



Subject Review

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Barriers and opportunities regarding community-based forest management in Afghanistan: considerations for fragile states

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Summary

The Government of the Islamic Republic of Afghanistan (GIROA), in power during 2002–2021, initiated the process of instituting community-based forest governance and building local capacity for natural resource management. These efforts coincided with the presence of international security forces and the mobilization of civil society organizations, and they were in response to community aspirations to protect and restore often degraded local forests. Legislation was passed to enable forest protection and management, including a provision to encourage participatory management by local community user groups organized as Forest Management Associations (FMAs). By the end of the GIROA era, c. 20 registered FMAs were operating with c. 400 others in various stages of development across Afghanistan. Our analysis of relevant policy documents revealed that the policy framework developed during the GIROA era scores favourably on the ideal criteria for community-based resource management. Despite the change in political administration with the inception of the current Islamic Emirate of Afghanistan regime, the influence of the GIROA era serves as a starting point and may have enduring influences on rural communities in Afghanistan and the natural resources that support them. Anecdotal evidence suggests that community-based forest management may persist under the current national leadership despite international isolation and funding constraints. The model developed in Afghanistan may be relevant to other fragile states, especially in contexts where rural forest-dependent communities have strong local institutions, such as *shuras*, and where forests are not prone to heavy extraction pressure.

Introduction

Recent decades have seen the turn towards community-based natural resource management (CBNRM) and other participatory approaches to resource management as a response to the shortfalls of centralized management, such as lack of community participation, rising incidence of social conflicts and failure to achieve conservation goals (Agrawal & Gibson 1999, Lele et al. 2010, Lockwood 2010, Huber et al. 2023). Unlike co-management approaches that involve the sharing of rights, responsibilities and benefits between government representatives and local resource users (Berkes 2010, Akamani 2023), CBNRM tends to emphasize local community control over resource management decision-making and implementation processes (Agrawal & Gibson 1999, Kellert et al. 2000). Closely related to CBNRM is community-based forestry, which refers to ‘an approach to achieving the dual goals of ecological health and socioeconomic well-being by incorporating local communities into sustainable forest management’ (Danks 2008: 186). Kellert et al. (2000) identified key features of CBNRM including local community involvement, devolution of power to local institutions, integration of socio-economic and environmental goals, utilization of indigenous property rights and recognition of traditional ecological knowledge. Ideally, the implementation of CBNRM and other participatory approaches to resource management is expected to result in a range of desired outcomes, including enhanced equity, local empowerment, conflict management, biodiversity conservation and sustainable resource utilization (Kellert et al. 2000, Lele et al. 2010, Akamani & Hall 2015, Huber et al. 2023).

However, available evidence suggests several pitfalls in the implementation of participatory conservation approaches, including neglect of community complexity, inadequate community institutional capacity, potential for benefit capture by local elite and prioritization of socio-economic goals over biodiversity conservation (Agrawal & Gibson 1999, Kellert et al. 2000, Lele et al. 2010). In their analysis of case studies on CBNRM in Nepal, Kenya and the USA, Kellert et al. (2000) highlighted the need to recognize the heterogeneity of interests and the potential for

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conflicts, as well as the need to prioritize public education and institutional capacity building in order to enhance success. More recently, Huber et al. (2023) also identified the genuine devolution of power and rights, involvement of diverse actors and perspectives and the availability of long-term external support as essential to enhancing the success of participatory conservation initiatives. Given the limited data on the implementation outcomes of CBNRM (Kellert et al. 2000) and the need for further understanding of the mechanisms accounting for the emergence of community-based conservation initiatives (Seixas & Davy 2008), this paper focuses on the recent history and current status of community-based forestry in Afghanistan, and this should be of interest to researchers and policymakers who are involved in CBNRM and other participatory resource management approaches in other locations, especially those with non-ideal socio-economic and political conditions.

Afghanistan's emergence into the consciousness of actors in the conservation and development arenas as a result of the Global War on Terror provided a multitude of opportunities to address forest conservation concerns, such as deforestation (UNEP 2003). Sudden and immense attention to and investment in developing environmental laws and building institutional capacity started in 2002, waned in the late 2010s and came to a halt with the re-emergence of the Taliban in 2021 (Johnson 2017, 2022). Deforestation and forest degradation in Afghanistan were at their peak right at the beginning of the newly established Government of the Islamic Republic of Afghanistan (GIROA; UNEP 2003). With the exception of deodar cedar (*Cedrus deodara*), which was smuggled to Pakistan, nearly all forest tree extraction was for local use (Groninger 2012). With the assistance of non-governmental organizations (NGOs) such as United Nations Environment Programme (UNEP), the Food and Agriculture Organization (FAO) and the United States Agency for International Development (USAID), the GIROA conducted a series of workshops and meetings to adopt policies that would help prevent further deforestation and forest degradation. As a result, the institutional mechanisms for forest management transitioned rapidly from a command-and-control model focused on preventing illegal extraction of timber and tree nuts towards a community-based model for involving communities in the management of diverse forest resources (Suich 2010, Khatri et al. 2017). With the recent resumption of Islamic Emirate of Afghanistan (IEoA) leadership, we offer an analysis of the trends and current status of forest governance in Afghanistan from the perspective of community-based forest management. We believe the recent history of the development of community-based forest management in Afghanistan provides valuable lessons for other regions sharing similar biophysical and socio-political attributes.

