



## Sustainability Consulting – International Cooperation

### Policy Brief

Commons and common good: What new paths of cooperation are there for reducing security and environmental risks?

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## Abstract

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This policy brief explores how *Commons* (i.e., modes of management of a resource by the community of its users, which defines rules for guaranteeing availability and sustainability of the resource), as studied by 2009 Nobel Prize in Economics Elinor Ostrom, have the potential to renew approaches to stabilising the management of natural resources under tension at the local or regional level and to preventing and managing conflicts. This potential notably resides in the capacity of Commons-based approaches to articulate regional and international cooperation frameworks with the direct engagement of grassroots resource users in governance schemes, aiming to prevent and solve conflicts over natural resources.

Since the early 1990s, access to natural resources (water, land, forests, biodiversity, etc.) has been identified as a security issue and a possible source of conflicts over transboundary resources, notably water (rivers, lakes). While “there is high scientific agreement that ... increased rivalry [over natural resources] is unlikely to lead directly to warfare between states” according to the Intergovernmental Panel on Climate Change (Adger, Pulhin et al., 2014), they have already contributed on diverse occasions to the development of inter-community conflicts (e.g., the Darfur conflict in Sudan since 2003 or, more recently, the conflicts between Dogons and Fulani in Mali in 2018, linked to the theft of livestock in the context of global warming).

Natural-resource management is also a source of inter-State tensions over water management (e.g., conflicts between Ethiopia, Egypt, and Sudan around management of the waters of the Nile River in the context of the ongoing construction of the Ethiopian ‘Renaissance’ dam on the Blue Nile, or conflicts over water resources in Central Asia – notably between Tajikistan and Uzbekistan) and air (e.g., tensions between Indonesia and Malaysia over haze caused by forest fires). Conflict resolution and prevention, the fight against climate change, and development therefore appear to be closely linked issues.

In the first part of the brief, we address the nature of Commons in the field of natural-resource management and how they are both vulnerable constructs and a possible tool to turn processes of natural-resource degradation and rising tensions into cooperative pathways towards sustainability. In the second part, we then address the specific case of *transboundary Commons* through three case studies: the process of securing pastures between Burkina Faso and Mali; the Kavango-Zambezi Transfrontier Conservation Area; and Lake Chad. We latterly show how transboundary Commons may represent a promising direction as a tool for environmental peacebuilding and we identify a set of conditions for their success that depends on a case-dependent

combination of factors that cannot be limited to the implementation of a Commons-based approach.

Transboundary Commons have important innovation potential in the fields of nature conservation, development, and peacebuilding. They pave the way for new international cooperation mechanisms that combine both the legitimacy of interstate cooperation and the flexibility and mobilisation potential of Commons.

This, however, requires a shift of perspective for public actors (and particularly for States), from a role of direct regulation of natural resources to a subsidiarity approach in which they support Commons at different territorial scales (including the transboundary scale) that contribute to public objectives. This shift does not represent a withdrawal of States and public actors but, on the contrary, a reengagement of these actors under new roles and attributes.

Developing transboundary Commons also requires international dialogue to make room for conversation with innovative representations of resource-users that are not only channelled through State organisations and to organise adequate and innovative representation of the different scales of Commons in transboundary negotiation forums.

It is, however, still necessary to detail the conditions for fruitful articulation between multi-scale Commons, new types of regulation, and the private sector in new institutional settings involving transboundary Commons, in order to develop further approaches in the framework of viable, real-use cases. This will require transdisciplinary research but also dialogue between actors across the fields of diplomacy, security, defence, humanitarian work, development, and research. The coordination of these actors, whose logics are sometimes different or even divergent, is difficult but essential. In this perspective, the Dialogue of Civilizations Research Institute represents a platform for multi-cultural exchanges that can contribute to this debate.

