



Community Action to Achieve Environmental Sustainability

The experience of the Global Environment Facility's Small Grants Programme in Egypt and the occupied Palestinian territory



SGP The GEF
Small Grants
Programme



*Empowered lives.
Resilient nations.*

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Published February 2013



Photo by Ahed Izhiman, UNDP/PAPP Photo Archive

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Acronyms

BERC	Biodiversity and Environmental Research Centre
CBO	Community Based Organization
CBD	Convention on Biological Diversity
CFL	Compact Florescent Lamp
CSO	Civil Society Organization
FAO	United Nations Food and Agriculture Organization
GEF	Global Environment Facility
GDP	Gross Domestic Product
NGO	Non-Governmental Organization
oPt	occupied Palestinian territory
PAPP	Programme of Assistance to the Palestinian People
POP	Persistent Organic Pollutant
SGP	Small Grants Programme
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children’s Fund
UNIDO	United Nations Industrial Development Organization
UNOPS	United Nations Office for Project Services
USD	United States Dollar



Photo by UNDP/PAPP Photo Archive

—Frode Muring, United Nations Development Programme Special Representative of the Administrator in the occupied Palestinian territory

Foreword from the occupied Palestinian territory

The Global Environment Facility’s Small Grants Programme (GEF SGP) is a global programme that engages civil society organizations and supports local leadership to achieve global environmental sustainability and improve local livelihoods. Partnering with GEF SGP since 1996, the United Nations Development Programme’s Programme of Assistance to the Palestinian People (UNDP/PAPP) has supported local communities in the occupied Palestinian territory (oPt) in addressing the linked challenges of environment and development and increasing resilience in these areas through its small grant mechanism. The programme has produced significant results—as this publication will demonstrate—by relying on the innovations and local knowledge of communities. Local and national partners have been able to hone in on specific challenges, such as resource scarcity, climate change (visible through limited precipitation), as well as the occupation and resulting inequalities.

Our local partners have been able to protect biodiversity and preserve native species through the creation of seed banks and parks and tackle climate change through innovative solutions such as solar food dryers, which are significantly more efficient than those that run on fuel. Parallel to the environmental impacts achieved, GEF SGP has supported marginalized groups and women, helping them to generate sustainable livelihoods and alternative income, thus creating long term win-win solutions.

Access to clean water is a critical issue for Palestinians, and with support from other co-financers such as the Coca Cola “Every Drop Matters” programme, GEF SGP has been able to support local initiatives, for example, that do research into which plant species can survive with the least water but have the greatest resilience. GEF SGP grantees have also worked on reforestation, which improves watershed management and has implications for the broader water problem. Such local solutions can be critical for farmers in remote areas and enhance their ability to remain viable on the land.

In addition, GEF SGP works hard to ensure the involvement of women in both the design and implementation of projects, and to ensure equal distribution of benefits

within the community. Hence, GEF SGP has become a catalyst for women to engage in the workforce and contribute to the economic strength and stability of their families.

I have found GEF SGP projects in the oPt to be very impressive, contributing to international knowledge about the environment and climate change. UNDP/PAPP has been supporting the programme with technical and financial resources and is proud to present some of the results and accomplishments of its grantees in this publication. Our local partners have been able to capitalize on small support, using it to cross the first hurdle, gain knowledge and invest sustainably in the solutions they believe in.

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Foreword from Egypt

“Vulnerable on a number of environmental fronts, Egypt was among the first countries to join the GEF SGP in its pilot phase.”

This publication portrays how absolutely vital it is to engage local communities in the development and implementation of projects and strategies in a field as key to human livelihoods in Egypt as is the environment. Using real life success stories from all over Egypt, it showcases how people and communities address critical challenges that affect their daily lives, such as climate change, land degradation and water scarcity through the valuable technical and financial support of the Global Environment Facility’s Small Grants Programme (GEF SGP).

Vulnerable on a number of environmental fronts, Egypt was among the first countries to join the GEF SGP in its pilot phase. Over the last 20 years, the programme has undergone a continuous evolution: having started with the implementation of simple projects such as tree plantation as a sink for carbon dioxide and promotional projects for solar water heaters and biogas units as climate change mitigation measures, the programme now supports complex community-based infrastructure projects, as well as the development of national environmental policies.

To boost its results, the programme came up with an approach that quickly became a key ingredient to its success: linking these small-budget SGP projects to multimillion dollar GEF projects. This offered Egyptian environmental organizations and local communities a unique opportunity to contribute to the implementation of national environmental initiatives, while simultaneously building their own resilience by accessing innovative technologies and approaches disseminated by the GEF SGP.

The most noteworthy achievements of this approach not only fall in the field of climate change mitigation, which now enjoys heightened international interest, but tackle some of the country’s most economically and socially pressing development issues. To mention a few, a small grants component of the UNDP GEF Energy Efficiency Project’s technical assistance on Compact Florescent Lamps (CFLs) was used by over 30 non-governmental organizations (NGOs) to promote the use of CFL in various governorates, contributing significantly to the expansion of the CFL market in Egypt and, ultimately, the reduction

of electricity bills of hundreds of households. Likewise, in the UNDP GEF BioEnergy for Sustainable Rural Development Project, NGOs supported by GEF SGP promoted bio-energy technologies and the training of local communities to build their own biogas units, creating job opportunities and supporting income generation as well as (and most importantly, given the pressing need) providing an alternative to butane gas cylinders in cooking.

Another particularly interesting and celebrated success story takes place in one of Egypt's most thriving protected areas: Saint Katherine. In this particular case, the GEF SGP project led to the development of a multimillion dollar GEF project and continues to provide assistance to the Medicinal Plants Association established by this project among the Bedouin community in Sinai to support income generation and job creation activities related to medicinal plants conservation.

This is what makes the GEF SGP in Egypt so important in the field of development. It is participatory and responsive to pressing development challenges and needs of communities.

I would like to extend my appreciation to the GEF SGP teams of the Egypt and oPt programmes for their efforts and encourage them to strengthen this innovative model for South-South cooperation and exchange of experiences for the benefit of their local communities.



*—Anita Nirody, United Nations
Development Programme Egypt
Resident Representative*

“GEF SGP has made a long-term commitment to local and community sustainable development that produces global environmental benefits, taking ‘local action, global impact’ as its mission statement.”

Introduction to GEF SGP

Launched in 1992, the year of the Rio Earth Summit, the Global Environment Facility Small Grants Programme (GEF SGP), implemented by the United Nations Development Programme (UNDP), and executed by the United Nations Office for Project Services (UNOPS) has worked with communities and civil society around the world to grapple with critical global environmental problems. With a presence in 126 developing countries and having provided more than 14,500 grants worldwide by 2012, GEF SGP’s cumulative experience and results have demonstrated that supporting communities in their efforts to achieve more sustainable livelihoods is not only possible, but necessary for achieving global environmental benefits.

GEF SGP has made a long-term commitment to local and community sustainable development that produces global environmental benefits, taking “local action, global impact” as its mission statement. By channelling financial and technical support directly to community-based

The Global Environment Facility

The Global Environment Facility (GEF) unites 182 member governments—in partnership with international institutions, civil society organizations (CSOs), and the private sector—to address global environmental issues. Established in 1991, the GEF is today the largest funder of projects to improve the global environment. The GEF has allocated USD 10 billion, supplemented by more than USD 47 billion in co-financing, for more than 2,800 projects in more than 168 developing countries and countries with economies in transition.

An independent financial organization, the GEF provides grants to developing countries and countries with economies in transition for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and chemicals. These projects benefit the global environment, linking local, national, and global environmental challenges and promoting sustainable livelihoods.

The GEF partnership includes 10 agencies: the United Nations Development Programme (UNDP); the United Nations Environment Programme (UNEP); the World Bank; the United Nations Food and Agriculture Organization (FAO); the United Nations Industrial Development Organization (UNIDO); the African Development Bank; the Asian Development Bank; the European Bank for Reconstruction and Development; the Inter-American Development Bank; and the International Fund for Agricultural Development. The Scientific and Technical Advisory Panel provides technical and scientific advice on the GEF’s policies and projects.

The GEF serves as financial mechanism for the following conventions:

- Convention on Biological Diversity (CBD)
- United Nations Framework Convention on Climate Change (UNFCCC)
- Stockholm Convention on Persistent Organic Pollutants (POPs)
- UN Convention to Combat Desertification (UNCCD)

The GEF, although not linked formally to the Montreal Protocol on Substances That Deplete the Ozone Layer, supports implementation of the Protocol in countries with economies in transition.

The United Nations Development Programme

Since 1966, the United Nations Development Programme (UNDP) has been partnering with people at all levels of society to help build nations that can withstand crisis and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in 177 countries and territories, UNDP offers global perspective and local insight to help empower lives and build resilient nations.

UNDP works in four main areas:

- Poverty Reduction and Achieving the Millennium Development Goals (MDGs)
- Democratic Governance
- Crisis Prevention and Recovery
- Environment and Sustainable Development

In all areas of its work, UNDP encourages the protection of human rights and the empowerment of women, minorities and the poorest and most vulnerable. UNDP receives voluntary contributions from nearly every country in the world.

Because of its mandate and its strong, continuous and neutral presence in most developing countries, UNDP coordinates all United Nations development activities at the country level as manager of the UN Country Team.