Throughout its history, Afghanistan has been characterized by a complex interplay among peoples and nations vying for control of a resource-rich and strategically important landscape. Forests and accompanying rangelands have played a prominent role as sustaining resources, as focal points for conflict and as physical settings for combat (Shalizi et al. 2018, Gouhari et al. 2021). Since the late 1970s, Afghanistan has been subjected to a diverse range of approaches towards and effectiveness in natural resource governance (Groninger 2012, Shalizi et al. 2020). The tenure of the recently deposed GIROA coincided with the global emergence of CBNRM in a move away from a centralized command-and-control model (Armitage 2005). CBNRM is strongly rooted in Afghan culture, relying heavily on Community Development Councils (CDCs), many of which originated as *shuras* (tribal councils; Majeed 2014, Ziaey 2021). CBNRM recognizes the

overwhelming preference of rural Afghan communities for self-governance and prevailing contempt for centralized control (Groninger 2012, Groninger et al. 2013, Shalizi & Khurram 2016, Rahmani et al. 2021). This structure was prioritized by the Afghan government and communities to address forest degradation and deforestation problems (Government of Afghanistan 2018). Under these conditions, international financial and capacity support were generally welcomed.

Over a nearly two-decade period, with the military and humanitarian support of many nations and institutions, the GIROA era was characterized by an unprecedented – and now concluded – period of mobility to those who worked with armed international security personnel in southern Afghanistan and for those working with non-military civilians in parts of northern Afghanistan (Groninger 2012). International engagement and financial support for rural development spiked in many parts of Afghanistan, particularly during the first half of the GIROA era. Community leaders and international development personnel worked among formal and informal governing institutions at national, provincial and community scales to form natural resource management (NRM) systems to balance sometimes disparate interests and expectations (Smallwood et al. 2011, Groninger et al. 2015). During the later years of the GIROA period, freedom of movement for international personnel, and for all but non-government-affiliated Afghans or minor government personnel, was increasingly constrained and eventually restricted to only the largest cities. This time was also marked by growing disillusionment with the GIROA due to corruption and increasing Taliban influence in many rural areas. These conditions set the stage for the final collapse of the GIROA and the formal emergence of Taliban leadership across Afghanistan in August 2021. Despite tremendous uncertainty regarding the direction of the new government, experiences gained in the process of establishing Forest Management Associations (FMAs) will probably influence efforts to address critical and ongoing natural resource governance issues. In this paper, we aim to: (1) summarize characteristics of representative forest ecosystems and factors threatening forests across Afghanistan; (2) analyse the evolution and patterns of change in forest management policies in Afghanistan over time; and (3) assess the status of CBNRM policy using the 2012 Forest Management Law (FML) and other relevant forest policies.

Review methodology

A general review of the literature was conducted to assess the status of forest management in Afghanistan. Google and Google Scholar search engines were used in conducting the literature search, using a combination of the keywords 'forests, forestry, natural resources, environment, management, law, policy, community-based and Afghanistan' to construct phrases for the search engines, yielding a total of 51 research articles and reports published between 1995 and 2021. These documents were reviewed and summarized to assess characteristics representative of Afghanistan forest ecosystems and factors threatening forest cover, and these were then listed in a spreadsheet. The frequency of each threat factor (the percentage of papers citing it) was visualized using a bar chart.

To analyse the evolution of national forest policy in Afghanistan, a literature review was performed on all available forest policy and strategy documents issued by Afghanistan's governments between 1965 and 2022. If available online, documents were obtained from Google and Google Scholar search

Table 1. Key differentiating characteristics of representative Afghanistan forest ecosystems 2002–2022.

Characteristic	Forest ecosystem type		
	Eastern Forest Complex	Pistachio woodlands	Redbud woodlands
Primary uses/services	Chilgoza pine nut, timber, fuelwood, grazing	Pistachio nut production, fuelwood, grazing	Fuelwood, watershed protection
Users	Local, outsider	Local	Local
Key management institutions	MAIL, tribal <i>shuras</i> , <i>arbaki</i> ^a , national police, border control police	MAIL, tribal <i>shuras</i> , <i>arbaki</i> , national police	MAIL, national police
Accessibility to national authorities	Extremely limited	Limited	Fairly accessible
Threats to resource	Timber theft, commercial fuelwood extraction, abusive nut harvesting, livestock grazing	Premature nut harvesting, overharvesting of nuts (which compromises regeneration), livestock grazing, fuelwood extraction	Urban land encroachment, excessive fuelwood extraction, livestock grazing

^aArbaki forces were a tribal security system registered with the government. They were mainly groups of individuals from local communities formed by the central and provincial government to fight against the insurgents during 1987–1992 and 2006–2020.
MAIL = Ministry of Agriculture, Irrigation and Livestock.

engines and websites of the Afghanistan Ministry of Justice (<https://moj.gov.af/en>), the National Environment Protection Agency (NEPA; <https://www.nepa.gov.af/indexen>), the Ministry of Agriculture, Irrigation and Livestock (MAIL; <https://mail.gov.af/en>) and the Afghanistan Center at Kabul University (<https://acku.edu.af/library/>). Hard copies of the documents not available online were obtained from Kabul University Library and the documents repositories of NEPA and MAIL. The policy documents included constitutions, laws, executive orders, policies, strategies, regulations, procedures, frameworks and strategic action plans. The literature search for the policy and strategy documents was conducted between 2020 and 2022.

