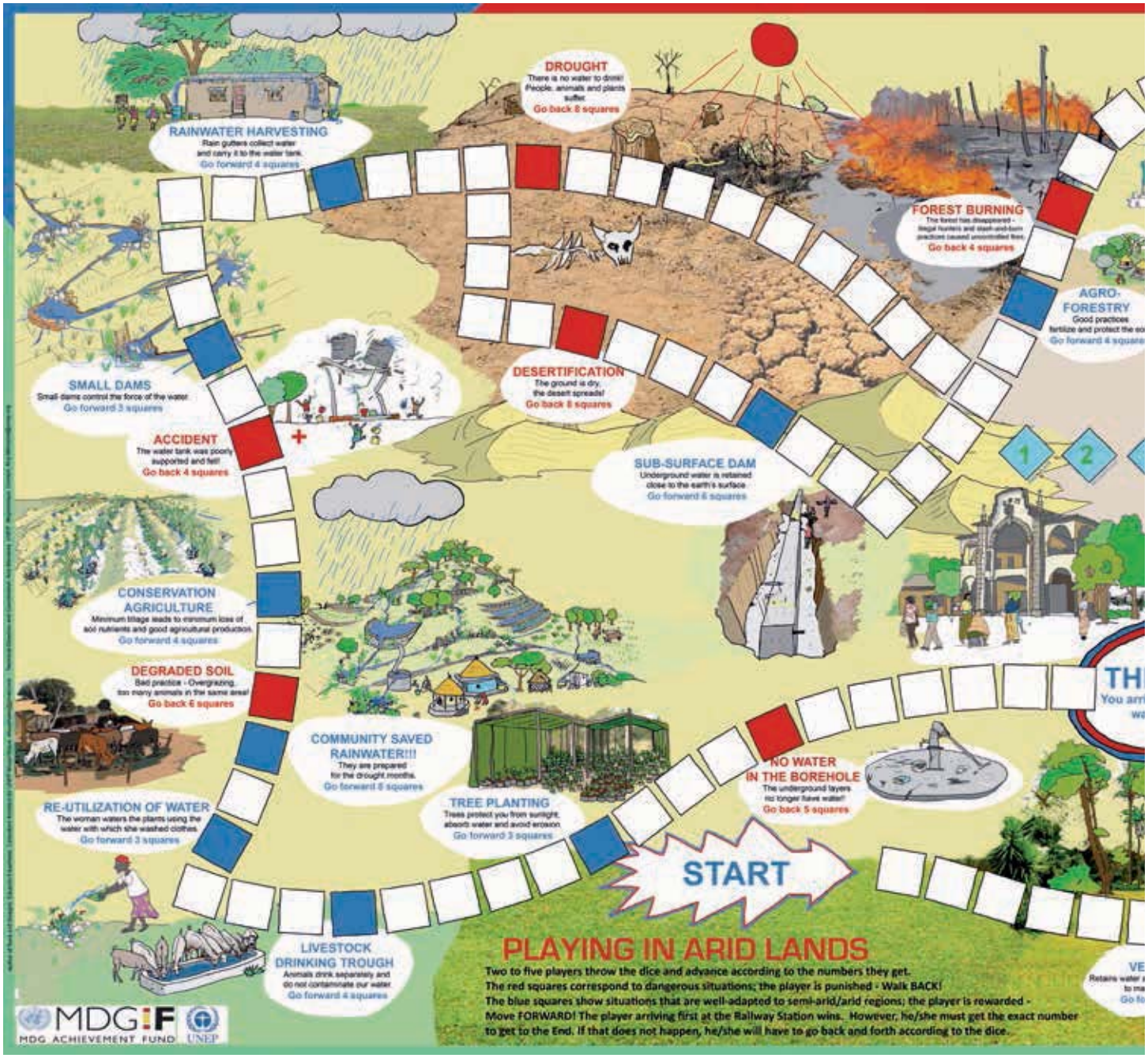
The participatory approach can be used for the successful bridging of climate science and community adaptive behaviour in the specific case of building climate change resilient social infrastructure for vulnerable urban communities in a coastal city. However, certain conditions are needed for its success:

1. Ownership of property and/or security of land tenure is essential in order to ensure that the dwellers have an incentive to pay for retrofitting their homes.
2. Implementation and the potential replication of retrofitted housing structure became more viable with the participation and investment of funds by specialized partner agencies.
3. Providing appropriate financing schemes, such as subsidies or acceptable repayment schemes, will also improve the viability of these retrofitting projects.
4. Participation and appropriate communication, such as an information campaign, are critical factors in ensuring appropriate levels of understanding and support for such activities.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-CapBuild-Philippines

On Joint Programme Philippines, please see:
http://wiki.mdgfund.net/ECC-Philippines


DROUGHT
There is no water to drink! People, animals and plants suffer.
Go back 8 squares
RAINWATER HARVESTING
Rain gutters collect water and carry it to the water tank.
Go forward 4 squares
FOREST BURNING
The forest has disappeared - illegal hunters and slash-and-burn practices caused uncontrolled fires.
Go back 4 squares
AGRO-FORESTRY
Good practices fertilize and protect the so
Go forward 4 square
DESERTIFICATION
The ground is dry, the desert spreads!
Go back 8 squares
SMALL DAMS
Small dams control the force of the water.
Go forward 3 squares
ACCIDENT
The water tank was poorly supported and fell!
Go back 4 squares
SUB-SURFACE DAM
Underground water is retained close to the earth's surface
Go forward 6 squares
1
2
CONSERVATION AGRICULTURE
Minimum tillage leads to minimum loss of soil nutrients and good agricultural production.
Go forward 4 squares
DEGRADED SOIL
Bad practice - Overgrazing, too many animals in the same area!
Go back 6 squares
COMMUNITY SAVED RAINWATER!!!
They are prepared for the drought months.
Go forward 8 squares
NO WATER IN THE BOREHOLE
The underground layers no longer have water!
Go back 5 squares
RE-UTILIZATION OF WATER
The woman waters the plants using the water with which she washed clothes.
Go forward 3 squares
TREE PLANTING
Trees protect you from sunlight, absorb water and avoid erosion.
Go forward 3 squares
START
LIVESTOCK DRINKING TROUGH
Animals drink separately and do not contaminate our water.
Go forward 4 squares
PLAYING IN ARID LANDS
Two to five players throw the dice and advance according to the numbers they get.
The red squares correspond to dangerous situations; the player is punished - Walk BACK!
The blue squares show situations that are well-adapted to semi-arid/arid regions; the player is rewarded - Move FORWARD! The player arriving first at the Railway Station wins. However, he/she must get the exact number to get to the End. If that does not happen, he/she will have to go back and forth according to the dice.
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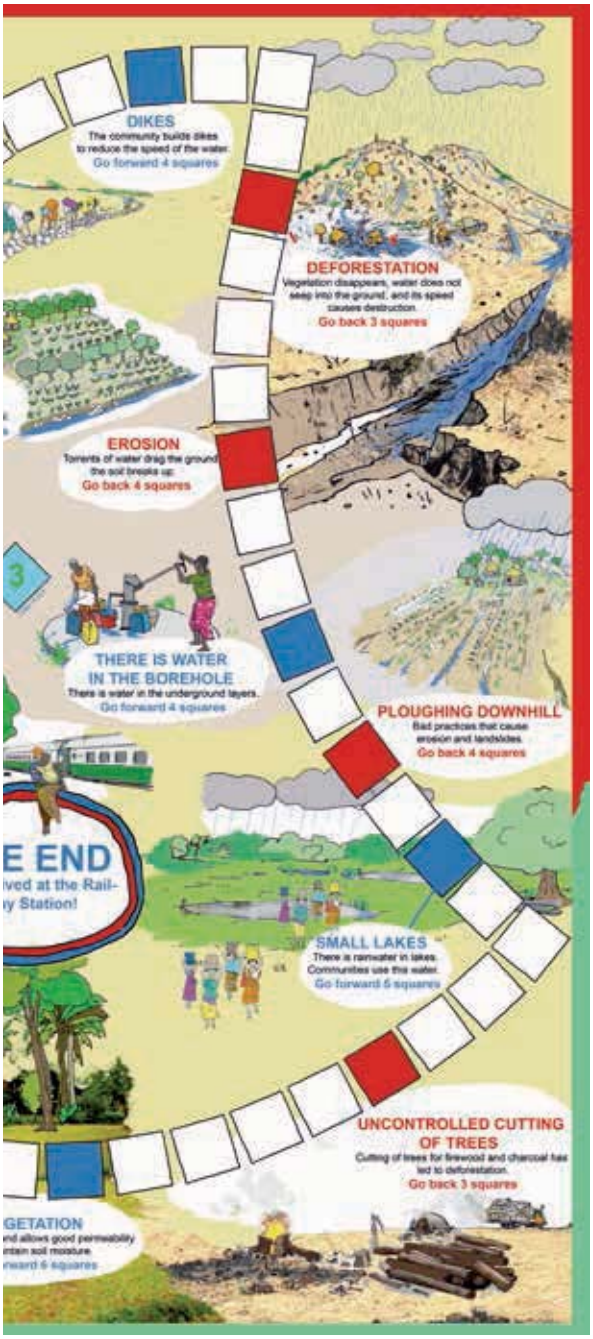

The Drought Game © Environment Mainstreaming and Adaptation to Climate Change/Mozambique Joint Programme

Communication

Communication is an essential component of the Joint Programmes and must be included from the start. It is the tool for building support for the activities of the project and fosters a greater understanding and stronger collaboration, which are critical for reaching the goals. How one communicates the Programme is essential for expanding the audience, building a cohesive Programme and also for replication in other countries. Ultimately, it is the communication that will lead to the replication that will lead to the overall global achievements of the MDG-F.

Communication protects the environment in Nicaragua's BOSAWAS Biosphere Reserve

Eduardo uses a megaphone to inform emergency alerts, communicate news and relevant information to the community in Walpa Tara, Nicaragua

The Problem

The BOSAWAS Biosphere Reserve is located in northern Nicaragua and was designated a biosphere reserve by UNESCO in 1997. At approximately 20,000 square kilometres in size, the hilly terrain is rich in largely unexplored biodiversity and comprises about 15 percent of the country's total land area, making it the second largest rainforest in the Western Hemisphere, after the Amazon in Brazil.

The Reserve is also home to the Sumos and the Miskito, two indigenous populations of Nicaragua, who depend on the natural resources of the region for their livelihoods. But endemic poverty and a growing population has threatened the conservation of the area through overhunting of wildlife, unsustainable land-clearing for agriculture and human-wildlife conflict.

The Solution

The UN Joint Programme under the MDG-F aimed to improve the quality and quantity of the communication on sustainable development in the BOSAWAS Biosphere Reserve. Initially, the Programme conducted participatory assessments to understand the communication trends in the Waspam and Bonanza municipalities with the conclusion that in these rural areas, radio stations are the only source of information, although the target audience of the radios was mostly the urban population where radio signal coverage was stronger. The results of the assessments were shared and validated with local stakeholders and with different key communicators in the area to create awareness of the situation.

Against this backdrop, the Joint Programme helped to develop the capacities, skills and knowledge of the local radio broadcasters with the aim to develop an inclusive communication for urban and rural populations. The initiative also worked with the Sustainable Development Network, a national organization with experience in media training.

A communications network was created in the area with radio programmes to improve the quality and the content of radio communications in the Reserve. As a result, the municipalities of Waspam and Bonanza strengthened their communication structures and experienced an evolution in radio programming tailored to meet local needs.

In the three years since the Joint Programme was started, the skills of the media and radio broadcasters has improved dramatically, with a stronger focus on sustainable development. The broadcasts also targeted different audiences, such as women, youth, and farmers with specialized topics that focused on the sustainable use of natural resources.

The three radio broadcasts - Voice of Environmental Education (VEA), Radio Bonanza and Yaiti Tasba - are still on air even after the closing of the Joint Programme. Radio Bonanza and Yaiti Tasba (literally, Mother Earth Radio) work on higher frequencies which allow for more coverage and longer broadcasting hours. The three radio stations continue to be financially supported and managed by the local Governments, with funding also coming from the sale of services and advertising.

Lessons Learned

Setting up a communications network in the Biosphere Reserve faced many obstacles. Rural radio broadcasters were very inexperienced in the basic techniques of communication. Sometimes the broadcasts were not in the local languages, or happened at times when people were at work and not at home. In addition, the three existing local radio programmes in the municipalities were targeting the urban population rather than the majority living in rural areas, with content focusing mainly on entertainment rather than on local and national news. Moreover, the content did not take into account that the rural population lives and depends entirely on access to natural resources, or the sustainable management of those natural resources which are critical to their livelihoods.

In addressing these challenges, there were a number of lessons learned from the Joint Programme's experience. Firstly, a participatory assessment is key to determining the needs for and roles of communication. Secondly, capacity training of local broadcasters is critical for ensuring high-quality programmes which are tailored to meet the needs of the local community. Thirdly, community leaders and the media, including local radio broadcasters, are important partners in developing a communications strategy. Finally, the radio is the best medium for reaching rural populations, especially in areas that have limited infrastructure in communications.

Replication

While the Joint Programme is an example of how communications can change attitudes and behavior towards climate change, poverty reduction and environmental sustainability, it also showcases how radio communication is especially useful in remote regions that have limited access to media infrastructure.

For replication purposes, it is important to recognize that the approach is not a 'one size fits all'. A preliminary assessment is crucial for understanding the needs of the specific community and the audience who should be allowed to express what they need from the media and the radio broadcasters. Only by listening to the community can the activity begin to foster respect and trust and long-term sustainability. Ultimately, the messages from the broadcasts must be tailored to the audience and meet local needs.

To replicate the development of media capabilities, it is also important to collaborate with all stakeholders (journalists, media institutions, universities and local community leaders) who can help as well in guiding the content. For the sustainability of the radio programmes, local governments are also valuable partners who can both manage and partly finance the broadcasts. Additional funding can come from the sale of services and advertisements from the private sector and civil society.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Comm-Nicaragua

On Joint Programme Nicaragua, please see:
http://wiki.mdgfund.net/ECC-Nicaragua

Radio and climate change meet in the Andes in Peru

Rural Communicator, Alicia Escalante, conducting a radio programme on climate change in Cotabambas, Apurímac, Peru.

The Problem

Rural indigenous communities in the southern Andean highlands of Peru's Cusco and Apurímac regions have been hit hard by climate change. Endemic poverty and a reliance on subsistence agriculture means that these remote communities cannot afford a bad harvest. Yet, in recent years sudden changes in weather are impacting traditional crops like potato, maize and quinoa, a grain high in proteins and other valuable nutrients. In the Santo Tomás River Basin several problems related to natural resources have emerged, and include the following: inappropriate use of water resources, forest and grassland fires, overgrazing, and deforestation.

