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Key lessons from a community-based forest and rangeland management initiative in Afghanistan

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Abstract

It is increasingly recognized that the management of forest and rangeland resources through the involvement of resource users is a sound strategy for the protection, conservation, and sustainable use of those resources in mountainous communities in Afghanistan. Community-based management of natural resources, especially forest and rangeland, is a priority of the Government of Islamic Republic of Afghanistan (GoIRA). Accordingly, the Ministry of Agriculture, Irrigation and Livestock (MAIL), with donor support, has initiated community-based natural resource management practices throughout the country.

This paper highlights the key lessons learnt from successfully implementing community-based forest and rangeland management interventions under a project implemented by the FAO in two provinces (Nangarhar and Parwan), with the support of the Global Environment Facility (GEF). It also draws some lessons from a similar project currently ongoing in five provinces (Badghis, Bamiyan, Gazani, Kunar and Paktiya) with close collaboration of different government agencies. The paper builds on the information gathered from focus group discussions, field observations and historical records.

The results indicate that more efforts are needed to make the communities and the government recognize the full potential of and emphasize community-based natural resource management through capacity building, provision of financial support, and clarification of user rights and ownership status. The results also revealed that capacity of government agencies, especially the office bearers, had to be strengthened in order to put the relevant policies and procedures issued by the GoIRA into practice more effectively and efficiently. The most important entry-point initiatives and interventions that showed progress in achieving sustainable natural resource management include: (i) providing alternative energy sources for reducing pressure on forest and rangeland in remote areas for wood fuel; and (ii) promote improved management of natural resources through awareness raising, capacity building, and introduction of new technologies.

Keywords: Community-based natural resource management (CBNRM), community, community-based association.

Introduction

The relevance of socioeconomic benefits from forests and their role in sustainable development are increasingly recognized today. Rangelands and forests are very important for the population and economy of Afghanistan (FAO, 2016). Rangeland- and forest-based production account for a significant share of Afghanistan's GDP. Afghanistan is one of the poorest countries in the world. Rangelands and forests provide goods and services for

agriculture, energy, construction, mining, and other sectors of the economy (World Bank, 2018a). Natural resources provide livelihoods for about 80% of Afghan households, preserve and protect soil, regulate water flow, and mitigate landslides and floods (MAIL, 2017; World Bank, 2018b). (NEPA, 2014) These natural resources, though, face serious threats from both man-made and natural causes (MAIL, 2017; UNEP, 2014). The greatest challenges for the protection and management of natural resources include rapid population growth, poverty, the excessive dependence of the rural population on natural resources as well as insufficient awareness of sustainable natural resource management and climate change (MAIL, 2017; Robinson et al., 2021). The rangelands cover 30.2 million hectares (47%) of the territory, directly backing extensive and intensive agricultural occupations and provide 75% to 80% of animal feed for the country's livestock. Rangelands also regulate the flow of surface water. It is estimated that rangelands support nearly 4 million hectares of irrigated land in Afghanistan (Ali & Shaoliang, 2013). Forests and shrubs cover 1.8 million hectares (2%) of the land area and provide wood, fuelwood, and non-wood forest products, all of which are highly valued in local and international markets (World Bank, 2018a). According to FAO Afghanistan forests contain around 38 million metric tons of carbon in forest biomass (*Afghanistan Forest Information and Data*, 2009; Fleming, 2020).

The country's forests and rangelands can be broadly classified into four ecological regions: (i) temperate coniferous forests in the east; (ii) minor occurrence of temperate grasslands, savannahs and shrub-lands in the northern region; (iii) grasslands and shrubs in the northern, southern and western parts of the mountainous areas, and (iv) the deserts and shrubs of the southwest (FAO, 2016). Afghanistan's forests are diminishing rapidly due to overexploitation and due to lack of proper management arrangements. Between 1990 and 2000, the average annual rate of deforestation based on estimated forest area in 1990 was 2.3%, which rose to 2.9% per year between 2000 and 2005. In total, over the 25 years (1990-2005), the country lost about 34% of its forest cover, or about 442,000 hectares (MAIL, 2017; NEPA, 2019).

Sustainable management of these resources is important for rural livelihoods, food security, as well as for addressing the risks of natural disasters and climate change. Furthermore, rangelands and forests contribute to Afghanistan's rural economy by providing essential resources such as fodder, water, oil, timber, and non-timber forest products. The Global Environmental Facility (GEF) funded project "Reducing Greenhouse Gas emissions through Community Forests and Sustainable Biomass Energy" was implemented in two provinces (Nangarhar and Parwan) from August 2016 to July 2019. The ongoing project "Community-based forest management for biodiversity conservation and climate change mitigation in Afghanistan" was designed to further support integrated, community-based approaches to sustainable land and forest management in Afghanistan for promoting biodiversity conservation, climate change mitigation, and rangeland productivity. Afterward, based on the evaluation of the first project results, donors and government decided to strengthen communities with the approach of community based natural resource management (CBNRM) and implement the project through local communities together with local government institutions. This paper summarizes some lessons from these efforts.

