RURAL GREEN ENVIRONMENT ORGANIZATION (RGEO)
Islamic Republic of Afghanistan

Equator Initiative Case Studies
Local sustainable development solutions for people, nature, and resilient communities
Local and indigenous communities across the world are advancing innovative sustainable development solutions that work for people and for nature. Few publications or case studies tell the full story of how such initiatives evolve, the breadth of their impacts, or how they change over time. Fewer still have undertaken to tell these stories with community practitioners themselves guiding the narrative. The Equator Initiative aims to fill that gap.

The Equator Initiative, supported by generous funding from the Government of Norway, awarded the Equator Prize 2015 to 21 outstanding local community and indigenous peoples initiatives to reduce poverty, protect nature, and strengthen resilience in the face of climate change. Selected from 1,461 nominations from across 126 countries, the winners were recognized for their achievements at a prize ceremony held in conjunction with the United Nations Convention on Climate Change (COP21) in Paris. Special emphasis was placed on the protection, restoration, and sustainable management of forests; securing and protecting rights to communal lands, territories, and natural resources; community-based adaptation to climate change; and activism for environmental justice. The following case study is one in a growing series that describes vetted and peer-reviewed best practices intended to inspire the policy dialogue needed to take local success to scale, to improve the global knowledge base on local environment and development solutions, and to serve as models for replication. Case studies are best viewed and understood with reference to The Power of Local Action: Lessons from 10 Years of the Equator Prize, a compendium of lessons learned and policy guidance that draws from the case material.
Nestled in the rugged mountains of the Hindu Kush range, in northeastern Afghanistan, Badakhshan is one of the poorest and most remote provinces of the country, devastated by over 30 years of armed conflict, deforestation, and climate change. When all seemed lost, in 2012 the Rural Green Environment Organization (RGEO) began to bring hope to more than 40,000 people in 81 villages. Thanks to funds received through the UNDP-Implemented GEF Small Grants Programme (SGP), the initiative has created 6,150 jobs, constructed five kilometres of irrigation canals, protected two kilometres of river, constructed 125 check dams and 120,000 metres of terracing, and planted over 200,000 trees, as well as 16 local vine varieties that prevent soil erosion and contribute to food security. To the sustainability of their actions, RGEO has engaged village mosques, schools, and Koran study groups in environmental education efforts to raise awareness of the benefits of conservation. This powerful model of landscape restoration and poverty reduction has the potential to be replicated across the country.

Equator Prize Winner
2015

Founded
2012

Location
Tagab, Kishim and Faizabad districts, Badakhshan Province, Northern Afghanistan

Beneficiaries
Nine communities, with over 40,000 indirect beneficiaries

Areas of focus
Reforestation and sustainable management of forests, community-based adaptation to climate change, food security, sustainable livelihoods, wildlife protection, environmental education

Sustainable Development Goals Addressed

EQUATOR PRIZE 2015 WINNER FILM
BACKGROUND AND CONTEXT

The Islamic Republic of Afghanistan is framed by six neighbouring nations: Iran, Turkmenistan, Uzbekistan, Tajikistan, China, and Pakistan. The Hindu Kush mountain range extends from the east into the centre of the country, limiting agriculture to flat plains in the northwest and southwest, and to the river valleys throughout the country. Afghanistan’s mountains, deserts, open woodlands, and forests make it a country rich in living resources and natural beauty, harbouring a vast array of species that exist in a variety of ecosystems and conditions.

Although Afghanistan is not considered a ‘hotspot’ for biodiversity, it was one of the most significant centres for the origin and development of humanity’s crop plants, including numerous local landraces of wheat and other crops in use by Afghan farmers.

Afghan biodiversity provides essential tangible goods and services to the local population. Some of these goods and services are offered through the direct uses of biodiversity for subsistence and livelihoods, including for traditional crops, grazing, fuel, timber, fishing, and hunting. Ecosystem services provided by biodiversity are also significant and include soil fertility, erosion control, crop pollination, and climatic stability, among others.

Unfortunately, decades of armed conflict, population growth, natural disasters, and overexploitation of natural resources have taken a toll on the environment in Afghanistan, particularly in the northeastern Badakhshan Province.