The Solution

Living at altitudes of over 3,000 meters, these communities are far from urban knowledge hubs that are researching solutions for dealing with climate change and they largely rely on the radio for information. With this in mind, the UN Joint Programme of the MDG-F in February 2010 launched an integrated communications approach, using non-formal (information campaigns) and formal educational activities to build awareness about climate change and adaptation measures. The integrated approach included: the broadcast of four live radio broadcasts, training of rural communicators, information and awareness campaigns aiming to address environmental issues caused by climate change, a capacity-building programme for teachers and specialists in educational institutions and the elaboration of a proposal for school curricula. As a result, the radio broadcast popularly known as '**Pachamamanchista Munakusun**' ("Protecting Mother Earth") now airs daily in Quechua, the local language, and Spanish, to encourage farming communities to identify local problems and propose ways for adapting and mitigating the impacts of climate change.

The broadcasts motivate farmers to implement adaptation measures such as water harvesting, reforestation with native species, protection of biodiversity and prevention of forest fires and overgrazing. The radio broadcasts also share successful experiences in using adaptation measures that include traditional knowledge regarding indigenous plants, and using crops more resistant to changing climate and higher temperatures.

As a complement to the radio broadcast initiative, the UN Programme organized several awareness campaigns and 19 workshops for teachers and educational institutions on

climate change so as to incorporate the issues into school curriculum. Now that people are sensitized to climate change and encouraged to manage their natural resources better, there is more interest to maintain the broadcasts and more appropriation of the Programme by stakeholders. While the UN Programme has ended, three radio programmes are still on air, thanks to the support of local municipalities. In addition, the municipalities are now using radio spots to highlight climate change, environmental protection and other social impacts. The awareness campaigns have also been taken over by the local government's Environmental Management Unit.

Finally, international radio programmes on climate change are also now being transmitted to Peru via the **Pachamamanchista Munakusun** broadcast.

Lessons Learned

Given the location of these rural communities and limited access to information, the radio was considered to be the best medium for communication. However, to be sustainable, the focus needed to be not just on the radio programme itself, but more importantly on building the capacities to develop the programme using local skills and networks. For this reason, the Joint Programme emphasized that the radio programmes needed to be managed by the local communities. There was also a focus on training rural broadcasters who know the reality of the region. This gave more credibility to the stories, and also helped to capture audiences.

It was important to organize as well an awareness campaign in partnership with the local government's Environmental Management Units. To make the campaign successful, it was important to create a work plan together with the city councils and private and public institutions to avoid duplication and to coordinate on a yearly and strategic basis.

An important element of the Programme was the inclusion of formal educational institutions. Teachers were clearly an important target audience for the Programme as they will teach the students the importance of protecting the environment and the adoption of responsible consuming habits. However, any activity related to the work of the teachers has to be planned at the beginning of the school year in order to ensure their presence.

Replication

This UN initiative can be replicated in other Andean regions and rural areas, in order to inform and sensitize remote communities and authorities about the importance of knowing and acting on climate change. When replicating, however, it is important to consider the following:

- The need to implement an integrated communications approach, using non-formal (radio and information campaigns) and formal educational activities to build awareness about climate change and adaptation measures.
- The need to train rural radio broadcasters before launching the radio programmes and to schedule the broadcasts according to the agricultural calendar which gives more credibility and will capture the interest of a wider audience.
- The need to build partnerships with the local government's Environmental Management Units, whose participation ensures the involvement of the local authorities in combating climate change.
- The need to identify and choose - by agreement with civil society - the appropriate channels, media, modes and languages for each message in each area.
- The need to involve educational institutions which are key to assure the participation of youth in the awareness campaigns.
- The need to strengthen the knowledge of the teachers on climate change and environmental issues. Teachers are important players for the sensitization of the youth and are the ones who instill the values in the students for protecting the environment.
- The need to plan any activity with the teachers at the beginning of the school year so as to ensure their participation.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Comm-Peru

On Joint Programme Peru, please see:
http://wiki.mdgfund.net/ECC-Peru

Cultivation of Tarwi (Lupinus Tarwi) in Santo Tomás River basin, Cusco, Peru © Flor de María Villa/Integrated and adaptive management of environmental resources and climatic risks in High Andean micro-watersheds (Peru Joint Programme)

Ecosystems Management

Ecosystems Management is an approach to natural resource management that focuses on sustaining ecosystems to meet both ecological and human needs in the future. It is adaptive to changing needs and new information and promotes the shared vision of a desired future by integrating social, environmental and economic perspectives to managing geographically defined natural ecological systems.

Multi-disciplinary teams bring agricultural adaptation to climate change in China

Farmer working in a demonstration field, China

The Problem

The Yellow River, or Huang He, is known as the cradle of civilization in China. As the second longest river in the country and the sixth longest in the world, it runs over 5,000 kilometers and cuts through nine provinces. Its importance and size are matched by the growing population living along its riverbanks. But population pressure and increases in agricultural production have accelerated degradation of the natural resources along the river. By 2000, about 26 percent of the Yellow River basin had already been urbanized, with groundwater extractions reaching threatening levels.

Climate change is impacting the already fragile water resource, changing the conditions for crop growth, and affecting crop yield with the possibility of changing the distribution of crop species. Currently, irrigated agriculture covers 10 percent of the total area of the Yellow River basin but consumes 95 percent of the water resources. Increasingly, agriculture and downstream ecosystems are suffering from water shortages. Growing demand for industrial and urban water supplies around the Yellow River basin is also causing increased water pollution from wastewater.

The Solution

The UN Joint Programme of the MDG-F chose to address the challenges in the Yellow River basin by introducing agricultural practices that are both environmentally sound and resilient to climate change impacts. One of the most effective measures was using multi-disciplinary teams which were made up of not only experts in the field of agriculture, but also specialists in the fields of water management, climate change, environment and economics. These teams developed solutions for sustainable and climate resilient agricultural production (C-RESAP) which were proposed to the Chinese Government for implementation. The C-RESAP takes into consideration climate change threats and the status of natural resources so that agricultural yields are maximized, emissions and wastes are reduced, and the negative impacts to ecosystems are minimized, resulting in safe agricultural practices.

The strategy used achieved the following:

1. Improved coordination mechanisms between different institutions and levels of work;
2. Research and analysis of the challenges that the agricultural sector faces in relation to climate change

and natural resource use in four pilot provinces (Henan, Ningxia, Shaanxi and Shandong). The research revealed a decline in water resources, over-extraction of groundwater, loss of soil fertility, salinization and soil and water pollution due to excessive use of fertilizers.

3. A comprehensive needs and environmental assessment that identified the C-RESAP practices which could be employed in these and similar regions.
4. Over 1,000 farming households, 400 technicians and 140 local officials were given training in C-RESAP in 13 pilot sites in the four pilot provinces in order to help them better understand the challenges posed by climate change and natural resource degradation.
5. Provincial Action Plans for C-RESAP on how to make agriculture less polluting and more productive and resilient to climate change were prepared in each of the four pilot provinces with the participation of farmers, field technicians, local authorities and researchers. These plans were also shared at the national level to serve as examples for other provinces.

Sediments of the Yellow River, China

Lastly, the inter-agency relationships which were established through the Programme have allowed for better communication and coordination of C-RESAP in the future.

Lessons Learned

The main lesson learned is that in implementing climate resilient and environmentally sound agricultural production, it is necessary to have multi-disciplinary teams. The introduction of the C-RESAP approach was meant to help the formation of these teams, which would be responsible for implementing all the activities at the provincial levels, including delivery of training, provision of technical advice and services. They also compiled the situational analysis reports that used information on the Yellow River basin and focused on the bio-physical, socio-economic and technological aspects provided by different stakeholders.

One of the main challenges was that the Programme started in the middle of the year instead of in January which was not in sync with the crop cycle and required a major reorganization of the initiative. However, having a flexible approach to the project's activities, as well as committed participants, allowed the activities to be carried out successfully.

Replication

Given the far-reaching impacts of climate change on different parts of society and the economy, a multi-disciplinary approach is recommended for replication purposes.

Specifically, with respect to the implementation of C-RESAP activities, it is important to carefully identify the pilot sites, as there are many challenges associated with this, including the ability of the Programme to synchronize with crop cycles. Unknown factors, such as changing weather conditions, can lead to the delay of activities. Due to such uncertainties, for implementing C-RESAP activities the following is recommended:

1. Identify farmers and technicians who have a very strong interest and are committed to both improving their agricultural practices and dedicating their time to the multiple trainings necessary.
2. Use awareness raising to ensure all participants are informed of the requirements and potential delays in implementing C-RESAP.
3. Allow for flexibility in the project's activities and timing to allow for unplanned events such as bad weather.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-EcosysMgmt-China

On Joint Programme China, please see:
http://wiki.mdgfund.net/ECC-China

Trends in forest ecosystems and their services in Senegal

Baobab Tree, Senegal

The Problem

Senegal is known for its forests, which cover 44 percent of the country, of which 18 percent is primary forest and rich in biodiversity. However, a dramatic decline in rainfall is contributing to frequent droughts which are threatening Senegal's natural resources, such as forests. In addition to the unfavorable climate, human activities, such as illegal logging and deforestation, are also having a negative impact on the health of the country's forests. Since 1990, this West African nation has been losing forest cover at an average of over 43,000 hectares per year.

The Solution

Using a communications campaign as well as a participatory approach, the UN Joint Programme of the MDG-F recognized that for effective management of the country's forests, there was an urgent need to monitor the changes in the forest ecosystem and its significant decline. However, to achieve this, the Joint Programme also recognized that the country faced two challenges in this regard: a lack of accurate data on the forests, and an insufficient capacity to ensure regular monitoring.

In order to strengthen national capacity and ensure the quality of assessing the condition and trends of forests in the country, the Joint Programme established working groups to conduct a "forest biodiversity assessment". The groups were made of experts from national organizations with diversified and relevant experience in forest conservation and supported by an international expert to steer the scientific accuracy of the assessment. These working groups were in turn guided by a scientific panel in charge of reviewing findings and facilitating communication with policy makers.

The working groups were an innovative approach in Senegal, where all work in the past was focused around one task manager. As a result, national organizations were empowered and committed to the findings of the assessment.

The outcome of the final assessment has contributed to the design and recommendation to promote an 'eco-tax' policy tool that will, in the future when it is implemented, help to improve the overall management of the country's forest.

Lessons Learned

While there were good outcomes and the design of an eco-tax policy, there were still a number of challenges to overcome. The major lesson learned was how to better select and engage the members of the working groups and ensure their commitment in order to deliver a high quality assessment. Some members of the working groups were not fully engaged in the project or informed about it when their expertise was needed. Issues, such as this, had not been anticipated by the Joint Programme and as a result, the quality of the final assessment could have been stronger.

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Timber from a forest

In addition, the implementing partners were not selected in a competitive process to ensure a high quality assessment nor did the international scientist provide enough guidance to the final outcome. All of this raised concerns about the quality of the overall assessment.

To address the quality issues of the results obtained, remedial steps were taken to implement a complementary assessment with the focus as follows:

1. Outcomes need to be up-scaled so that they can reach policy-making levels.
2. The overall quality of the assessment has to be improved and has to have more relevant data on forest trends.
3. The assessment has to be closely monitored by international experts on biodiversity.

Replication

There is a window for replication of this experience in other countries with similar conditions. However, it should be done with corrective measures to emphasize both national ownership and capacity-building, in order to ensure the quality of the final product.

Based on experience in the Senegal Joint Programme, it is recommended that replication of similar forest ecosystem assessments should consider the following in the design stages:

- National partners should be identified based on expertise and in a competitive process rather than through personal networks.
- In the project's log frame, the financial allocation of resources should go against the activity without the specific name of a partner institution mentioned. There is a serious challenge to change an implementing partner when expectations are raised due to the budget already allocated in the project log frame.
- From the early stage of preparation, constant "quality assessment" of the outcomes with the effective backstopping of implementing partners is needed.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-EcosysMgmt-Senegal

On Joint Programme Senegal, please see:
http://wiki.mdgfund.net/ECC-Senegal

Part of the Coal-Gangue Brick Waste Heat Recovery Power Generation (WHRPG) boiler at Xinrong pilot plant © The China Climate Change Partnership Framework (CCCPF)/China Joint Programme

Energy

Energy is an inter-sectoral issue that cuts across the traditional divides of many development projects and programmes, therefore providing a good entry point for joint efforts. However, the technical terminology and the engineering aspects of energy projects can act as a communications barrier in such cross-sectoral work. In designing projects it is important to focus on the development services that energy makes possible. Clean water, better health care, improved communications, and employment opportunities are all made possible by energy. These and other services have to be put in the forefront of the Programme's design.

Energy efficiency and renewable energy sources in Bosnia and Herzegovina

Thermal solar collectors at Sports and Culture Centre in Tuzla, Bosnia and Herzegovina

The Problem

Bosnia and Herzegovina suffers from significant economic and environmental losses because of the low-energy efficiency standards found in both residential and publicly-managed buildings, which typically have very high expenditures. In addition, owners and decision-makers are not sufficiently aware of the situation, nor equipped to properly control or manage these energy costs more efficiently.

As a country in economic transition, Bosnia and Herzegovina cannot afford to have inefficient use of energy which directly counters efforts to reduce poverty. The latest studies show that energy consumption within the building sector comprises 57 percent of the country's total energy consumption. The same rate for the European Union stands at 40 percent. Such statistics become even more important in the global context, considering that the building sector is responsible for 74 percent of worldwide greenhouse gas emissions.

The Solution

The main objective of the activities of the UN Joint Programme under the MDG-F was to reduce fossil fuel usage, decrease CO_2 emissions, and reduce energy costs in public buildings that would also cut public expenditure. A unique, multi-prong approach was chosen for tackling these energy issues, with a heavy emphasis on energy efficiency (EE) and renewable energy sources (RES) in public buildings.

The focus on public buildings was deemed a high priority for three major reasons:

1. Buildings are responsible for a significant amount of the country's overall energy consumption;
2. The standards of efficiency are quite low, so the relative benefits of any upgrade are high;
3. Local authorities and other stakeholders want to mainstream these issues in a comprehensive manner.

Grant windows were introduced within the Joint Programme for municipalities to implement EE/RES projects in public facilities and 28 projects were implemented in thermal insulation, biomass furnaces, solar panels, and LED street lighting.

Municipalities were also strongly encouraged to think and act strategically. The Joint Programme supported the development of Sustainable Energy Action Plans (SEAPs) in five municipalities and Local Environment Action Plans

(LEAPs) in 37 municipalities, and made sure that energy issues were given a high priority.

To build in sustainability, an Energy Management Information System (EMIS) was set up so that information of each local EE/RES project could be entered into a national database to highlight the best practices for replication. The long-term objective is to provide the EMIS software to the municipalities so that all public buildings and facilities are integrated into the centralized system. The comprehensive data set generated by this system will then be used to monitor nationwide energy consumption trends, and to encourage future EE/RES efforts in both the public and private sectors.