UNDP Programme of Assistance to the Palestinian People

In December 1978, the UN General Assembly adopted resolution 33/147, which called on UNDP to provide assistance to the Palestinian people. By this date, the West Bank and the Gaza Strip had endured over 10 years of occupation, which had led to increased levels of poverty and unemployment. Hundreds of thousands were living in refugee camps in slum conditions without the most basic amenities. Infrastructure had been allowed to deteriorate, including schools, health facilities, housing, roads, and water and sanitation systems, despite the steady population growth.

In response to the UN resolution in support of the economic and social development of the Palestinian people, UNDP launched the Programme of Assistance to the Palestinian People (PAPP). As a partner in the UNDP's development network, the over-arching mission of PAPP is to work on the fulfilment of these goals, especially with respect to the development of the Palestinian people.

Quick Facts

occupied Palestinian territory

Population (millions)	4.4 (2.7 in West Bank, 1.7 in Gaza Strip)
Population Growth Rate (%)	3.7
Poverty Rate (% in 2011)	25.8
Unemployment (%)	20.4
Real GDP Growth (%)	5.5
GDP per Capita (USD)	421
Life Expectancy (years)	73.3
Adult Literacy (%)	95.3%

Information from Palestinian Central Bureau of Statistics, UNDP and UNData

Egypt

Population (millions)	84.5
Population Growth Rate (%)	2
Unemployment (% in 2010)	9
Real GDP Growth (%)	5
GDP per Capita (USD)	2,264.90
Life Expectancy (years)	73.0

All information from UNDP and UNData

organizations (CBOs) and nongovernmental organizations (NGOs) in poor and often remote areas for initiatives that conserve and restore the environment while enhancing people's livelihoods and well being, GEF SGP's approach integrates the three pillars—social, economic, and environmental—of sustainable development. GEF SGP has shown that community action can maintain the fine balance between human needs and environmental improvement. As such it exemplifies the principle of “thinking globally, acting locally.”

The maximum grant amount awarded by GEF SGP per project is USD 50,000, with an historic average of about USD 25,000 per grant. Although grant awards are relatively small, they have been effective in demonstrating sustainable and innovative approaches to global environmental problems at the community level.

GEF SGP primarily works in five focal areas: conservation and sustainable use of biodiversity, mitigation and adaptation¹ to climate change, protection of international waters, reduction of chemicals such as persistent organic pollutants (POPs), and prevention of land degradation, including sustainable forest management. Over time, SGP's community-based, intersectoral, and multi-level approach has been tested to be effective across participating countries, making the programme an efficient and capable delivery mechanism for channelling funds from other donors, including governments, for supporting sustainable development concerns, such as water supply and sanitation, disaster risk reduction and response, and civil society capacity development through a host of related initiatives.

GEF SGP's principal objectives are to:

- Support communities and civil society organizations (CSOs) to understand and practice sustainable development strategies that protect the global environment
- Develop, implement, and learn from community-level approaches that reduce threats to the global environment through replication, scaling up, and mainstreaming
- Build partnerships and networks to strengthen local and national capacities to address global environmental problems and promote sustainable development
- Gather, share, and apply lessons from these community-based experiences, innovations, and strategies

¹ Adaptation to climate change activities are funded by the GEF Strategic Priority for Adaptation and other donors.

The GEF SGP Experience in Egypt and the occupied Palestinian territory

GEF SGP has supported activities in the oPt since 1996 through a regional cooperation between Egypt and the oPt, which falls under SGP Egypt’s programming umbrella. Significant financial and technical support has been provided by UNDP/PAPP, which has relied on SGP’s unique small grant mechanism as a means to accomplish environmental and sustainable development objectives.

This publication highlights success stories and examples of good practices that demonstrate how GEF SGP has empowered community leaders, including women and other vulnerable groups, to find their own solutions to the environmental challenges they face. Through the support of GEF SGP, local communities serve as key actors in protecting and restoring the environment where they live while generating new sustainable economic opportunities.

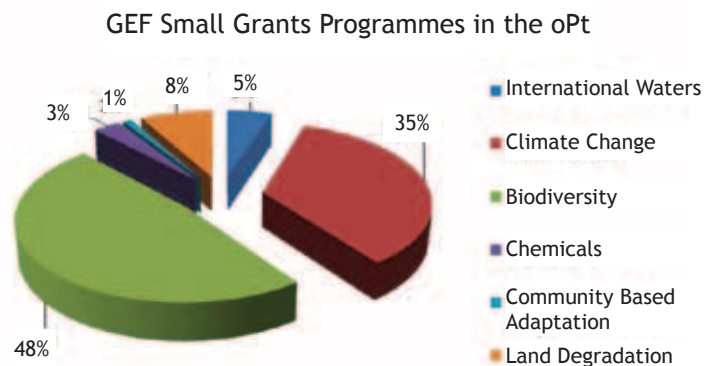


The occupied Palestinian territory’s Environmental Context

The oPt consists of two separate geographical regions, the West Bank and the Gaza Strip. The West Bank is located in the central highlands extending east towards the Jordan River and is mostly comprised of limestone hills, while the Gaza Strip is a narrow low-lying area along the south-eastern shore of the Mediterranean Sea.

The oPt, while relatively small in size at 6,165 km², is rich in biodiversity, with 2,780 species of natural plants, 162 of them endemic. The percentage of threatened plants (twelve percent) is higher than the average in other countries. Given that the West Bank’s 48 nature reserves are not accessible to Palestinians, the Palestinian people experience a continuous depletion of natural resources and pollution. As a result of the occupation, access to fresh water, hygiene and sanitation are in many cases compromised, which led the United Nations Country Team in the oPt to warn that the Gaza Strip may be “unliveable” by

GEF SMALL GRANTS PROGRAMME IN THE oPt	
Starting Year	1996
Projects	125
Grants (total USD core budget)	3,926,141
Co-Financing (total USD)	1,022,360
In-Kind Co-Financing (total USD)	1,201,309



“Climate change will impact the oPt disproportionately, mainly as a result of the ongoing military occupation. In their 2010 Climate Change Adaptation Strategy and Programme of Action, UNDP and the Palestinian Authority predicted increased occurrences of heat waves, prolonged periods of drought, reduced rainfall, rises in sea level and more numerous flash floods.”

2020 if the basic needs of its 1.7 million residents are not addressed.

The coastal aquifer of the Gaza Strip is overused at a rate of more than 120 million cubic metres of water annually, resulting in seawater intrusion and high levels of chlorides and nitrates. Marine and coastal pollution in the Gaza Strip has become a regional concern.

Land degradation due to overgrazing and unsustainable rangeland management practices in the West Bank presents a major threat to the environment. Stone quarrying and marble industries in the West Bank and sand dune quarrying in the Gaza Strip deplete non-renewable natural resources and threaten biodiversity.

The unregulated use of pesticides and abuse of fertilizers and herbicides pollute soil and water, thus constituting a serious public health issue and depleting biodiversity. Palestinian farmers currently use more than 160 types of pesticides, herbicides, fungicides and insecticides, 14 of which are banned by the World Health Organization. Moreover, Persistent Organic Pollutants (POPs) have been released into the environment to an extent that seriously threatens human health, fauna and flora. Still, no records are kept on the import, use and disposal of POPs.

Climate change will impact the oPt disproportionately, mainly as a result of the ongoing military occupation. In their 2010 Climate Change Adaptation Strategy and Programme of Action, UNDP and the Palestinian Authority predicted increased occurrences of heat waves, prolonged periods of drought, reduced rainfall, rises in sea level and more numerous flash floods. Meanwhile, especially with the need for mitigation measures, more and better data is needed to monitor and understand the state of greenhouse gas emissions in the oPt, as these emissions are expected to grow as Palestinians adopt the consumption and production pattern of developing countries.

Much can be done to protect the environment in the oPt, despite ongoing instability.

Egypt's Environmental Context

Egypt is located strategically between the Mediterranean Sea to the north and the Red Sea to the East. It is made up of more than one million square kilometres and over 3,000 kilometres of coastline. With a population of 84.5 million people, it is one of Africa's most populous countries. Ninety-five percent of Egypt's land area is desert.

Egypt's cities and towns produce more than 20 million tons of solid waste a year, while recycling is only carried out on twenty percent of the total—and often unsafely. Industrial waste is increasing as Egypt's economy develops.

One of the main environmental challenges Egypt faces is air pollution, which is caused by a variety of sources, among them industrial waste, the burning of agricultural by-products, vehicle emissions and the burning of solid waste. These air pollutants release gases and particles into the air that are damaging to human health and contribute to climate change. Government monitoring of these air pollutants has shown some improvement in indicators.

Noise pollution, particularly in the Greater Cairo area, has also been identified as a public health problem. The growing numbers of roads and vehicles (estimated to increase by fifteen percent annually) are contributing to this problem, although monitoring systems have been established and standards introduced to limit noise production.

The Nile River is Egypt's main source of fresh water, providing 55.5 billion cubic metres annually to Egypt and neighbouring Sudan. Lake Nasser, the second largest artificial lake in the world, extends into Egypt and Sudan and has a storage capacity of 162 billion cubic metres. The lake allows for three agricultural rotations a year instead of one, and its proper management is crucial to the country's farmers. Egypt also has vast amounts of underground water resources that are not fully exploited. Tests on some wells have shown the presence of high salinity, iron, chloride and other elements that make water unsuitable for drinking and/or irrigation.

