

SGP The GEF
Small Grants
Programme



*Empowered lives.
Resilient nations.*

Empowered Generation

Youth Action on Climate Change Through the GEF Small Grants Programme





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Youth Introduction

Today's youth has a unique stake in the global dialogue on climate change. Within their generation's lifetime, our planet's climate will cease to be what we know it to be. The effects of climate change will first be felt in the world's tropical climates which are home to the majority of the planet's population. Temperature rise, sea level rise, hydrological variability, droughts, floods and other extreme weather events are just some of the potential effects of global warming youth will increasingly experience. These effects will exert undue pressure on delicate ecosystems and likely destabilize the ecosystem services we rely on. Swift action needs to be taken with participation of communities around the world to promote mitigation measures and build resilience to climate change.

Youth is ready to take on this monumental challenge. The GEF Small Grants Programme (SGP), which is funded by the Global Environment Facility (GEF) and implemented by the United Nations Development Programme (UNDP), has found that many of today's more than 2 billion children and youth have unique insights into how to deal with climate change and can take leadership roles in promoting a low emission, climate resilient development.

To do this, however, youth urgently needs to be equipped with knowledge and tools to take action.

Tapping youth's energy and ideas, SGP has helped young people channel their creative enthusiasm into concrete actions to help their communities transition to a low carbon and climate resilient future. SGP projects are designed to support experimentation, promote innovation, and develop models for potential replication and scaling up. SGP has empowered young people at the grassroots level by providing financial and technical support to youth organizations of up to US\$50,000 dollars for projects that address climate change mitigation and adaptation. SGP's country-based National Steering Committees include a youth focal point to ensure that the youth sector is appropriately represented. To date, close to half a million youth around the world have stepped up to take action through SGP projects in their homes, their schools and their communities. Some have even reached further, creating coalitions that can have impact on a wider scale.

To date SGP has supported over 3,800 projects across more than 120 countries that have addressed climate change mitigation and adaptation. Many of these projects have involved youth participation or leadership. SGP's mitigation initiatives focus on Renewable Energy, Carbon Storage, Energy Efficiency, Sustainable Transport and Awareness Raising. To increase communities' resilience to climate change, SGP is also working in 42 countries, of which 38 are Small Island Developing States (SIDS), on community-based adaptation to climate change. This portfolio is funded through a partnership with Australian Aid and focuses on several priority sectors and themes including Agriculture, Coastal Zone Management, Land Degradation and Water Resource Management.

This publication showcases a number of SGP projects which can serve as a source of inspiration for expanding engagement with youth in addressing climate change. Employing a range of tools, young people have led and promoted the use of renewable energies, carbon footprint mapping, tree planting, disaster risk reduction measures, as well as communicated the urgency of taking action on climate change through environmental awareness raising events. In this process universities, schools, research organizations, media and government departments have played a critical role in partnering with youth organizations and scaling up their efforts.







Case Studies

Producing Biodiesel from Recycled Vegetable Oil

Grantee

Counterpart Caribbean @ The Future Centre (CC@TFC)

Project duration

June 2006 - June 2007

Grant Amount

US\$ 20,165

Co-Financing

US\$ 62,681

With the support of the Small Grants Programme, the Lester Vaughan Secondary School in Barbados with its 1,100 students implemented a project to raise awareness about the use of biodiesel as an environmentally friendly, alternative fuel for diesel vehicles. The members of the school's Environmental Club collected used vegetable oil from their homes and communities for the Sole Proprietorship, who then converted it into biodiesel and glycerin. The income generated through the sale of biodiesel and its PEP bottles was shared with the students and their school in order to conduct other environmental and community activities.

The students learned about climate change, recycling, renewable energy and also participated in business training workshops. To demonstrate the use of biodiesel in generators and for income-generating activities, the private sector donated a popcorn machine and a diesel generator, which are managed by the school's Environmental Club. The generator ran on the biodiesel produced and the funds from the sale of popcorn were used to develop additional environmental activities.

As a result of the project, a total of 3,943 liters of oil were collected, which would have otherwise been disposed of in sink drains or in another environmentally unfriendly manner. A total of 3,154 liters of biodiesel were produced and used to fuel diesel vehicles, resulting in the reduction of approximately 6,000 tons of CO2 emissions. In addition, 592 liters of glycerin, another useful by-product from the conversion of used vegetable oil to biodiesel, were produced.

Moreover, students gained more awareness regarding recycling and were able to earn a significant income from the collection of vegetable oil, to expand their climate actions. In 2008, the school received an award from the Ministry of Youth, Family, Sports and the Environment for this project. Based on this positive experience, the private sector is looking at recycling vegetable oil at the national level.