Once gathered, each policy document was thoroughly reviewed, and information discussing laws and policies related to forests, natural resources, land management and the environment was recorded in a spreadsheet. The majority of the policy documents were in Dari and Pashto languages. These were translated into English before being summarized. In total, 27 forest policy-related documents were reviewed and summarized. The summary of the policies, supplemented by the general literature review and authors' field experience, were then synthesized to analyse the evolution of forest policy in Afghanistan.

To assess the status of community-based forestry, all relevant forest policy and strategy documents between 1965 and 2022 were evaluated for the five features of CBNRM based on Kellert et al. (2000). Each policy and strategy document was analysed to determine the presence or absence of each of the five features of CBNRM, with a score of 0 indicating absence of a feature and 1 indicating presence of that feature. The scores were then summed to obtain an index indicating the extent to which a particular policy meets the requirements of CBNRM, with 5 being the highest value.

Forest degradation and management in Afghanistan

Afghanistan supports a diverse but scattered forest resource (Breckle 2007). In the 1970s, natural forests covered c. 3% of the total land area, of which 50–70% was lost between the years 1977 and 2002 (Saba 2001, UNEP 2003, 2009). The four decades of war and continuous instability beginning with the Soviet invasion in 1979 enabled extensive forest resource exploitation and the absence of a sustainable management response. Forest cover declined from 13 090 to 8670 km², with a net change of –3.3% per year, between 1990 and 2003 (FAO 2005). Key differentiating characteristics of representative Afghanistan forest ecosystems

from the peer-reviewed literature are summarized in Table 1. Anecdotal reports and a small number of field-based studies (Bader et al. 2013, Shalizi et al. 2018, 2020, Mahmoodi et al. 2023) representative of three important forest types have documented continuing damage to mature trees, selective logging of high-quality trees from timber species, unmanaged branch removal and neglect or destruction of tree regeneration (Fig. 1 & Table 1). Forest utilization nearly always includes diversified livestock grazing and fuelwood extraction components, with forests near transportation or export corridors being particularly vulnerable to intensive exploitation.

Afghanistan's forests provide much of the winter heating energy across the country, cooking fuel for many rural areas and high-value products for export. This populace and their physical environment have been heavily strained by a generally degrading resource base, inconsistent governance, inadequate security and diminished NRM capacity. Forest resources in particular have been subject to multiple and often intensifying damaging forces over almost 50 years (Saba 2001, FAO 2010, Groninger 2012, Shalizi et al. 2018). The meta-analysis of the data available from published articles and governmental and NGO reports between 1995 and 2021 indicates fuelwood collection, overgrazing, illegal logging and generally unsustainable management and overharvesting of nuts and fruits were the most frequently mentioned practices driving forest-cover change in Afghanistan (Fig. 2). War and political instability, weak local institutions and weak law enforcement were the most frequently listed socio-political factors driving forest-cover change (Shalizi et al. 2020, Mahmoodi et al. 2023).

Afghanistan's remaining forests are typically proximate to rural communities, but sometimes they are also heavily urbanizing (Shalizi et al. 2020). An important exception was deodar cedar, which captured government interest prior to the GIROA as an opportunity for tax revenue generation. Strong cultural differences between communities regarding the primary values of forest resources and capacity to manage commonly used resources have strongly influenced forest health. While entirely timber-based communities are probably non-existent, forest resources make up at least a portion of rural livelihoods, often for people who are extremely impoverished. In some instances, such as chilgoza pine (*Pinus gerardiana*) forests in the densely forested Eastern Forest Complex (EFC) and pistachio woodlands in the north, forest resource development represents a pathway to increased economic stability that is consistent with local cultural norms and



Figure 1. (a) Large gap created by illegal logging in a forest stand of mixed conifer species in the Eastern Forest Complex (EFC). Approximately 15 mature trees, mainly deodar cedar, were logged at this site in Paktia Province. (b) Degraded pistachio forest stands in Abkamari District of Badghis Province. A large patch of eroded soil is visible in the open area of the forest. (c) Grazing of livestock in the understory of a degraded pistachio forest in Abkamari District of Badghis Province. (d) Traditional method of chilgoza pine nut collection practised in the EFC. (e) Local fuelwood market in the EFC (Khost Province). (f) Local villagers transporting fuelwood collected from pistachio forests in Abkamari District of Badghis Province. (g) Urban settlement expansion towards the redbud woodlands in Kabul.

preferences (Shalizi et al. 2018, Mahmoodi et al. 2023). In many rural areas, traditional forest management institutions have been degraded or disrupted as a result of decades of armed conflict and other drivers of social instability (Groninger 2010). Against this backdrop, policymakers have worked to harmonize contemporary rural Afghan societies and their forest environments, with the hope of building resilience and economic opportunities for communities that depend at least in part on local forest resources (Groninger et al. 2013).

Evolution of forest policy and governance

Afghanistan's forest management policies have evolved from a centralized authoritarian model to one supporting community participation in the sustainable management of forest resources. Starting with the Kingdom of Afghanistan during the 1960s and concluding with the fall of the GIRoA, the government enacted several policy documents that directly or indirectly

addressed forest management (Table 2). Specifically, the Afghan governments enacted several forest laws and executive orders to prevent deforestation between 1965 and 2022. However, most policy documents from this period did not go through the Parliament and were signed by the King, President, Prime Minister and/or Minister of the ruling administration.