GEF SMALL GRANTS PROGRAMME IN EGYPT

Starting Year	1993
Projects	274
Grants (total USD)	5,797,246
Co-Financing (total USD)	3,688,245
In-Kind Co-Financing (total USD)	1,665,347

GEF Small Grants Programme in Egypt

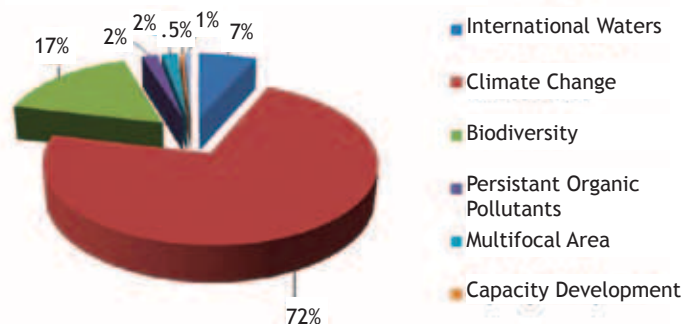




Photo courtesy of GEF SGP Egypt

The Red Sea is one of the most important shipping waterways in the world but its coral reefs are also an important marine biodiversity resource, home to more than 5,000 species. Port activity, related waste, and pollutants from marine accidents threaten biodiversity and human health, despite regulations to monitor and protect the area. More than twenty percent of Egypt's population and forty percent of its industry is concentrated on its coastline.

Protected areas and monitoring have helped restore some endangered species, among them the Egyptian gazelle and Nubian ibex. Threats remain from over-grazing, over-collection, the presence of invasive species and illegal fishing and hunting. Conflicting regulations and oversight bodies remain a challenge to adequate biodiversity protection.

Climate change is expected to impact Egypt through rises in sea level that will submerge some parts of the Nile Delta, cause heightened temperatures and generate water shortages, all of which will in turn decrease agricultural productivity and hinder the cultivation of some crops. Agriculture makes up approximately twenty percent of Egypt's economy. Tourism, public health and infrastructure are also expected to be affected by climate change.

Egypt continues to experience unrest and instability after demonstrations in early 2011 that culminated in the resignation of its long-time president and led to new general and presidential elections. This insecurity has affected Egypt's economy and stalled policymaking on the environment.



Photo by Ahed Izhiman, UNDP/PAPP Photo Archive

From the Community, to the Community

By supporting community actors in implementing their solutions to local development issues, GEF SGP has supported hundreds of non-governmental and community-based organizations in Egypt and the oPt to generate sustainable change—in the environment, in their livelihoods, and in their collective future. The challenges in both the oPt and Egypt remain immense, but Palestinians and Egyptians are working on the micro-level with GEF SGP support to ensure environmental sustainability and economic opportunity.

► Using Renewable Energy and Sustainable Agricultural Practices to Serve the Youth

Kaykab Garden, a section of the Ramallah Friends School that was founded in part with UNDP/PAPP TRAC funding through GEF SGP, has grown into a centre for environmental education. The small green area in the heart of Ramallah city hosts 2,500 school children annually, providing interactive learning about organic gardening, composting and how to protect the earth. The garden is also the site of a weekly organic farmer's market that brings together city residents and agricultural producers.

The Kaykab Garden was also outfitted with a solar energy system that generates renewable energy to light the garden's pathways and meet its other energy needs. Not only does this centre provide the Kaykab Garden with the equivalent of USD 600 of electricity annually, but it has become a teaching tool for the many students that visit the garden.

GRANTEE	PALESTINIAN WASTEWATER ENGINEERS GROUP
Project Location	Ramallah, West Bank
Focal Area	Climate Change
Operational Phase	Phase Four
Grant Amount (USD)	41,000.00
Co-Financing Cash (USD)	8,800.00
Co-Financing in-Kind (USD)	4,000.00
Project Number	PAL/SGP/OP4/Yr3/CORE/10/05
Start Date	March 2010
End Date	December 2010
Status	Satisfactorily Completed
Carbon Dioxide Emissions Prevented	Four tons annually
Electricity Generated	Worth USD 1,200
Children Educated	Over 5,000

Over nine months in 2010, the Palestinian Wastewater Engineers Group installed a photovoltaic power plant providing 1.3 kW of power on the roof of the garden's adjoining building. Throughout the day, the plant can provide 7 kWh. The plant has four solar modules and its energy is stored in eight solar batteries with a total capacity of 20 kWh.

Two separate solar-power lighting units provide further lighting along the garden paths and a solar reflector, 1.5 metres in diameter, produces 2.5 kWh that is used for boiling water. Moreover, the garden's electrical system was rehabilitated for greater efficiency.

The project included training for the garden's educational staff in the uses of the solar power plant and this knowledge has since been passed on to the garden's many visitors.

Since implementation, the project team has received many calls from other schools asking to replicate the project at their in-

stitutions, and an initial meeting has been held with one such school to start the planning process.

► **Creating Green Areas, Protecting Community Health**

Most of Egypt’s residents are crowded into the urban space in and around Cairo, which is plagued with air and noise pollution and lacks invigorating green areas for leisure and recreation. Seeking to address these problems while providing residents with new sources of income, the Aga Khan Foundation Cairo used a GEF small grant to support families in planting their rooftops with vegetable gardens. The families contributed the space, which they cleared and cleaned to be ready for growing.

The small organic gardens created green areas on approximately 50 city rooftops or approximately 300 m² using naturally-enriched soil without chemical pesticides in order to produce healthy and safe crops. The project created agricultural work for 100 women who tend and sell the produce, which was chosen specifically to provide a stable and renewable income for their families and saves them about USD 50 every month. Much of the produce is now sold in area restaurants, strengthening community links. Also, the families gained access to safe and nutritious food for their own sustenance.



Photo courtesy of GEF SGP Egypt

“I participated in the project from the beginning. I planted nine different kinds of vegetables: tomatoes, peas, green mint and so on. The organization gave us all the technical help [we needed] and we gained a lot of experience. We feel that these vegetables taste much better than those we used to buy from the market.”

—homemaker Nawal Mostafa

GRANTEE	AGA KHAN FOUNDATION EGYPT
Project Location	Al-Darb Al-Ahmar District, Cairo, Egypt
Focal Area	Climate Change
Operational Phase	Phase Four
Grant Amount (USD)	43,000
Co-Financing Cash (USD)	22,097.37
Co-Financing In-Kind (USD)	40,337.07
Project Number	EGY/SGP/OP4/Y1/CORE/2008/301
Start Date	June 2008
End Date	December 2011
Status	Satisfactorily Completed
Emissions Reduced	50 rooftops planted/emissions reduced from 8% to 10%
Jobs Created	100 women employed

“I am happy that, despite all the problems and obstacles we have faced over the past year due to insecurity and instability, we succeeded in accomplishing the project’s activities and the local community is committed to the new technology of biogas. [They were] willing to co-finance building the biogas units and stop burning agricultural wastes and thus breathe clean air. ”

—Eid Ahmad, Chairman of Dar El Salam Oasis Society to Develop Environment & Society

Finally, the creation of these gardens was one more step towards addressing Egypt’s contribution to carbon emissions, cleaning the air and thus reducing the greenhouse gases that are behind climate change and its ill effects.

► Supporting Better Energy Solutions: Biogas

Remote rural areas in Egypt often go without access to critical services. In the Bahariya Oasis, about 360 kilometres from Cairo, residents needed power. Supported by GEF SGP, the Dar El Salam Oasis Society to Develop Environment & Society worked with residents to create five biogas units and meet their energy needs.

The units were constructed using cheap, locally available materials such as brick and metal piping, and run entirely on organic agricultural waste. This waste is stored safely underground and slowly ferments, producing gas that is used for domestic cooking needs. The units also produce high-value fertilizer that can be used to sustain the region’s agriculture, a major source of income.

Through the project, ten families were provided with low-cost, safe energy that makes use of recycled waste. Each unit produces 240 m³ of biogas annually and replaces carbon-producing wood fires that were harmful to the environment and human health, and thus reducing carbon emissions by sixty percent annually.

Eight workshops were held in the community to promote the use of biogas and explain its economic and environmental benefits. In addition, five workshops were held in best practices for creating biogas and the use of fertilizers produced by the units. Moreover, the project was a replication of 11 other similar biogas projects in other Egyptian governorates that succeeded in providing other rural communities with energy in a safe and sustainable manner.

GRANTEE	DAR EL SALAM OASIS SOCIETY TO DEVELOP ENVIRONMENT & SOCIETY
Project Location	Bahariya Oasis, Egypt
Focal Area	Climate Change
Operational Phase	Phase Four
Grant Amount (USD)	27,844.00
Co-Financing Cash (USD)	10,581.00
Co-Financing In-Kind (USD)	13,581.00
Project Number	EGY/SGP/OP4/Y3/RAF/2009/355
Start Date	December 2009
End Date	December 2011
Status	Satisfactorily Completed
Biogas Units Constructed	Five
Families Supported	Ten

► New Technology Builds Bridges in Stricken Communities

The nearly 14,000 residents of Yabad in the northern West Bank make a living largely on the production of charcoal. Traditionally, the burning of wood to produce charcoal depletes critical forested areas, pollutes the air and has negative health consequences for those living nearby.