Energy Marathon – Mobilizing Students for Energy Efficiency

To support the achievement of the commitments of Belarus to the UN Framework Convention on Climate Change, in 2008, Ecoworld Fund (EKOMIR), received the support of SGP to launch a state-wide “Energy Marathon” mobilizing youth to engage and provide ideas on energy efficiency in the secondary school sector. The Ministry of Education and the Department of Energy Efficiency joined the initiative and became active partners.

The goal of the national competition among schools and students was to raise awareness on energy conservation and climate change, promote the application of innovative approaches and identify best practices on energy saving. To ensure high participation, EKOMIR reached out to 2,800 secondary schools by streaming promotional videos on TV channels across the country and by providing guidelines on participation.

The Energy Marathon became a huge success. More than 100,000 enthusiastic students and teachers participated in energy conservation activities, including the development of innovative, energy-saving measures and the creation of educational material, such as videos, flyers and posters in the national competition. At the end, a jury composed of the Ministry of Education, the Department of Energy Efficiency and the EKOMIR Fund selected, among others, the best ideas on practical energy saving measures, creative information material, and educational methods for energy conservation. The winners received diplomas and prizes for their innovative ideas on addressing energy efficiency and climate change.

During the Energy Saving Festivals, organized as part of the Energy Marathon in all the districts of Belarus, secondary school teachers had the opportunity to exchange experiences and learn good practices in environmental education.

As a result of this Small Grants Programme project, schools are using teaching methodologies on energy efficiency on a regular basis, more than 12,000 schoolchildren have become active champions for energy conscious behavior, and the secondary education sector achieved 62 tons in avoided CO2 emissions.

Due to its tremendous success, the Ministry of Education and the Department of Energy Efficiency decided to continue the practice. The “Energy Marathon” has since been held on an annual basis.

Grantee

Public Association Ecoworld Fund (EKOMIR)

Project duration

January 2008 - April 2009

Grant Amount

US\$ 46,070

Co-Financing

US\$ 46,070



Reducing the Carbon Footprint

Grantee

All China Environment Federation

Project duration

March 2010 – March 2011

Grant Amount

US\$ 49,927

Co-Financing

US\$ 32,687

The project of the All China Environment Federation aimed to minimize the power consumption in the Wangjing community of China involving 10,000 households (30,000 persons) to encourage Beijing residents to address climate change. For this purpose, with the support of the Small Grants Programme, the project raised awareness on climate change, promoted low-carbon consumer behaviors and an energy-saving lifestyle. The goal of the project was to conduct research on the incentives of energy conservation for communities in Beijing.

The core of this research project was carried out by youth. The project recruited 15 university student volunteers from 8 universities who received training on energy efficiency saving measures. One of the main tasks of the university student volunteers was to conduct door-to-door interviews on energy-saving awareness, household power consumption habits and willingness to address climate change. The other key task was to provide hands-on education on energy-saving tips to the households, install power utilization monitoring equipment in households, and to record and collect data on household power consumption.

After just one year of implementation, the project effectively raised the awareness of 30,000 people living in the Wangjing Community on energy conservation, carbon reduction and climate change. In the summer during the project cycle (May–September 2010), the average power consumption among 10,000 houses in Wangjing community dropped by 1 kWh or more per household, which contributed to the reduction of about 50 tons of CO₂ emissions. Additional impacts on Beijing residents have also been observed, as residents now spontaneously take energy-saving measures in their daily life and select energy-efficient products when they purchase home appliances.

A publication entitled “The Studies on the Incentives of Energy Conservation & Carbon Reduction in Communities in Beijing” was completed and published in China Environment Daily, which has been submitted to the Ministry of Environmental Protection, the National Development and Reform Commission, the Beijing Municipal Government and other relevant authorities.



Building Resilience of Coastal Communities to Climate Change

Mangroves play a fundamental role in mitigating the effects of climate change in coastal communities and are also an important source of livelihood. Global Unification The Gambia, an established youth-led civil society organization, initiated this project to reduce vulnerability to climate change in three communities on Gambia's West Coast. The project, supported by the Small Grants Programme, is in the final stages of implementation and is working primarily with youth.

The main objective of the youth-for-youth project is to counteract the effects of sea level rise and soil erosion through the conservation and rehabilitation of mangroves. In a capacity building workshop on mangrove regeneration and coastal protection, 75 youth were trained on mangrove identification and planting techniques, as well as propagules collection methods. Participating youth also received on-the-job training during the actual planting process.