Objectives

This paper highlights the key lessons learnt from two projects: (i) the completed project on community-based forest and rangeland management interventions in two provinces (Nangarhar and Parwan); and (ii) the ongoing project since August 2018 in five provinces (Badghis, Bamiyan, Gazani, Kunar and Paktiya).

Study area and methodology

The main focus of this paper is Dara-e-Noor District of Nangarhar province and Salang District of Parwan province. Both provinces are forested and mountainous areas, where local people directly depend on forest and rangeland resources for livelihoods. However, few lessons from the Community-based sustainable land and forest management project are also included.

The observations made while promoting sustainable land and forest management and community-based management approach were compiled. The information was also collected from the project reports and other available literature.

Results

1. Benefits' management and community engagement

The project was implemented in coordination with General Directorate of Natural Resource Management of Ministry of Agriculture, Irrigation and Livestock (MAIL) at central level and Agriculture, Irrigation and Livestock Directorate at provincial level, National Environmental Protection Agency (NEPA), Ministry of Energy and Water (MEW) and Ministry of Rural Rehabilitation and Development (MRRD) as well as with other agencies present in the area in order to avoid any duplication. The Food and Agriculture Organization of the United Nations (FAO), with the support of line departments, provided assistance in identifying families who are relying on natural resources and not able to procure fuel efficient or renewable technologies. To ensure that eligible households were selected for the GEF project, FAO including the Department of Agriculture, Irrigation and Livestock (DAIL), Community Development Councils (CDCs), forest management associations (FMAs), district governor offices and district development assemblies (DDAs), finalized the list of beneficiaries based on the established criteria. The selection process of final beneficiaries was inclusive, transparent, and based on consensus of all relevant stakeholders. The fuel efficient cookstoves, biomass digester, heaters (Bukharies) and tandoors were distributed among eligible communities/beneficiaries.

The community-based management approach was adopted throughout. This encompasses the management of forestlands and forest resources by or with local people, individually or in groups, and for commercial or non-commercial purposes. The concept covers a range of activities including indigenous management of sacred sites of cultural importance, smallholder forestry schemes, as well as decentralized and devolved forest management (FAO, 2020). Follow eight steps in Figure 1 including series of community consultations in ten FMAs in both Dara-e-Noor District of Nangarhar province and Salang District of Parwan province were followed during project implementation.

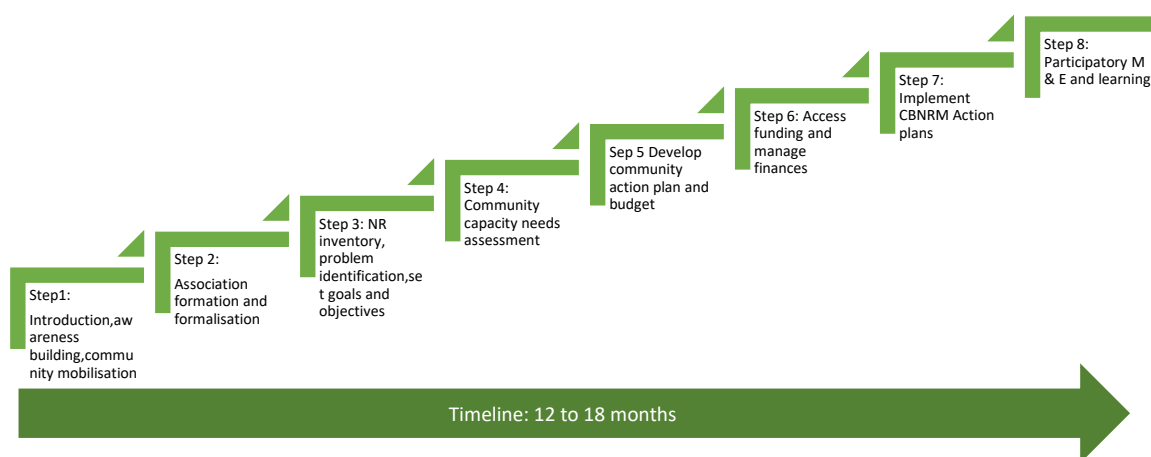


Fig. 1: Eight steps of CBNRM

2. Bringing climate change mitigation benefits

Establishing FMAs has enabled direct communications with forest and mountain dwellers in order to build their capacity to manage the forests. As a result, deforestation has been down to zero, and forest dwellers have shifted their approach towards sustainable forest management. Because of the positive result of the CBNRM approaches in improving the management of forests and rangelands, the other eight districts of Parwan province have replicated the CBNRM approaches for sustainable management of natural resources, especially the forests