World Vision-JWG is working to find a solution to these intersecting environmental and health concerns by testing a low-cost retort kiln coal production method, which makes use of bio-mass to create charcoal. The project, funded in part with a GEF small grant, will build three kilns that use waste wood to produce charcoal more efficiently, while releasing less carbon dioxide into the atmosphere.

Once the technique is evaluated and proven suitable, local producers in 11 area villages will be trained in using the technology and a manual published in its use. The project could ultimately reduce greenhouse gas emissions by hundreds of tons annually and create a cleaner, healthier way of life for charcoal producers and their families.

GRANTEE	WORLD VISION-JWG
Project Location	Yabad, West Bank
Area Of Work	Climate Change
Operational Phase	Phase Five
Grant Amount (USD)	40,000.00
Co-Financing Cash (USD)	
Co-Financing in-Kind (USD)	20,700
Project Number	PAL/SGP/OP5/CORE/CC/12/09
Start Date	August 2012
End Date	June 2013
Status	Currently underway

“As the world has recognized Palestine as a state, new opportunities to resolve environmental problems have emerged, among them the opportunity to receive funds from GEF through its full-sized and medium-sized projects.

Since its establishment in 1996, the Small Grants Programme of GEF has assisted the Palestinian community in protecting natural resources by implementing specific initiatives and pilot projects across the Palestinian territory, especially in rural areas and remote villages [where the Palestinian government has limited access].

Palestine suffers from severe environmental conditions due to pressures that exceed the capacity of its natural resources. Such problems include the alarming deterioration in the water quality of the coastal aquifer in the Gaza Strip [home to about 1.7 million people] and land degradation in the West Bank. GEF can help us in developing modalities that guarantee the sustainable use of these resources.

Additional care must be taken to protect indigenous species, as Palestine has a high rate of biodiversity. Everything can be restored, except for species that disappear. For the land, the loss of trees is similar to a creature losing its lungs. While such problems are global, they have serious local impacts. When someone protects the environment, he or she protects human life as well.”

—Palestinian Minister of Environment Affairs, Dr. Yousef Abu Safia



Photo by Ahed Izhiman, UNDP/PAPP Photo Archive

IN FOCUS

Til Educational Garden Grows Into Biodiversity Hub

Rana Jamous, head of the biodiversity and biotechnology unit at the Biodiversity and Environmental Research Centre (BERC), couldn't believe it when she first saw the land allotted for an educational garden in the northern West Bank village of Til.

"I thought they were laughing at us," she says, 11 years later. The 15,000 m² (about the size of two football stadiums) being donated by the village council had been a dumping ground. The land was littered and rocky—seemingly unusable.

But after years of labour by the centre and local volunteers, the BERC-Til Educational Garden, supported by GEF SGP, has become a natural preserve for hundreds of plant species native to the region, including 19 varieties of figs and 40 varieties of olives. Moreover, the garden and the growth of the centre have provided a platform for numerous research publications and studies in biodiversity in cooperation with other universities.

In total, GEF SGP provided the Biodiversity and Environmental Research Centre with three grants, the first in 2001 of USD 41,500 to create the garden, the second in 2004 to conserve Palestinian medicinal plants and preserve traditional knowledge associated with their uses, and the third in 2008, USD 43,000 to establish community-based agricultural units in the rural Nablus area that use solar energy to dry fruits and vegetables. The centre matched these funds by using their own resources and looking for other partners.

"Biodiversity is very important, from my point of view," says Mohammed Saleem Shtayeh, head of the research centre and the driving force behind the garden. "The percentage of forested areas is very low, and I think it should be much higher. We need to preserve what is there but also increase it by planting forests." One current project is examining an indigenous species of oak and how it grows in both rainy and drier regions of the West Bank. By examining the tree's genotypes, the researchers hope to draw conclusions about what will happen to the tree as the climate becomes warmer and dryer over time. A similar study is underway for varieties of olive and fig trees, which are crucial crops for Palestinian farmers.

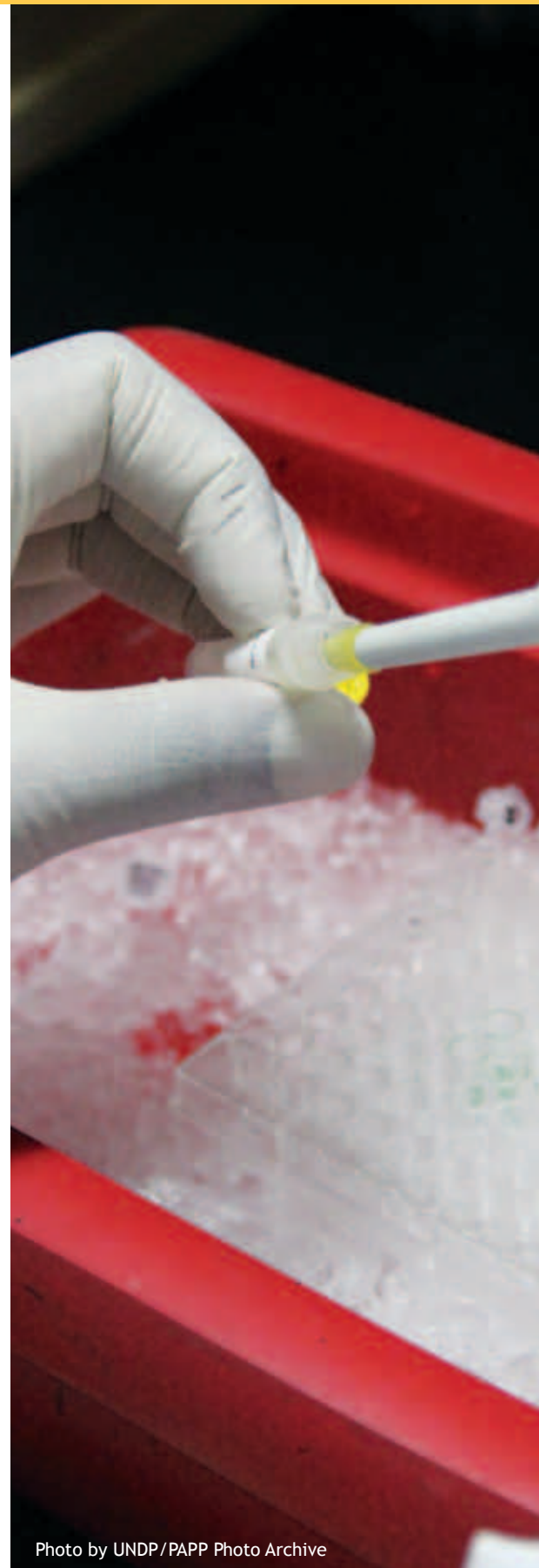


Photo by UNDP/PAPP Photo Archive



Photo courtesy of BERC-Til Educational Garden

The photo above shows the rocky land that was donated to be made into a preserve for indigenous plant life. It is now planted with trees, bushes and plant life of the region (opposite).

Trees and vegetation protect land from desertification and global warming. Conversely, once vegetation cover has been removed, the subjacent soils degrade, preventing vegetative restoration. Thus the desert expands, which has dangerous implications for crop production. Biodiversity is the mainstay of a healthy ecosystem and food security alike.

A HIVE OF ACTIVITY

The centre has become a major hub for studying regional plant life and improving agriculture.

“This is the only place in Til and nearby villages where people can come to enjoy and learn about natural plants. Other areas are overgrazed,” says Shtayeh.

In a small lab at the centre, 26-year-old graduate student Iman Hussein examines samples under a microscope. She is conducting DNA extraction of zucchini plants to see if they are infected with a crop-endangering virus. BERC researchers are trying to control these damaging viruses in order to save farmers from total crop loss by characterizing the viruses at the epidemiological and molecular

levels, testing Integrated Disease Management approaches to control damage and yield reduction, and developing transgenic plants with resistance to these viruses.

“I am the daughter of a farmer,” she says, explaining why her work is important. “I have watched the farmers and they usually have to remove the plants that are infected with this virus. It’s much better if we can control the virus.”

Another room holds 450 plant specimens collected, dried and labelled by the centre staff. Among the publications produced by the centre are a national list of indigenous medicinal plants and a red list of threatened plants. Ethnobotanic studies using complementary and alternative medicine have been carried out on Palestinian patients suffering from cancer and diabetes.

To broaden the centre’s reach, schoolchildren are given tours of the garden’s various sections and encouraged to think about protecting the environment.

“They get experience in how to think scientifically,” says Shtayeh. “We encourage them to carry out small research projects on biodiversity and water conservation.” Water resources are scarce in the region and the future depends on protection and conservation.

COMMUNITY ENGAGEMENT

Shtayeh worked hard to convince the Til village council to provide the land for the garden, as each plot’s sale price was nearly USD 40,000. Decision-makers were reluctant, but the fact that the college professor was a well-respected resident of the village helped to bring them around, he says.