European Union (EU) integration remains a strong motivation for EE/RES measures in Bosnia and Herzegovina, and the authorities realize that they must raise their local standards to meet the international requirements.

Lessons Learned

When it comes to environmental protection, and particularly energy issues, it is not necessarily true that "bigger is better" – i.e. large-scale projects and investments are not necessarily the best solutions. In many cases, such as in Bosnia and Herzegovina, several smaller-scale projects can have a greater impact and be invaluable role models to the rest of the country.

The initiative showed that the energy sector does not necessarily have to be solely the jurisdiction of higher-level authorities. It also showed that there are issues which are not exclusively solved through capital infrastructure projects but rather can be effectively addressed via smaller-scale investments, which often have shorter payback periods and more decentralized impacts which benefit the local communities better.

Another lesson learned is the importance of mainstreaming new approaches such as EE/RES in a systematic way, which allows for greater uptake and sustainability. The greatest impact achieved by the Joint Programme is that stakeholders at all levels in the Government are finally playing a role and taking responsibility for the sector. It is also clear that EE/RES measures help to reduce poverty in the region as municipalities and individuals are spending less on energy costs.

Finally, the importance of local ownership and responsibility cannot be understated. A prime example is that personnel from local communities were the ones who actually maintain the EMIS database, which shows the success of this approach. This is also reflected by the local municipalities, who were co-financing their projects and thereby claiming ownership of the energy issues in their regions.

Replication

The Joint Programme's energy components have strong possibilities for replication, within the country, and worldwide, especially in locations that are undergoing economic transition, have outdated public infrastructure or lack a tradition of energy efficiency (and therefore have plenty of room for improvement).

The SEAPs and LEAPS are concepts borrowed from other countries and have been designed for easy duplication in other locations. In fact, both types of strategic plans have already started to spread around the country, as other municipalities see the benefits to long-term planning, even in the energy sector.

The pilot projects provide practical examples on how to properly implement measures from such plans, regardless of the location. In a place like Bosnia and Herzegovina, they serve as innovative ideas for other towns to follow. At the same time, local communities can finally claim ownership of their energy issues without having to wait for higher-level intervention or large-scale investments and donations.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Energy-BosniaandHerzegovina

On Joint Programme Bosnia and Herzegovina, please see:
http://wiki.mdgfund.net/ECC-BosniaandHerzegovina

Egypt tackles climate change through energy-efficient transportation

New taxis in Cairo, Egypt

The Problem

Finding a taxi in Cairo - Egypt's largest city - is never a problem. Totaling 80,000, they are easy to spot. But their vast numbers also contribute to the daily gridlock and their fumes leave the driver, the passengers and the city struggling for clean air. The taxis are part of the more than 1.5 million vehicles polluting this ancient city of over 17 million people. The transportation sector alone emits 26 percent of the total greenhouse gases in the country.

But knowing the problem is easier than finding the solution. Upgrading these old taxis, most of which were over 15 years old and suffer from frequent breakdowns, is far too costly for individual drivers. Moreover, building social awareness for energy-efficient cars in a country where energy is highly subsidized by the Government is difficult.

The Solution

With the aim to expand Egypt's access to the global carbon trading market as a way to reduce the burden of Government subsidies in the energy sector and mitigate against climate change, the Egyptian Government targeted the transportation sector where old vehicles were a significant source of carbon emissions.

The Egyptian Environmental Affairs Agency (EEAA) had at first targeted the country's polluting taxis in a pilot project in 2005 when 763 taxis were upgraded, resulting in a reduction of nearly 26,000 tons of CO_2 equivalent over a ten-year period.

The success of the project brought in other institutions, such as the Ministry of Finance, which approached the World Bank in 2008 for assistance on submitting the project to the UN Framework Convention on Climate Change (UNFCCC) for carbon credits.

The Egyptian Government, working with the UN Joint Programme of the MDG-F, helped to strengthen the reduction of greenhouse gases by establishing a Clean Development Mechanism (CDM) Awareness and Promotion Unit within the EEAA to support the CDM project registration. This was done mainly by providing technical assistance for the lengthy and specialized registration process.

As a result, the CDM Awareness and Promotion Unit supported the registration of the 'Vehicle Scrapping and Recycling Programme' with the goal to reduce CO_2 emissions

by replacing old inefficient vehicles with new ones and the scrapping of the old vehicles. After three years in the registration process, the CDM Awareness and Promotion Unit succeeded to formally register the programme with the UNFCCC as a carbon credit initiative, which was the first CDM-registered transport project worldwide. In 2012, over 40,000 taxis were replaced with new energy-efficient cars. The remaining old taxis in Cairo are now expected to be upgraded with the aim to reduce carbon emissions by 1.4 million tons over the next decade. Today, the streets of Cairo hum with new taxis that offer more comfort and a cleaner city.

Another impact of the 'Vehicle Scrapping and Recycling Programme' was that its visible success has led to positive spin-offs in Egypt's energy sector and the drive towards a greener economy. Through the political support of the national Supreme Energy Council (SEC), this initiative now serves as a model to institutionalize an energy-efficiency programme in two other sectors: housing and tourism. After monitoring the experiences in these sectors over the next two years, it is hoped that similar measures will be implemented in all energy-consuming sectors.

Lessons Learned

There were several challenges to overcome. One came at the community level. Many people were concerned about a non-profit organization, like the CDM Awareness and Promotion Unit, trying to reduce greenhouse gases which are not included in the country's environmental compliance law. However, the UN Joint Programme contributed to improved awareness on the benefits of carbon trading and as a result helped to win the support at the community level. In fact, the 'Vehicle Scrapping and Recycling Programme' managed to gain the political support of the Ministers of the SEC, the key national policy-making institution for approving energy -efficiency activities.

Another lesson learned is that energy efficient programmes are most successful when there is a centralized technical support, like the CDM Awareness and Promotion Unit, within the Government. This unit was a key player, able to act as a networking agent to promote carbon trading and at the same time provided a high-level of expertise in obtaining the registration approval of the UNFCCC.

Replication

The experiences of the CDM Awareness and Promotion Unit show that such energy programmes are feasible but only through a centralized technical unit that can be a networking agent to promote carbon trading. By ensuring that such measures are implemented through the existing governance framework, long-term sustainability can be ensured. Moreover, the technical unit in Egypt was not reliant on external support only, but rather it was set up as part of the national governance framework, and now has a high level of expertise and domestic ownership.

In addition, although pilot projects are important in creating confidence and proving success, the success on its own cannot guarantee further replicability without having strong political support. The positive example of success showcased through the 'Vehicle Scrapping and Recycling Programme', not only helped to gain interest and support in further CDM projects, but also helped to gain political support in the SEC, which proved key to the Programme's success.

Finally, in terms of energy goals, the lesson in Egypt is very relevant to countries which have similar energy systems – i.e. energy that is highly subsidized by the Government, making it difficult to create interest in energy efficiency improvements. In such a case there is a need to create positive incentives on both demand and supply sides in order to encourage change in behavior towards energy efficiency.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Energy-Egypt

On Joint Programme Egypt, please see:
http://wiki.mdgfund.net/ECC-Egypt


Allah has created on earth is for the welfare and well being of human beings and
we are mandated to protect and benefit from them.
UNEP
UNDP
Training W
Committe

Environmental Sub Committee Training in Herat, Afghanistan © Aimal Khaurin/Strengthened Approach for the Integration of Sustainable Environmental Management into the ANDS/PRSP (SAISEM)/Afghanistan Joint Programme

Environmental Mainstreaming and Governance

A key challenge for the MDG-F's success is the mainstreaming of environmental concerns and poverty reduction measures into national and sub-national development plans, programmes and budgets. Mainstreaming is a slow, multi-year process, requiring capacity-building, the generation and communication of evidence, and institutional coordination. It also requires persistence, flexibility, and attention to detail. Governments around the world, and the wider international development community, can take inspiration from the successful examples highlighted in this booklet, which demonstrate that mainstreaming is possible.

Environmental planning for protecting Bosnia and Herzegovina, one town at a time

Flock of sheep near a mountainous village in Bosnia

The Problem

While Bosnia and Herzegovina is slowly transitioning from a socialist, state-centered model, it is a country that in recent years has made significant strides towards economic stabilization and national cohesion. The environment, however, has typically never been a priority and instead has suffered from inadequate environmental policies, poorly developed management, negligible public participation in environmental decision-making and a lack of reliable information and data. Indeed, the environmental sector is critically stagnant and represents one of the most serious obstacles on the country's road to European Union integration.

The Solution

The development of Local Environmental Action Plans (LEAPs) is an established method of strategic planning for addressing issues concerning how society affects its environment. While LEAPs have long become a part of the legislative landscape in Bosnia and Herzegovina, they have not been adequately enforced nor have sufficient incentives been introduced to support compliance.

Before the UN Joint Programme of the MDG-F was launched in the country at the end of 2009, only 61 of the 142 municipalities (about 40%) had adopted LEAPs, or were in the process of adopting one. As a result, the Joint Programme felt that the LEAP process needed to be re-examined and updated, and established that the two main areas in LEAP development in need of change were approaches for defining problems, goals and measures, and public participation.

The Programme selected 37 municipalities for developing re-vamped LEAPs that would empower local authorities and the community to find solutions on environmental issues, rather than wait for top-down remedies from the national Government.

Lessons Learned

It became clear during implementation that upgrading the LEAP methodology was not the only thing necessary. The coordination between the national and local levels, and the role of LEAPs within the wider strategic planning processes had to be addressed, as well.

Based on the experience of the country, while harmonizing national and community processes is critically important, it

is, in fact, very difficult to achieve. Numerous administrative layers complicate any integration efforts. As a result, the focus of the UN initiative has had to be directed on building linkages and information flows to ensure that national policy is effectively interpreted and implemented at the local level and, conversely, that local-level experiences feed into and influence higher-level policy development.

It also became apparent in implementation that simply pushing municipalities to create a LEAP is insufficient by itself if it is not framed within a longer-term context. Instead, what is needed is for them to be continually exposed to strategic-planning principles over a period of several years and covering a range of sectors. Only after such exposure would they be able to realize not just the benefit of such methods, but also actually be able to continue to develop such plans without the need for outside guidance or assistance, perhaps even being able to offer their expertise to mentor neighboring municipalities wishing to develop their own LEAPs or other strategies.

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Capacity building trainings for municipal teams, Bosnia and Herzegovina

Furthermore, it was found that "showing by doing" is a powerful approach to ensuring the sustainability of the outcomes of the initiative. By highlighting municipalities which are now successfully able to institute planning processes on their own and those which have benefited in capacity and/or funding through such endeavors, it is expected that other municipalities will follow suit.

It was found that overall, the four key ingredients for a municipality to more easily develop its own LEAP are:

1. Real support from the municipal administration to enact positive change;
2. Active non-municipal stakeholders willing and capable to contribute meaningfully;
3. An experienced staff led by a confident coordinator; and
4. A 'champion' that other municipalities can learn from in a peer-to-peer process.

Replication

Even outside the context of Bosnia and Herzegovina, it is clear that the sustainability of strategic-planning processes and of LEAPs in particular, needs to be addressed in a way that emphasizes the necessity of linking the development process to the actual implementation. Potential opportunities exist for resolving this issue by stressing the need for the municipalities to prioritize environmental action in their budgets, and also by underscoring to higher-level donors/actors the need for them to provide municipalities with funding windows to bridge budgetary gaps that they are unable to finance on their own.

For replication, the following is recommended:

1. The LEAP development should be tied to budgeting processes, follow-ups with concrete action and detailed reviews and revisions for branching out with strategic planning practices into other sectors.
2. Strategic planning processes, such as LEAPs, should be 'championed', with experienced local authorities acting as mentors to others, while also advocating the long-term value of environmental protection.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-EnvMainstr-BosniaandHerzegovina

On Joint Programme Bosnia & Herzegovina, please see: http://wiki.mdgfund.net/ECC-BosniaandHerzegovina

Mauritania converts national policies into concrete action on natural resource management

Re-afforestation site in Birette, Mauritania

The Problem

Mauritania remains among the world's poorest countries despite being rich in natural resources. Trarza, Brakna, Assaba are three regions in the country that highlight Mauritania's overall plight: high poverty rates, recurrent drought, desertification, food insecurity, pressure on natural resources, lack of environmental infrastructure and insufficient capacity to address these problems at the policy level.

Since 2000, the Mauritanian Government had designed many environmental policies to meet the Millennium Development Goals but they have not been implemented, and instead the most vulnerable populations have continued to suffer from the growing degradation of natural resources. Instead, the focus has been on 'paper plans' with little practical impact. Yet environmental mainstreaming is not just about including environmental issues into policies or plans, but rather the goal is to institutionalize this way of thinking so that it becomes 'normalized', not only on paper but also through actions and changes in people's habits.

The Solution

The UN Joint Programme targeted the three regions of Trarza, Brakna, Assaba, which were selected based on a vulnerability survey done by the World Food Programme (WFP), United Nations Children's Fund (UNICEF), OSA and the United Nations Development Programme-United Nations Environment Programme Poverty and Environment Initiative (UNDP-UNEP PEI).

The Joint Programme initiative took one year to plan with the following objectives:

1. To implement participative environmental and poverty reduction projects designed to achieve the sustainable management of natural resources, and the promotion of hygiene and sanitation, while giving priority to national ownership and sustainable development.
2. To enhance national capacity for the improved mainstreaming of environmental challenges into the central and decentralized planning processes.
3. To enhance income generation and livelihoods, and combat poverty with the improved management of the country's natural resources.

With this approach, positive results were achieved and the local communities in the three targeted areas were empowered. Visible results of the initiative include: 600 hectares of dunes were stabilized; 295 hectares of pastures were restored and now protected; 47,000 hectares of land has been restored and managed in the delta region; and 28,000 people now have access to drinkable water.

The impact of the UN's coordinated work on the ground also resulted in the realization on the part of the national and sub-national partners that cross-sectoral and government coordination can lead to more effective natural resource management and poverty reduction. The improved dialogue and work between all sectors has brought change to the most vulnerable and poorest areas of the country, and successfully reversed the trend of natural resource degradation with stronger policies that have resulted in tangible actions.

Additionally, despite the initial challenges in working together, the seven UN agencies who were involved in the Programme have now affirmed their commitment to continuing their joint work even beyond the current funded project.