Only four NRM and conservation policies listed in Table 2 were issued by the Afghan governments prior to 2002. During that period, the Department of Forest Management (DFM), through its subordinate offices in the provinces, was the only officially recognized institution responsible for forest protection and management. Between the 1960s and mid-1970s, the DFM, in addition to having authority over the forests, also implemented several forest management programmes within the EFC, Afghanistan's only internationally significant high-value timber-producing region. The DFM was also responsible for the management of other renewable natural resources such as ranges, wildlife, protected areas and medicinal plants.

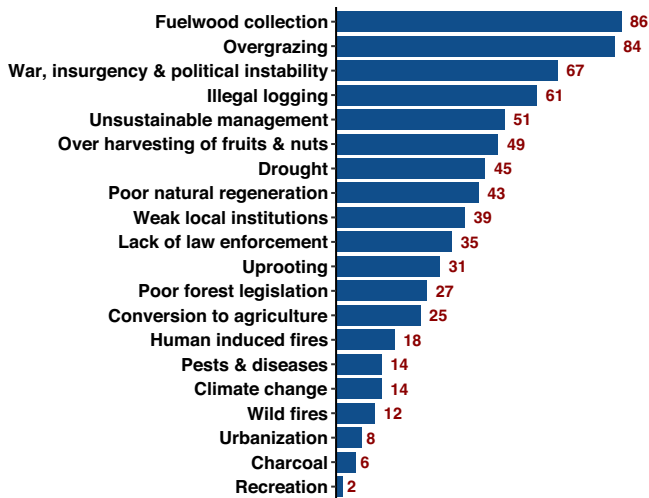


Figure 2. Threats towards and drivers of forest-cover decline in Afghanistan reported in the literature between 1995 and 2022. Values next to bars indicate the percentages of papers reporting the threats towards and drivers of forest-cover decline (N = 51).

A significant number of policy instruments were developed between 2002 and 2021 (Table 2), indicating that natural resources and environmental policies became more important to the Afghan government under GIRoA control. In 2005, the General Directorate of Natural Resources Management (GD-NRM) was established, and DFM became one of the subdivisions of GD-NRM within MAIL. At around the same time, the GIRoA established NEPA, the establishment of which and separation of other administrations within GD-NRM enabled DFM to focus exclusively on forest management activities.

Through the GIRoA era, NEPA developed policies and strategies for NRM and environmental protection-related issues but was granted no executive authority. Both NEPA and DFM/GD-NRM were assigned to collaborate on policy and strategy development related to forest protection and management, but responsibilities were not delineated between the two. This ambiguous arrangement greatly limited the impact of international NGOs, who provided key expertise in developing policy interventions during much of the GIRoA era until many of these issues were clarified by the Afghanistan National Natural Resources Management Strategy (2017–2021) and the Operational Manual for Community-Based Natural Resources Management (NRM Strategy 2017, OM-CBNRM 2020). However, by that time, international involvement and resources had declined considerably.

Beyond the initial confusion resulting from the initiation of NEPA, DFM remained limited in its abilities to influence forest use. Prior to 2002, the absence of specific policies severely limited the role of DFM in managing natural forests (Ministry of Justice, Islamic Republic of Afghanistan 2004). In addition to lacking specific details regarding forest management, the constitution did not specifically authorize DFM, but rather called upon the government in general to protect and manage natural forests. While DFM was generally recognized as the prevailing authority regarding forest resources, conflict developed with NEPA regarding delineation of responsibilities concerning protected areas and wildlife management.

The government of Afghanistan issued executive orders between the years 2002 and 2012 to address illegal logging and conflicts over the management of natural forests (Table 2). The executive orders helped clarify the role of law enforcement agencies

to curb illegal activities in forests. However, detailed forest management strategies and policies were still lacking in that they were limited to brief references in the executive orders, while the roles of communities and the private sector remained unclear. To overcome confusion regarding the roles of DFM, other governmental institutions and the public, the Parliament of Afghanistan passed the FML in 2012 under the overarching Constitution of 2004, Articles 64 and 100.

The FML recognizes natural forests as public property owned by the national government, but it also creates opportunities for local communities to utilize and manage forests sustainably. The law emphasizes natural forest protection and restoration and supports community-based sustainable use of forest resources (Article 44; EPL 2007). The FML affirms that forests are public property but explicitly allows the citizens of Afghanistan to sustainably manage forests according to the law and under the supervision of MAIL (Article 5; FML 2012). The primary goals of the FML are to: (1) protect and manage forest and regulate forest resources based on community participation; (2) maintain a steady balance between forest utilization (timber harvest, fuelwood collection, non-timber forest products harvest, grazing, etc.) and forest health (stand stocking, area, growth, regeneration, under-story vegetation); and (3) encourage local communities to actively participate in the protection, regulation and management of forest resources (Article 2; FML 2012).

Assessment of CBNRM in the relevant policies

Based on the Kellert et al. (2000) CBNRM criteria, the forest management-related policies enacted before 2002 did not support participatory forest management (Table 2). However, after 2002, the majority of the policies supported some or all features of CBNRM. Among the policies and strategies developed for NRM by the GIRoA, the FML, the Forest Management Associations Establishment and Management Procedure, the National Natural Resources Management Strategy for 2017–2021 and the National Forest Management Plan policies developed after 2012 promote all of the required components of CBNRM. Other documents released during this era also partially support CBNRM. These results indicate that the GIRoA realized the importance of community participation for sustainable management of natural resources, a phenomenon never considered by the previous governments.