“We wanted to do this,” he says. “We believed in doing this. We believed in making a difference in our environment here.”

As a result, the garden and its many related projects have helped to bring work to the village of about 5,000. The centre was originally run by eight individuals, each holding down another job. Now its work involves 30 people: 26 volunteers and eight paid full-time staff. A cooperative was established to produce various jams and dried fruits with a large, efficient solar drier. These are sold at exhibitions where the centre makes presentations and provide a hobby and income-earner for local women.



Photo by Charmaine Seitz

PLANTS CONSERVED BY BERC

SCIENTIFIC NAME	ENGLISH NAME
<i>Acacia farnesiana</i>	Acacia, Sponge Tree
<i>Acacia saligna</i>	Blue Leaf Wattle
<i>Amygdalus species</i>	Almonds
<i>Amygdalus communis</i>	Bitter Almond
<i>Anagyris foetida</i>	Bean Trefoil
<i>Atriplex canescens</i>	Sea Orache
<i>Atriplex halimus</i>	Shrubby Salt Bush
<i>Azadirachta indica</i>	Neem Tree
<i>Bauhinia purpurea</i>	Bauhinia
<i>Bougainvillea glabra</i>	Bougainvillea
<i>Castanea vulgaris</i>	Chestnut
<i>Casuarina cunninghamiana</i>	River Sheoak
<i>Celtis australis</i>	Nettle Tree
<i>Cerasus vulgaris</i>	Cherry
<i>Ceratonia siliqua</i>	Carob
<i>Cercis siliquastrum</i>	Love Tree
<i>Crataegus aronia</i>	Spiny Hawthorn
<i>Cupressus arizonica</i>	Arzonica
<i>Cupressus sempervirens</i>	Evergreen Cypress
<i>Datura stramonium</i>	Thorne Apple
<i>Dittrichia viscosa</i> (Inula viscosa)	Inula
<i>Dodonea viscosa</i>	Dodonea
<i>Elaeagnus angustifolia</i>	Linden
<i>Eriobotria japonica</i>	Medlar tree
<i>Eucalyptus camaldulensis</i>	Red River Gum
<i>Ficus carica</i>	Common Fig Tree
<i>Hedera helix</i>	Common English Ivy
<i>Jacaranda mimosaeifolia</i>	Jacaranda
<i>Juglans regia</i>	Walnut
<i>Lantana camara</i>	Yellow Sage
<i>Laurus nobilis</i>	Sweet Bay

<i>Leucena leucocephala</i>	Leadtree
<i>Livistona australis</i>	Fountain Palm
<i>Morus alba</i>	Mulberry
<i>Myrtus communis</i>	Common Myrtle
<i>Nerium oleande</i>	Oleander
<i>Olea europaea</i>	Olive Tree
<i>Opuntia ficus-indica</i>	Prickly-Pear
<i>Phoenix dactylifera</i>	Date Palm
<i>Pinus brutia</i>	Cyprus Pine
<i>Pinus halepensis</i>	Aleppo Pine
<i>Pinus pinea</i>	Stone Pine
<i>Pistacia atlantica</i>	Atlantic Pistachio
<i>Pistacia lentiscus</i>	Mastic Tree
<i>Pistacia palaestina</i>	Palestinian Pistachio
<i>Populus nigra</i>	Poplar
<i>Punica granatum</i>	Pomegranate
<i>Pyrus malus</i>	Apple
<i>Quercus calliprinos</i>	Kermes Oak
<i>Retama raetam</i>	White Broom
<i>Rhamnus palaestinus</i>	Palestine Buckthorn
<i>Rhus coriaria</i>	Sumach
<i>Ricinus communis</i>	Castor Beans
<i>Rosa centifolia</i>	Pale Rose
<i>Rosa sp.</i>	Roses
<i>Rosmarinus officinalis</i>	Rosemary
<i>Ruscus aculeatus</i>	Butcher's Broom
<i>Ruta chalepensis</i>	African Rue
<i>Salvia fruticosa</i>	White sage
<i>Sambucus nigra.</i>	Black-berried elder
<i>Styrax officinalis</i>	Storax
<i>Tamarix aphylla</i>	Athel
<i>Thuja occidentalis</i>	Tree of life
<i>Vitex agnus-castus</i>	Chast Tree
<i>Vitis vinifera L.</i>	Grape

UNDP Programme Analyst Philippe Wealer points out that this project has greatly benefitted from Professor Shtayeh's leadership, using the knowledge and experience he gained at several universities across Europe before he returned to his home village. As a result, Shtayeh is able to put the GEF small grant to the best possible use.

"This is exactly what we are trying to achieve," says Wealer, "on the global level you have a knowledge centre and perceive an environmental crisis. On the local level you help experts with the implementation of a community-based solution."

Every time the mayor is asked to give a speech at a function, says Shtayeh, he proudly mentions Til's educational garden. None of this, he says, would have been possible without GEF SGP, which provided the centre with the seed money and experience to invest and expand.

GEF SGP helped the centre develop into an authoritative institute in the area of plant biodiversity conservation and traditional herbal medicine, which in turn allowed it to partner with Israel's Hadassah College and four other international institutions in the European Union-funded Bio-Xplore project (see right), which is identifying indigenous plants that could have pharmaceutical value.

"GEF SGP was a stepping stone," says Shtayeh.



Photo by UNDP/PAPP Photo Archive

About Bio-Xplore

The Bio-Xplore project that BERC is now participating in is funded by the European Union through the European Neighborhood and Partnership Instrument (ENPI) and is implemented under the ENPI CBC Mediterranean Sea Basin Programme.

Its partners other than BERC include Hadassah Academic College Jerusalem (Israel), Leitat Technology Centre (Spain), Hellenic Regional Development Centre (Greece) and Rutgers University and North Carolina University (United States).

The project title is "Novel Methodology for the Identification of Valuable Natural Products Derived from Mediterranean Flora".

Based on technology developed by the Global Institute for Bio-Exploration (GIBEX) the Bio-Xplore project will establish the Mediterranean Hub of GIBEX (GIBEX-MED).

GIBEX has been endorsed by the World Health Organization as a unique model for scientific collaborations and cross border partnerships and its experience and network of partners will support the Bio-Xplore endeavor.

Total project budget: Euro 1,999,410.00

Project website: <http://www.bio-xplore.org>

► Protecting Forest Areas, Supporting Longevity

Less than four percent of the oPt is forested (half of the forested areas that existed 30 years ago), and these essential green areas are under constant threat.

To try to stem this thinning of vegetation, loss of habitat and the resulting threat of desertification, the Applied Research Institute - Jerusalem (ARIJ) is using GEF SGP funding to preserve two main forested areas in the northern and southern West Bank.

Al-Qarin protected area in Hebron in the southern West Bank is 56 hectares of mixed woodlands, comprised of strawberry trees and planted coniferous and natural oak forest. It is the only natural growth forest in the Hebron governorate. It is a habitat for foxes, jackals, hyenas, mice, hedgehogs, squirrels, lizards, rats, and many birds and insects.

Currently, residents near Al-Qarin forest use it mainly to collect firewood. Poverty and rising unemployment over the last decade have led to the uprooting of seventy percent of the forest pine trees for household use.

The other project site is Um Tut protected area, a 78 hectare natural oak forest in Jenin in the northern West Bank dominated by oak trees. The forest is used for grazing sheep and goats, collecting firewood, recreation and food collection. It lacks proper management and regulation, thus negatively affecting its sustainability.

ARIJ is in the process of enhancing natural vegetation succession in the forests' most degraded areas. Local residents, among them students, women and youth, are implementing the project, thus becoming more familiar with the sustainable use of natural resources. Corridors, maps and signage are being established in the forests to reduce visitors' impact and help raise awareness.

GRANTEE	APPLIED RESEARCH INSTITUTE - JERUSALEM
Project Location	Hebron & Jenin, West Bank
Focal Area	Biodiversity
Operational Phase	Phase Five
Grant Amount (USD)	40,000.00
Co-Financing Cash (USD)	
Co-Financing In-Kind (USD)	2,300.00
Project Number	PAL/SGP/OP5/CORE/bio/12/04
Start Date	September 2012
End Date	September 2013
Status	Currently underway
Forest Protected	134 hectares
Communities Supported	64 experts and decision-makers trained, over 40,000 students indirectly impacted and nearly 90,000 residents indirectly impacted

Full geographical information systems and remote sensing techniques (GIS/RS) including landscape and land degradation studies will be conducted for both forests.

At the end of the project, a web-based database initiated by ARIJ will be updated with new indicators for Al-Qarin and Um Tut protected areas. Moreover, the project has been selected by the International Union for Conservation of Nature - MAVA project as a learning project for NGOs and CBOs in the oPt and region.

The Al-Qarin protected area (below) is a natural habitat for numerous animals, birds and insects.



Photo courtesy of ARIJ



Photo by Ahed Izhiman, UNDP/PAPP Photo Archive

Building the Capacity of the Civil Society

The GEF SGP has provided hundreds of recipients with a first stepping stone in achieving their goals, thus building their capacity to implement more expansive and effective projects that have even greater environmental impact. These small organizations hold the leaders of the future, and their empowerment has been a major success of the GEF SGP.