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## 1. Introduction

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Since the early 1990s, access to natural resources (water, land, forests, biodiversity, etc.) has been identified as a security issue and a possible trigger for violent conflicts over transboundary resources, notably water (rivers, lakes). While “there is high scientific agreement that ... increased rivalry [over natural resources] is unlikely to lead directly to warfare between states” according to the Intergovernmental Panel on Climate Change (Adger, Pulhin et al. 2014), they have already contributed on diverse occasions to the development of inter-community conflicts (e.g., the Darfur conflict in Sudan since 2003 or, more recently, the conflicts between Dogons and Fulani in Mali in 2018, linked to the theft of livestock in the context of global warming). Natural resource-management is also a source of inter-State tensions over water management (e.g., conflicts between Ethiopia, Egypt, and Sudan around the management of the waters of the Nile River in the context of the ongoing construction of the Ethiopian ‘Renaissance’ dam on the Blue Nile, or conflicts over water resources in Central Asia – notably between Tajikistan and Uzbekistan) or air (e.g., tensions between Indonesia and Malaysia over haze caused by forest fires).

Conflict resolution and prevention, the fight against climate change, and development therefore appear to be closely linked issues. This security-climate/environment-development nexus is high on the international and European agenda. Recent UN Security Council resolutions and statements on the Chad Basin,<sup>1</sup> West Africa and the Sahel,<sup>2</sup> and Somalia<sup>3</sup> have opened important space for engagement on climate change and security. The resolutions recognise the adverse effects of climate and ecological changes on the stability of these regions. This recognition sets an important precedent for how the international community will approach land degradation and the impacts of climate change in fragile areas. On 22 June 2018, the European Commission organised a high-level COP24 side-event titled ‘Climate, peace and security: The time for action’, hosted by Federica Mogherini, High Representative for Foreign Affairs and Security Policy of the EU. The event gathered Ministers from around the world, top United Nations officials, and leading experts. “Elevate climate-security nexus to highest political level in national, regional and multilateral fora”; “put the premium on prevention: building state and societal resilience”; and “make action on the ground a

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<sup>1</sup> Resolution 2349 (2017) of the UN security council

<sup>2</sup> Statement S/PRST/2018/3 by the President of the Security Council of 3àth January 2018

<sup>3</sup> Resolution 2408 (2018) of the UN security council

source of sustainability, strength and peace” were among the six points for further action stemming from this event.

This triple challenge – climate and the environment; security; and development – requires the intervention of many actors in the fields of diplomacy, security, defence, humanitarian work, development, and research. The coordination of these actors, whose logics are sometimes different or even divergent, is difficult but essential. A global approach around these three challenges is essential. Governance then appears as a major challenge to fight against political conflict, reduce security risks and also environmental risks through better management for the common good. However, classical inter-State cooperation frameworks are not sufficient for safeguarding natural resources under tension while preserving access for communities that depend on them. In effect, where cross-border common good management institutions exist, national logics tend to persist and do not prevent local governments from pursuing their national interests alone. Moreover, States do not always have the legitimacy we might think they do and, in various situations, people may recognise other entities (e.g., local non-state actors like FARC in Colombia or Boko Haram in West/Central Africa) as the legitimate authority in some situations, and dialogue with these groups and their involvement in the solution is often needed as well. Finally, big companies have increasing impact and control over natural resources and could become key players in the management of conflicts over these resources.

Since the popularisation of the work of Elinor Ostrom, winner of the Nobel Prize in Economics in 2009, the rediscovery of the Commons as a mode of sustainable management of natural resources (i.e., modes of management of a resource by the community of its users, which defines rules for allocation and use of the resource, aiming to guarantee its availability and sustainability) has opened up new avenues for stabilising the management of natural resources under tension at local or regional levels and for preventing and managing conflicts. New approaches based on common principles, in fields as diverse as access to energy, access to water, forest management, and access to seeds, make it possible to reinvent the rules for managing these resources according to rules that are neither only public, nor only private, nor relying of traditional public-private partnerships. At the international level, Commons are at the root of institutional innovations involving networks of actors around common initiatives.

The purpose of this policy brief is to explore how the emergence of approaches based on Commons and Common pool resources in natural resource management can lead to new modes of governance at the local, regional, national, and international levels

that can address the triple challenge of environment, security, and development in areas where access to natural resources is a source of tension. In the first part of the brief, we will address the nature of Commons in the field of natural-resource management and how they are both a vulnerable construct and a possible tool to turn processes of natural-resource degradation and rising tensions into cooperative pathways towards sustainability. In the second part, we will then address the specific case of transboundary Commons through three case studies: the process of securing pastures between Burkina Faso and Mali; the Kavango-Zambezi Transfrontier Conservation Area; and Lake Chad. We will then show how transboundary Commons may represent a promising direction for environmental peacebuilding and identify a set of conditions for their success – while acknowledging the complexity of conflicts over natural resources, the resolution of which depends on a set of case-dependent factors that cannot be reduced to the implementation of a Commons-based approach.