To date, more than 20,000 mangrove seedlings have been planted in 12 hectares of strategic or degraded areas along the coastline. By acting as a buffer zone to storm surges and sea level raise, the mangroves are improving the resilience of the community. In addition, this reclaimed area has also become important for the conservation of the coastal ecosystem as mangrove roots absorb massive amounts of nutrients and sediment from land runoffs, thereby reducing ocean pollution.

Another important element of the project was to raise awareness on environmental management and to change destructive behavior within the community. The project improved the capacity of the community by training 40 women in communications and running an effective public education and awareness raising campaign. As a result, more than 300 youth learned about sound environmental management and communities recognize the link between climate change, biodiversity and sustainable livelihoods. They are now able to take an active role in improving their resilience towards climate variability and extreme weather events.

To improve sustainability and provide alternative income to the community, the project promoted sustainable harvesting of mangrove products. Hence, the youth organization trained 25 women oyster collectors on sustainable oyster culture and emphasized the importance of not cutting the mangrove shoots on which oyster breed, as this practice destroys the mangroves and their ecosystem.

As a result, capacity of community members to manage local ecosystems to reduce vulnerability to climate change has been strengthened. In all three communities, local project management communities composed of male and female youth were set up and are functional, continuing to play an active role in monitoring and supervising coastal protection measures.

Grantee

Global Unification The Gambia

Project duration

November 2012 - October 2013

Grant Amount

US\$ 10,000

Co-Financing

US\$ 5,200



Developing a Bamboo Bike Factory as a Social Enterprise

Grantee

Bright Generation Community Foundation

Project duration

February 2012 – May 2013

Grant Amount

US\$ 30,200

Co-Financing

39,000

Website

www.brightgeneration.org



The Bright Generation Community Foundation (BGCF), a youth-focused NGO, sought SGP's support to develop its Ghana Bamboo Bike Initiative into a viable social enterprise. As many rural communities in Ghana lack suitable transportation, bicycles can meet this important need by providing an affordable, non-polluting mode of transport.

Using bamboo for bicycles provides significant environmental benefits. Bamboo bikes are much less energy-intensive to produce and recycle than steel bikes, saving 5 kg of carbon dioxide emissions per bike. In addition, bamboo forests absorb CO₂ and generate up to 35% more oxygen than an equivalent stand of trees, and its elaborate root system reduces soil erosion.

A key project component was to build BGCF's organizational and technical capacities on its Ghana Bamboo Bike Initiative. With SGP's support, BGCF created a business plan and established a bike factory. 15 rural, unemployed youth and women were trained in the construction and maintenance of bamboo bikes, collaborating with MTG Engineering (China) and the Technical University of Delft (Netherlands). The trainees also gained entrepreneurial skills through a workshop run by the National Board for Small Scale Industries (NBSSI).

These trainings significantly improved the quality of the bikes, helping the initiative obtain the ISO 9000 quality standard certification for their bikes. These improvements generated sustainable employment opportunities at a higher wage than most enterprises in the area, directly benefiting 75 family members. Currently, the factory employs 25 young women, who produce 60-100 bamboo bikes monthly. The introduction of bamboo bikes generated strong ripple effects by facilitating transportation in the communities and empowering farmers and businesses to transport their goods to the market. With faster transportation, access to medical and school facilities is easier. School attendance for children has increased as their previous 2-hour daily commute vanished.

To ensure a sustainable supply of native bamboo, BGCF created a 2.5 ha-bamboo plantation and nursery with a capacity to produce 10,000 bamboo seedlings. The nursery, which was developed with the technical support of the International Network for Bamboo and Rattan (INBAR) and the Ghana Forest Research Institute, also rehabilitates the community's dwindling forests. 1,500 bamboo seedlings were initially purchased and transplanted by youth, who received technical guidance on planting and maintenance of bamboo along the way.

Today, local and overseas demand for the bicycles far exceeds the initiatives' current supply. Its innovative approach has also won several awards: 2010 SEED Award; 2012 Samsung Generations for Peace Award; 2012 UN Habitat/Dubai International Best Practice Award; 2012 World Business and Development Awards (WBDA) for its efforts to improve living standards in some of the world's most disadvantaged communities; and UNFCCC's 2013 Momentum of Change 'Women for Results' award for the most innovative initiatives by women combating climate change. Bernice Dapaah, Executive Director of BGCF, received recognition for her efforts in sustainable enterprise development with a focus on youth.

Biodiesel Production: Turning Waste to Fuel

The goal of this Small Grants Programme supported pilot project is to increase awareness about renewable energy sources among students and residents in marginalized communities. In cooperation with the Departments of Chemistry and Physics at the University of the West Indies (UWI), the project is testing the feasibility of converting waste vegetable oil into biodiesel with the objective to reduce the use of fossil fuels and associated Greenhouse Gas (GHG) emissions in Jamaica. As such, the project serves as a research center for fuel diversification and climate change mitigation.