Forest Management Associations

To encourage CBNRM, one of the important components of the FML is the establishment of FMAs by GD-NRM (Article 5; FML 2012). The FML authorizes DFM to establish FMAs to protect, expand, manage, conduct research and surveys and utilize forest resources for economic purposes through active community participation (Article 6; FML 2012). Furthermore, the FMAs' activities were to be regulated by DFM under the provisions of the FML and the Environment Protection Law (EPL). The FMAs are required to register and obtain a licence from MAIL prior to implementing activities in the forest under the supervision of and supported by MAIL, the provincial Directorate of Agriculture, Irrigation and Livestock (DAIL), GD-NRM and DFM. Duties and activities vary among the FMAs and may be site-specific (NRM Strategy 2017, OM-CBNRM 2020). Any activity resulting in forest degradation and deforestation is considered an infringement of the law. The law enforcement agencies, especially the Afghanistan National Police and the Border Protection Police, are required to

Table 2. Documents issued by the Afghan governments (DRoA = Democratic Republic of Afghanistan; FMA = Forest Management Associations; GIROA = Government of the Islamic Republic of Afghanistan; IEOA = Islamic Emirate of Afghanistan; KoA = Kingdom of Afghanistan) related to forest policy and management between 1965 and 2022. Columns F1–F5 score the policy documents against the five features of community-based natural resources management (CBNRM) from Kellert et al. (2000). A 0 value indicates ‘no’ and 1 indicates ‘yes’. ‘Score’ is the sum of 1s indicating the strength of the policy towards promoting CBNRM. A score of 5 indicates that the policy promotes all five features of CBNRM identified by Kellert et al. (2000; F1 = a commitment to involve community members and local institutions in the management and conservation of natural resources; F2 = an interest in devolving power and authority from central and/or state government to more local and often indigenous institutions and peoples; F3 = a desire to link and reconcile the objectives of socio-economic development and environmental conservation and protection; F4 = a tendency to defend and legitimize local and/or indigenous resource and property rights; F5 = a belief in the desirability of including traditional values and ecological knowledge in modern resource management). The majority of the documents were issued between 2002 and 2021 by the GIROA and most of them promoted CBNRM.

Document (year, regime)	Type	F1	F2	F3	F4	F5	Score
Land Survey and Statistics Law (1965, KoA)	Law	0	0	0	0	0	0
Pasture Law (1971, KoA)	Law	0	0	0	0	0	0
Nature Conservation Law (1986, DRoA)	Law	1	0	0	0	0	1
Forest Management Law (2001, IEOA)	Law (unpassed)	0	0	0	0	0	0
Constitution (2004, GIROA)	Constitution	0	0	0	0	0	0
Prohibition of Illegal Logging (2005, GIROA)	Executive order	0	0	0	0	0	0
Policy and Strategy for Forest and Range Management Subsector (2005, GIROA)	Policy and strategy	1	1	1	1	0	4
Environmental Law (2007, GIROA)	Law	1	1	1	0	0	3
Medicinal Crop Management and Its Sustainable Use Plan (2007, GIROA)	Plan	1	1	1	1	0	4
Pistachio Nuts Collection Timing Procedure (2008, GIROA)	Procedure	1	0	0	0	0	1
Protocol for Distribution of Forest Trees Seedlings (2008, GIROA)	Procedure	0	0	0	0	0	0
National Protected Areas System Plan (2009, GIROA)	Policy document	1	1	1	1	0	4
Strategy for Management and Protection of Pistachio Forests – Draft (2009, GIROA)	Strategy	1	1	1	1	0	4
Forest Management Law (2012, GIROA)	Law	1	1	1	1	1	5
FMA Establishment and Management Procedure (2013, GIROA)	Procedure	1	1	1	1	1	5
National Biodiversity Strategy Action Plan (2014, GIROA)	Policy and strategy	1	1	1	0	1	4
Dry Land Farming Strategy (2014, GIROA)	Strategy	1	0	0	0	0	1
National Comprehensive Agriculture Development Priority Program for 2016–2021 (2016, GIROA)	Policy and strategy	1	1	1	0	0	3
National Natural Resources Management Strategy for 2017–2021 (2016, GIROA)	Policy and strategy	1	1	1	1	1	5
Prohibition of Illegal Logging (2017, GIROA)	Executive order	0	0	0	0	0	0
National Agriculture Research Policy (2018, GIROA)	Policy document	1	0	0	0	0	1
Land Management Law (2018, GIROA)	Law	0	0	0	0	0	0
National Comprehensive Agriculture Development Priority Program for 2019–2023 (2019, GIROA)	Policy and strategy	1	1	1	1	0	4
Prohibition of Illegal Logging (2022, IEOA)	Executive order	0	0	0	0	0	0
National Forest Management Plan (unknown, GIROA)	Plan	1	1	1	1	1	5
Wetland Protection Law (unknown, GIROA)	Law	0	0	0	0	0	0
Chilgoza Pine Forest Conservation and Restoration Plan – Draft (unknown, GIROA)	Plan	1	1	1	1	0	4

intervene and implement the law, regardless of whether violations are committed by the FMAs or outside parties.