Lessons Learned

The outcome of the Mauritania Joint Programme had three main lessons:

1. Environmental mainstreaming can be considered successful, not simply if this appears in policies, but also once the norms have been institutionalized and people choose to continue the approach/activities even after the formal end of a project. To enhance this possibility, domestic ownership at all levels (from the national to the local) should be emphasized throughout the project's lifecycle through participatory mechanisms.
2. Best practices from pilot projects at the local level should be included into key local planning documents, such as Local Agenda 21, which can help to orientate future natural resource management in a way which is not dependent on external help.
3. UN agencies not only improved their coordination mechanisms during the life cycle of the Joint Programme, but also recognized that there is still substantial room for improvement in implementing their joint initiatives. By committing themselves to continuing to work together, they will improve upon their learning and also enhance the results of future programmes.

Replication

The experience gained by the Mauritania Joint Programme can be useful to others who would like to enhance the value of environmental mainstreaming, to normalize the concept and go the 'next step' in developing concrete interventions.

The key factors to consider in replication are:

1. Mainstreaming the environment into policies or strategies is a necessary, but not sufficient part, of ensuring better environmental and natural resource management. Mainstreaming 'on paper' can and must be supplemented by concrete interventions that recognize poverty-environment linkages. The best practices derived from these field activities can be used as a basis for further replication.
2. Ownership of environmental mainstreaming activities is an essential component to ensure that the concept is normalized and taken up by domestic partners. This can be achieved by emphasizing a participatory approach throughout the project's life cycle.
3. UN agencies themselves must also mainstream and normalize the concept of integrated environmental management. This can also act as a good example of cross-sectoral collaboration for other related organizations at both the national and community levels.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-EnvMainstr-Mauritania

On Joint Programme Mauritania, please see:
http://wiki.mdgfund.net/ECC-Mauritania

Afforestation campaign on friendly water species in the Apurimac region, Peru © Flor de Maria Villa/Integrated and adaptive management of environmental resources and climatic risks in High Andean micro-watersheds (Peru Joint Programme)

Gender

Including gender equality in programming directly correlates to improved programme planning. However, gender mainstreaming requires specialized expertise, training, and coordination with gender theme groups at the country level. Gender equality must also be included in programme planning, and included as at least one of the key outcome areas with indicators to measure progress and with activities also linked to measurable results. Lastly, baseline studies and mid-term evaluations are important tools for making adjustments to the Programme's achievements and gender-equality results, even when these were not planned for at the outset.

Ethiopian female pastoralists unite to fight climate change

Cattle drive in Ethiopia

The Problem

Pastoral communities have a close relationship with the natural environment and move their livestock in relation to the availability of water and food. While pastoralists have historically had to adapt to hostile climates in Africa, adaptation capacities today have been eroded due to their marginalization. As a result, pastoralists have become even more susceptible to the impacts of climate change where drought can lead to famine and extreme poverty.

In Ethiopia, the pastoralists live and work in strong traditional communities and most activities are managed along gender lines. While household activities, such as the collection of water and fuelwood, are done by women, the men take care of hunting and livestock, as well as making decisions about access to and management of natural resources with little consultation with women. Indeed, there is a culture that restricts women from meeting with men to discuss resource management or any other common issues impacting their lives. At the same time, as the impacts of climate change are bringing increased vulnerability to the pastoral system, in some cases women are taking up the traditional role of men, who leave the villages to seek better food sources for the animals or work outside the community

The Solution

The UN Joint Programme of the MDG-F targeted 17 pastoral villages in some of the most vulnerable parts of Ethiopia and sought to mainstream gender in all of the activities. To do this, the Programme designed a special project for women empowerment by creating additional sources of income. Women already organized into groups were given the support of seed money and given training to start their own businesses, which included bee keeping, milk processing, small irrigation for garden farming and petty trades.

The Joint Programme also introduced mechanisms for women that would assist in increasing livestock productivity and improved access to markets. In addition, access to functional water was facilitated in the selected pastoral villages so that women no longer have to travel long distances to fetch water. Female beneficiaries have now formed 21 cooperatives in the selected villages of which four are female-headed pastoralist households.

Given the historical marginalization of pastoralists, who have little access to education, clean water and health services, the Joint Programme also engaged the Government to reduce the

gaps in social services through its development programmes and the achievement of the Millennium Development Goals, with a special emphasis on women empowerment.

Lessons Learned

A major challenge faced in implementation was due to the traditional submissiveness of women to men, which has restricted some women from engaging with the UN Joint Programme. For example, during the Programme's baseline survey and the assessment for income generation, women were not willing to take part in the discussions that involved men.

© Rick Bajornas/UN Photo

Local farmers and members of the Awash Fentale agro-pastoralist community in the Afar region of Ethiopia

This challenge was addressed and the situation improved following training with community leaders on the benefits of involving women in all socio-economic endeavors as well as the role of women in climate change adaptation and mitigation activities. This has resulted in overall attitudinal changes that have allowed for a greater participation of women in decision making in the community.

By focusing on empowering women in the whole decision-making process of the community, it can be seen that the lives of pastoral women in the areas targeted by the Joint Programme are changing dramatically. Women have formed their own cooperatives, and have engaged in a range of income-generating activities which have helped to reduce inequality and increase their own independence.

Replication

The income-generating activities demonstrated through livestock marketing cooperatives can be the best practice for changing the lives of pastoral communities, especially women who are more vulnerable to climate change impacts. It is especially applicable to pastoral communities worldwide who are similarly vulnerable to climate change.

It is also recommended that awareness-raising on the enhanced role of women needs to start on a practical level in communities where there is inequitable access for women to opportunities and resources. For this purpose, community trainings should be provided on a regular basis.

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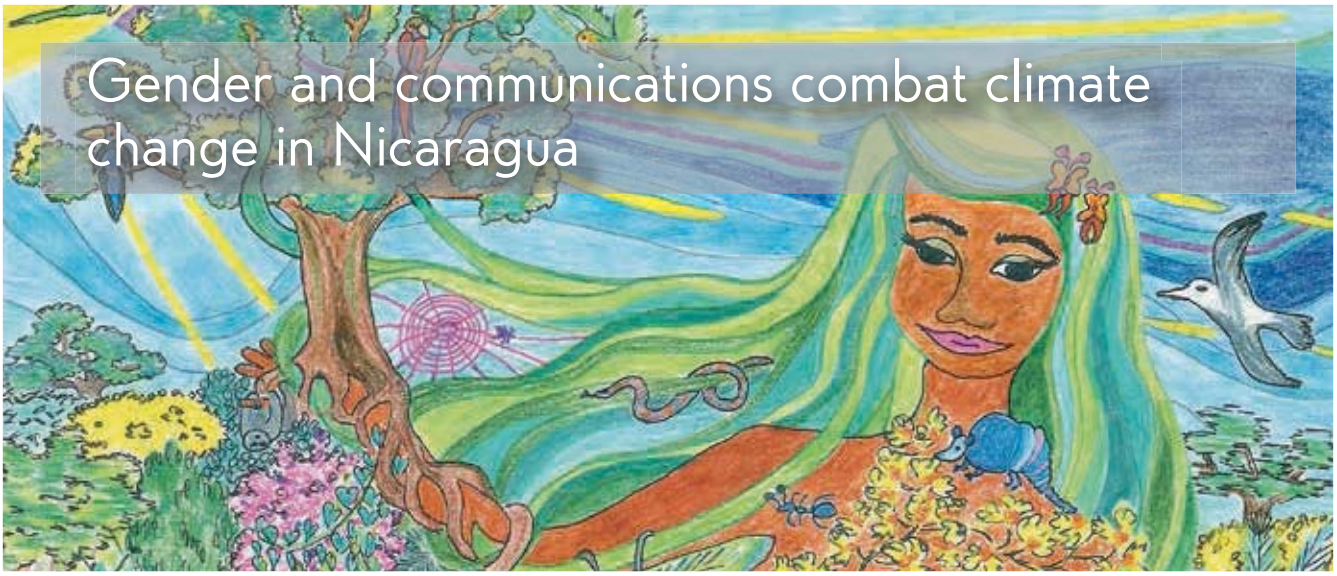
A small farm in Ethiopia

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Gender-Ethiopia

On Joint Programme Ethiopia, please see:
http://wiki.mdgfund.net/ECC-Ethiopia

Gender and communications combat climate change in Nicaragua



Fertile Mother Earth illustration in a story by author Rosse Cunningan shared with participants of a workshop on poetry as another technique for sensitization of environmental sustainability, Nicaragua

The Problem

The municipality of Waspam on the banks of the Coco River in northern Nicaragua is in one of the poorest regions of the country and the most vulnerable to natural disasters. In November 2010, villages around Waspam were hit by floods that inundated 80 percent of the agricultural crop and threatened the food security of the area.

Though it can be a source of natural disasters, the Coco River also sustains the livelihoods of the local communities by providing a means of transport, a source of food from fishing and a constant supply of water for the agricultural crops. The communities would not be able to survive without the river and the forest along it.

The women living near the Coco River are particularly sensitive to its importance. They are the ones who carry the water home, use it for cooking, housekeeping and child care. They also understand that the deterioration in the water quality of the river represents a health risk they cannot afford. If the water is contaminated, their food security is also threatened and they have to walk further to get clean water.

The Solution

The role of women in the day-to-day life of the community in Waspam is critical so that when launching the UN Joint Programme there was an effort to engage the women's movement in the area in a creative initiative that would strengthen communication on climate change but with a gender focus.

As there was no gender specialist, nor was there the resource to hire one, the Joint Programme collaborated with Wanki Tangni, a local women's indigenous organization with 800 members and a presence in almost every community in the area. The members of the Wanki Tangni include teachers, politicians, religious leaders, journalists, lawyers and housewives, all of whom provided support and advice to the UN Programme.

Wanki Tangni, working together with the Joint Programme, developed an artistic technique to create awareness on environmental issues including climate change. The women's movement recognizes that when communication is accompanied by art it is more entertaining and effective. The art forms of communication used by the movement include

local traditions in drama, drawings, poetry, storytelling and songs.

There were a number of positive results of the initiative which included:

1. Nicaragua's Ministry of Environment recognized Wanki Tangni as the local counterpart for implementing Environmental Protection and climate change solutions in the area.
2. The Biodiversity Youth Research Network was established under the Joint Programme in collaboration with the Ministry of Environment as a way to engage youth on climate change issues and to strengthen environmental education in the schools.
3. The women's movement is leading the local Community Committee and Youth Research Network on climate change as well as monitoring the biodiversity of Waspam.

Lessons Learned

Programmes such as this must recognize and capitalize upon local movements such as Wanki Tangni, which can help to not only improve outcomes but also enhance legitimacy and the sustainability of the activities. In this case, even though a gender specialist was unattainable, the activities were delivered with a strong gender focus, empowering women through the communication work. Moreover, it was important to have a participatory approach, and to be culturally sensitive in developing an effective communication strategy.

The importance of creativity, openness and flexibility in the organization of the Programme was also critical. For example, although it was not initially anticipated, it was found that poetry was an extremely popular mode of communication among the women. So popular, that the Joint Programme invited Christian Santon, a well-known Nicaraguan poet who is also an environmentalist, and who held a workshop on the art of poetry for the women of Waspam. It was the first time that Nicaragua held such a workshop facilitated by the country's most famous bard for women in the poorest region.

The impact of poetry has now moved even beyond the initial target group. The use of poetry to raise awareness on climate change and the improved use of natural resources has had an enormous impact as well on both the youth and elders in the communities. For example, youth are now putting music to the environmental poetry and the songs have become very popular among community members and the poetry is going to be published.

Replication

The experience of the Joint Programme represents a form of communication that respects traditional knowledge and traditions including gender roles. In addition, it develops different art forms such as music, poetry and storytelling, which are well accepted among community members and has a strong potential for replication.

Some recommendations for replication include:

1. As climate change is a topic of particular interest to rural communities, adaptation and mitigation efforts are especially effective if they are led by the community in its own language, culture and socio-economic context. Gender and generational identities have to be incorporated into the solutions, and Programmes must recognize local forces such as local movements.
2. The art of storytelling and drawing are effective techniques for creating awareness and advocacy on the environment and climate change.
3. Art forms of communication such as drawing, poetry, songs, storytelling and theater also revive local traditional practices.
4. Partnerships with local and national authorities are key to the Programme's sustainability.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Gender-Nicaragua

On Joint Programme Nicaragua, please see:
http://wiki.mdgfund.net/ECC-Nicaragua


PROGRAMA CONJUNTO
y mitigación del cambio climático en el manejo de los
naturales en dos Cuencas prioritarias de Panamá
BIENVENIDOS A LA COMUNIDAD DE "EL S
COMARCA EMBERA WOUNAAN
LA PREVENCIÓN DE LOS DESASTRES ES UN COMPROMISO DE TODO
MIDA
Salud
PNUD
FAO
PNUMA

A sign reading "Welcome to the Community of "El Salto" in Comarca Embera Wounaan - DISASTER PREVENTION IS EVERYONE'S CONCERN, El Salto, Panama © Integration of Climate Change Adaptation and Mitigation Measures in the Management of the Natural Resources in Four Priority Watersheds of Panama/Panama Joint Programme

Partnerships with Civil Society

Establishing partnerships with civil society in the implementation of the Joint Programmes crystalizes the participation and inclusion of stakeholders into national and sub-national development processes. Stakeholders are thus empowered through their involvement in planning, designing, and implementing the Programme, and can take ownership of the development process ensuring its sustainability as well as its replicability. Partnerships built from local communities and stakeholders within civil society are crucial in undertaking a reality check which is often needed in implementing development programmes.

Community based adaptation to climate change in Colombia

Milk production in the upper basin of the Cauca River. Paletará Ward, Township Puracé, Colombia

The Problem

The Cauca Department in southwest Colombia has been hit hard by climate change with a loss of precipitation of up to 0.3 percent per annum and temperature rises of some 0.2 degrees celsius per decade. This is having direct consequences on the agricultural economy as well as on the biodiversity and glaciers that make up this steep mountainous region.

The impacts of extreme weather events from climate change and El Niño/La Niña–Southern Oscillation (ENSO) include growing desertification, shortages of drinking water, food insecurity, loss of ancestral knowledge, agricultural land expanding into conservation areas and an increase in diseases impacting health care in the region.

The Solution

The UN Joint Programme of the MDG-F developed an adaptation strategy that targeted the most vulnerable populations of the region - the farmers and the indigenous communities - and focused on activities that would increase their role in the decision-making process on climate change adaptation measures and strengthen national capacities as well as regional and local knowledge relating to conservation and the sustainable use of natural resources.

The strategy emphasized the importance of the "Knowledge Dialogues" as a powerful method to collect explicit information from the communities in order to improve local adaptation strategies.

The strategy implemented a consultative participatory approach in order to change the status of the local community from being 'beneficiaries' to being 'partners' in the overall decision-making process. This included the creation of inter-cultural teams that are comprised of members of the indigenous communities, farmers, UN technicians and Government officials. Using this approach, the process was recognized and supported by the traditional authorities of the local communities.