The project launch included a high-profile public awareness campaign on climate change and environmental conservation which improved the understanding of students and youth on waste management. In particular, students learned about the environmental degradation, health and pollution risks related to improper disposal of waste, such as vegetable oil waste. Approximately 200 persons, including students from primary, high and tertiary level institutions, attended the launch and were able to witness the biodiesel conversion process.

The project has become a learning center where the pilot-scale biodiesel processor is not only being used for the conversion process, but also to show visitors the chemical process that is involved during the production of biodiesel. Youth have been involved throughout the project and are in charge of coordinating the collection of vegetable oil waste from school canteens, community households and businesses. Youth are also engaged in raising awareness, mainly during the collection process.

Although the project is still under execution, it is already showing solid results. Over 30 members from five communities and one school have been trained and have a better understanding of environmental stewardship, conflict resolution, alternative energy, biodiesel conversion, soap-making and entrepreneurship. Approximately 800 liters of waste vegetable oil have been collected so far and over 65 youth from schools and communities are directly involved in the project.

As a result of their enhanced knowledge and skills, these youth are now active environmental champions in their schools and communities and have established connections with experts in the industry. Some youth are even considering becoming entrepreneurs by developing businesses around biodiesel conversion, soap making or the design and construction of biodiesel converters from material that is locally available.

The project has been so successful that the Caribbean Green Technology Center (CGTC), hosted by the University of the Virgin Islands, has formally approached the UWI to help them pilot a similar initiative in the US Virgin Islands. An initial scoping mission to the Virgin Islands took place in October 2013 and included senators and other government officials, to enhance buy-in and support for a similar project.

Grantee

Youth Crime Watch of Jamaica

Project duration

August 2012 - February 2014

Grant Amount

US\$ 50,000

Co-Financing

US\$ 50,750



Youth as Drivers of Key Innovations in EE/RE

Grantee

Bulak NGO, Akbota NGO and Zhenskiy Luch (Women Ray) NGO

Project duration

December 2012 – May 2014

Grant Amount

US\$ 30,522; US\$ 42,022; US\$ 46,022

Co-Financing

US\$ 54,700; US\$ 32,700; US\$ 24,900

In Akmola, the northern region of Kazakhstan, school-based NGOs comprised of teachers and principals got together, formed a network, and developed an umbrella project to introduce Energy Efficiency (EE) technologies to the schools in the region. Through an innovative scheme where each NGO is responsible for the implementation of one component of the project in all 4 project sites, the initiative has been successful in testing and promoting EE approaches among government officials, students and communities. Supported by the Small Grants Programme (SGP), the project has attracted more than 4,000 students as well as the attention of 10,000 community residents and some government officials.

The project was implemented in three key components. One component focused on energy-efficient lighting and was responsible for the installation of LED lighting systems in all of the classrooms in the four schools. As a result, the schools have reduced their electricity consumption by at least 50% while also improving the lighting conditions in the classrooms from 30-60 lumens to 300 lumens per class. Previously, inadequate lighting had contributed to the deterioration of vision among children (from 5-10% at the beginning to 50-60% at point of graduation). Hence, the project is not only helping to combat climate change but is also having an important effect on the learning environment and the health of the students. In particular, energy-efficient LED systems save up to 60% of the electricity consumed by incandescent lamps and up to 50% of the electricity consumed by fluorescent lamps. Besides, life cycle of LED lighting is 50 times longer than that of a standard lamp.

The second component focused on establishing energy-efficient greenhouses near the schools to provide school canteens with fresh organic vegetables, such as tomatoes, potatoes, beets, cabbage, pumpkins from early spring until late autumn (March-October). Traditional glass greenhouse surfaces were replaced with energy-efficient polycarbonate which keeps temperatures 10-15 degrees higher, thus eliminating the need for furnace heating and reducing CO2 emissions. This has allowed the schools to offer more affordable school lunches at 50 cents per child, which helps improve the nutrition among the school children who come primarily from poor families. In addition, the initiative has an educational component where children learn how to grow their own vegetables. This has allowed schools to offer more affordable school lunches at 50 cents per child, which helps to improve the nutrition of the school children who come primarily from poor families.



The third component focused on solar water heaters as most schools in remote areas do not enjoy access to hot water. New solar water heaters were installed to replace inadequate electric water heating and reduce emissions while also allowing children to wash their hands with hot water and helping canteens wash dishes more effectively.

