



UNDP-GEF SUPPORTED CBA COMMUNITY BASED ADAPTATION PROJECT PILOT SITES: ONAMULUNGA SCHOOL GARDEN PROJECT

Country	Namibia, North Central areas, Oshikoto Region, Onamulunga Combined School
Region	Southern Africa
Key Result Area	Agriculture/Food Security, Natural Resource Management <i>Keywords: Change Literacy, Capacity Building, Land Degradation, Sustainable Land Management, Soil Conservation, Soil Management, Community Based Adaptation, Water Security, Drip Irrigation, Organic Farming, Conservation Tilling, Drought Resistant Crops, Gender Equality.</i>
Project Activity Dates	Start: February 2011 End: December 2011
Key stakeholders	Major stakeholders are: the Onamulunga Combined School; Creative Entrepreneurs Solutions (CES). Primary beneficiaries are the grade 9 and 10 students, their families and the communities living within the pilot areas, as well as other schools in the wider area. Other stakeholders include: the Ministry of Environment and Tourism, the Ministry of Education, the Ministry of Fisheries, the Ministry of Agriculture, the Namibia Agronomic Board, GEF through its Strategic Priority on Adaptation (SPA) programme, UNDP; Small Grants Programme and all its delivery partners.

ABSTRACT

The Community-Based Adaptation Programme (CBA) is a five-year United Nations Development Programme (UNDP) global initiative funded by the Global Environmental Facility (GEF). UNDP works with a number of partners including the United Nations Volunteers and the GEF Small Grants Programme (SGP). Initial CBA investments have been made in 20 communities in the northern parts of Namibia (i.e. Omusati, Oshana, Ohangwena, Oshikoto and Kavango Regions). Climate models suggest that these areas are particularly vulnerable and face significant climate change risks, both at present and in future. To facilitate uptake of CBA strategies the Onamulunga Combined School project is focused on integrating adaptation to climate change into school curriculum. The pilot programme at Onamulunga Combined School in the Oshikoto region involves training grade 9 and 10 students in adaptation farming methods such as conservation tilling, water harvesting, and micro-drip irrigation and planting drought resistant crops. These methods are subsequently taken up by the students' native communities. This project directly contributes towards Millennium Development Goals (MDGs) 2 and 7 and, through a special focus on the inclusion of young women and girls, to MDG 3. The project also indirectly contributes to the realization of other MDGs.

BRIEF DESCRIPTION OF ISSUES

Background

Approximately 70% of the Namibian population lives in rural areas, with 60% concentrated in the seven northern regions. Climatic variability is a common phenomenon in Namibia, exhibited by persistent droughts and unpredictable rainfall and temperatures. Soil degradation and desertification are an increasing threat to agricultural productivity. The Intergovernmental Panel on Climate Change (IPCC) assessment reports and other recent studies suggest that by 2050 temperatures and rainfall over southern Africa will be 2 – 4°C higher and 10 – 20% less than the 1961-90 baseline, respectively. In addition to climatic challenges, the rural economy is further restrained by low demand for domestic products, high transportation costs and competition with South African products.

Due to the effects of worsening climatic conditions on long-term agricultural productivity, the adaptive capacities of farmers, pastoralists, and natural resource managers need to be strengthened. Coping strategies for climate change need to be enhanced at the local, regional, and national levels. Adaptation to climate change is a national priority in Namibia's National Communications (Initial National Communication, 2002, and Second National Communication, 2011) given that a high proportion of Namibia's population is directly dependent on subsistence agriculture; fishery, tourism and agriculture form the basis of the country's economy.

The target communities are facing climate risks such as frequent and more severe floods and droughts, increased temperatures and aridity, extreme changes and unpredictability in rainfall patterns and a resulting change in growing seasons. The direct impact of these changes in climate are heightened risk of food and water insecurity, decreased health levels, and threats to eco systems, traditional crops and grazing land due to severe soil degradation, deforestation and desertification. The latter, deforestation and desertification, have been brought about by anthropogenic pressure, and have considerably worsened due to climate change. Soil degradation is caused both by climate change (namely floods and increased temperatures) as well as human activities including poor farming practices.

The floods that occurred during the 2010 and 2011 rainy season adversely affected communal farmers. While it is uncertain that these specific floods were a direct result of climate change, the important point is that climate change makes extreme events that harm the community, like severe flooding, more likely to occur. Currently communities do not have any clear strategy for coping with the effects of climate change. Thus, it is important to build capacity within the community to withstand the increased likelihood of devastating climatic events, such as droughts and severe floods. All climate threats mentioned above are addressed at all project sites.