## 2. Commons and the development-environment-security nexus

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### 2.1 Definition of Commons

About two billion people<sup>4</sup> worldwide depend for their livelihood on natural resources (pastures, wetlands, forest, fisheries, ...) that are used collectively as *common-pool resources* through community-based governance structures. American political scientist and economist Elinor Ostrom, winner of the Nobel Prize in Economics in 2009 for her work on the *Commons*, developed her principles for collective action in the 1990s based on analysis of the management of such common-pool resources (Ostrom, 1994) by local communities.

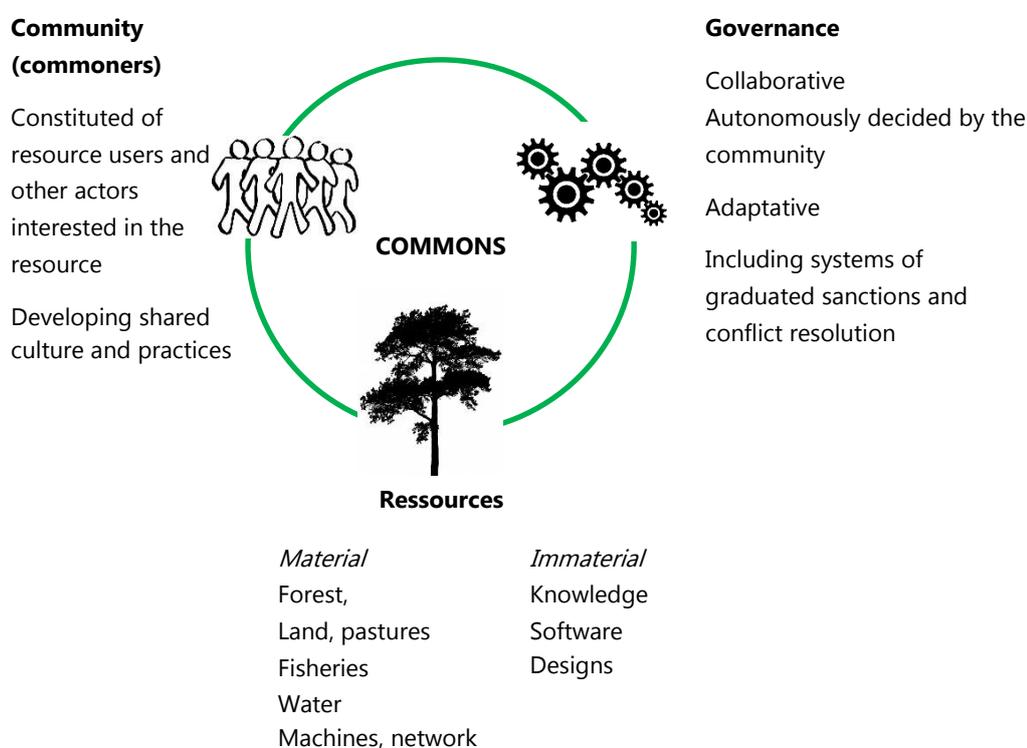
Ostrom provided both a conceptual framework and empirical evidence to show that, contrary to a widely held belief since the famous article by ecologist Garrett Hardin on "the tragedy of the Commons" (Hardin, 1968), public management or privatisation were not the only effective ways to manage such resources. Thus, certain communities of actors, whether homogeneous or heterogeneous, autonomously adopting their own rules of access, use, and maintenance of the resource on which they depend, manage it in a cooperative and sustainable manner in ways that equate to neither public nor market-based management.

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<sup>4</sup> The estimation of this number varies, from an unspecified "millions of people" (FAO, 2016) to 2 billion people (Bollier, 2014), up to 2.5 billion people according to the International Land Coalition.