In addition to these main components, the project aimed at identifying small youth initiatives on alternative energy and energy efficiency. For this purpose, the “Youth Glance in EXPO2017”, a competition for youth ideas on energy efficiency was launched and supported by SGP, UNDP, the Ministry of Environment, the Ministry of Education and Coca-Cola in May 2013. The event was highly popular, attracting more than 70 students between 13 and 18 years of age including youth from other Central Asian countries such as Uzbekistan, Kirgizstan and Tajikistan. Applications were submitted to SGP who selected the nine best youth projects. The projects are currently implemented by the youth and contribute to the improvement of various educational facilities through the use of motion sensors for lighting systems, EE woodworking machines, LED and other EE lighting and solar water heaters. The next competition is scheduled for 2014.

In October 2013, the project launched an “Energy safe week” during in which over 2,000 young people, their parents, teachers and local authority representatives learned about EE from presentations that each school made. The project also provided special educational courses on environmental technologies to reinforce theoretical knowledge with practice. Now children can study firsthand how solar water heaters or EE lighting work.

Although the project is still in progress, the schools have become learning centers on EE technologies and are visited by mass-media, NGOs, local authorities, UNDP and other donor representatives where students and teachers presented the project. Site visits and knowledge exchanges among the schools are taking place on a regular basis, including a visit to one of the project sites by the elder daughter of the President of Kazakhstan.

The results have been presented, among others, to Akimat’s government officials and the Department of Education, who are currently considering the wider promotion of these EE technologies through the state budget in other schools at the provincial level. The project and its pilot schools were also selected as one of the pilot territories for the large EE lighting project by the Global Environmental Facility (GEF), which supports EE lighting approaches at the national or regional level.



Fanaaru 2011 – Uniting Youth to Fight Climate Change

Grantee

Maldivian Youth Climate Network

Project duration

January 2011 – October 2012

Grant Amount

US\$ 14,000

Co-Financing

US\$ 11,000

Website

<http://mycn.mv>

Comprised of nearly 1,100 coral islands, most of which are only a few feet above sea level, the Maldives is the lowest lying country in the world and one of the most vulnerable nations to sea level rise as a result of climate change. Since the islands lie on coral reefs, they are at the forefront of climate change as high acidity and ocean temperature rise are destroying the coral ecosystem. In addition, the islands suffer from severe soil and beach erosion.

To tackle some of these issues and empower the youth to take an active role in addressing climate change issues, the Maldivian Youth Climate Network (MYCN), a group of like-minded, committed young people applied to the Small Grants Programme to support the creation of a strong alliance and network among various youth groups working on climate change. Since more than half of the population in the Maldives is under 25 years of age, the organization saw a unique opportunity to inspire and empower young people to take action against climate change.

Through educational sessions and networking, the MYCN successfully managed to mobilize close to 300 youth from several atolls of the Maldives. One of the main activities was a three-day summer camp on youth and climate change (“Fanaaru 2011”) which provided participants with a unique opportunity to connect and establish a strong bond among youth NGOs and CBOs across the nation. It also provided a platform for youth to come up with innovative solutions for mitigating and adapting to climate change.

At the camp, participants learned about the importance of coral reefs and their vulnerability to climate change as well as other important practices, such as dredging and overfishing and their impact on the ecosystem. Participants also discussed the difference between weather changes and climate change and the difference between ozone layer depletion and global warming. To further empower them to make a difference in climate change, these youth received training on leadership.



As a result of the “Fanaaru 2011” camp, participating youth are now well informed about climate change mitigation and adaptation measures and some participants have proactively conducted trainings on climate change to share their knowledge with their communities. Most importantly, participants are now connected within a strong network that offers enhanced collaboration and coordination among its members and other relevant government organizations and other institutional partners for climate change programmes and activities.

Another major outcome of the sessions was the “Let’s LEDify” project, an initiative spearheaded by two students of Addu High School, who sought to convert all lighting in their school to LED. The students were able to install a total of 105 LED lights, replacing the high energy consuming tube-lights in their school while also launching a community awareness program on the benefits of reducing GHG emissions.

The educational sessions provided MYCN with valuable insight about the level of understanding of youth on climate change issues, which has served them as a benchmark and a tool to further fine tune and design the contents of the climate change tools they use. With the technical support of MYCN, three youth-led NGOs who participated in the camp have now submitted project proposals to the Small Grants Programme for support.



Measuring Ecological Footprints in Urban Areas

Grantee

Persatuan Perlindungan Alam Sekitar
Environmental Protection Society,
Malaysia (EPSM)

Project duration

February 2012 - December 2013

Grant Amount

US\$ 48,426

Co-Financing

US\$ 42,525

Supported by the Small Grants Programme, the Environmental Protection Society of Malaysia (EPSM) is working with youth to measure the environmental impact of the lifestyles of urban households in the country. The project targeted youth in five educational institutions comprising high schools and colleges in Malaysia's urban centers, including the capital city of Kuala Lumpur.