The UN Programme at the same time strengthened the capacity of the indigenous community and farming associations to address existing vulnerabilities to climate change and improve their current response capacity. However, for the initiative to continue there is a need for further modifications, particularly the need to strengthen the relationship of the indigenous authorities with technical institutions and policy makers.

Lessons Learned

It is clearly always important to respect the traditional knowledge of the local communities and to adjust to local realities. It is also important that the technical experts address the issues from a local perspective using a clear and simple language. The exchange of information throughout the "Knowledge Dialogues" also has to be done on equal terms in order to reach mutually beneficial outcomes. Respect for beliefs and practices helps for achieving the goal for developing social legitimacy and governance structures.

Working directly with the local communities helped to facilitate the spread of information on climate change adaptation measures which can lead to resilience and social transformation.

© Luis Sánchez/Integration of ecosystems and adapation to climate change in the Colombian Massif (Colombia Joint Programme)

Indigenous guards that play a key role in security and risk prevention in the social organizations in the Cauca river basin, Colombia

However, at first the steps taken to approach the indigenous and farming organizations were challenging. The political and organizational context of the communities required a coordinated and consistent inter-agency intervention that included mutual understanding, horizontal dialogue and the articulation of needs and interests. Moreover, there was a need to move from a consultative participatory approach with the communities to the decision-making process and a key step taken was to include them in decision-making entities such as the Steering Committee and the field teams.

The neutrality of the UN and partner organizations was instrumental for gaining acceptance in this sensitive region.

Replication

The UN Joint Programme is now an example for a community-based adaptation initiative. This experience can be replicated nationally and globally but especially in remote areas in which the presence of the governmental institutions are weak and the cultural identity of the local population is strong. Indeed, the adaptation strategy must recognize cultural differences and respect the social situation already in place.

In places where the presence of the indigenous community is strong, a bottom-up approach is necessary and should include the following:

- The role of traditional authorities and political organizations;
- The level of autonomy of the territory, including the laws and practices of self-governance;
- The cultural context for building the process with the local community;
- Capacity building in the local community that allows for the representation of their interests;
- The Knowledge Dialogue as a method to collect explicit knowledge from the communities in order to improve local adaptation strategies;
- The local perspective;
- The use of a clear and simple language.

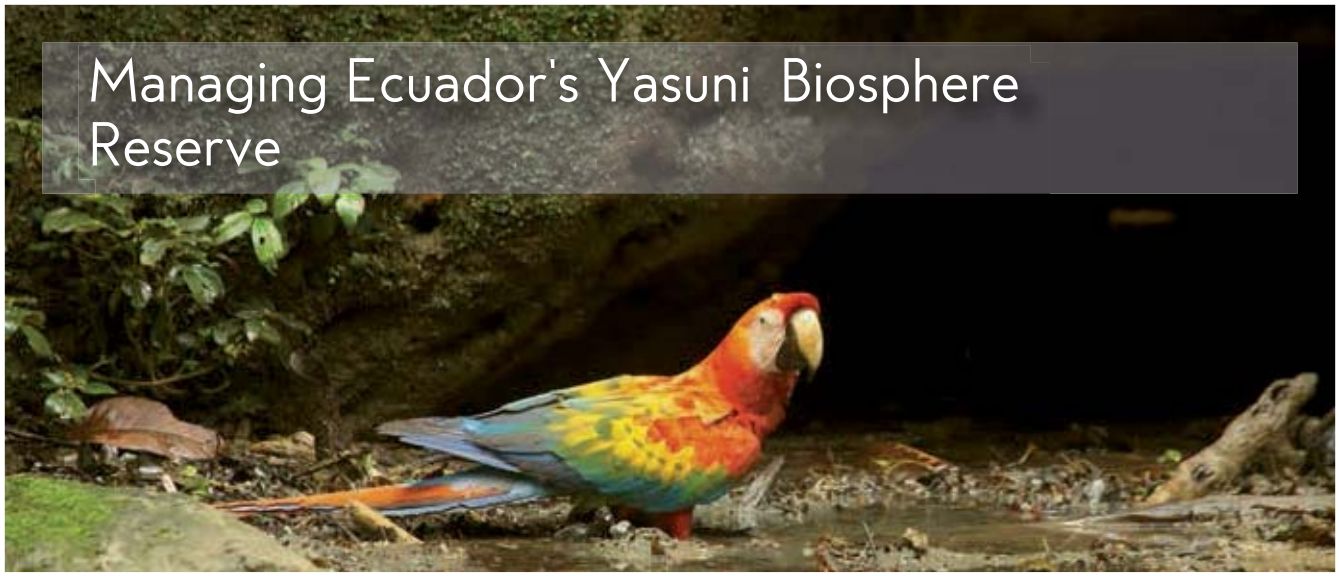
These are the starting points for building trust, finding points of affinity and identity between the stakeholders and generating the means for a sustainable environment.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Par-CivSoc-Colombia

On Joint Programme Colombia, please see:
http://wiki.mdgfund.net/ECC-Colombia

Managing Ecuador's Yasuni Biosphere Reserve



Scarlet Macaw, Yasuni National Park, Ecuador

The Problem

Ecuador's Yasuní Biosphere Reserve is possibly one of the most biologically diverse places on the planet with over 9,000 square kilometers of primarily rainforest. It is also home to the last two known indigenous groups still living in voluntary isolation in Ecuador - the Tagaeri and Taromenane. But the Reserve, with its wealth of timber and oil, is also a place in which the negative impacts of the extractive industries and military interventions are becoming all too common, threatening not only the environment but also the livelihoods of the vulnerable indigenous population, who already suffer from high levels of poverty and poor access to education and health.

While the title of 'Biosphere Reserve' was given to Ecuador by UNESCO in 1989, the institutionalization of the management of this unique region has lacked clarity and the legal channels to be part of the decision-making process. As a result, the commercialization of wildlife and other environmental crimes have become rife and the indigenous population has suffered the consequences. Moreover, with their diverse languages, the local communities have not been able to find a common language to communicate their concerns at a national level in a way that could influence policy making.

The Solution

The UN Joint Programme under the MDG-F focused its efforts at the legal, political and local levels. Firstly, the Programme clarified the legal and institutional framework for the Yasuní Biosphere Reserve, and for three other biosphere reserves in the country. This work has been boosted by official recognition by the Ministry of Environment of Ecuador, by the legalization and formal recognition of the Management Committee and by the formation of the National Network of Biosphere Reserves.

Politically, the UN Joint Programme created more awareness, both at the national and local levels, about sustainable livelihoods in a fragile ecosystem like the Yasuní Biosphere Reserve. The initiative also ensured that agreements between the Government and the local communities were officially recognized, for example through the promotion of the Management Committee of the Yasuní Biosphere Reserve, an existing organization which was formed nearly ten years ago and included 120 indigenous groups but which lacked

effectiveness. This Committee was officially recognized by a Ministerial Agreement, which also established clear responsibilities for the management and sustainable development of the Reserve. The Management Committee was further strengthened through the formation of the following:

1. A representative and inclusive Board, including the Association of Women Waorani of Ecuador;
2. A Technical Advisory Group to support its institutional, academic, and scientific experience;
3. Four thematic working groups on land-use planning, control and surveillance as well as sustainable livelihoods and tourism.

By strengthening the governance structure of the Management Committee, the Joint Programme helped to address the institutional weaknesses and helped to achieve the following:

1. The active participation of all stakeholders in the territory and their contribution to public policy relating to the Yasuní Biosphere Reserve;
2. The establishment of the Fourth General Assembly, which represents three provinces, five municipalities, more than 22 parish councils and more than 60 communities;
3. The development of activities - and resource allocation - for land management in the Yasuní Biosphere Reserve;
4. The prevention of environmental crimes arising in the Biosphere through an awareness campaign using advocacy products such as television and radio spots as well as billboard advertisements;
5. The development of Strategic Guidelines to prepare the Management Plan of the Reserve, with the inclusion of local-level planning which was previously missing.

Finally, a study on the financial sustainability of the Reserve and a guideline for sustainable tourism were also created.

Lessons Learned

The highly participatory approach taken by the Joint Programme was key to its success as a result of the following:

1. Creation of more awareness, both at the national and local levels, about sustainable livelihoods in a fragile ecosystem like the Reserve;
2. Identification of public, private and civil society organizations working in the area and the establishment of a framework of common interest as well as the design of local strategies;
3. Establishment of a common language for communication between the local communities and governmental organizations;
4. Establishment of clear responsibilities and rules that allow for a participatory and inclusive management process;
5. The initial mistrust of the Programme by the Management Committee was overcome through discussions that allowed for the development of local strategies that addressed local demands and strengthened the efforts of local and national stakeholders.

Replication

The experience of the Management Committee of the Yasuní Biosphere Reserve is being replicated in the remaining three reserves in Ecuador. Additionally, this experience can be replicated for the management of Biosphere Reserves in other countries with the following considerations:

1. Creation of awareness, both nationally and locally, on how to live in a Biosphere Reserve and practice conservation;
2. Strengthening and empowering local stakeholders;
3. Optimizing and developing capacity building and the search for common interests;
4. Designing strategies in order to meet local demands and realities and include local participation;
5. Usage of a common language that can support the dialogue between the local communities and governmental organizations, including a communications strategy which includes all shareholders;
6. Establishment of clear responsibilities and rules that allows for a participatory and inclusive management process.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Par-CivSoc-Ecuador

On Joint Programme Ecuador, please see:
http://wiki.mdgfund.net/ECC-Ecuador


SALON DE HONOR
"Gran Varón Rabinal Ac

© Byron Medina/Strengthening Environmental Governance in the face of Climate Risks in Guatemala (Guatemala Joint Programme)

Partnerships with Governments

Partnerships with governments provide an enabling framework for successful results as well as the Programme's sustainability. The successful implementation of a Programme often requires political will and strong strategic leadership at the local level. Governments therefore have a critical role to play in removing policy, regulatory and technical barriers that prevent Programmes from happening, and also in ensuring that local governments can make their contributions. Environmental sustainability increases in countries where governments take strong leadership in setting pro-active policies and regulations, and simultaneously support innovative solutions.

Generating synergies to tackle climate change in Guatemala

Training of community leaders of the micro-basin the Zope, in Cubulco, Baja Verapaz, Guatemala

The Problem

In the past, UN organizations and governmental institutions in Guatemala traditionally gave preference to their own priorities and operational management styles. As a result, the collaboration of the international organizations with official institutions to provide a joint solution was a challenge, like in the case with climate change which impacts a variety of sectors - health, education, natural resources and the environment.

The UN Joint Programme under the MDG-F was first designed with a single Managerial Committee, which was made up of senior representatives of Government, including deputy ministers and technicians. The work of the Programme depended on the advice of this Committee. As a result, there were constraints for reaching agreements on the operational management of the Programme as the discussions mixed strategic and political orientations.

The Solution

Eleven months after the start of the Joint Programme there were clearly operational management difficulties and it was recognized that a fundamental revision was required that could have more correlation between the different areas and levels of action. A new strategy was chosen to address the issues allowing for the following:

1. Changes in the management, administration and coordination structure;
2. Changes of the Results Framework;
3. A budgetary review and transfer of funds.

In this context, UN organizations and governmental institutions taking part in the implementation of the Joint Programme realized that this initiative provided a good opportunity to generate synergies and shared learning for securing the most effective results that could tackle climate change so that instead of one coordinating body, there were two:

1. The Managerial Committee responsible for political and strategic aspects;
2. The Technical Programme Committee responsible for the technical and operational aspects.

The Technical Programme Committee was created after a substantive revision adopted on July 2009 by the National Steering Committee (NSC) to deal with technical operations, thereby leaving the Programme's Managerial Committee, to deal with the political and strategic aspects at its own pace.

The results of this fundamental revision became evident once the Joint Programme began to develop into a true strategy creating synergies, shared learning and performing at acceptable levels. In January 2011, the Secretary of the Millennium Development Goals Achievement Fund (MDG-F) granted a six-month extension on the Programme's implementation deadline to allow for complete outcomes.

The work with local communities, including community leaders and women's groups, also made agreements easier to reach and actions plans easier to implement. The Programme also concentrated operations in a common geographical area, and as a result facilitated the overall coordination and the impact of the initiative. Furthermore, environmental policies and development plans, were developed through participatory assessments.

The Joint Programme officially ended in February 2012, with the completion of 96 percent of its financial implementation and 99 percent of its outcomes obtained. These performance levels would not have been possible without the reform and reorientation of both the Programme's Results Framework and its administration, thereby converting the Joint Programme into an example of the benefits of the "joining of forces".

Lessons Learned

The main lesson learned is clearly the importance of separating political and technical levels in order to ensure that the technical work of the operational management is carried out successfully, while the political work of the strategic management moves at its own pace.

Initially, the design of the Joint Programme caused tension. The procedures of participating UN agencies are different from the capacities of participating governmental institutions. Therefore, different operational modalities and different working rhythms were implemented , giving the impression that each organization was implementing different projects in a common area of intervention. And effort had to be made to ensure collaboration which sometimes affects the initial planning.

The formation of a Technical Programme Committee responsible for the operational coordination was a key element in ensuring collaboration and adding to the learning process. This political decision was essential for the Joint Programme to truly become collaborative.

Replication

Joint Programmes in Guatemala are a new experience both for the UN system and for governmental and other organisations that participate in their implementation. Successful implementation requires structures that are designed at the beginning of the Programme to ensure that the work does not stagnate as a result of the 'politicking' with the interests of various other sectors involved.

There also needs to be a separation of political and technical levels, to ensure that the operational management and technical work are sufficiently carried out, while strategic management and political work can also take place at their own pace.

When Programmes involve ownership and alignment at the national level, and when administrative procedures are slowed down, the following changes need to be considered:

1. Adapting the products to the changes that will impact the results;
2. Budgetary and fund-transfer reforms;
3. Structural changes to regulations governing management, administration and coordination.

Other important aspects to be considered when replicating:

- Working with local communities;
- Develop policies and actions plan through participatory assessments involving local stakeholders, especially community leaders and women's groups;
- Focus operations in a common geographical area.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Par-Gov-Guatemala

On Joint Programme Guatemala, please see:
http://wiki.mdgfund.net/ECC-Guatemala

Strengthening capacity to adapt to climate change in Turkey

Seyhan River, Turkey

The Problem

The consequences of climate change have been distinctively observed in Turkey in recent years, and are likely to be exacerbated in the near future. Some expected impacts are rising temperatures, changes in precipitation leading to both drought and floods, land degradation and coastal erosion. These are expected in turn to impact virtually all economic sectors, including on food production and security, and ultimately on the country's overall development. There is therefore a need to adopt a strategic, inter-sectoral approach to address these ongoing and expected changes.