► Planting Green Takes Families Out of the Red

Palestinian farmers struggle with an impossible triad: lack of access to land due to the occupation and declining rainfall and increasing temperatures as a result of climate change. With over sixty percent of the West Bank inaccessible, Palestinian farmers find it increasingly difficult to irrigate the land that they want to cultivate.

In the arid al-Masafer area of Bani Naim, nine farmers were able to turn this cycle around through the support of the Bani Naim Charitable Society and GEF SGP. The farmers planted 6,390 almond and pistachio trees, reforesting 14.2 hectares or about 14 football fields of their own previously unused lands. Small wells were dug to irrigate the trees.

The trees will start to bear fruit within five years, supporting not only regional biodiversity but also the farmers and their families. Almonds and pistachios are strong income-producing crops, providing twice as much income as their cost, according to the Palestinian Ministry of Agriculture. As such, the estimated 150 relatives of the farmers involved will increase their yearly income by a total of USD 13,950.

The international aid organization World Vision saw the outcomes of this GEF SGP-supported project and is funding a similar project to dig 10 wells and reclaim 10 hectares also east of Hebron. More support is needed to fight regional desertification and help support sustainable agriculture.

“This project transformed a small part of al-Masafer into a green spot full of fruit trees. This project would be good to implement in the surrounding areas as well in order to expand this green spot and build a green and rich country.”

—Islam Manasrah, Project Manager, Banu Naim Charitable Society

GRANTEE	BANI NAIM CHARITABLE SOCIETY
Project Location	Al-Masafer, West Bank
Focal Area	Biodiversity, Land Degradation
Operational Phase	Phase Four
Grant Amount (USD)	42,000.00
Co-Financing Cash (USD)	21,105.00
Co-Financing In-Kind (USD)	9,440.00
Project Number	PAL/SGP/OP4/Yr3/CORE/10/06
Start Date	March 2010
End Date	June 2011
Status	Satisfactorily Completed
Land Reforested	14.2 hectares with 6,390 fruit trees
Farmers Supported	18 farmers trained and 150 family members provided with increased income

► Community Investment Produces Long-Term Water Protection

El-Qarawi is a small village of 5,000 located on a canal that flows into the Nile River. Until the Al-Thanaa Association used a GEF SGP grant to support a municipal and gray water treatment system for the village, none of its 500 homes were connected to a sewage disposal system. Instead, the village's waste flowed directly into the Nile, polluting one of Egypt's main freshwater resources.

Working with the community, the Al-Thanaa Association held various meetings with village leaders to mobilize the needed resources. Private businesses contributed USD 75,000 in grants, alongside the GEF small grant, as well as the land needed for the treatment plant. Farmers were integral in working to conserve irrigation water and housewives participated in stopping the practice of disposing dangerous waste into the environment.

In all, 2,500 residents were involved in discussions about better waste management and the ill health effects of water pollution. Despite difficult economic conditions, families committed to contributing about USD 6 a year for the maintenance of the plant, ensuring its long-term viability. The project is viewed as an important pilot for other rural areas in Egypt that remain unconnected from the sewage treatment network.

GRANTEE	AL-THANAA ASSOCIATION
Project Location	El-Qarawi, Beheira Governorate, Egypt
Focal Area	International Waters
Operational Phase	Phase Three
Grant Amount (USD)	19,328.72
Co-Financing Cash (USD)	75,000.00
Co-Financing In-Kind (USD)	
Project Number	EGY-05-168
Start Date	July 2005
End Date	September 2006
Status	Satisfactorily Completed
Waters Protected	Stopped a source of pollution of the Nile River
Beneficiaries of Sewage Treatment	5,000

► Improving Safety and Health with Alternatives for Pest Control

The Gaza Strip, plagued with inadequate sanitation, has 53 open cesspools, according to UNICEF. These cesspools are dangerous for children, who are attracted to the water and the wildlife that breeds there. But they are also magnets for disease-carrying mosquitoes, which become pervasive in the summer and early fall.

Gaza city officials have been accustomed to fighting these pests by spreading motor oil on the cesspools. The result of this practice is a carcinogenic stew of chlorinated hydrocarbons that eventually flows into the sea, damaging regional aquatic life and poisoning the environment.

Supported through a small grant from GEF SGP, the JICA Alumni Association worked with the affected communities to spread environmentally-safe *Bacillus thuringiensis*, a microbial insecticide produced from potatoes in a special treatment plant. The liquid was then sprayed near cesspools in the northern Gaza Strip and Wadi Gaza and waste treatment plants in the central Gaza Strip, Khan Younis and Rafah.

By distributing 5,600 litres of the insecticide in mapped mosquito breeding grounds, project staff were able to reduce the mosquito population by half one week after spraying. The results lasted for months, directly improving the lives of 204,500 Gaza Strip residents, 32,000 of them children, who are particularly vulnerable to the diseases carried by mosquitoes.

This project also impacted the Gaza Strip's 1.7 million people, decreasing the overall presence of mosquitoes and increasing sea biodiversity and preserving water resources. While this naturally-produced insecticide is available commercially, the project was able to produce it in the Gaza Strip—where the importation of goods is difficult—at a reduced cost.

“Finally we have found a suitable solution for producing a substitute material that combats mosquitoes by using simple raw materials available locally. The income we received from selling the product helped us to continue [bacteria] production and improve our production unit.”

—Atef Jaber, Vice Chairman of the Board of Trustees, Palestinian Environmental Friends Association

GRANTEE	JICA ALUMNI ASSOCIATION
Project Location	Various regions, Gaza Strip
Focal Area	Chemicals
Operational Phase	Phase Four
Grant Amount (USD)	34,000.00
Co-Financing Cash (USD)	14,000.00
Co-Financing In-Kind (USD)	
Project Number	PAL10-71645: PAL/SGP/OP4/Yr3/2010/11/GEF-SGP/UNDP
Start Date	March 2010
End Date	December 2010
Status	Satisfactorily Completed
Direct Beneficiaries	204,500 residents, including 32,000 children

“This project achieved three goals. First, it offered a creative solution for the problem of accumulated tires, minimizing their negative effects on the environment. Second, the constructed playgrounds are a quiet, safe place for kids to play and feel better. Finally, it increased community awareness about environmental damage.”
 —Waleed Nazzal, head of Al Amal Association for the Deaf in Qalqilya

► Children Find Renewal in Play Areas Created from Waste

Palestinian children in the oPt grow up in an environment fraught with conflict, with few areas where they can play and freely develop. The creation of safe areas for play helps children relieve stress and cope with hardship.

In 2004, GEF SGP was the first to support an innovative way of creating playgrounds for children out of discarded tires that otherwise litter and pollute the environment.

Since that project was completed, more than 10 similar initiatives have been supported by other international donors, among them UNICEF, Norwegian People’s Aid, British Consulate-General SGS Welfare Association, the German Representative Office, and Kinder USA.

In this way, the GEF SGP has been a leader in building the capacity of local organizations to implement a vision that links the needs of the community with those of the environment.

In 2010, GEF SGP partner, the Roads and Environment Safety Centre, again sought a grant to create three playgrounds for disabled children in Salfit, Qalqilya and Ramallah. The project safely reused 2,000 old tires that might have been discarded by setting them alight, releasing the pollutants of lead and zinc oxide into the atmosphere in heavily populated areas. The safe use of these tires to build a fun space for children instead modelled for the youngest generation how non-biodegradable pollutants can be transformed into a positive addition to their community.

GRANTEE	ROADS AND ENVIRONMENT SAFETY CENTRE
Project Location	Salfit, Qalqilya & Nablus, West Bank
Focal Area	Chemicals
Operational Phase	Phase Four
Grant Amount (USD)	35,200.00
Co-Financing Cash (USD)	
Co-Financing In-Kind (USD)	11,900.00
Project Number	PAL/SGP/OP4/Yr3/CORE/10/04
Start Date	March 2010
End Date	February 2011
Status	Satisfactorily Completed
Subsequent Projects	Over 10
Pollutants Recycled	2,000 tires
Disabled Children Supported	261 boys and girls

► Solving Environmental Problems as a Community

Date cultivation makes up one-fourth of the agriculture sector in the Gaza Strip. There are 120,000 productive date palms in the area that produce about 6,000 tons of dates annually. The trees' green cover is an important natural resource that consumes relatively little of the Gaza Strip's precious water resources. Date palms are endemic and do not require large amounts of pesticides. Their fruit is also highly nutritious.

Palestinians hope to increase the Gaza Strip's date production to 8,000 tons annually over the coming years. But an infestation of the damaging red palm weevil in September 2011 threatened the future economic viability of this sector, and a task force of local organizations, the International Red Cross, the Food and Agriculture Association, the World Food Programme, and the Palestinian Authority Ministry of Agriculture met to take emergency measures.

Al-Ahlya Society, with support from GEF SGP, implemented a project to train farmers and agronomists in identifying the insect, as well trees damaged by the pest. In all, 150 male and female farmers, 90 service workers and 15 agricultural engineers participated in the workshops.

Identified trees were treated to prevent the spread of the insect to other uninfected date palms, and 170 pheromone traps were distributed to curb the pest.

The project was ground-breaking in developing methods for early detection of the weevil and infected trees. The use of traps was monitored to ascertain how they could be used most effectively while not damaging the trees or the environment.