Commons, as theorised by Ostrom, are situations of action structured around three elements:

- a *community* of users;
- which emerges relative to either existing *resources* (e.g., pastures, forests, fisheries, ...) or to resources produced in common (e.g., Wikipedia);
- and put in place their own *governance system* (norms, protocols, rules of use, conflict resolution mechanisms) with the objective of enabling *shared use* of these resources while exerting stewardship to *preserve and enrich* them (see figure 1 below).



**Three objectives of a Commons:**

Ensure access to the resources

Safeguard and enrich the resources

Favour cooperation and limit conflicts

Figure 1: The three constitutive elements of Commons

Commons also differentiate from regimes of public or private property as they allow a fine distribution of rights between the different users of the resource, with a view to both optimising its use and ensuring its safeguarding. In effect, while proprietary regimes (be they of private or public property), following the Roman tradition of property, allocate to a single proprietor *all rights* over the property (right to use, to get the fruits generated by the property, to sell or rent, or even to destroy the property), rules defined by the Commons often *dispatch the bundle of rights over a resource among different users* (Schlager, Ostrom, 1992), allowing a much larger range of possibilities for fine-tuning the governance system of a Commons to the characteristics of both the community and the resource. This bundle of rights includes use rights, such as access (e.g., to walk across a field or visit a sacred site), withdrawal (e.g., to pick wild plants) and usufruct (e.g., to exploit a resource for economic benefit), as well as control or decision-making rights, including management rights (e.g., to plant a crop), exclusion rights (e.g., to prevent others from accessing the pasture) and alienation rights (e.g., to rent out, transfer, or sell).

Ostrom identified eight principles for successful management of common-pool resources (Ostrom, 1994):

1. Clearly define the boundaries of the Commons (notably in terms of access rights).
2. Match rules to the local needs and conditions.
3. Ensure that those affected by the rules can participate in modifying the rules.
4. Make sure that the rule-making rights of community members are respected by outside authorities.
5. Develop a system, carried out by community members, for monitoring members' behaviour.
6. Use graduated sanctions for rule violators.
7. Provide accessible, low-cost means for dispute resolution.
8. In the case of larger or interconnected common-pool resources, build responsibility for governing the common resource in nested tiers from the lowest level up to the entire interconnected system.

Commons can be traditional Commons, regulated by customary rules (see example in Burkina Faso below) or sometimes revived traditional Commons (see example of revival of ancient seeds in India below), but can also be *neo-Commons*, i.e., newly created Commons that build on the aforementioned key characteristics of Commons. A key feature of these neo-Commons is their capacity to make room for hybrid governance systems connecting governance of natural resources based on the principles of

Commons to modern frameworks of natural-resource management that include public regulation and/or the private sector. As we argue further in this paper (see section 2.4 and section 3), such neo-Commons can constitute useful tools for jointly addressing environmental, development, and security issues.

Finally, another key feature of the Commons is that, if they can be supported, they cannot be decreed as they require active and sustained engagement from the community of *commoners*. In that view, Commons are as much organisations as processes and communities of shared practices, culture, and knowledge. Rules in use are iterative by design, as their flexibility enables experimentation and a drawing of collective lessons from experience.

**An example of traditional Commons: The management of ponds in the Winiyé country, Burkina Faso (Technical Committee 'Land & Development', 2017)**

In the Winiyé country, Burkina Faso, different types of fishing are practised in the flooded plains, each with its own rules: individual hook and line fishing all throughout the wintering period; dam and pot fishing during the wintering period; and collective fishing in natural pools at low water levels. A customary fisheries organisation governs fish exploitation on a micro-regional scale. The objectives of the fishing rules are to ensure the reproduction of the resource by protecting the key moments of the reproductive cycle, in order to ensure that the economic interests of different human groups settled along the plain are taken into account equitably, and to regulate the distribution of fishery products within domestic units.