Students between 14 and 19 years of age were selected and trained on how to measure and compile detailed household data required to estimate the carbon, water and food footprints of their respective households. As a result, as of September 2013, 414 students had already surveyed their households while more students continue to be recruited for the final two rounds of surveys, which will be concluded by December 2013.

The project also organized a talk on Sustainable Living in Malaysia and Ecological Footprint Analysis in Kuala Kangsar where 600 youth improved their understanding on the impact of their lifestyles on the environment. The presentation promoted reduced consumption of electricity, petrol and water; greater use of public transport; lower consumption of meat; more home-cooked meals; and composting of kitchen waste.

The presentation highlighted links between the ecological footprint data collected and climate change, water security and livestock production. On completion of the presentation, many of the youth commented that the survey and ensuing discussion had given them a new perspective on the environment and motivated them to act.



Given the emphasis of the project on living sustainably within the ecological limits of the planet and the urgent need to reduce our footprint, these youth were provided with the knowledge, data and action plans to become agents of change. More significantly, the students made a tremendous contribution to public policy by providing unique and detailed environment-related data not usually available in the public domain. Once the data analysis is completed, the ensuing report can be used for policy intervention by EPSM and for planning purposes by a range of government agencies.

Finally, EPSM has designed and will hold a series of capacity building seminars on Sustainable Living in Malaysia with the theme “Living within the Ecological Limits of One Planet” to be launched on November 26, 2013 in Kota Kinabalu. The seminars will present case studies on effective ways of reducing the carbon, water and food footprints. Participation is open to a wide range of stakeholders including the government, professionals, non-governmental organisations, private sector, businesses, academia, as well as the youth.



Increasing the Resilience of the El Mouddaa Community

Grantee

Association AMSING

Project duration

July 2011 – December 2012

Grant Amount

US\$ 34,209

Co-Financing

US\$ 296,347

The Association AMSING, a youth-led, community-based organization, initiated a range of projects to improve the resilience and sustainable development of El Mouddaa, an isolated village in Morocco's High Atlas mountains. The goal of the Small Grants Programme (SGP) project was to increase the adaptive capacity of the community, of which two thirds are youth, for dealing with increasingly erratic and extreme weather patterns and protect natural resources, such as land and water. The project piloted a combination of adaptation solutions, including biological and mechanical ravine corrections aimed at ecosystem and infrastructure protection; resilient farming techniques aimed at strengthening livelihood and food security; and experiments on a valley-wide, community-based early warning system.

One of the key success factors of this project is its powerful community mobilization and participatory approach, which allowed all community groups to contribute their specific knowledge and skills while also equitably benefiting from the project. Even though the elders traditionally hold local authority, this project was managed by youth with the elders bestowing and granting youth the legitimacy to take leadership.

The adaptation efforts were successful in improving the wellbeing of the local community through the protection of critical village infrastructure and strengthening of local food security. Youth built rock dams to reduce the floodwater flow and prevent infrastructure damages to the village. In addition, they buried the main irrigation line to ensure permanent irrigation flow, thus reducing the vulnerability of local farming to droughts. The community also learned how to revive traditional subsistence practices to improve food security.

Through local consultation and awareness-raising, this youth-led project helped the community set aside large sections of land around the village for conservation, reforestation and re-vegetation. It outlawed the grazing of herds in and around the village in an effort to protect and sustain native shrubs and grasses. The re-vegetation improved soil and reduced erosion flash flooding risks.

The project is also testing a user-friendly, low-cost technology in water and sanitation to prevent hazardous chemicals from contaminating irrigation water, damaging soils and crop production. These activities contribute to environmental protection, sustainable natural resource management and protection of ecosystem services. Furthermore, the project installed an early flash flood alarm system in order to support community-based disaster risk management.

This project was part of 8 community-based adaptation (CBA) projects delivered by SGP under the UNDP-GEF CBA programme in collaboration with ten local, national and international organizations, including the US Peace Corps, the US Forestry Services and the GIZ. This project was selected among 800 contestants for its outstanding community-based adaptation measures as the winner of the Equator Prize in 2012.



Beach Restoration of Tobi Island Sand Dunes

Tobi Island, also known locally as Hatohobei in Palau, is a spectacular low lying atoll and tropical hotspot in Micronesia. The island has been at the forefront of climate change, facing challenges such as sea level rise and coastal inundation, threatening the livelihoods of its inhabitants, especially youth and children. It is estimated that the west side of Tobi island has been losing one meter of beach and sand each year due to severe coastal erosion, which became more noticeable in 2004.