The groundwork for these committees was established in 2001 with the introduction of the Forest Law, which promoted the CBNRM model. Since that time, MAIL continuously encouraged local communities to establish Forest Management Committees (FMCs). Over time, hundreds of FMCs were registered at the provincial levels that have actively participated in forest management. While MAIL personnel found this approach beneficial, the Forest Law lacked specific details on how FMCs should function, prompting the need for a separate regulation/strategy to address this issue. Consequently, the National Natural Resource Management Strategy emphasized the development of a procedure to guide the official establishment of these FMCs. In response to this requirement, MAIL, with the technical and financial support of Action on Climate Today from the United Kingdom Department for International Development, developed the NRM Operational Manual. This manual outline seven steps on how to establish FMAs. Once the NRM Operational Manual was approved by MAIL, and prior to the collapse of the GIROA in August 2021, FAO became the first organization to adopt and establish 20 FMAs in Parwan and Nangarhar provinces. These FMAs are now officially registered, but it is important to note that the existing FMCs are still in place and will need to re-register to

obtain the title of FMAs. Nevertheless, both FMAs and FMCs are actively involved in forest management in Afghanistan.

Among the 20 forestry associations that were officially registered with MAIL, 10 each were in Salang and Dar-i-Noor districts of Parwan and Nangarhar provinces, respectively (FAO 2018). In Salang, the primary resource focus was wild almond woodlands, a dwarf tree species abundant in mid-elevation slopes, whereas in Dar-i-Noor, which is located in the EFC, the primary resource foci were oak (*Quercus baloot* and *Quercus semicarpifolia*), walnut (*Juglans regia*) and deodar cedar. A national NGO also reported in 2022 the presence of a few other FMAs (apparently unregistered) in Khost and Paktia provinces (<https://tloafghanistan.org/>). The foci of those FMAs were on watershed management and restoration of degraded forestland using indigenous tree species. Approximately 400 FMAs had been listed across the country at the end of the GIROA era but had not yet met all FMA requirements. The most formidable technical support requested by these unregistered FMAs and Rangeland Management Associations (RMAs) was presumably to help in developing a forest management plan. RMAs were to be managed by the Department of Rangeland Management, implementing a framework similar to the FMA but under the Rangeland Law and focused on regions where trees are typically small in stature or are a minor landscape component relative to primary grazing resources.

Almost all of the unregistered FMAs failed to provide a sustainable management plan, primarily due to lack of technical expertise and external support from conservation organizations. In other instances, lengthy administrative processes delayed FMA and RMA registration and planning approval that would have otherwise been instituted prior to the end of the GIRoA era.

Establishment of individual FMAs involved cooperation among DFM and community members. Prior to establishment of an FMA, representatives of constituent communities were trained on the FML, the EPL and other rules and regulations. According to the FML, an FMA could be established in a community or among communities residing near and sharing a defined tract of forested land that supports their livelihood. Other requirements include naming 11 committee members who constitute an executive board and, with the assistance of technical experts and in direct contact with provincial forestry administration, draft a management plan.

The 20 registered FMAs were financially supported by FAO (Syed Aminullah Fakhri, DFM Forest Management Administrator, personal interview 2021). Support included teaching communities about natural resources management, training government staff to better support local initiatives, constructing biogas digesters and selling low-cost, fuel-efficient heaters and cookstoves, allowing communities to utilize fewer trees and protect their forests while still meeting domestic needs. By the end of the project in 2018, over 2000 fuel-efficient heaters and cookers had been distributed, reducing wood use from hundreds of hectares of forests in two provinces alone, and thousands of people were trained on natural resources topics.

One of the primary issues hampering FMA registration was insufficient financial support. The government failed to adequately fund GD-NRM/DFM to provide technical and occasionally financial resources to FMAs. In some cases, cash was needed to provide an alternative source of income to those whose livelihoods were derived from unsustainable uses of natural resources that were necessarily disrupted by plan implementation. Widespread insecurity also slowed or halted the FMA establishment process in that local government representatives and technical experts could not travel to or operate safely in many forested areas or communities (Shalizi et al. 2018, Mahmoodi et al. 2023). RMAs were further hampered by the continued absence of an enacted rangeland law that could have granted them the formal legal status needed to fully participate in the FMA process.

Forestry institutions potentially supporting FMAs

Parallel to the FMA system, other mechanisms were sometimes in place performing a similar function. Ishkashim District Community Conservation and Forestry Association was active in Badakhshan Province; not registered in MAIL, it operated as a Civil Society Organization in the Ministry of Justice. The association supported the community for sustainable natural resources utilization, providing technical support, environmental education and community outreach in 44 villages across the district to address biodiversity and watershed stabilization concerns threatened by grazing (UNDP 2016). The district is not forested per se, rather being dominated by dwarf shrubs, annuals and shrubby perennials, and so it is not under the jurisdiction of the FML. However, similar conditions prevail across many portions of Afghanistan, suggesting potentially broad applicability for this model.

The limited implementation of formalized FMAs did not preclude other institutions from practising or at least influencing

forest management. *Shuras* were another type of unregistered forest management entity that are very common in the EFC, especially in Khost, Paktia and Paktika provinces (Shalizi et al. 2018). Usually, these *shuras* are established based on common ethnicity and tribal customs and, in some cases, village proximity. Most tribal *shuras* are constituted from several villages that together cover <10 km². However, in ethnically homogeneous areas, a tribal *shura*'s jurisdiction may include an entire district. Often, the *shuras* are made up of community elders and include only men. The *shuras*' primary role is the resolution of legal matters between individuals and families. However, part of their duty is to distribute forest resources among community members, determine the timing of harvests and control logging. Some of these *shuras* assign forest guards to monitor illegal activities and fine violators (Shalizi et al. 2018, Khurram et al. 2023). In some areas, the Ministry of Rural Rehabilitation and Development (MRRD) used *shuras* to establish CDCs to implement development projects. The primary foci of CDC projects were road, bridge, well, clinic and school construction. For example, the Wildlife Conservation Society implemented an afforestation project on 300 ha in Wakhan, Ishkashim and Zebak districts of Badakhshan Province through CDCs that were established by MRRD.