Because almost all its water is derived from rainfall, Afghanistan is highly susceptible to climate change and its effects on precipitation and snowmelt patterns. Two of the five watersheds in the Amu Darya River Basin, the Panj and Kokcha, are located in Badakhshan. The Kokcha River runs from the high Hindu Kush Mountains, covering a vast area of the watershed and draining the Tagab district, one of the three districts where the Rural Green Environment Organization (R GEO) works with 9 villages, benefiting over 40,000 people.
RGEO Origin and Organizational Structure

In this context, RGEO’s work builds on the reforestation and wildlife protection initiatives introduced by Haji Awrang, the former governor of Badakhshan’s Tagab District. When he returned to Tagab after the war in the early 1990s, much of the region’s natural resources had been erased from the landscape. This cycle of resource degradation and increased poverty continued until 1997, when RGEO director Ahmad Seyer, who had worked with the people of Badakhshan as a construction engineer for over a decade, teamed up with Awrang to promote further initiatives that would benefit the well-being of the communities.

The turning point was 2002, when the community elders banned fishing and logging, imposed controls on grazing and hunting and recruited community members as volunteer guards to enforce the measures and report illegal activity to the police. In addition, in 2015 the Environment and Engineering Sectors of the Norwegian Afghanistan Committee (NAC) established a nursery and orchard and provided irrigation water through the construction of a six-kilometre canal, thus demonstrating the significance of environmental conservation to local livelihoods and encouraging the full support of local communities.

RGEO was formally registered as a non-profit organization in 2012. The organization’s activities are selected by the Community Development Councils (CDCs) – the Government-approved village-level development institutions – and formalized with RGEO through consultations that involving male and female community members in the decision-making process. Once approved, the projects are handed over to the community, which takes full ownership and management of the initiative.

RGEO is led by a board made up of four members, including community elders and advisors from the national government, and its objectives are the following:

- To assist in the rehabilitation and reconstruction of rural Afghanistan;
- To seek financial resources and implementation possibilities for rural communities of Afghanistan;
- To improve the socioeconomic and environmental conditions of rural areas of Afghanistan;
- To deliver donor and governmental assistance through rehabilitation projects to rural areas of Afghanistan; and
- To protect and conserve the natural environment of rural areas of Afghanistan by converting unproductive land into productive areas and to control erosion and landslides through planting various tree species.

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LOCAL CHALLENGES

Deforestation and Habitat Loss

Badakhshan’s original vegetation was composed of woodlands characterized by scattered trees, relatively low shrub density and a significant amount of herbaceous cover. It also included Pistachio (*Pistacia vera*), in a band along the northern mountains at altitudes ranging from 600 to 1,500 metres, and northern Juniper (*Juniperus* spp.) communities, at elevations between 1,500 to 3,200 metres. Other noteworthy plant species in the province are cumin, anise, chicory, mustard, daphnia, barberry, and hundreds of wildflowers and bushes.

However, the overexploitation of these trees – driven by demand for timber and firewood – coupled with rapid and unplanned population growth, natural disasters, and illegal lapis lazuli mining, have decimated the province’s native pistachio and juniper forests and damaged the upper mountain. This, in turn, increased soil erosion along the Kokcha riverbanks and destroyed the natural protective mechanisms for environmental health.

This loss of natural protective mechanisms, which affects food security, resilience to natural disasters, energy security and access to clean water and raw materials, is particularly devastating for the people who live in rural areas and rely on natural resources to make a living. In addition, habitat destruction and uncontrolled hunting have also led most wildlife species to flee the area.

Food Insecurity

Afghanistan and its nearest neighbouring countries are considered to be the third most important centre of crop origin in the world and the home of the wild ancestors of species vital for human life, such as wheat, rye, barley, chickpeas, apples, pears, melons, grapes, and pistachios, among others. Despite this history, food insecurity now threatens the country’s population, particularly in the rugged mountains of the Badakhshan Province.

With high mountains and steep river valleys, Badakhshan is one of the larger provinces in Afghanistan, although sparsely populated, remote, and relatively underdeveloped. To the south, the Hindu Kush range cuts it off from the rest of the country. Because of this isolation, as well as the difficulty of growing grains in the province’s mountainous terrain, the province has a history of chronic food insecurity. With limited options available, local communities purchase grain with income earned through seasonal wage labour outside the area or through the sale of livestock. In the case of the Kokcha Valley, the lack of connection also means that communities located further away from the road are less developed and face a worse quality of life in terms of access to health care, hygiene, nutrition, and female education, among other services.