The management of fishing is the responsibility of Chiefs of land, installed in the different villages, who control a portion of the plains and the natural pools found there. The rules governing fishing activities illustrate how Commons dispatch the bundle of rights over a resource to various individual and collective users. Individual fishing is free during wintering, but only for self-consumption: the fish caught may not be sold; ponds are prohibited for individual fishing as soon as the water stops flowing. Dams on the plain and artificial ponds are the collective property of a domestic group, which has the possibility of selling the fish and can lend or pledge the infrastructure. In some villages, the status of the floodplain as a common area is maintained and the floodplain is managed by specialised 'water masters' who grant temporary loans on the fishing ponds. Collective low-water fishing is organised by the land managers. For these, the right to fish is shared between different neighbouring communities, linked by mutual aid pacts. Fish caught during collective fishing cannot be sold.

**Revival of a traditional Commons: Community management of ancient seeds by women of Erakulapally village in India (Bollier, 2014)**

Observing that traditional varieties of cereals were better suited to local climate, land type, and ecological conditions than costly imported patented seeds, women from the village of Erakulapally in Andhra Pradesh have sought to revive traditional polyculture. After recovering seeds of almost forgotten varieties from elders and reviving their agronomical knowledge, they multiplied the seeds through several cultivation cycles. These seeds are used in polyculture, planting six or seven different varieties together on the same plot, in order to ensure resilience of food production vis-à-vis the climatic variations (whatever the climatic conditions, at least some of the varieties yield grains).

Each household now has its own 'seed library' and practices of seeds exchanges have developed according to mutually agreed rules: seeds cannot be bought or sold, only shared, borrowed, and exchanged. This emerging social system of management in common of seeds (and associated agronomic knowledge) has led to more stable yields and revenue and to the end of dependence on external seed production.

## 2.2 Vulnerability of the Commons

Although natural resources managed as Commons are essential for the wellbeing and cultural identity of a large proportion of humanity, the collective right to access and manage these resources are still often not recognised or protected by national legal and regulatory frameworks. A recent study estimates that 65% of the world's land area is held by communities and indigenous people under customary systems, while only 18% of the world's land is officially recognised as owned or controlled by these communities (Rights and Resource Initiative, 2015). Moreover, in cases where there is formal legal recognition of these tenure rights, they lack practical implementation and enforcement (FAO, 2017). These collective rights of local communities are also challenged by increased pressure over natural resources caused by climate change, migration, increasing demand and competition for natural resources, and enclosures and transfers of large portions of natural resources (notably land) to the private sector for commercial purposes, or to public organisations. This results in conflicts over natural resource uses, resources overuse and degradation, and the eviction of vulnerable populations from the natural resources they depend on.

While such situations of tensions over natural resources are unlikely to be the direct trigger of inter-State armed conflicts (Adger, Pulhin et al., 2014; Tertrais, 2015), and pathways from conflicts over resources to conflict are indirect and complex and mingle various economic, political, social, cultural, and institutional factors (Froese, Schilling,

2019). Tensions over natural resources can however contribute to inter-community or inter-ethnic tensions, and sometimes be at the source of violent local conflicts.

### 2.3 Contribution of traditional and neo-Commons to development, environmental stewardship, and conflict mitigation

Community management of natural resources appears not only as a key factor of subsistence of communities; it also contributes to the safeguarding of the ecosystems these communities depend on (ensuring both access and preservation of the resources), provided that collective property rights over the resources are supported by institutions and protected from resource-grabbing by external actors (as shown e.g., by Blackman et al., 2017).

The idea that Commons constitute useful tools to preserve or restore natural resources is also supported by international organisations like the FAO, which stresses that “securing tenure rights to Commons can provide incentives for the environmentally sustainable use of natural resources and for investments in the productivity of the resource systems” (FAO, 2016). Commons as a tool for sustainable development is also of interest for development agencies like the French Development Agency (AFD), which has made this notion central in its motto (‘A World in Common’) and incorporated Commons-based approaches in its intervention methods in different fields. Commons-based approaches to development are particularly justified (Technical Committee ‘Land and Development’, 2017) in situations where,

- Adaptation of societies to climate change requires adaptative modes of management of natural resources.
- Conflicts of interest oppose local populations to private investors.
- Development and implementation of public policies do not sufficiently consider vulnerable populations.
- Considered territories are neglected and/or subject to environmental vulnerability and this requires mobilising local actors in order to adequately address security and development stakes.