The long-term effectiveness of *shura*-based forest management is hampered by the absence of technical expertise. These *shuras* may help protect the trees from recognized threats of illegal logging; however, in most cases, they are uninformed regarding other important causes of forest decline. For instance, in some chilgoza pine forests, *shuras* allow villagers to conduct unrestricted livestock grazing and pine cone collection. This has depleted natural regeneration, leading to forest decline as stands degenerate to ageing forest overstories with no younger cohorts to take their place (Khurram et al. 2023). While the national government of Afghanistan was aware of the role played by tribal *shuras*, they are not legally recognized entities. A *shura* could potentially formalize forest management within the national government structure by registering with MAIL as an FMA (Syed Aminullah Fakhri, DFM Forest Management Administrator, personal interview 2021). However, the tribal *shuras* are associated with remote regions with no formal government presence, posing a significant challenge to meaningful engagement between these institutions needed to formally pursue recognized FMAs. Yet *shuras* are already recognized as functioning, representative and authoritative entities, and, assuming that technical support for natural resources management may be provided, they could serve as the basis for FMAs.

To the best of our knowledge, the private sector did not formally engage in forest management during the GIRoA era, but it may indirectly impact forest management considerations for nut-producing species such as pistachio and chilgoza pine. In some forested areas, the local people contract with commercial harvesters, who bring labourers from outside the community to collect pinecones from the trees (Shalizi & Khurram 2016, Rahmani et al. 2021). Often, they focus only on maximizing immediate yield to the detriment of tree health or natural regeneration (Khurram & Shalizi 2016), resulting in damaged trees and suppressed natural regeneration. Throughout the GIRoA era, no private company was registered with MAIL for forest management, which precluded the potential for these entities to engage with the government to eventually receive subsidies or product certification if these opportunities had become available. We believe that GIRoA-era government action left a gap in the rules and regulations for the private forest management sector.

Forest nurseries are the only private forestry-related enterprises that have been widely established across the country. However, they were not registered, and their activities or the quality of their products were not monitored by the government (Groninger 2006, Harrington et al. 2012).

Even during times of relatively high international engagement during the GIRoA era, NGOs and United Nations agencies had limited direct involvement in forest management in Afghanistan. Some, such as FAO, UNEP, United Nations Development Program (UNDP) and USAID, implemented small-scale projects between 2002 and 2021. Most of these provided training and technical support for policy and strategic development. NGO activities have been confined to secure areas (Syed Aminullah Fakhri, DFM Forest Management Administrator, personal interview 2021), thus limiting their impact to a very small proportion of Afghanistan's forests and associated communities. Furthermore, in-country applied research initiatives, aimed towards addressing decades of neglect, did not gain traction with national and international entities during this window of opportunity, instead being relegated to considering potential activities for a secure future that has yet to materialize.

FMA's and forest management under the GIRoA in perspective

Until the collapse of the GIRoA, sustainable management of natural resources and protected areas was one of the priorities of the Afghanistan Agriculture Development National Priority Program, and this included FMAs, conservation, expansion, improvement and sustainable harvesting of forests. The strategy sought to initiate 800 FMAs across the country in order to engage communities in sustainable conservation, expansion, improvement and utilization of natural forests and to facilitate the development of plans for the sustainable use of forest resources (MAIL 2016).

However, despite widespread appeal, the eventual success of the FMA concept was far from guaranteed had the GIRoA and international supporters remained in place. In reality, CBNRM systems had limited impact. In particular, insecurity and funding constraints were persistent challenges, slowing FMA establishment across the country (Azimi & McCauley 2002). Although efforts were made to train NRM personnel at the provincial level, many of these officials were unable or unwilling to become effective advocates for communities or natural resources. Provincial offices (DAIL) have a long legacy of distrust amongst local people. Dating to the Democratic Republic of Afghanistan (DRoA) and continuing through the GIRoA, these offices were widely associated with promoting the centralized government agenda without regard for local needs, preferences and conditions and with providing government jobs to unqualified but well-connected local people. In other instances, local officials were justifiably afraid to travel anywhere outside district centres or beyond their home districts, let alone to typically remote forest communities, due to safety risks (Groninger & Pense 2013, Pense & Groninger 2013).

While law enforcement entities played an important role in forest protection in Afghanistan, the lack of clear policies until 2012, corruption and the need to prioritize national security weakened potential enforcement of forest protection laws during the GIRoA era. In particular, bribery was common among Afghan police, allowing violators to be immediately released at the crime scene. Insecurity and continuous instability impacted forest protection and management. Insurgency has remained a major

challenge to security and to law and order. Over the past four decades, almost half of the country, and a much larger proportion of forested areas, was controlled by militias and insurgent groups (Jackson 2021). In some instances, they exploited forest timber and nuts to generate revenue. Alternatively, insurgents extorted local contractors and villagers during the pistachio and chilgoza pine nut harvest seasons. Timber smuggling was very active in remote regions, especially near the Pakistan border (Syed Aminullah Fakhri, DFM Forest Management Administrator, personal interview 2021; Bader et al. 2013). Corrupt local police, warlords and insurgent groups worked with the timber mafia to smuggle high-quality wood across the border to Pakistan. Sometimes, tribal conflicts for land control occurred in forested regions. As a result of clashes between the conflicting groups, the forest was often set on fire to enact revenge. In addition, sometimes the forest stands became battle zones between government forces and insurgents (UNEP 2003). Trees were felled by either party to remove visual obstruction or to prevent concealment. Stands were also inadvertently ignited as a result of weapons fired by combatants.