Today, communities in the Tagab District, where RGEO operates, rely on homegrown crops of wheat, barley, green beans, corn, fruits (mulberries, peaches, apricots, pears, cherries, and apples), and nuts (almond, pistachio, and walnut) for their sustenance and livelihoods. However, due to deforestation, much of the scant agricultural land available has been destroyed and many orchards have disappeared. Some families depend on animal husbandry as an alternative source of income, but not all of them have this option.
Climate Change and Natural Disasters

The United Nations Environment Programme (UN Environment) has identified Afghanistan as one of the countries that is most vulnerable to climate change, despite the fact that it only contributes 0.1 percent to the total global greenhouse gas emissions. Because Afghanistan almost exclusively relies on its own rainfall rather than water flowing from transboundary rivers, it is particularly susceptible to global warming and its effects on precipitation and snowmelt patterns.

Less rainfall entails longer drought periods and a higher risk of desertification, a situation that has been highlighted by both the United Nations Framework Convention on Climate Change (UNFCCC) and Afghanistan’s Ministry of Agriculture Irrigation and Livestock (MAIL).

Given their proximity to the Hindu Kush Mountain Range, Badakhshan Province and the Tagab District have increasingly suffered the effects of climate change and are highly vulnerable to other types of natural disasters, such as flash floods, avalanches, and landslides. This is so serious that, in 2016, the Afghanistan Natural Disaster Management Authority (ANDMA) identified 35 areas in Badakhshan prone to natural calamities in 12 districts, including Tagab.
Community environmental education and training

Community engagement, environmental education, technical training, and workforce development are central to the sustainability and success of RGEO’s environmental initiatives. Working in a post-conflict country, RGEO is focused on activities that reinforce local livelihoods, community stability, and environmental resilience. Awareness programs have been launched in mosques and schools, utilizing the Koran to explain the benefits of environmental conservation, engage youth and school children, and involve local religious leaders, commanders and elders.

The environmental education program explores how forests are essential for human life and are home to millions of species, providing ecosystem services such as protection against soil erosion, production of oxygen, purification of air and water resources, carbon sequestration, and climate change mitigation. Through this program, communities learn about the link between environmental protection and sustainable livelihoods.

Technical training is a core practice for community engagement to build skills and share knowledge across the villages in the region. A two-room training centre has been constructed in the Tagab District to provide a reliable and secure training space, maintain training materials and tools, enhance the technical knowledge of local farmers, and support community capacity building activities. Women are likewise trained in environmental conservation and workforce development projects, which greatly enhance job opportunities available to them.

One hectare of land has been designated as a demonstration nursery where local community members are invited for open days, and training days are held for farmers, high school students, and local government officials. With assistance from the French Development Agency, RGEO has introduced apiculture has also been introduced to the area, conducting training sessions and providing beehives to members of the community.

KEY IMPACTS

Community environmental education and training

- Three community members are being trained as forest guards who are paid and given horses by the village people to both protect the forests and provide environmental education at the local mosques. They obtain technical knowledge for orchard and nursery management, reforestation, and environmental conservation.
- RGEO is training 100 farmers in grafting, nursery establishment, drip irrigation, and mountainside orchard management.
- Diverse community members including women and men, youth, disabled community members, and indigenous nomadic people have access to training and work programs.
Forest protection and reforestation

Recovering degraded lands has been at the forefront of RGEO’s efforts in the Tagab, Kishim, and Faizabad districts, building on the decision made by the community elders and Shuras (consultative councils) in 2002 to protect and rejuvenate the upper mountain forests by banning the cutting of the forests, as well as fishing and bird hunting. At present, the aim is to restore vital ecosystem services, by preventing further soil erosion, retaining water, and supporting carbon sequestration. To date, the organization and the participating local communities have planted over 200,000 fruit and non-fruit bearing trees.

As a complement to this work, in 2012, the UNDP-implemented Global Environment Facility Small Grants Programme (SGP) funded the RGEO project ‘Reforestation of Degraded Watershed and Establishment of Fruit Orchards in Tagab District, Badakhshan Province’. The grant provided resources to build a nearly 500-metre fence made with concrete and metal to safeguard thousands of natural pistachio trees on the mountainside that were previously destroyed by grazing animals from neighbouring communities or cut for firewood by villagers.