By 2006, significant parts of the island's coastline had been swept away and lost. This included the destruction of sand dunes as well as coastal protective trees and shrubs, all of which offer protection against salt spray on the agricultural and food resources of island and are critical for its resilience to climate change.

In an effort to address this issue, the Traditional Leadership of Hatohobei requested the support of the Small Grants Programme in 2007. The goal was to implement a youth-centered project to restore the sand dunes and improve coastal protection. Building community and youth awareness on climate change impacts was an important element of the project.

Over fifty youth volunteers from an environmental summer camp helped build a nursery and plant over 1,000 salt tolerant, native plant species and vines to restore biodiversity along half a mile of coast line while learning about the threats of climate change to their village. Youth also built sand dunes and carried out beach restoration activities to help mitigate coastal erosion.

Thanks to the growing of protective trees along the coastline, land, fruit trees and agricultural resources are now better protected from further land degradation and salt spray intrusion. Participating youth have had the opportunity to reconnect with nature, thereby gaining a deeper understanding of the importance of keeping their island resilient and learning from their elders.

Grantee

Hatohobei Women Association (HWA)

Project duration

June 2008 – June 2009

Grant Amount

US\$ 50,000

Co-Financing

US\$ 47,750



Indigenous Youth Develop Improved Cooking Stoves

Grantee

Sustaining Rwanda Youth Organization (SYRO)

Project duration

April 2012 - now

Grant Amount

US\$ 45,000

Co-Financing

US\$ 45,000

Website

www.sustainingrwanda.org

Clay products, including clay cooking stoves, are often made by indigenous people in Rwanda. However, these stoves are not energy efficient and consume a large amount of firewood. The student-run NGO Sustaining Rwanda Youth Organization (SYRO), an organization comprising 30 university students, developed a project to help young people from indigenous communities in Ndora improve the quality of their stoves to increase their production capacity, reduce cooking time, and to increase awareness about the benefits of these stoves. The technology used for making the stove was provided by the Department of Energy, Water and Sanitation.

With the support of the Small Grants Programme, SYRO trained around 50 indigenous young people on how to build energy-efficient kilns, help them register the indigenous youth group as a cooperative, and establish a store to improve the sales of the stoves. Moreover, to promote awareness about the use of the improved clay cooking stoves, the youth organization also started a door-to-door campaign.

Although the project is still ongoing, it is already showing promising results. Since project start, more than 1,000 energy efficient cook stoves have been sold, reducing firewood consumption by 60% in those households. These stoves are stronger and more readily available in Ndora than before, as the cooperative now has the capacity to produce about 100-200 stoves per week. Furthermore, the revenue earned by the social enterprise is deposited into the newly established Saving and Credit cooperative that covers all mandatory medical insurance fees for its members. The cooperative's store has already attracted many visitors and potential donors.

Due to this initial success, this youth cooperative is now recognized as a formal partner of the District administration in promoting energy efficiency in the Gisagara area where it has already participated in a number of District fairs to showcase its new and improved energy efficient stoves. Finally, the project has not only empowered youth and indigenous people to take action on climate change but also created a cooperative that is able to provide improved services to its members and can be sustained in the long run.



Illuminating a Youth Village with Solar Energy

In 2005, Ushirika wa Vijana wa Kikristo wa Uzalishaji Tanzania (UVIKIUTA), a youth cooperative located in the peri-urban area south of Dar es Salaam, approached the Small Grants Programme to support the solar electrification of their village which did not have access to electricity from the national grid. The lack of access to electricity was a major issue impeding their development and affecting their quality of life.

The project installed solar PV systems for lighting and radio powering in eight residential houses as well as a hostel and office facilities. Youth group members received-on-the-job training on how to operate, troubleshoot, service and generally maintain the solar energy system in the village. In addition, through a partnership with an NGO, technical guidance on maintaining the solar energy installations is provided twice a year to ensure sustainable results.

The village is now a demonstration site for solar energy, raising awareness about the benefits of PV systems in improving environmental conditions and living standards. In particular, the village learning center offers intensive training sessions on renewable energy and, over the last seven years, more than 2,000 youth have been trained on renewable energy technologies. The village also facilitates a youth exchange programme with Europe to promote knowledge exchange between youth from Tanzania and EU countries.

The availability of high quality lighting has extended working days well into late evenings and improved safety throughout the center through the use of street security lights. Youth now have easy access to information thanks to functioning communication facilities such as radios, TVs and mobile phones. The adoption of renewable energies has also resulted in considerable time and cost savings for the community, while income from the rental of the hostel and office facilities funds the maintenance of the solar energy system.