### 2.4 Neo-Commons as a tool to change conflicts and resource-overuse into a situation of sustainability

In the field of development, public authorities, civil society organisations, as well as development agencies, can (and do) mobilise the tools of the Commons at the service of sustainable development goals. These neo-Commons are new constructs that are

not the sole construction of a local community managing vital natural resources, but are often co-produced by communities and external actors (i.e., NGOs or public authorities) in order to articulate the engagement of user communities to sustainable use of the considered resource with upper-level development or environmental agendas. These neo-Commons are also often connected to institutional frameworks (i.e., through objective contracts, public service delegation, delegation of police powers) and/or to the market economy, leading to a hybrid Commons/State/market system which reconfigures norms and roles of the actors of these three spheres (Leyronas, Calas, 2019), for instance, public actors may devolve some responsibilities (e.g., some forms of policing) to the community of commoners.

If such neo-Commons may be useful for sustaining natural resources (see e.g., the example of the Rupa Lake watershed in Nepal below), they are also confronted by three specific challenges.

The first challenge is to reconcile the inherently endogenous dynamics of commoning with external goals (e.g., goals of public actors) in a process of negotiation between public actors (and possibly private actors) and communities in which new Commons are intended to be founded. For this, support from third parties like NGOs is often required (human support to facilitate negotiations between the different users of the resource and sometimes technical support related to the specific issues addressed by the Commons in formation) in order to help communities structure and negotiate governance schemes and operational management of the Commons. The institutional framework in which these Commons are created should therefore be sufficiently flexible to accommodate the specific goals of the community of commoners under formation.

The second challenge is the maintenance of the engagements of external public and private actors over the long term, in order not to jeopardise the basis on which the neo-Commons are created and to avoid undermining their capacities of regulation and conflict-resolution.

The third challenge is to ensure that the newly formed Commons genuinely operate as such, enabling actual participation of all commoners in accordance with defined rules, and are not captured by actors in position of power.

This process of renegotiating respective roles and functions of local communities and public actors (e.g., State institutions) is not a process of withdrawal of public actors, but a process of transformation of their engagement, which requires disengaging from a role of direct regulation or management of the concerned resources in order to enable new forms of subsidiarity in which public actors engage with local communities in order

to facilitate the formation of Commons and support them to ensure their sustainability and checking, together with the commoners, that they actually play their role of regulating and preserving the resource. In such a process of formation of neo-Commons, public authorities thus endorse a double role of partner of the communities, negotiating new roles and relationships, and that of the responsible enforcement of the institutional framework.

### **Revival of the Rupa Lake watershed in Nepal through neo-Commons (Chaudhary et al., 2015)**

The case of the Rupa Lake watershed in Nepal illustrates how well-designed neo-Commons can revert a situation of degradation of natural resource and local conflicts toward cooperative engagement of different communities in the stewardship of a resource, with economic benefits for the communities.

The Rupa Lake is the third-largest lake in the Kashi district in the western part of Nepal, south of the Annapurna mountains. Until the middle of the 1980s, lake users were mainly fishermen from the Jalahari ethnic group. From the middle of the 1980s, the migration of fishermen from the surrounding hills led to the over-exploitation of fish stocks while other factors like unsustainable agricultural practices; deforestation; soil erosion leading to increased sediment loads in the lake; hydroelectric damming; and water pollution contributed to threatening the lake's sustainability and contributed to a decline in biodiversity. Tensions accumulated between communities living downstream and those living upstream, the latter being blamed by the former for the degradation of the lake. By 2000, sedimentation of the lake became a major issue for fishery users, fish farming became impossible in some areas, and the lake was colonised by aquatic weeds.

In 2000, a joint initiative from two local organisations, *Bioresources Conservation Movement* and *Farmers to Farmers*, supported by a nationally recognised NGO, LI-BIRD, which began to develop agro-biodiversity conservation programmes in the area from 1998, led to the creation of the Rupa Lake Rehabilitation and Fishery Cooperative with representatives from both downstream and upstream communities. The Cooperative successfully imposed a total ban on fishing by individuals while incorporating (as members as well as vice-president and executive committee members) many members of the Jalahari community claiming their traditional rights to fishing. The Cooperative has been helped in its mission of fishing regulation by local authorities as Lake patrols and Cooperative employees are often supported by government police.