The Solution

To respond to these challenges, and adapt to the ongoing and expected changes, the UN Joint Programme of the MDG-F supported Turkey in adopting a strategic approach. The Programme aimed to develop the following three components based on participatory processes:

1. Development of a National Adaptation Strategy;
2. Building the capacity for implementing adaptation measures;
3. Reviewing the country's legislation that would ensure the sustainability of the adaptation strategy.

Early on in the implementation phase, it became clear that these three different components would have to be integrated to create more effective and sustainable results. As a result, the schedule for the delivery of the relevant outputs was revised and all of the three components were integrated into one work plan with the development of a National Adaptation Strategy becoming the fulcrum of the entire intervention.

The integrated approach of all three components led to the development of the foundation of the country's National Adaptation Strategy that has taken into full account the findings of a needs-assessment as well as the findings from reviewing the existing legislation. Full political support and ownership, as well as integration, were fundamental to the successful and sustainable outcomes and therefore they were carefully built into the project from the start.

Lessons Learned

In order to facilitate sustainable and successful outcomes, particularly when a project has a strong policy component, there is a need to integrate policy, legislation and capacity-building and to make sure that national stakeholders have full ownership of the project from the design stages.

In particular, it became clear very early in the project's implementation that both reviewing the legislation and capacity-building were crucial components for developing a National Adaptation Strategy.

Furthermore, it was recognized that while the 'review' of legislation could be done through the work of consultants, its 'revision' - i.e. introducing new or amended provisions into the existing legal framework - was a much more ambitious undertaking, which required a high degree of political support as well as very strong participation and ownership from all relevant national authorities throughout the implementation of the project. Such a revision could not be delivered within the life and limits of the project. Instead, the project delivered recommendations on areas for improving legislation which can be used by the country in its further steps towards adaptation, following the completion of the project.

© Atila Uras/UNEP

Training teachers on adaptation to climate change using the toolkit Climate Classroom produced in context of UN Joint Programme on Enhancing the Capacity of Turkey to Adapt to Climate Change

Replication

The lessons learned can be applicable to projects with a strong policy component. For those trying to implement similar activities, the recommendations are as follows:

1. Create mechanisms for integration of various components, especially of a policy nature, during the planning stages of the project and make sure integration is clear and in a logical framework. At the same time, ensure that a certain degree of flexibility is kept in order to be able to adjust the methodology of implementation.
2. At the outset, create very strong ownership by all crucial national actors for any interventions in the fields of policy, law and governance and conduct a needs assessment during the planning stages of the project to identify and integrate the wide range of national stakeholders;
3. Secure full integration of project objectives into the regular work of the institutions involved and of the project implementation team with the institutions involved.

© Deniz Şillier Tapan/UNDP

People looking at the map of coastal areas of Adana where the Seyhan River ends

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Par-Gov-Turkey

On Joint Programme Turkey, please see:
http://wiki.mdgfund.net/ECC-Turkey

Assembly on the impacts of climate change in the rural community of Casacancha, Apurima, Peru © Flor de María Villa/Integrated and adaptive management of environmental resources and climatic risks in High Andean micro-watersheds (Peru Joint Programme)

Partnerships with Local Communities & Indigenous People

Participation and inclusion of all actors across generations and the respect for traditional knowledge and experience, as well as diverse perspectives, will plant the seeds towards a creative change in development programmes. The inclusion of such perspectives will also lead to the sustainability of the programme. It is all about learning from each other and the will to share knowledge towards making a project a replicable success.

Community mobilization helps protect Afghanistan's natural resources

Mountains in South-West Pamir, Afghanistan

The Problem

Rangelands in Afghanistan cover some 70 percent of the country and are mainly used for livestock grazing as well as for supplying water, wood and wildlife. Their importance in the country cannot be underestimated as a large segment of the population depends on the rangelands for livestock grazing. As a result, the rangelands have been overgrazed for years, exposing the soil to rainstorms and erosion, leading to the poor productivity of livestock and ultimately growing poverty. As the majority of the population is rural (over 80%), it is clear that environmental management and mainstreaming cannot only be targeted at the national level.

Indeed, the majority of environmental challenges faced by the country are in rural areas and despite national goals to improve environmental management, there are still many challenges in practical implementation. Moreover, because of its cross-cutting nature, environmental management and mainstreaming requires coordinated action from all stakeholders. In Afghanistan, inadequate coordination between and among governmental departments has slowed the rate of environmental mainstreaming in planning at the provincial level.

The Solution

The purpose of the UN Joint Programme of the MDG-F was to enable the government of Afghanistan to introduce policy-level sustainable planning in the development and management of environmental and natural resources. The aim was to create suitable policy frameworks, as well as the capacity building that is necessary to institutionalize policies and mainstream environmental concerns into the national and sub-national planning in the country's 34 provinces.

The UN Joint Programme coordinated activities with the Government and UN partners at the sub-national level, using the nationally recognized Provincial Environmental Advisory Councils (PEACs), which also include women, elders and religious scholars, as a vehicle for sustainable planning. Through institutions like the PEACs, the communities are now linked with the national Government and can have their voices heard in the decision-making process.

The Joint Programme also trained the communities in the management of natural resources, such as the restoration of the degraded rangeland, and also organized trainings on kitchen gardening, poultry raising, agriculture for income

generation and the protection of natural resources. As a result, the local management of environmental resources has now improved and the local communities are empowered to make decisions regarding the management of the environment and natural resources.

Within Afghanistan the environment is one of the six cross-cutting issues which are being mainstreamed in to the Afghanistan National Development Strategy (ANDS), and it is now clear that the approach taken by the UN Joint Programme will be replicated throughout the country. There are already plans to replicate this approach in other provinces, with the PEAC being a key mechanism through which this will be achieved.

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Mobilizing local communities to protect the environment for livelihoods, Afghanistan

Lessons Learned

The UN initiative involved Government partners at both national and sub-national levels with the main lesson learned that if communities are not aware of the environmental priorities of the national Government - and vice versa - then the over-arching goals cannot be achieved. Working together, on the other hand, with both community and higher governmental levels creates a much stronger foundation for the management of the country's natural resources.

The main challenge faced by the Joint Programme was how to link the local communities with the national Government for a bottom-up approach to planning, and to have the voices of the communities heard in policy-making at both national and sub-national levels. This challenge was overcome with the establishment of the PEACs and the Environmental Sub-Committees at the district and village levels.

Another lesson learned is that community-based work and centralized environmental activities, such as environmental mainstreaming, if carried out in isolation from one another will have limited long-term effectiveness. The environmental action and voices of the communities must be connected to a centralized management framework, which create a strong foundation for the long-term future in the management of the country's natural resources.

Replication

The lessons learned from the initiative can be useful for other contexts even outside Afghanistan. The first point for replication is that linking dispersed communities with the provincial and central governmental authorities and, ultimately with the decision-making process, is particularly important in countries where the majority of the population is still rural. Environmental management can be achieved by creating two-way communication between the central decision-making powers and local communities more sustainable.

While the specific institutional mechanisms by which this is being achieved in Afghanistan may not be exactly replicable in other contexts, the second key message for replication is that there must be a formalized structure, and commitment on the part of different stakeholders, in order to maximize the potential of such local-to-national level partnerships.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Par-LocCom-Afghanistan

On Joint Programme Afghanistan,
please see: http://wiki.mdgfund.net/ECC-Afghanistan

The guardians of adaptation and seed custodians of Colombia

Types and colours of corn in a market in Colombia

The Problem

The Cauca Department in southwest Colombia has experienced a dramatic loss of precipitation in recent years and an increase in temperatures which are having direct impact on the biodiversity and glaciers in this high mountainous region, home to a large indigenous community equivalent to 21 percent of country's population. The increasingly extreme weather conditions as a result of climate change and El Niño/ La Niña–Southern Oscillation (ENSO) are also leading to growing desertification, shortages of drinking water, food insecurity and increasing the overall poverty of the local communities.

The Solution

The UN Joint Programme of the MDG-F chose the Cauca Department as a pilot project designed to help the local community adapt to climate change and use their traditional production systems as an adaptation measure for ensuring food security.

The UN initiative recognized that the dissemination of traditional knowledge is key for strengthening the resilience of the indigenous communities to the extreme impacts of climate change. In particular, the Programme worked with the indigenous *Seed Custodians* to create a network and knowledge base of agricultural practices, which can strengthen food security. The *Custodians* live in the central part of the Cauca Department and are well known in their communities as people with traditional and ancestral knowledge on the different types of species that survive extreme climactic variations and which can be used in conserving agro-biodiversity and as traditional medicinal plants.

Until recently, the *Seed Custodians* worked in isolation without any organizational or strategic planning. However, at the request of the Association of Indigenous Councils of Central Genaro Sanchez (AGS), the Joint Programme helped to strengthen the traditional position of the *Custodians* as well as provide support in organizational and strategic planning.

Today, the *Seed Custodians* have a five-year work plan which emphasizes promoting alliances with indigenous councils, youth and other regional and national organizations and they are planning to scale up activities in order to attract other communities to recover the traditional knowledge of native species resistant to climate change.

The *Alliance of Seed Custodians of the High Basin of the Cauca River* is also planning to disseminate their lessons learned and will scale-up activities in order to attract other communities for recovering their traditional knowledge of resistant native species to climate change.

The adaptation measures facilitated through the *Alliance* include:

- The rescue and rehabilitation of the cultural practices of production and traditional knowledge;
- The strengthening of the planning and sowing of crops resistant to climate change;
- The use of the natural cycle of nutrients;
- The use of organic resources in the preparation of organic fertilizers;
- The relationship of the production cycle with the Lunar calendar;
- The promotion of seed exchanges and the successful acclimatization of seeds in the region;
- Creation of an inventory of seed varieties resistant to climate change.

The Joint Programme also provided the financial support and generated opportunities for the exchange of experiences, knowledge and dialogue with the local communities. These exchanges helped in defining the methods for the improved management of land and resources in the region.

Lessons Learned

The UN Programme showed that flexibility was a critical factor for working with the indigenous councils. Initially, the vision was to create a network of custodians, but the development of such a network needs more time than the three years designated for the UN Joint Programme. After several consultations, however, it was advised to form a body that identifies with the *Seed Custodians* and, as a result, the *Alliance of Seed Custodians of the High Basin of the Cauca River* emerged, which is an informal organization, but with a proper name, management and planning structure.

The purpose of the *Alliance* was to build coordination in order to strengthen the work of the indigenous communities for building resilience to extreme climate changes. Among the members are adults, with their experience and traditional knowledge, and youth who are open to learning new concepts to strengthen the future of the community.

The UN initiative's emphasis on working with traditional knowledge helped to bring the local community into the discussions about climate change and the measures that can be used to build resilience to its impacts. Moreover, the local community now sees the importance of reviving their traditional knowledge and building on it. Indeed, 77 families in the area are participating in this process and have now adopted key climate change adaptation practices, which have helped to boost food security.

Replication

The use of traditional knowledge is emerging as a powerful practice to combat climate change and strengthen the local communities. There is also great potential for replication if the following is considered:

1. It is important to respect and recognize that indigenous communities have their own ways for managing their regions and natural resources for adapting to climate change
2. It is also important to promote alliances with indigenous councils and rural organizations in the area, with non-governmental, regional and national organizations and with youth to promote generational sustainability
3. Finally, it is critically important to ensure the local communities that they have ownership of the Programme and can choose the adaptation options that work best for them.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Par-LocCom-Colombia

On Joint Programme Colombia, please see:
http://wiki.mdgfund.net/ECC-Colombia

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Project Cycle Management

Project Cycle Management refers to the management of activities and decision-making process used during the life-cycle of a Programme. The effective implementation of a Programme often requires a willingness to take corrective action throughout the life of the Programme. What has always been done or what had been planned may not provide the optimal path to the desired results, yet this fact might not become apparent until the Programme is already underway. Wisdom, fed by broad consultation and active listening, must guide every decision to revise an agreed implementation strategy. The work must be based on real needs. We should not be afraid to adjust our thinking to the unanticipated realities on the ground.

Ownership of climate change adaptation strategies in Jordan

Amman Citadel, Jordan

The Problem

Jordan is classified as a semi-arid and arid region with scarce water resources that depend mainly on precipitation. Climate change is expected to not only increase temperatures but also change precipitation patterns, potentially threatening the already precious water supply. With growing water scarcity, also comes increased use of wastewater, which has a direct impact on the health of Jordanians.

While the country, with a population of over 6.6 million, has made significant advances towards the achievement of the Millennium Development Goals, but their achievements are also compromised by crippling water scarcity. Moreover, the current Health Strategy of Jordan does not address climate change issues and impacts on health.

The Solution

The UN Joint Programme has been working with Jordan's Ministry of Health (MOH) to include climate change impacts on human health in the country's National Health Strategy. The Joint Programme is designed to work with key governmental institutions to enhance the capacity for adaptation by carrying out the following activities:

- Review adaptation strategies to protect health;
- Develop response strategies;
- Develop a work plan for the implementation of these strategies;
- Train staff in the health sector and other concerned sectors on the implementation of these strategies;
- Disseminate these adaptation strategies to the public through workshops and other outreach activities.

In a recent workshop for the dissemination of the accumulated results and outcomes of the activity, the Minister of Health declared that the updated health strategy will be fully adopted and implemented throughout Jordan. He also indicated that climate change issues are becoming an integral part of the planning process of the MOH and they will be included into all MOH action plans.

Lessons Learned

Initially, the Joint Programme planned to have external consultants for carrying out the activities of the Programme that would assist the country's Ministry of Health in updating its climate change adaptation strategy. However, there was reluctance to have external consultants, who would be

available only for a short period of time and not be fully aware of the country's needs or the health sector, develop a plan. As a result, a more innovative approach was adopted, which included the partnering of government officials and experts who could update the strategy and ensure that Jordan also had ownership of the outcomes.

The revised approach to updating the National Health Strategy internally has focused on establishing six Ministry of Health National Technical Teams, which are composed of professionals, and a Technical Coordination Team. All the teams meet periodically to discuss findings and share outcomes.

National Planning Workshop, Jordan

By having ownership of the process, the Jordanian Government is also able to institutionalize the updated strategy into the day-to-day work of the Ministry of Health. The inclusion of high-level decision makers from the Government to head the six thematic committees for developing a National Strategy and Plan of Action to Protect Health from Climate Change means that the process will continue to be updated even after the UN Joint Programme ends. Moreover, replicability of this approach has become easier since it is developed internally within the country and there are now some 40 professionals trained in the process and its implementation.

The approach of having task forces has even been expanded to additional implementing ministries within the programme, including the Ministry of Environment and the Ministry of Water and Irrigation.

Meeting on the development of early warning systems with the international expert, Dr. Simon Hales

Replication

The experience in Jordan has shown that the utilization of internal capacities can be very fruitful and maximum sustainability and ownership can be achieved.