Following the adoption of the solar energy technologies, the use of kerosene (150 liters per month) and dry cells (150 cells per month) for lighting has been phased out. The installation of a parabolic solar cooker has reduced reliance on biomass and fuel wood for cooking by 75% and hence contributed to a reduced rate of deforestation and forest degradation in the surrounding areas. This has eased pressure on fossil fuels and reduced emissions of carbon dioxide (CO₂) and other greenhouse gases. Similarly, indoor air quality improved significantly, which helped eliminate respiratory diseases.

The Youth Village has gained high visibility in the media, thanks to visits by a number of VIPs. Notable visitors include the First Lady of Tanzania, Mrs. Anna Mkapa, Representatives of the US Congress, as well as the UNDP Administrator. To date, a number of individual households and public institutions have also installed their own solar PV systems.

Grantee

Ushirika wa Vijana wa Kikristo wa Uzalishaji Tanzania (UVIKIUTA)

Project duration

November 2005 – December 2006

Grant Amount

US\$ 31,054

Co-Financing

US\$ 7,384



Rehabilitating a Forest Ecosystem to Reduce Emissions

Grantee

Oberig – Association of Hunters

Project duration

April 2012 – April 2013

Grant Amount

US\$ 38,776

Co-Financing

US\$ 41,818



In a remote corner of the Ukraine, a community located near the Rivne National Protected Area, initiated a project with youth participation to rehabilitate the degraded forest ecosystem surrounding the Rivne region and to protect the habitat for endangered species listed in the Ukrainian Red Book.

Local scientists and experts developed a methodology of species composition and landscaping to rehabilitate the endangered forest ecosystem comprising species such as *Querceto roboris*, *Pinetum sylvestris*, and *Juniperoso communis – hylocomiosum*. With support of local activists, the project team planted over 1,230 trees, including 15 Red Book species, in 40 natural habitats covering a territory of three hectares of degraded forests.

Joining the worldwide campaign “The Green Wave”, a Children’s Ecological Camp was launched to celebrate the International Day of Biodiversity in which 60 school children from four local schools participated. Students planted rare and endangered species and learned about the global challenges of biodiversity protection and climate change through environmental films, eco-games and quizzes. The three winners of the eco-quiz received honorary diplomas and valuable gifts. Local experts conducted master-classes, environmental lessons and an excursion to conservation areas, which were undertaken through the joint efforts of the Small Grants Programme and the Ostky forestry department.

Three local schools transitioned to “green classrooms” by installing energy-saving equipment, conducting ecological lessons, and developing ecological libraries including films, books and a list of useful on-line sources. An official website (www.oberig-project.org.ua) was created to encourage youth to build a social network of environmentally-conscious people at the regional level. In addition, the project also established the All-Ukrainian Environmental Forum “Children for Environment: The future We Want!” where children are able to reflect on their actions and explore exciting new discoveries, ideas, and experiences.

The project has already produced tangible global environmental benefits and improved the lives of the local people. The *in-situ* conservation areas lead to a reduction of over 3 tonnes of CO₂ per year while at the same time offering an excellent opportunity for practical ecological education. “Henceforth each spring and autumn children will plant trees, get new useful knowledge, enjoy environment-friendly activities while expanding conservation areas”, said Ostky’s school principal Ms. Valentyna Gryshkovets. The project has become a demonstration site, attracting the attention of many nearby communities.

In total, 620 schoolchildren enjoyed new educational opportunities and more than 800 people became involved in project activities. The local community established new community-based organizations (CBOs) and partnerships with local civil society organizations (CSOs). The project team also launched the crowd-sourcing initiative “Plant a tree!” to mobilize additional financial sources for tree-planting activities.



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GEF SMALL GRANTS PROGRAMME

Established in 1992, the GEF Small Grants Programme (SGP) works directly with communities around the world to address environmental issues. With grants of up to US\$ 50,000, SGP has supported over 17,000 community-based projects to address biodiversity conservation, climate change mitigation and adaptation, land degradation, chemical pollutants and protection of international waters, – while creating sustainable livelihoods.

To date, climate change represents 22% of the portfolio with 3,800 projects on climate change mitigation and adaptation. SGP's mitigation portfolio focuses on Renewable Energy, Carbon Storage, Energy Efficiency, Sustainable Transport and Awareness Raising.

To increase the resilience of communities to climate change, SGP is working in 42 countries, of which 38 are Small Island Developing States (SIDS), on adaptation measures. This portfolio is funded through a partnership with Australian Aid and focuses on Agriculture, Coastal Zone Management, Land Degradation and Water Resource Management.



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