Photo courtesy of Al-Ahlya Assoc.

GRANTEE	AL-AHLYA ASSOCIATION FOR DEVELOPMENT OF PALMS AND DATES
Project Location	Deir al-Balah & Khan Younis, Gaza Strip
Area Of Work	Biodiversity
Operational Phase	Phase Five
Grant Amount (USD)	37,500.00
Co-Financing Cash (USD)	7,550.00
Co-Financing In-Kind (USD)	300.00
Project Number	PAL/SGP/OP5/CORE/BD/12/05
Start Date	July 2012
End Date	February 2013
Status	Satisfactorily Completed
Green Area Protected	4,000 m ² of trees



Photo by Ahed Izhiman, UNDP/PAPP Photo Archive

Empowering Women, Meeting Their Needs

Women's involvement in the labour force has proven to be a critical part of family economic survival in the oPt and Egypt. From the beginning, the GEF SGP prioritized women's empowerment and gender equality by ensuring women's full participation in the grant allocation process, at the community recipient level, as well as in project implementation. It also emphasizes support for other vulnerable groups in society, such as the Bedouin, the poor, and farmers.

► Planting Awareness through an Educational Garden

Kufr Nameh, a small Palestinian village of about 4,000, is home to an educational garden, a place where area young people can gain awareness about local biodiversity and their environment.

The garden was an initiative of Sharek, an organization that sponsors programming for youth, and was supported with funding from the GEF SGP. Through the efforts of 320 youth volunteers, five dunams (about 5,000 m²) of land were reclaimed and planted with approximately 400 trees. A meeting hall adjoining the garden was also constructed for holding forums and agricultural roads opened up to allow access to the garden.

The garden is maintained by a group of youth volunteers, most of them girls, from Kufr Nameh. A local girl, Fidaa Attieh, leads the group and supervises volunteer days that are attended by young people from across the country. Student groups visit the garden and learn about the varied plant and animal life in the region. The garden provides them with an opportunity for recreation, despite the difficulties of life under occupation.

Sharek plans to use the experience it gained from implementing this UNDP/PAPP track fund distributed through the GEF SGP programme to recruit funding for a large eco-park and youth village in the West Bank that will have camping and meeting facilities, and areas for team-building, hiking, picnicking and bird-watching.

“Palestinian society is in dire need of such projects because of their great importance in protecting endangered species of plants from extinction. Introducing students to the plants, preservation of biodiversity, investment in Area C [under Israeli control], converting barren land to green areas, in addition to developing the region to attract world attention are all important concerns.”

—Hamdan Barghouti, Deputy Governor of Ramallah and Al-Bireh

GRANTEE	SHAREK YOUTH FORUM
Project Location	Ramallah, West Bank
Focal Area	Biodiversity
Operational Phase	Phase Four
Grant Amount (USD)	40,000.00 from UNDP/PAPP Co-finance Track Fund
Co-Financing Cash (USD)	17,250.00
Co-Financing In-Kind (USD)	62,100.00
Project Number	PAL10-71645:PAL/SGP/OP4/Yr3/2010/08/GEF-SGP/UNDP
Start Date	July 2010
End Date	June 2011
Status	Satisfactorily Completed
Land Reforested	5,000 m ²
Youth Supported	320 volunteers, as well as hundreds of student visitors



Photo courtesy of GEF SGP Egypt

► Ensuring Sustainability by Meeting Needs at Home

Egyptian villages face numerous cyclical challenges, where low average incomes affect the rural environment which, in turn, negatively impacts economic opportunities over the long term. Breaking this cycle, the Egyptian Association for Comprehensive Development used a GEF SGP grant to support families in Assiut governorate in changing from wood and waste-burning stoves to a healthier, cheaper alternative.

Working with village women, the association installed 214 environmentally clean ovens and 16 biogas units for use in cooking and heating. Also, 71 barns were constructed to help keep animal waste away from living areas.

The change from using traditional ovens in homes decreased by twenty percent the release of carbon dioxide gas into the atmosphere, reducing greenhouse gas emissions overall. Moreover, it dramatically improved health conditions for the villagers, as residents were no longer exposed to eye and skin diseases caused by toxins in the burned material. The women involved improved the quality of the bread that they were able to bake and began offering it for sale, thus augmenting their family income. Finally, jobs were created for seven young people who were tasked with cleaning and maintaining the ovens and biogas units.

The benefits of these changes were also discussed in 37 awareness-raising seminars in 30 other villages in Sahel Salem living in similar conditions.

GRANTEE	THE EGYPTIAN ASSOCIATION FOR COMPREHENSIVE DEVELOPMENT
Project Location	Assiut governorate, Egypt
Focal Area	Climate Change
Operational Phase	Phase Four
Grant Amount (USD)	45,678.57
Co-Financing Cash (USD)	2,7685.00
Co-Financing In-Kind (USD)	1,9685.00
Project Number	EGY/SGP/OP4/Y2/RAF/2009/345
Start Date	September 2009
End Date	June 2012
Status	Satisfactorily Completed
Emissions Reduced	From more than 230 traditional stoves, by 20%
Emissions Training Conducted	Among 1,328 villagers
Women Supported	Over 300



Photo by Ahd Izhiman, UNDP/PAPP Photo Archive



IN FOCUS

Nurturing Relationships, Restoring Green Areas

The sun beats hot in this dry valley south of Hebron. Nevertheless, over two dozen men and women have gathered under a tent on a vast expanse of dry farmland to discuss plans for water and land reclamation with the Land Research Centre - LRC.

“Before when we started out,” Jamal Talab addresses the group, “we started without you farmers. But now you are here with us from the beginning.”

This is the centre’s third GEF SGP grant, and it will go to help these farmers dam floodwaters that roll in from higher elevations in the winter, stripping the land and leaving it dry and nutrient-weak for the planting season. For years, the centre has been nurturing relationships and gathering data to make this project and others like it a reality.

Through responsible and coordinated planning, the centre will create a reliable year-round water source for fruit orchards, which in turn produce greater income for the farmers and will snatch the land back from the enemy of desertification. Already one can see large stones that individual farmers have put in place to try to hold the flow of the water to feed the straw fields. But, Talab points out, unless the water is directed responsibly and communally, such interventions will fail and even do greater damage.

“If we create the dams correctly, it will allow the water to remain in the soil,” says Talab. “Any activity here is very sensitive and needs to be based on research. I am not going to tell you that you will be growing peaches, like in Halhoul [a more fertile area],” he tells the farmers, “but we will introduce tolerant trees and we will make stone walls that filter, like our forefathers did, rather than use cement.”

A SPARSE EXISTENCE

Some 400 people live on the land of Ennab el-Kabira, eking out a living in difficult conditions. Little infrastructure has been extended to this region, which lies only partly



under the auspices of the Palestinian Authority. Electricity is extended from house to house through a single wire running over ground. Water is not available through pipes and usually, it must be brought in with tanks.

Sadiqa Abu Sharq, 63, walked three kilometres over dirt roads to the meeting. She has farmed this land for years, sending her eight children to school on the fruits of her labour. Two of them are lawyers, she says proudly.

“If you could only see my house, what it is like,” she says. Abu Sharq lives in the settled area of Arab al-Kabira. She maintains one greenhouse with a shallow well and a cement pool that fills with water in the winter.

“Our problem is that no farmer has a hand extended to him,” she says, lamenting the lack of resources available to her and her neighbours. But through the support of GEF SGP, the farmers will be able to work together to improve their lives.

STEPPING STONES

The project to rejuvenate the Ennab el-Kabira lands has been long in the making. In 1997, the Land Research Centre - LRC, based in Halhoul near Hebron city, began to develop a land use map for the West Bank. It found that the region south of Hebron had deep, rich earth, ideal for agriculture. Farming was restricted, however, by low levels of annual rainfall. Instead of the desired 350 mm of rainfall a year, the area receives 250 mm annually.

“These findings led us to approach GEF SGP and we convinced them to let us work” to explore the possibilities, says Jamal Talab, director of the centre.

The centre’s first GEF small grant was in the northeast Hebron area, working with rock quarry owners and local officials to understand and mitigate the environmental damage of the industry.

Then, for 18 months in 2004 with another GEF small grant of USD 45,360, the centre sampled the soil in the region and treated it for degradation, working with the farmers in six Hebron communities to create stone terraces that support the soil and plant growth.

“The farmers have a lot of information,” says project manager Morad Mekki, “and if I go and tell them ‘do



All photos by Charmaine Seitz

this', they will refuse. But if we work together, they see the change themselves on the ground." Afterwards, the centre remained in touch with the farmers, building relationships and keeping its more expansive plans alive.

"The whole valley needs development," says Talab, "but this will be a big project. In the meantime, we kept the idea functioning." The team worked with the farmers to fertilize the soil according to its deficiencies, measured through sampling. This saved the farmers money and produced a better yield.

Talab points to a full plume of wheat, its golden kernels bursting, in a vase. "Before, the kernels of wheat would fall off the sheaf. It was only good for animal feed."

The centre also trained a group of farmers in creating compost, shortening the time needed to create good fertilizer from years to a matter of months. On their own, those farmers then expanded the idea to start a factory producing natural and cheap fertilizer that they can offer for sale.