BRIEF DESCRIPTION OF PROJECT

Solution: Adaptation Approach, Components and Description

There are various Community Based Adaptation projects in Namibia. The particular project discussed here is implemented by an NGO called Creative Entrepreneurs Solutions (CES) that applies CBA measures through self-help groups. At the Onamulunga Combined School in the Oshikoto region, grade 9 and 10 students receive practical lessons in how to implement improved farming methods for a future affected by climate change. Through equipping the students with relevant agricultural adaptation skills, the pilot programme is designed to sow the seeds for uptake and wider spread of adaptation measures throughout the community.

In response to the threats of climate change outlined above, the Community Based Adaptation project works to develop and pilot a range of innovative adaptation measures that can easily be adopted on the household or community level. The adaptation projects in Namibia incorporate 20 communities across five regions of the country (altogether 13,000 beneficiaries in over 2,000 households) using a bottom-up approach involving the establishment of self-help groups within the communities, each led by a coordinator.

The project has the following six components: 1) ensuring water security, (2) using harvested flood and rain water for irrigation of vegetable crops and fish farming, (3) improving crop production on dry land, (4) introducing new, high-yield crops such as sunflower, rice and oyster mushrooms, (5) development and introduction of an energy-efficient cooking stove and (6) increasing community awareness of climate change, including adaptation and mitigation strategies. The Onamulunga sub-project combines several of these components while equipping students with agricultural adaptation skills.

The specific contribution of this project to climate based adaptation is twofold: theoretical lessons on conservation agriculture and practical application of conservation tilling, micro-drip irrigation, mulching, fertilizing and thinning. The SGP-CBA project has assisted Onamulunga with the Conservation Tillage Project (CONTILL) land preparation services, fertilizer, seeds and micro drip irrigation systems, as well as technical and management advice. The existing plots were recently extended to include a fruit orchard of 50 trees and an aquaculture project with 2000 tilapia.

Project Targets

RESULT	TARGET
<p>Objective</p> <p>To enhance the capacity of communities in the pilot areas to adapt to climate change, including variability.</p>	<p>As of July 2011 there are 423 participants in 20 groups as well as one school with 87 grade 9 and 10 students. On average the groups practice 4-6 out of a total of six components.</p> <p>The key target of this sub-project component is to test the uptake of agricultural adaptation measures among young people and the subsequent multiplier effect this exercise has in communities.</p>
<p>Outcome 1</p> <p>Enhanced adaptive capacity allows communities to reduce their vulnerability to adverse impacts of future climate hazards.</p>	<p>A mid-term Vulnerability Reduction Assessment noted a markedly positive response among key users with an average rating of 4 out of 5 on a scale measuring the improved capacity to adapt to climate change. Interviews with learners and stakeholders confirm a significantly heightened awareness of climate change and skills for adaptation.</p>
<p>Outcome 2</p> <p>National policies and programmes promote replication of best practices derived from CBA projects.</p>	<p>Specifically the pilot can contribute to this outcome by modelling new ways to 'climate proof' the school curriculum and generally increase performance by learners. Replication of this best practice will also go a long way in transforming the subsistence farming sector in line with national development plans.</p>
<p>Outcome 3</p> <p>Cooperation among member countries promotes innovation in adaptation to climate change including variability.</p>	<p>The model can be easily duplicated in other countries as a useful and effective early intervention tool.</p>

LESSONS LEARNED

Results and Learning

According to a recent field visit by an independent assessor, the Onamulunga Garden project has achieved many of the intended results. Various sites at the school have been prepared for crop agriculture using the latest conservation tilling methods for dry land crops and micro-drip irrigation for vegetables. The project coordinator is Agriculture and Life Science teacher, Johannes Nelongo, who has provided inspirational leadership for 87 grade 9 and 10 students to put the theory they learn in the classroom in practice in the field, growing maize, sunflowers, cow peas, spinach, carrots, onions and other vegetables. They apply conservation furrowing and ripping,

level Education and Early Childhood Development conference in Windhoek. In line with the recommendations at this conference the project pursues 'a learner-centered pedagogy that values students in their cognitive, cultural and affective worlds'. Education at Onamulunga, consequently, is also 'valued as a key social investment, with alliances built with other social sectors such as health and agriculture, with inclusive strategies that respond to marginal communities and students with special needs, as well as engaging in an ongoing inter-sectoral dialogue on how to best enhance the social impact of education'. Further, the project illustrates the linkages between improving human capital and economic development and meets the objective of popularizing education policies throughout communities. The project goes a long way to achieving several if not all of the Millennium Development Goals. It not only works towards the eradication of poverty and hunger and the promotion of environmental sustainability and universal education, but it also encourages gender equality through equipping girls with necessary skills. Better nutrition achieved through improved food security and diversification of crops, furthermore, contributes to child and maternal health and greatly improves the quality of life for people living with HIV/AIDS. The area is heavily affected by the HIV/AIDS pandemic and as a result, there are many orphans. Some of the proceeds from the sale of crops are used to purchase school uniforms for orphans so that they can attend school.