KEY IMPACTS

Forest protection and reforestation activities

- RGEO’s reforestation efforts are helping prevent soil erosion, enhance the nutrient- and water-holding capacity of the soil, reduce landslides, and strengthen community resilience to the impacts of climate change.
- As the ecosystem slowly recovers, partridges, foxes, wolves, and even rare snow leopards (*Panthera uncia*) and Marco Polo sheep (*Ovis ammon polii*) are gradually returning to the mountains.
- The organization’s activities have also enabled the regrowth of over 150 medicinal plants and herbs in the mountains.
Establishment of nursery farm and orchards

Since the establishment of an orchard and nursery farm in 2002, local communities and RGE have worked hand-in-hand to reforest the mountainside in order to reduce land degradation, have enhanced community-led natural resource management, and provided work for local community members. To achieve this, RGE plants grafted saplings of different varieties of indigenous fruit trees (pistachio, almond, and redbud), 16 types of grafted fruiting wild vines (locally called *Dew Tak*), and other fast-growing tree species that enable ecosystem restoration and income generation. These efforts were supported in 2012 by the previously mentioned SGP project. Today, local farmers continue to tend to the more than 80,000 indigenous wild vines that are contributing to expand vegetation cover and food sources in the area. In addition, widowed women are now employed in a work-for-food program where they become ‘foster moms’, looking after seedlings and saplings until the plants are strong enough to be transferred to the nursery.

**KEY IMPACTS**

Establishment of nursery farm and orchards

- Over 40 hectares of the mountainside have been revitalised with fruit and nut-bearing trees including mulberry, peach, apricot, pear, cherry, apple, almond, pistachio, and walnut.
- The increased food basket of additional horticultural products has improved the health and well-being of all the community members who live in the district.
- RGE’s initiatives have created 6,150 job opportunities for both men and women that have increased income generation within the valley.

Development of small irrigation systems and riverbank protection

Managing water resources to support local forests and crop plantations is another goal of RGE. To date, the organization and its partner communities have managed to reforest two kilometres along the Kokcha River to reinforce riverbank stability and construct five kilometres of irrigation canals, 125 check dams, and 120,000 metres of terracing. Furthermore, the SGP-funded project provided resources to build 15 water reservoirs, each with a capacity of 12 cubic metres, to irrigate the newly planted trees.

**KEY IMPACTS**

Development of small irrigation systems and riverbank protection

- RGE’s efforts enhance the productivity of the orchards on the mountainside and conserve water in the district.
- RGE’s work to reforest, reinforce, and protect the bank of the Kokcha River reduces erosion and ensures the provision of critical ecosystem services to the communities living in the valley.
National policy impacts

In 2005, the Government of Afghanistan approved the Environment Act, which provides a framework for managing natural resource conservation and enforcement. Building on this framework, government ministries have partnered with RGEO to support local approaches to protect natural resources and provide knowledge sharing opportunities. RGEO works with the National Environmental Protection Agency (NEPA), Ministry of Agriculture Irrigation and Livestock (MAIL), and Ministry of Rural Rehabilitation and Development (MRRD) in the development and implementation of community-level natural resource management and engages government officials in education and training for local communities.

The national government has plans for agriculture, climate change mitigation, and mountain area development at both the national and provincial levels. However, district-level plans still need to be developed. RGEO has served as a key partner in the development of district plans, which are community driven and in line with national plans. In tandem, national plans have been informed by local knowledge and practices. For example, in the Kishim District, community-based natural resource management practices have strengthened the sustainability of environmental and agricultural initiatives and are now guiding the national approach, since they have proven to be an especially effective post-conflict reconstruction tool for uniting community members on issues of common interest and need.

Contributions to Global Agenda

The post-conflict conditions in Afghanistan highlight the pressing need to deliver on the Sustainable Development Goals (SDGs) in order to reduce insecurity and support peacebuilding. The initiative engages local villages in environmental conservation and reforestation activities that simultaneously deliver on public health (SDG3), local livelihoods (SDGs 1 & 8), food security (SDG2), and climate change mitigation (SDG13) priorities. RGEO’s community-driven approach to enhance environmental management and strengthen local livelihoods has broadened sustainable land management and enhanced post-conflict recovery efforts. The initiative’s work not only highlights the importance of environmental conservation for delivering development benefits, but also the critical role of local engagement in natural resource management for peacebuilding and conflict resolution. Initiatives such as those of RGEO, which are designed, implemented, and owned by local communities will play a critical role across multiple SDGs as the world works to deliver on the 2030 Agenda for Sustainable Development.