Photo by Charmaine Seitz

In 2010, the centre received another ten-month grant to treat soil pollution in the Wadi Samn area through the use of plants. One of the major pollutants in the West Bank is run-off from industrial settlements that flows directly through Palestinian communities and agricultural lands. Also, Palestinians here have only one working sewage treatment plant and most domestic and industrial wastes run into the water table. The study found high concentrations of heavy metals, including chromium, in tobacco and corn plants, likely from Hebron's dozens of tanneries and stone-cutting factories.

The new GEF SGP-funded project will leverage the experience of the farmers and the centre, capitalizing on relationships developed over time in order to improve conditions for the neglected Ennab el-Kabir community and restore 10 hectares—about 10 football fields—to a fertile, producing area. By supporting the capacity of this relatively small organization, GEF SGP helps strengthen local initiative and community involvement.





Photo by Charmaine Seitz

Small Seeds Produce Life-Sustaining Fruit

The GEF SGP approach allows it to reach partners who would not normally have access to support, working with them to build capacity and a vision of what is possible. In project after project, GEF SGP's relatively small commitment of no more than USD 50,000 per project has been supported with community resources and a long-term plan for sustainability. The fruits of the GEF SGP have been self-sufficiency and strong long-term local engagement.

► Providing Sustainable Alternatives for Lost Livelihoods

Shalateen village, located along the southern Red Sea and the Sudanese border, is one of Egypt's most impoverished communities. The nearby protected desert area of Gabal Elba has been plagued by drought for some 15 years as a result of climate change and residents of the area try to eke out a living by herding and producing charcoal.

Seeking to protect biodiversity and create sustainable and environmentally friendly economic alternatives, the Red Sea Parks Development Association, with the support of the GEF SGP, worked to assess and manage invasive mesquite trees that had invaded the southern areas of Elba protected area since 1986. The mesquite tree, or *Prosopis juliflora*, is the most damaging plant invader in the southeast corner of Egypt.

The same project then worked with residents to develop handicrafts for sale to tourists and in urban markets. One hundred and fifty women no longer working as herders were engaged in the production of handicrafts. These goods were then marketed in Cairo by the association.

In tandem, literacy classes, food and clothing aid were offered the women as incentives for their participation in the project.

A centre was established for use as a handicraft training area and eco-centre for students to learn about the local environment, to be managed in cooperation with the Nature Conservation Sector of the Egyptian Environmental Affairs Agency.

“This project opened a new gate to knowledge for students and the local community, providing good opportunities for school students to improve their knowledge about invasive species and biodiversity. The project also provided guidance in using the existing natural resources and helped develop the skills of Bedouin women to generate sustainable income.”

—Adam SaasAllah, volunteer and Gabal Elba resident

GRANTEE	RED SEA PARKS DEVELOPMENT ASSOCIATION
Project Location	Shalateen (Gabal Elba), Egypt
Focal Area	Biodiversity
Operational Phase	Phase Four
Grant Amount (USD)	12,500.00
Co-Financing Cash (USD)	3,450.00
Co-Financing In-Kind (USD)	1,160.00
Project Number	EGY/SGP/OP4/Y2/CORE/2009/360
Start Date	December 2009
End Date	March 2012
Status	Currently underway
Women Supported	150 trained in handicrafts production, literacy



Photo courtesy of GEF SGP Egypt

► Clean Energy Brings Sustainability

Egypt’s fast-growing population and expanding industrial sector is proving a drain on its energy resources. Solar energy, abundant in the North African country, is considered a safe and efficient answer to this problem.

In the rural poor villages of Ben Suwaif governorate, solar energy also proved to be a clean cheap alternative to meet family needs. The Ekhlās Coptic Organization, supported by GEF SGP, helped 50 families install solar water heaters in their homes, providing energy much below market cost.

The work was partially funded by a long-term revolving loan by the families, which helped ensure sustainability and increase participation. Thirty jobs were created for young people who were trained in installing and maintaining the solar water heaters. Moreover, the home environment was improved,

GRANTEE	EKHLAS COPTIC ORGANIZATION
Project Location	Beni Suwaif governorate, Egypt
Focal Area	Climate Change
Operational Phase	Phase Four
Grant Amount (USD)	23,553.00
Co-Financing Cash (USD)	9,318.00
Co-Financing In-Kind (USD)	10,436.00
Project Number	EGY/SGP/OP4/Y2/RAF/2008/344
Start Date	June 2009
End Date	December 2010
Status	Satisfactorily Completed
Families Supported	50 low-income families
Emissions Reduced	By replacing 50 traditional water heaters with solar-powered units

as families no longer had to rely on expensive electric or dirty wood-burning heaters. Families' economic and health conditions improved after they began using solar energy and greenhouse gas emissions were reduced through the shift to 'green' energy over traditional carbon-producing fuels. Each solar water heater reduces carbon emissions by 45 kgs every year.

► Alternatives Prevent Over-Fishing, Sustain Livelihoods

Hundreds of fishermen are restricted from sailing deep into the waters off the Gaza Strip coast to net their catch due to a land and sea blockade imposed by Israel since 2007. As a result, increasingly fishermen are using their fine nets to catch fish located close to shore.

The practice is threatening the region's marine biodiversity, as the nets also draw in small fry and fish eggs that are then unable to grow, hatch and produce more fish. It also threatens the fishermen's livelihood over the long term.

To try to bring a halt to the damaging practice, the Agriculture and Environmental Development Society used a GEF SGP grant to provide fishermen with nets with wider mesh that allow the small fry and eggs to pass through uncaught. It also conducted workshops with 500 fishermen to train them in better protecting the marine ecosystem as they work.

By protecting the numbers and variety of fish off the coast of the Gaza Strip, the project not only helped to protect the marine environment, but also helped preserve economic opportunity for these fishermen and their families.

GRANTEE	AGRICULTURE AND ENVIRONMENTAL DEVELOPMENT SOCIETY
Project Location	Gaza port, Gaza Strip
Area Of Work	Biodiversity
Operational Phase	Phase Four
Grant Amount (USD)	
Co-Financing Cash (USD)	46,600.00
Co-Financing In-Kind (USD)	4,000.00
Project Number	Pal10-71645:PAL/SGP/OP4/Yr3/2010/14/GEF-SGP/UNDP
Start Date	March 2010
End Date	June 2011
Status	Satisfactorily Completed
Fishermen Supported	500 trained

► Workshops Build Capacity, Strengthen Relationships

Workshops sponsored by UNDP/PAPP TRAC funds enhance the conceptual understanding of local environmental NGOs and CBOs.

In one three day workshop held in the West Bank, 32 project managers from 15 environmental NGOs and two project managers from the Palestinian Environmental Quality Authority worked together on the key processes of the Result Based Framework, which assists in identifying projects, providing a baseline assessment of the addressed problems, designing the project and then monitoring and reporting on project outputs and outcomes.

This framework strengthens systematic linkages between project inputs and outcomes, country outcomes and impact and the global impact of the GEF SGP framework by defining a workable model for the cause-effect relationship of targeted global and local environmental problems.



Photo by UNDP/PAPP Photo Archive

زيادة الضغط
وزارة العمل

التشاور

تراكم مخلفات النفايات
العضوية في الكليات

تلوث المياه والهواء
والتراب

زيادة
الحش

زيادة الضغط على
العوارض العامة في البلدات

زيادة نسبة التلوث
في الطبيعة

عدم الاستعادة من النفايات العضوية

تراكم مخلفات
العضوية

قلة الوعي البيئي
لدى ربات البيوت

قلة مستوى النظافة
في الأحياء



برامج التوعية

واشئة الماء



Sustaining the GEF SGP Regional Programme in Egypt and the oPt

Despite doubling in size and working in challenging contexts, the GEF SGP continues to be a cost-effective instrument for the generation of global environmental and local benefits, according to a 2008 evaluation. Nearly 14,000 grants totalling approximately USD 450 million have been awarded, supervised and monitored since 1992 through transparent, credible, and accountable mechanisms at the country level.

Currently, GEF SGP is in its fifth operational Phase (2011-2014) and is leveraging the experiments, experiences, and achievements of the past two decades to further explore innovative and improved responses to evolving local needs.

In Egypt and the oPt, programme successes have cut across the critical environmental protection focal areas of the GEF while also supporting grassroots leadership, building the capacity of local organizations, targeting the needs of women and other vulnerable groups and applying small grants to foster local innovation.

In this context, GEF SGP seeks to create and strengthen partnerships, particularly with those sharing similar development and environment concerns at the community level. For example, the “Every Drop Matters” programme sponsored by Coca Cola through UNDP in the oPt will run from 2011 to 2016, allocating USD 75,000 annually to awareness about water conservation. Belgium Aid has also committed to allocate USD 300,000 to GEF SGP projects on climate change in the oPt.

These partnerships support environmental protection in a region that faces difficult political challenges. Donors trust the flexible, proven, country-driven small grants mechanism. Through a web of partnerships at the global, country and local levels, GEF SGP utilizes broad and powerful mechanisms to support local innovation and environmental change.

Photo by Charmaine Seitz

Resources

Global Environment Facility Small Grants Programme website, www.sgp.undp.org.

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**GEF Small Grants Programme
Ramallah, West Bank**

sgp.undp.org