Sustainability

The project has built adaptive capacity for almost ninety learners, with the intention that they take these skills forward and apply them in the decades to come. Already a multiplier effect is noticeable in the children and teachers' home communities. The project focuses on establishing a strong foundation for the application of adaptation mechanisms in farming practices rather than creating dependency through aid. "Because the programme demonstrates tangible benefits for the communities involved, it is sustainable," says Marie Johansson from CES. "It will continue even if donor support stops tomorrow. It is important to start with educating kids. Young people, especially girls, pick the skills up quickly. From there on it is easier to integrate the community. Later on, many kids will migrate to urban areas and unfortunately fall in the trap of unemployment. But with the skills they learn here, there is an alternative way to make a living off the two hectares or so near their homestead. In this way even small farmers can become commercial farmers."

Replicability

The project has been so successful that it has grabbed the attention of other schools. Four nearby schools are interested and have been invited to participate. As such, Onamulunga can become a centre of learning for the community. This is compounded by the multiplier effect already mentioned, with children introducing the new methods to their parents and villagers coming to the school to see the improved cropping system with their own eyes. "As a school we need to involve communities and share the skills and knowledge that we have," says Onamulunga principal Immanuel Namupolo. "Now the community helps us to look after the project when the school is closed. We also give parents our surplus maize, so they can sell it. In doing so, the project reaches out to parents. We give them a role to play, so that they are involved in the process of adaptation."

The experiment teaches children to adapt to a situation where fertile land and water are becoming increasingly scarce resources. But the initiative also has a wider effect within the surrounding communities, with children applying their newly acquired skills in the household farm setting. Enthused by the Onamulunga success story, parents and teachers have also started their own gardens. "The proceeds from the garden save people a lot of money. Sometimes you don't even have to go to the market for a whole month," one teacher remarks.

Innovation

The project is highly innovative in that it introduces a variety of improved farming methods, including alternative water saving irrigation methods, organic fertilizers and improved crops and seeds. It is also innovative in its student-centric, practical approach of the school curriculum, leading to much higher pass rates and offering an alternative for Namibia's current educational crisis. Finally, the way in which the school has been positioned as a hub of learning for the wider community is an innovative approach, ensuring sustainability and promoting replication of the programme.

Funding

GEF (SPA): US\$960,000

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Total GEF Grant: \$1,000,000

Co-financing: US\$5,795,806.00

TOTAL: US\$6,795,806.00

CES budget is US\$ 312,000.00

Onamulunga School Project: NAD\$ 10,000

The Community-Based Adaptation Programme (CBA) is a five-year United Nations Development Programme (UNDP) global initiative, funded by the Global Environmental Facility (GEF) within the Small Grants Programme (SGP) delivery mechanism. The UN Volunteers partners with UNDP and GEF/SGP to enhance community mobilization and recognizes the contribution of volunteers in ensuring

inclusive participation throughout the project, as well as the facilitation of capacity building activities with partner NGOs and CBOs. In addition, funding is provided by the Government of Japan, the Government of Switzerland, and AusAID. The CBA's goal is to strengthen the resiliency of communities to address climate change impacts.

ALM Project Profile / Case Study

Profile Created: July 2011

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References used: CES full proposal for the UNDP/GEF SGP Community Based Adaptation (CBA) Programme, 2009; Mid-term Vulnerability Assessment (VRA) for the CBA Programme Namibia by CES, 2011; Climate Change in Namibia (IPPR), Servaas van den Bosch, 2011.

Contact Information:

SGP-CBA: Contact Nickey //Gaseb

E-mail: NickeyG@unops.org

CES: Contact Marie Johansson

E-mail: info@ces.org.na

Onamulunga Combined School: Mr. Nelongo: +264 81 69 66700

AAP-NAM: Contact Ernst Mbangula

Email: embangula@met.na

GEF Database - Namibia: <http://gefonline.org/projectDetailsSQL.cfm?projID=2915>

Adaptation Learning Mechanism: www.adaptationlearning.net

ALM Project Website: <http://www.adaptationlearning.net/project/cpp-namibia-adapting-climate-change-through-improvement-traditional-crops-and-livestock-farm>