In terms of replicability to external contexts, a key point to keep in mind is the value of conducting preliminary capacity surveys. The involved entities from the Jordan Joint Programme recommend that a survey of the local and national capacities needed to be carried out first in order to gauge suitability for carrying out intended activities. While it might turn out that the external help is needed for certain tasks, such surveys help to determine where local capacities exist and how these can be utilized to the greatest extent possible to ensure maximum sustainability and ownership.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-PCM-Jordan

On Joint Programme Jordan, please see:
http://wiki.mdgfund.net/ECC-Jordan

Flexibility and responsiveness to climate change adaptation in Mozambique

Ms. Sara helps to identify problems and respective solutions for her village during an environmental planning training in Mapai, Chicualacuala district, Mozambique

The Problem

The UN Joint Programme under the MDG-F in Mozambique sought the engagement and ownership of the provincial and district government officials as well as the local communities in planning and implementing activities that would help the remote Chicualacuala district adapt better to the impacts of climate change. The district, which is located on the Limpopo River, has been badly hit by both droughts and flooding in recent years.

Due to the pressure of time constraints in planning the Joint Programme, few local government officials or communities were consulted during the project design stage, threatening the effectiveness and overall sustainability of the UN initiative.

The Solution

Throughout the implementation of the UN Joint Programme, the approach of the partners was to engage the local government and communities in strategic discussions and to show openness to their inputs and emerging requests.

Fortunately, the flexibility of the Joint Programme in its implementation guidelines allowed for the incorporation of several activities not originally envisaged in the project document but requested by the communities and local government partners at a later stage. These interventions included, for example, the construction of rainwater harvesting tanks, the introduction of integrated fish farming, the rehabilitation and equipping of a meteorological station and the building of a multi-purpose resource center in the district.

Capacity development in climate change mainstreaming also helped to sensitize the Government and the public on the impacts of climate change. The result has been that for the first time in Mozambique environment and climate change have become cross-cutting themes that are now being built into plans and policies. At the district level, training in adaptation measures as a way to deal with climate change and tackle poverty has helped the rural communities in Chicualacuala district strengthen and diversify their coping strategies and livelihoods.

As the interventions of the UN Joint Programme reflect the requests from stakeholders, the key is now to ensure the sustainability after the Programme ends. The implementation of an exit strategy, including training and handover activities,

has paved the way for the maintenance and continuation of the Programme's interventions.

Lessons Learned

Perhaps the most obvious lesson learned is the importance of inclusive consultations with all stakeholders in the development of a project, and flexibility to adapt interventions to meet local demands. During the first two years of implementation, a better understanding was gained of the needs on the ground thanks to improved dialogue with stakeholders. As a result, the second part of the Programme saw strengthened engagement of the government partners with the beneficiaries in the implementation of the activities. It is hoped that the long-term sustainability of the Joint Programme's outcomes will benefit from this.

© Ana Menezes UNEP (Joint Programme on Environmental Mainstreaming and Adaptation to Climate Change in Mozambique)

Members of agricultural associations being trained in territorial planning in Chicualacuala district

However, consultations can be costly and it is important for governments, implementing partners and donors to allocate funds to support the participatory approach which will ensure the sustainability of the project in incorporating climate change adaptation measures that ensure future resilience.

There were continuous challenges to strike a balance between responding to the local demands and ensuring the fulfillment of the original plan. However, the project log frame and work plan are important guides to ensure that objectives are met in a timely fashion, while also contributing directly to the achievement of overall project objectives.

Replication

There is high potential for any project to strengthen dialogue with the stakeholders and improve responsiveness to emerging needs. In particular, it may be helpful to consider integrating such flexibility already at the project design stage, for example, by leaving some room in the work plan and budget for possible emerging issues. There is also potential for donors to encourage such innovations by allowing greater flexibility in project implementation through their guidelines and procedures.

For others trying to implement similar programmes, the following is recommended:

- Programme design should be carefully considered, taking into account realistic timelines, logistical arrangements and budgets. Reconnaissance visits to the project sites, active engagement with local stakeholders, and assessment of available baseline data are essential to gain a better understanding on what is needed for the success of the project.
- Sufficient time needs to be allocated to project design and formulation, during the inception phase, in order to prevent costly inefficiencies during implementation.
- Buy-in from the local government and beneficiaries is necessary from the very start of the project. Project design should allow sufficient time to engage with local communities and stakeholders in order to ensure an understanding of the expected benefits of the programme.
- It is important to create a balance between achieving overarching objectives, while also being flexible to emerging demands. Log frames are useful tools to align changing project activities to overall outcomes.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-PCM-Mozambique

On Joint Programme Mozambique, please see:
http://wiki.mdgfund.net/ECC-Mozambique


RUTA DE EVACUACION

Flood evacuation signs in the Community of El Salto in the Embera Wounaan, Panama © Integration of Climate ChangeAdaptation and Mitigation Measures in the Management of Natural Resources in Four Priority Watersheds of Panama/Panama Joint Programme

Risk Management

A risk is an uncertain event or condition that might occur, and which - if it did - would have an adverse effect on results. Risks bring negative impact when they take place. In rare instances some risks can have positive impacts, in which case they are regarded to as 'opportunities'. The potential impacts of the risks can be anticipated, monitored and managed, through a variety of risk management techniques and strategies. Risk management is an ongoing process in the life-cycle of any Programme to effectively anticipate and mitigate the risks that can impact the goals.

Managing the risk of climate change impacts in Mozambique

Risk mapping training in Chicualacuala district, Mozambique

The Problem

Continued climatic uncertainty, extreme weather events and endemic poverty continue to be a serious challenge in Mozambique, a country with 23.7 million people, which is already one of the poorest in the world. Remote areas like the district of Chicualacuala are frequently hit by drought and by floods with little contingency planning and lack of risk analysis, resulting in enormous catastrophe including loss of lives and livelihoods.

The Solution

The UN Joint Programme under the MDG-F decided to help set up a system to manage these cyclical calamities hitting the country. A risk mapping exercise identified the areas most vulnerable to droughts and flooding and defined levels of risk, including the delineation of risk levels and impacts on communities. This was followed by the identification of adaptation strategies that could be integrated into local policies and plans.

The pilot risk mapping exercise in Chicualacuala made a significant contribution to the territorial planning exercise for the district, as well as paving the way for replicating the same approach in 11 further semi-arid districts. The entire process was led by national and provincial governments, with the Joint Programme giving technical support, to ensure integration of key aspects into national policy-making. This has also helped the different levels of government to replicate the exercise into other sectors.

The information produced in the risk mapping exercise was disseminated through formal trainings and workshops and helped to increase the awareness in the communities on key aspects of the environment that related to climate change and natural disasters. The information also helped in territorial planning for local strategies and policies.

As a result of the work of the Joint Programme, there is now detailed risk analysis information on droughts and floods for 12 vulnerable districts in the Limpopo and Zambezi River basins, with corresponding maps at the district level that is ready for contingency planning purposes. This includes zoning maps of disaster-prone areas and the total population at risk. In addition, there are now ten technicians who are trained in risk analysis at the government level with the government leading the process at the district level.

The mapping methodology has been improved and databases

are now available at the national level where they can be revised and updated. The replication of the same exercise is ongoing for other districts selected by the Government, using different funding sources.

Lessons Learned

While the process overall had positive results, there were some challenges in implementation. First, information on risk analysis in Mozambique is only available at the national level which was not useful for planning purposes at the district level. Moreover, the data that was available was not always appropriate for climatic analysis purposes. Given the lack of information for the data needed to do risk analysis, there is a need for more field work which will incur higher costs to the overall process. This challenge was overcome to some extent by increasing the participation of the community members, government officials and others who were part of the Programme.

Focus group discussion with a group of women during a risk mapping training in Chicualacuala district

Secondly, as the intent was to develop a multi-sectoral and multi-agency approach, there was a challenge in harmonizing the different activities and agencies involved. As a result, the activities were designed to align with governmental policy and strategies. While this was not always possible during the implementation of the Joint Programme, efforts have been made to ultimately ensure a harmonized approach with the Government's planning and budgeting cycles in order to avoid duplication.

Lastly, a major achievement was the collaboration in field monitoring which ensured that all decisions taken were made on a collective basis, making all partners accountable for their actions. The joint monitoring proved to be an innovative element that strengthened the partnerships between the UN agencies and the Government.

Erosion

Replication

The participatory method of this approach will be replicated in other districts and can also be replicated in other countries. However, an important consideration should be the costs for developing risk maps, particularly where significant information and data gaps exist. In this situation, considerable effort and funding must be given towards technical assessments and/or participatory based data collection. Therefore, before implementing such projects, a cost-benefit analysis of the exercise is crucial reflecting the immediate, medium and long-term objectives of the information that will be produced.

The risk mapping exercise based on the Mozambique experience will be shared and presented at different international fora. Already several countries with some similar conditions are ready to adopt this participatory methodology for risk analysis.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-RiskMgmt-Mozambique

On Joint Programme Mozambique, please see:
http://wiki.mdgfund.net/ECC-Mozambique

Early warning system for the Chucunaque river in Panama

© Jannet Ellis

Installation of a limnimetric scale in the Chucunaque River around the El Salto community, Panama

The Problem

Darién province in eastern Panama, fed by the mighty Chucunaque River, is lush with vegetation and renowned for its great biological and cultural diversity as well as an abundance of water. The province is home to some of the most important rainforests of Central America.

While the Chucunaque River basin is one of the country's largest, it also runs through some of Panama's poorest regions, making its inhabitants extremely vulnerable to climate change. Impacts such as drought and flooding are happening more frequently and with greater intensity. Indeed, in 2010 floods in Darién washed away houses and animals and contaminated drinking water. The flooding also forced the closure - for the first time in 21 years - of the Panama Canal.

The Solution

While the December 2010 disaster was tremendous, the effects could have been worse. A community-based early warning system using weather satellite-transmissions, rain gauges, limnimetric scales, solar panels and a radio communication system had been set up in 2009 by a UN Joint Programme operating under the MDG-F. The Joint Programme provided technical advice on environmental issues through the expertise of UNEP, UNDP, FAO, and PAHO/WHO, which worked with national counterparts of four Panamanian institutions to set up a climate change information system.

Entitled *Incorporation of Measures for Adaptation and Mitigation of Climate Change*, the UN Joint Programme in association with ETESA, the State Electricity Transmission Company, introduced the early warning system, as well as a climate change monitoring system with the latest meteorological technology, around the Chucunaque River basin, all of which helped to limit the impacts of the flooding on the local population. The early warning system includes base radios, limnimetric scales and various accessories in order to monitor and communicate changes in the river´s behavior and patterns.

The installation of radio equipment was done in key places that are often hit by flooding. In remote areas like Darién, radio communication is still the best source of information and the Joint Programme has made the most use of it. Thanks

to the radio communication system, endangered communities can now be informed ahead of time on the cresting of the Chucunaque River. As a result, in the flooding that took place in 2010, there was a smooth evacuation and no loss of lives.

The Joint Programme has also promoted the exchange of knowledge on the impacts of climate change and the solutions within smaller communities. This has led to the setting up of a climate change communications network, which goes beyond the watershed regions.

Lessons Learned

The Joint Programme had to consider a number of aspects from the outset, which also formed key lessons learned for the Programme. Firstly, the river's basin areas are not only remote, but access to some of them is very limited. So, strategic plans had to be sufficiently flexible to deal with unexpected events, and to better serve the needs of the communities.

Secondly, Panama has several indigenous communities living in these areas, so the challenge was to organize 'prevention' measures according to the traditional way of life. The involvement of local authorities and community members in implementing the Joint Programme and respect for traditional knowledge were carefully considered. The early warning systems were installed in partnership with national institutions, local authorities, universities, community leaders and the community. Empowering the community in the project was the key to its success.

Lastly, a communication strategy was also developed to encourage the local participation and dialogue on climate change. Considering the two characteristics mentioned above, information was simplified and translated into the two indigenous languages to increase the diffusion of the messages. Moreover, rather than imposing a strictly 'scientific' communication of climate change, the Joint Programme also sought to interweave this thinking with the more traditional paradigms found in the indigenous communities.

It was particularly important to train children and women on the use of the communication equipment, since in some cases it was installed at homes. Children and women, who usually spend more time at home, were able to use the equipment and to inform or alert other communities and SINAPROC, the national civil protection system, in cases of danger.

Replication

The early warning system and community work can be taken as an example to be implemented in other communities. From the Joint Programme experience in Panama there are the following conclusions and recommendations:

1. Programmes must be planned strategically according to the needs of the communities and in partnership with leading institutions in the area, local authorities as well as beneficiaries. These Programmes should also be sufficiently flexible to deal with unexpected variations, including any potential political changes.
2. Each of the institutions involved should monitor the early warning system and share information among them and with the local authorities and communities.
3. The empowerment of the project by the community is necessary, as they need to be aware of the risks confronting them, and should be prepared to address these risks.
4. Risk Management should be imbued in national policy and protocols and 'early warning systems' should be developed at the country level.
5. Political changes that could affect monitoring the projects at the community level, needs to be considered. The Programme must ensure periodic updates, particularly of the plans, trainings, warning systems and drills installed in the communities covered by the Programme.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-RiskMgmt-Panama

On Joint Programme Panama, please see:
http://wiki.mdgfund.net/ECC-Panama

Band-e-Amir © Aimal Khaurin/Strengthened Approach for the Integration of Sustainable Environmental Management into the ANDS/PRSP (SAISEM)/Afghanistan Joint Programme

Water

Water is a key and essential element for environmental sustainability and socio-economic development. It is important to demonstrate that water development and management projects can generate specific social and economic benefits for the local communities. Water development, in particular, should be clearly positioned in all social, economic, rural and urban development programmes.

Managing climate change impacts on groundwater in China's Hebei Province

On-site technical support in Cangzhou City, Hebei Province, China

The Problem

Groundwater is an essential water resource, making up 20 percent of the world's freshwater supply, and is naturally recharged by precipitation, streams and rivers. At 760 billion cubic metres, groundwater resources account for 26.8 percent of China's total water resources. However, in many parts of the country, especially in the north, the long-term exploitation of precious groundwater has resulted in a serious drop in the water table and other geological and environmental problems, including an increase in ground sedimentation, an intrusion of seawater and desertification. Pollution from agriculture and industry has also contributed to the declining quality of groundwater. Climate change impacts are adding to the problem with more frequent extreme droughts, floods and other natural disasters impacting the groundwater's recharging rates.

Cangzhou city in northeastern Hebei Province has been hit particularly hard by climate change. A dramatic long-term decrease in the water flow of the Grand Canal that passes through the city has meant that groundwater has now become the major source for the local water supply. However, over-exploitation and contamination by industrial and domestic sewage have threatened this vital natural resource, and the city is now urgently trying to monitor its groundwater with the aim of maintaining a safe water supply and sustainable groundwater use.