and the rangeland. Forest inventory and carbon measurements were completed for Dara-e-Noor and Salang districts, and the collected data has been analyzed for further enhancement of the approved CBNRM Plans of the targeted districts. More than 80% of the households have been using the fuel-efficient cook stoves and heaters because of its 64% fuel efficiency. The solar cooker, which provides 100% clean and safe energy for the households, has been demonstrated and distributed to many households. This technology has been replicated by the communities without project contribution. About 110 hectares of the deforested areas has been reforested through planting of adaptable tree varieties, and 2,500 hectares of the forest and rangelands sustainably managed. The locally produced fuel-efficient cook stoves were affordable, cheaper and had very good results. Hiring of local promoters, both women and men, from the respective targeted districts proved to be very effective in awareness raising to women beneficiaries, accessibility, timely support. They were able to carry out awareness raising sessions regularly for women and men in the targeted villages in line with the local cultural sensitivities and values. They played a critical role in extending the knowledge and understanding about the importance of thermal devices, natural resources management, and climate change.

The project reduced 19,858 tCO₂e of GHG emissions in pilot sites and 429 tCO₂e from household energy consumption, which exceeded by nearly 4 times the original target of 4,955 tCO₂e. The sustainable biomass energy systems (SBES) were successfully deployed. Local artisans produced SBES stoves that are about 10% more efficient and 70% cheaper than imported “prototype models.” Finally, awareness was raised on the use of SBES in the pilot implementation areas.

3. Improved capacities

The project increased capacities of national and provincial government agencies and communities including women to plan, promote and implement SBES. Various training workshops were conducted including GHG accounting, such as Ex-Ante Carbon Balance Tool (EX-ACT). In addition, 20 local artisans/tin smiths were trained on production of fuel-efficient stoves; 21 masons trained on construction of biogas digesters, and training provided for 40 biogas digester beneficiaries on their operation and maintenance; 35 staff members from government line departments, with representatives from both districts, received training on SBES and biogas digesters.

4. Key lessons learnt

Key lessons learned from project implementation include the following:

1. The deployment of SBES and the GHG emissions mitigation strategy are found effective in reducing unsustainable wood removal for fuel.
2. Improved public awareness and effective “self-regulation” support can reduce GHG emissions and increase forest areas.
3. Successful consultation in each stage of CBNRM plan with local communities during FMAs establishment had positive impacts in building trust among communities, interest of project beneficiaries, involvement of women in project interventions as well as awareness raising.
4. Frequent communication with communities has resulted in gaining support and involvement of project beneficiaries in physical and practical works to be done in their respective areas such as erosion mitigation practices, orchards and woodlots establishment, reforestation, plantation establishment, fruit saplings distribution, sustainable biomass energy such as Fuel Efficient cookstoves, fuel efficient heaters (Bukharis) solar cookers, tandoors and biogas digesters as well as distribution of thermal devices.
5. In total 110 hectares of deforested land were reforested, and 2500 hectares of forests and rangelands were brought under sustainable management. 1420 fuel-efficient cook stoves, 900 fuel-efficient heaters (Bukharis), 160 fuel-efficient-tandoors, and 20 solar cookers were distributed. In addition, 40 biogas digester systems were constructed in both Salang and Dara-e-Noor Districts of targeted 10 FMAs.

6. Some interventions, such as establishment of biogas digester and installation of fuel-efficient Tandoors in Salang district of Parwan province, were technically non-feasible in the context of selected provinces and also culturally unacceptable to local communities. Therefore, the project interventions should be technically feasible and culturally acceptable in the context of selected communities.
7. It was also realized that the private sectors need to be involved in the process of reforestation and reducing GHG emissions, as they can support these FMAs further to implement more project in this thematic area.
8. According to the feedback of project beneficiaries, the fuel-efficient cook stoves had a good result. As these are fuel efficient, environmentally friendly, portable, affordable, and clean burning with less adverse effect on human health.
9. Solar cookers were good innovation and had positive results without any input cost and reducing pressure on natural resources with zero carbon emission in both project sites.
10. For sustainability of project interventions particularly afforestation/reforestation and reducing pressure on existing natural resources, an integrated approach such as alternative livelihood activities for earning income, energy efficient sources as well as capacity building and awareness is highly crucial.

Conclusions

The community-based forest and rangeland management initiative implemented in Parwan and Nangarhar Provinces of Afghanistan yielded promising results despite constraints. By promoting the establishment of community forests and the use of SBESs, the project contributed to reduce the rate of land degradation and deforestation, while promoting efficient use of biomass fuel. The lessons learnt in this process are relevant while designing projects in similar situation.

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