A programme of payment for watershed services was set up with LI-BIRD in order to provide incentives to upstream communities and users to conserve the lake and LI-BIRD organised training for farmers and forest users in sustainable practices. Rupa fish is sold exclusively through the Cooperative, monthly, at prices fixed by the Cooperative executive committee. This has enabled better bargaining power and immediate gains of profits for the Cooperative, thus supporting the governance of the Cooperative with solid economic returns. The Cooperative reinvests 25% of its profits into support for sustainable management activities for the lake's watershed and invests in fish stock repopulation projects.

### 3. Transboundary Commons as a tool for environmental peacebuilding

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#### 3.1 Transboundary Commons: Renewing perspectives on cross-border and international cooperation

A wide range of threatened natural resources extend across national borders, thus calling for cross-border cooperation to ensure their sustainability. This includes natural resources as diverse as marine ecosystems, watersheds, endangered species, wetlands, and the atmosphere (see e.g., the phenomenon of South-East Asian haze, which originates largely in industrial-scale slash-and-burn practices in Indonesia, and extends across borders, causing air pollution and health impacts in Indonesia, Brunei, Malaysia, Singapore, and to a lesser degree, the Philippines and Thailand).

The interconnection between the environment, development, and security also manifests in the concept of *environmental peacebuilding*, which takes cooperation over transboundary environmental issues as an opportunity to facilitate reconciliation between rival parties and abate cross-border tensions (Ide, 2018). Tobias Ide identified four conditions for successful environmental peacebuilding: a high degree of environmental awareness; ensuring effective political support for cooperation over environmental issues; internal political stability, ensuring a stable environment and a low level of interstate violence and a climate of goodwill; and pre-existing informal cooperation through international networks.

Neo-Commons can constitute a useful tool for jointly addressing environmental, development, and security issues. They can also be mobilised at a transnational scale through *transboundary Commons* (Miller, 2019) in order to leverage the potential of cooperative engagement of users of the addressed resources in its stewardship and preservation. Two complementary dimensions are at play in transboundary Commons:

- The development of practices of commoning between actors from different States over a shared natural resource, notably with a view to overcoming the rigidities, gaps, overlaps, and inconsistencies incurred by the regulation of the same resource by different national institutional frameworks.
- The development of transboundary institutional cooperation frameworks, making room for and supporting these practices of commoning, thus connecting the governance of Commons with institutional frameworks and cross-border public action.

In these two dimensions, the necessary multi-scale nature of transboundary Commons is a key feature to be addressed in order to articulate local, national, and transnational levels of action. For this, the Commons can represent a fruitful framework of analysis, design, and action as the Commons include a perspective of polycentrism and nested scales of action in which local-level Commons can be designed as parts of upper-level Commons.

In the following section, we address three examples of transboundary commoning aiming to preserve natural resources: a process of securing pastures between Burkina Faso and Mali; the regulation of pastoralism in the Lake Chad region; and the Kavango-Zambezi Transfrontier Conservation Area.

## 3.2 Case studies

### 3.2.1 Securing pastoral areas through sharing (Burkina Faso - Mali)

#### **Context and issues calling for a Commons-based approach**

Rainfall in West Africa is highly variable, a phenomenon which is increasing with climate change. In this context of a changing geography, the best response that family farmers can provide to maximise resources and overcome constraints is pastoralism, or herd mobility.

Pastoralism in West Africa accounts for about 30% of the agricultural GDP in countries of this zone. This activity, which is very respectful of the environment, is based on mobility and makes it possible to cope with the uncertainty inherent to the availability of water and fodder.

Historically, mobility was secured by the joint management of rangelands, which is based on the three aspects that make up a Commons:

- Access to water, water being the determining resource that controls access to fodder.

- Management rules, i.e., a principle of reciprocity of access to the surrounding wells and pastures.
- A network between pastoralists, making it possible to multiply the destinations and grazing areas.

These three pillars have been weakened since the 1970s due to: destabilisation of the pastoral well network by modern hydraulic policies; insecurity; reduction of pastures; and increases in livestock numbers. Today, free access to pastoral resources prevails in West Africa. However, in the long term, this land situation threatens mobility, favours the advancement of fields, and leads to increased competition between pastoralists, a source of inequality and increased conflicts.