The Solution

The UN Joint Programme of the MDG-F conducted a pilot project in Cangzhou for managing the impacts of climate change on groundwater, with the focus primarily on building capacity for monitoring, data collection and analysis in order to develop a model, as well as concrete adaptation measures and regulations based on this.

To launch the project, the Joint Programme team first built up the necessary local capacities for updating monitoring systems and installing portable water quality meters. It also provided technical assistance and on-site training for technicians on groundwater monitoring, water sampling, data storage and analysis. With the improved capacity, the relevant data necessary for modelling and developing adaptation measures was then collected from the pilot site.

Based on the data collected and through a statistical

analysis of long-term historical meteorological data, the Joint Programme team was able to prepare for the future impacts of climate change on groundwater in Cangzhou. Furthermore, the team explored the effects of climate change and human activity on changes in precipitation, temperature, evaporation and groundwater table over the past 40 years.

A conceptual model for groundwater simulation and management was created and scenarios were identified on the impact of climate change on groundwater. Based on the results of the pilot project, technical regulations on groundwater monitoring were revised and recommended for adoption throughout China. The results were shared at the 4th International Yellow River Forum in 2009 and at the Global Water Partnership's high-level Roundtable Conference on Climate Change and Water Security in 2012.

Lessons Learned

Monitoring is one step in the process of water management and allows for an improved analysis of a situation but there is a great need to strengthen this capacity in Cangzhou. Beyond this, the city needs to implement more active measures, including adopting water saving practices, using alternative water resources and increasing groundwater recharge during the wet season so that more water is retained from runoff in the fields.

Another lesson learned was the recognition that a greater understanding is still needed on the interaction between the direct and indirect influences of climate change on groundwater. Groundwater modeling needs to take into account both these influences. Further efforts should be made to make existing data on groundwater information available to all relevant stakeholders while also enhancing groundwater related research and training.

Awareness of the impacts of climate change on groundwater should also be promoted, as should the interaction between climate change and human activities.

The results of the Joint Programme's pilot project concluded that the Chinese Government should develop more comprehensive and integrated policies for the management of both surface and groundwater. Such policies would allow for the proper management of water abstraction licenses, water metering and emergency responses to natural disasters. The Government has developed some polices on groundwater management already, however, they are still very rudimentary and do not fully take into account the impacts of climate change.

Replication

The overarching message for replication is to promote an integrated and comprehensive approach to water management. Such management approaches must also consider the direct and indirect effects of climate change on water resources.

Replication of the pilot project on groundwater monitoring and/or management should also consider the following:

1. Capacity building to improve groundwater monitoring and to allow for better data analysis, modelling and scenario development, which is of great importance in the identification of effective adaptation measures in countries with scarce water resources or are at risk from the effects of climate change.
2. Greater efforts should be made to make existing data available to all relevant stakeholders while also enhancing groundwater related research and training and enhancing advocacy and education of groundwater knowledge.
3. All monitoring and management efforts should be done within a framework that emphasizes an integrated water management approach, which includes both surface and groundwater.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Water-China

On Joint Programme China, please see:
http://wiki.mdgfund.net/ECC-China

Irrigated and integrated production systems help Mozambique adapt to climate change

Harvesting fish at the fish culture site in Mapuvule village, Chicualacuala district

The Problem

Mozambique's unpredictable climate manifests in frequent extreme weather events. Between 2000 and 2009 alone, the country suffered from six droughts and fifteen floods. The droughts impacted the lives of over 3.2 million people, whereas the floods affected over six million people.

In 2010, the country was again hit by both droughts and floods. The double shock left 465,000 people in need of food assistance and wiped out 30 percent of the cultivated land to the extent that food insecurity has become a norm in a country that already had a 37 percent undernourishment rate.

Although the country is blessed with abundant water resources, the use of the water from Mozambique's major rivers, like the Limpopo, for irrigating agricultural production has been, until recently, very limited. Agricultural land around the Limpopo River has instead been largely rain-fed and vulnerable to unpredictable rates of precipitation. When the rains fail to come, many farmers leave their withered crops and turn to the forests for charcoal and income, contributing to the growing forest degradation.

The Solution

By 2008, when the remote district of Chicualacuala on the Limpopo River was selected as the focus area for the MDG-F work on environment in Mozambique, it had experienced increasing unpredictability in the timing and intensity of the rainy seasons. To help the farmers in this semi-arid region cope with climate change, the UN set up a Joint Programme that made the best use of existing water resources.

The Programme worked in four rural communities near the Limpopo River, bringing local government officials together with the community to discuss ways to improve food security with climate change adaptation measures. Irrigated production was identified as a priority given the proximity of the river, but the communities also identified other needs such as fish farming, crop irrigation systems, livestock production and forestry management.

One far-reaching innovative measure was a fish farming project, where pig sties, duck pens and rabbit cages were also built on the banks of the fish tanks. These integrated production systems used waste products to feed the fish and other animals, and in return manure from the animals went to fertilize the fields.

As a result of the improved agricultural system, between 2009 and 2011 over 400 tons of vegetable crops were produced in the communities in Chicualacuala. Fencing also helped to raise production and improve incomes, diets and, very importantly, reduced the pressure on forest resources. Whereas in the past the farmers' income came from cutting trees and selling charcoal, today they have the option of producing food all year round and boosting their income through the sale of crops. And with increased income, farmers are now improving their homes and sending their children to better schools.

Diversification of the livelihood measures using irrigated systems that combined crops, livestock and forest resources will play an important part in adapting to climate change in Chicualacuala district and can be replicated in other regions. This initiative serves as an example of what is possible in a country where water exists. In Mozambique, with its abundance of water sources, there is clearly tremendous potential to increase food production and improve food security.

Lessons Learned

While overall there was success, there were also challenges. For example, while crop production improved, marketing the crops was not easy. Over-production in 2009, coupled with poor market access resulted in the spoilage of tons of produce. These problems were not anticipated so remediatory measures were introduced, including the training of farmers in agro-processing, especially in the drying and storage of excess crops, and the introduction of fish farming.

There were also mixed results with the integrated fish farming as market access was a challenge. However, the Joint Programme provided a tractor and trailer which were used for land cultivation and the transport of products to the railway line 18 kilometers away.

This experience has shown that where adequate water, such as a perennial river, exists in arid or semi-arid areas, the potential for producing food through the judicious use of this water is very high. Intensive, integrated crop and livestock production in these areas can significantly improve food security at the district level, increase household incomes and assist rural communities adapt to the negative effects of climate change.

Replication

The Joint Programme recommends the following based on experiences in Mozambique:

1. Current and future water resources must be scientifically assessed and used sustainably in order to adapt to climate change and support long-term development. Future project formulation and site selection should also assess the water availability potential, as it will significantly influence adaptive capacity to climate change.
2. Flexibility in climate change adaptation programmes is increasingly important, to incorporate changing conditions and to help build resilience. For example, integrated fish farming with other livestock and agro-forestry products, although not envisaged as an intervention by the project in the planning stage, was developed based on local demands and requests.
3. Agro-fish farming is an important area for further studies. It has significant potential for building resilience and developing crop-livestock synergies in a smallholder system operating under gravitational water systems from perennial water bodies, and where livestock are crucial resources in adaptation. For these systems to be viable, however, consideration must be given to food preservation techniques as well as market access for surplus produce.

For more information

On the lesson learned, please see:
http://wiki.mdgfund.net/ECC-Water-Mozambique

On Joint Programme Mozambique, please see:
http://wiki.mdgfund.net/ECC-Mozambique


EXIT

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Exit Strategy

An exit strategy is the principal tool for communicating the intention of the MDG-F projects and for holding ourselves accountable for our actions. It is developed at the start of each project and clearly identifies the sustainable actions we will strive to reach throughout the project's life-cycle. A successfully implemented exit strategy builds bonds between all the stakeholders, empowering those partners to gradually take over responsibilities and to carry the project to its end, thereby sustaining the results that make for its success.

Exit Strategy
Road towards Sustainability

The Strategy

The exit strategy is an agreed plan between the different stakeholders to bridge the gap between the completion of the project's activities and achieving the impact and long-term sustainability. The exit strategy helps all stakeholders to understand where the role of the project ends, when to let other stakeholders take more ownership and accountability for it, and when to fully handover the responsibility for the work that will continue beyond the closure of the initiative. Ideally, the exit strategy should be developed at the beginning to enable gradual handover during the life of the Joint Programme.

The Joint Programmes under the Environment and Climate Change window of the MDG-F formulated their exit strategies at various stages in the lifespan of the projects and shared these experiences and learning so that an exit strategy checklist with 16 interlinked elements could be developed. This lesson was written based on them.

Selection of the scale and scope of activities

The selection of activities that should be sustained after the project's closure is an essential element of an exit strategy. It has clear repercussions for the selection of partners, funding and resources, roles and responsibilities and capacity development. The Joint Programmes chose to do the selection by applying scales from national to local levels. For example, the Programme in China led to the development of a national Basic Energy Law at the national level. Nicaragua's Programme strengthened the administrative plans of five territorial governments, helping them to include climate change resilience into provincial planning. Similarly, the Programme in Ethiopia developed tools that target the local level and are useful in mainstreaming climate change adaptation into local planning.

Selection of partners for sustainability

If any project intends to influence the long-term management of a major protected area or local-scale area, there must be a close collaboration with the individuals who make those decisions, whether the local community and/or governmental agency. An exit strategy must make explicit the choice and responsibilities of the partners so as to ensure transparency and the sustainability of the activities. This will also result in a wider acceptance of the goals and outcomes once the Joint Programme has closed.

Funding

Funding is usually required to sustain the project-related impacts. Developing funding proposals for new adaptation

projects, or integrating adaptation criteria into already existing funding mechanisms, are two possible strategies to achieve this goal. The Joint Programmes often chose to empower their partners to develop fund-raising skills and in some cases developed a grants programme to help provide future funding. For example, the Programme in Colombia, Mozambique and Panama all worked on longer-term funding to assist the local communities to invest in adaptation.

Communication

Communication has a strong influence on sustainability and can take many forms, such as a documentary film on the management practices in the Seyhan River Basin and a series of shorter video clips on climate change adaptation in Turkey. As people in government, local communities and other target groups come to understand the goals and results of the project, they are more likely to develop ownership and participate in ongoing activities beyond the lifecycle of the project.

Beneficiaries

The dynamics of age, gender, social status and income drive the difference in climate change vulnerability. When the vulnerable, or minority groups, of a population are targeted in a Joint Programme, the exit strategy must also contain explicit reference and elements that address these groups. In Nicaragua, emphasis was placed on training women in order to develop and deploy best practices for the management of micro-watersheds.

Capacity development

Capacity development is an essential part of an exit strategy and can comprise the "hard factors", such as changes made to the infrastructure, or address the "soft factors" such as improved individual and institutional abilities by training, technical capacity development and formal education. The Joint Programmes in Afghanistan, China and Nicaragua worked extensively on technical capacity building at the local level whereas in Turkey the focus was on increasing the ability of institutions to assess climate change risks.

Knowledge management and lessons learned

Knowledge management should be given explicit attention within exit strategies. The knowledge gained and lessons learned from the activities should be captured systematically and made available to the partners who will carry on the work. In Colombia, the Joint Programme developed a system for transferring knowledge management practices for risk mitigation in agricultural systems, community health and water management.

Risk management

Due to the severity and unpredictable nature of climate change, the importance of anticipation of and response to future risk patterns, cannot be under estimated. Planning under conditions of high uncertainty and the need for both disaster preparedness and increased climate resilience should be an explicit part of the exit strategy. In Panama and Turkey, the Joint Programmes supported the development of a national risk alert and disaster preparedness systems.

Asset management

Most of the Joint Programmes accumulate a series of assets. The process of returning the assets to the funder or transferring them to stakeholders needs to be transparent. Ideally, this should be explicit from the early stages of the project. The Programmes in Ethiopia and Guatemala developed formal agreements that coordinated inventory and the handover of the project assets.

Legal and contractual arrangements

There were explicit contracts to clarify lines of accountability in the hand-over of activities at the project closure. The Afghanistan Programme signed a Memorandum of Understanding with the local Government, spelling out their responsibility versus the Government's responsibility. In Ethiopia, the Joint Programme handed over all duties to the local community.

Replication

Each of the UN Joint Programmes had a vision to bring long-term change beyond the restricted life and resources of the initiatives. The formulation of exit strategies has enabled the Programmes to work towards this vision together with their partners. Applying their learning and using the exit strategy checklist is recommended for future initiatives of a similar nature.

For more information

On Exit Strategy, please see:
http://wiki.mdgfund.net/ECC-ExitStr

MDG-F Environment and Climate Change Joint Programmes

Country	Joint Programme
Afghanistan	Strengthened Approach for the Integration of Sustainable Environmental Management into the ANDS/PRSP (SAISEM)
Bosnia and Herzegovina	Mainstreaming Environmental Governance: Linking Local and National Action in Bosnia and Herzegovina
China	The China Climate Change Partnership Framework (CCCPF)
Colombia	Integration of Ecosystems and Adaptation to Climate Change in the Colombian Massif
Ecuador	Conservation and Sustainable Management of the Natural and Cultural Heritage of the Yasuní Biosphere Reserve
Egypt	Climate Change Risk Management in Egypt (CCRMP)
Ethiopia	Enabling Pastoral Communities to Adapt to Climate Change and Restoring Rangeland Environments
Guatemala	Strengthening Environmental Governance in the Face of Climate Risks in Guatemala
Jordan	Adaptation to Climate Change to Sustain Jordan's MDG Achievements
Mauritania	Mainstreaming Local Environmental Management in the Planning Process
Mozambique	Environment Mainstreaming and Adaptation to Climate Change
Nicaragua	Local and Regional Environmental Management for the Management of Natural Resources and Provision of Environmental Services
Panama	Integration of Climate Change Adaptation and Mitigation Measures in the Management of Natural Resources in Four Priority Watersheds of Panama
Peru	Integrated and Adaptive Management of Environmental Resources and Climatic Risks in High Andean Micro-Watersheds
Philippines	Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change
Senegal	Expanding Access to Environmental Finance - Reversing the Decline in Forest Ecosystem Services
Turkey	Enhancing the Capacity of Turkey to Adapt to Climate Change

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This booklet is a compilation of 24 lessons learned from the 17 Joint Programmes of the Millennium Development Goals Achievement Fund (MDG-F) with a focus on the environment and climate change. Each lesson learned is a history at the country-level of the challenges faced and the successes achieved in protecting the environment.

These experiences are also a part of an easy-to-access online knowledge base (http://www.wiki.mdgfund.net/ECC) and are witness to humanity's efforts to adapt and to find solutions in the fight against climate change.

We hope readers will find this information useful, will share it and will replicate it in their communities and in their countries.

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