CBNRM prospects under the Taliban

Since the return of the Taliban, the status of implemented FMAs remains unknown. Even though the Taliban had previously assumed power, it is difficult to predict how the current regime will address forest management and FMAs. Initial concerns centred on rejection of international influences and that the desperate need for revenue, including through the sale of timber, may result in centralized control, as was the case prior to 2002.

However, 2 years since the IEoA assumed control, early signs offer some reason for encouragement regarding community-based forest management. The leader of the IEoA has urged all governmental organizations to review their laws and regulations and amend them according to Islamic Sharia principles. While some laws in Afghanistan, particularly those related to women's rights and freedom, have undergone significant changes or even dissolved completely, the Forest Law or the National Natural Resource Management Strategy affecting the involvement of FMAs and FMCs in the forestry sector are not highly controversial and may not be significantly impacted. For example, a recent development indicates that the IEoA approved the Convention on International Trade in Endangered Species regulation, which was inspired by the EPL Articles 54–56 enacted under the GIRoA in September 2022. This suggests that the IEoA is willing to use the existing laws and regulations if they do not contradict Islamic principles, which appears to be the case for these particular laws. Furthermore, international support for community-driven development has continued, albeit at a lower capacity (Strand et al. 2022). Perhaps more importantly, awareness of deforestation and forest decline has grown throughout forest communities, providing hope for locally supported action to consolidate the hard-won gains of the past two decades.

Lessons for fragile states

A disproportionate number of the world's most fragile states have significant cover of low-density, scattered and non-timber-producing forests. Continuous degradation as a consequence of overcollection of fuelwood or unsustainable grazing is sometimes acknowledged by often severely impoverished local communities (Shalizi et al. 2018, Ebhuoma et al. 2022, Mahmoodi et al. 2023). That degraded dry forests contribute to flooding and drought to

downstream and generally more populated and accessible areas is generally acknowledged (Kavian et al. 2017, Bacha et al. 2021, Kihwele et al. 2021). Their remoteness from urban centres and designated conservation areas (De Boer & Baquete 1998) and their being outside of the consciousness of and safe areas for global elites further contribute to the invisibility and tendency towards poor security and limited governance (Kreutzmann & Schutte 2011, Feldt et al. 2020, Tade & Yikwabs 2020).

When possible, fragile states should avoid reliance on solutions that depend entirely upon the sustained support of a stable central government. Despite general support for CBNRM, the Afghanistan government was slow to implement necessary laws. For example, the 2004 Constitution provisioned the government to sustainably manage forests, but since there was no legislation to this effect at the time, it took them 8 years to pass the EPL and FML. It then took them several more years to develop strategic plans and procedures, and finally, c. 2018–2021, they were able to start implementing CBNRM. In fairness, the government was spending a very large proportion of its budget on fighting insurgency. At the same time, security was insufficient for the government to implement the relevant policy. Corruption was another problem. Within the environmental policy sector, forest management to meet community priorities sometimes struggled to fit into an international focus on climate change. The limited effectiveness of centralized government-based solutions in fragile states and remote areas has been noted elsewhere (Formoli 1995, Marinaro et al. 2020, Zida et al. 2020). Perhaps the most compelling reason to avoid central government solutions is that central planners do not assimilate the very real possibility of failure into their work. Further resilience might still be secured by undertaking projects in which partial implementation can still yield a meaningful benefit. As is generally the case in rural Afghanistan, other fragile states and elsewhere in remote portions of the Global South, such predictions cannot be made with confidence, as local sentiments and conditions may vary widely from community to community and are prone to change abruptly.

Traditional governance models would be an appropriate starting point in other regions where such institutions exist, as is the case with *shuras* in much of Afghanistan. Rules governing the formation, operation and authority of these bodies would need to be acceptable to all relevant parties. It stands to reason that comparable institutions in other fragile states could play a similar role. Reconciling their function with central government and other changes will undoubtedly remain a challenge, but they do provide an avenue to connect technical information to manage resources recognized as being in need, and they have proven to be highly resilient institutions in the face of instability. Afghanistan's forest communities, with their diverse ranges of local social norms, biophysical environments and outside influences during the GIRoA era, will provide many opportunities to observe community-based forest resources management in settings where international engagement has ceased.

In one respect, progress in the development of practical forestry knowledge amongst a new generation of technical expertise, along with the new framework for CBNRM, may produce an unprecedented opportunity for at least some Afghan communities and their forests. Under the IEoA, Afghanistan is largely inaccessible to foreigners; however, in many forest areas, primarily in the EFC, the emergence of the IEoA as a ruling force from its previous insurgent status has improved security for Afghans traveling to and within the region. In these areas, Afghan personnel with technical expertise in forest resources might actually be in a

better position to support CBNRM than under the GIRoA. This underscores the importance of building human capacity in fragile states to permit relevant technical knowledge to move freely where international personnel cannot safely go.

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