In 2017, RGEO won the National Energy Globe Award for Afghanistan, as part of a campaign that runs in cooperation with the United Nations Environment Programme (UNEP), recognizing and showcasing its success in increasing fruit products, creating job opportunities, providing income for local families, transforming barren land into productive land, and protecting the area from erosion and landslides. This recognition reinforces the importance of RGEO’s work to deliver integrated conservation, development, and peacebuilding dividends.
Replication

Over the past five years, RGEO has been able to successfully replicate their approach to meet needs throughout the region. Initially implemented in one village in Badakhshan, in response to additional community requests and funding availability RGEO now serves nine communities across northeastern Afghanistan, which have replicated the development of nurseries, as well as reforestation and environmental awareness activities.

Scalability

This initiative is a powerful model of landscape restoration and poverty reduction that has the potential to be scaled up to the national level. RGEO aims to create a model applicable across Afghanistan in partnership with international organizations and the national government. Expanded programs would provide education, training, and knowledge sharing through mosques and schools. In addition, formalized project implementation would focus on tools for climate change adaptation and flood/drought prevention techniques in collaboration with RGEO partners and the local Community Development Councils, elders, and community members.

Sustainability

RGEO is a self-sustaining organization that largely relies on grants to execute projects in its area of intervention. For example, funding from the Equator Prize was spent on providing transportation for the organization's staff, one of the main difficulties they faced in project implementation.

Aside from regular funding from SGP, in 2016 RGEO received US$95,000 from the UN Environment for a project to mitigate climate change impacts that includes the establishment of nurseries, watershed protection in the Kokcha and Kishem Rivers, site training for farmers, reforestation, and the construction of water reservoirs. One major achievement of the project was building a water reservoir in Karas Deh, with a capacity of 2,100 cubic metres of water. This is helping people use the water when it is scarce and to ensure the crops and land are not dry.

FUTURE PLANS

- Secure funding to implement reforestation programs for climate change mitigation in the Baghlan Province, which is known for the high quality of its apples.
- Secure funding to establish a dry fruit processing project for women in Badakhshan.
- Involve women in additional activities, such as collecting and processing fruits for sale in the market.
- Build a factory for juice processing, fruit dehydration, and nut cleaning to add value for these products and enable them to be sold in the main markets in Badakhshan.
- Continue working with the UN Environment on the project for the Improvement of the Kokcha and Kishem Watersheds, which will make a great difference to the people living in this area.
PARTNERS

R GEO works with a diverse range of partners including the following academic institutions, government, and international organizations:

- **World Food Programme (WFP):** An ongoing partnership with WFP enables community members to participate in a food for work program, which provides stable employment and helps reduce the number of men leaving the area to find work in other parts of Afghanistan or other countries.

- **United Nations Environment Programme (UN Environment):** UN Environment has provided financial support and capacity building for staff and community members and is funding the implementation of a watershed improvement project.

- **UNDP-Implemented GEF Small Grants Programme (SGP):** SGP has provided financial and technical support to R GEO for forest preservation and conservation of community orchards.

- **Food and Agricultural Organisation (FAO):** FAO has supported training and capacity building for R GEO staff in environmental conservation and climate change.

- **Afghanistan National Environmental Protection Agency (NEPA):** NEPA has provided training and capacity building for R GEO staff in environmental conservation and climate change.

- **Afghanistan Ministry of Agriculture Irrigation and Livestock (MAIL):** MAIL has provided training and capacity building for R GEO staff in environmental conservation and climate change.

- **Afghanistan Ministry of Rural Rehabilitation and Development (MRRD):** MRRD has provided training and capacity building for R GEO staff in environmental conservation and climate change.

SOURCES AND FURTHER REFERENCES


ACKNOWLEDGEMENTS

The Equator Initiative acknowledges with gratitude the Ahmad Seyer and Farkhunda Ateel Siddiqi
All photo credits courtesy of R GEO. Maps courtesy of CIA World Factbook and Wikipedia.

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Suggested Citation

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The United Nations Development Programme (UNDP) is the UN’s global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life.

The Equator Initiative brings together the United Nations, governments, civil society, businesses and grassroots organizations to recognize and advance local sustainable development solutions for people, nature and resilient communities.

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