A new mode of governance of pastoral resources had to be renegotiated. It had to continue to secure mobilities, which ensure the economic and ecological efficiency of pastoralism in relation to sedentary livestock farming, and which is the best strategy for adapting to the increasing variability of rainfall in the coming years as a consequence of global warming in West Africa. In the meantime, it is necessary to consider the transformations that have taken place in the region over the last fifty years: territorialisation of agriculture, population densification, etc.

### **A Commons-based approach to solving conflicts**

The pastoral zone of Barani, on the border of Burkina Faso and Mali, underwent profound changes in the 1950s: formerly dominated by the Fulani (Peul), a traditionally agro-pastoral people, more and more farmers settled in the fields intended for grazing. At the beginning of the 1990s, a development project, the PDRI (Integrated Rural Development Project), financed by the French Development Agency (AFD), changed the spatial and political situation. After consultation with the local population, the 50,000 ha of rainy season grazing land was delimited, marked off with concrete markers; specifications for the new pastoral zone were drawn up, setting out the rules of use; the zone was reserved exclusively for livestock farming and settled farmers were driven out; supervisory committees enforced the specifications and collected the entrance fees paid by the herders who wanted to use the grazing land.

Several criteria define the emerging management system of the Barani pastoral zone as a Commons:

- Resources, which are rehabilitated and recognised for their primary pastoral vocation. The rainy season pastures are delimited by concrete markers and firewalls around the perimeter of the zone. Farmers settled in the area since the

1970s are being evicted. Pastoral wells and boreholes are renovated. In addition, pastoral livelihoods depend on the health of ecosystem provisioning services: pasture, water, and minerals. As healthy ecosystems, pastoral areas can be spaces for adaptation to climate change as well as for climate change mitigation, acting as carbon sinks and reserves of biodiversity;

- Management rules. These were formalised in a set of specifications drafted in the framework of the PDRI in the mid-1990s and rewritten in 2010. The terms of reference ratify the limits of the zone, the rules of use, detail the organisation of the zone's management bodies, and provide for sanctions in the event of non-compliance with the rules. Village Natural Resource Management Committees (CVGRN) have management powers: they monitor the zone, collect entry fees, and are responsible for maintenance work within their perimeters. A Departmental Natural Resource Management Committee (CDGRN), based in Barani, has real power over the zone: it has management rights superior to those of the CVGRNs and a right of exclusion. Revenues from entry fees to the zone are centralised in its fund. It decides on expenditures: e.g., for maintenance of the zone and funding of motorised surveillance patrols. It is the forum for conflict resolution and the guarantor of the integrity of the zone against attempts to cultivate grazing land. It is the privileged interlocutor of external stakeholders like State services, NGOs, etc.
- A community of rights-holders shares the resource. The bundle of rights makes it possible to distinguish different types of actors:
  - Simple users who have access and levy rights against payment of an entry fee;
  - CVGRN members who have access, levy, and management rights;
  - Members of the CDGRN who have access, levy, management, and exclusion rights.

### **A success story raises other issues**

The Barani pastoral zone can be an example of successful management through the constitution of a territorialised Commons. It is indeed the result of a spatial strategy to control access to and use of resources through a geographical area that the Peul agro-pastoralists, with the help of the PDRI, have delimited and over which they have had their authority recognised. Nevertheless, deeper research would enable the distinguishing of the concrete role of the PDRI at that time: a top-down but

participative approach (with PDRI as a leading position in pastoral-zone management) or a Commons-based approach, enabling local actors to implement the new spatial strategy (with PDRI as a mediator and source of proposals, clarifying agreements between populations).

Last but not least, the delimitation of a territory, while it secures a group of rights holders, leaves out a certain number of excluded people, in this case farmers who had settled since the 1970s, but also pastoralists with herds that were too small and who remain too poor to pay for entry into the pastoral zone. In addition, this has created different levels of stakeholder groups, depending on the rights received (users with the right of exclusion, simple users, etc.). Management by the Commons cannot ignore the importance of local democracy in the long term, nor the exclusion of certain social groups.

### 3.2.2 Unfixed rules: Considering the functioning of socio-ecosystems in resource-governance for Lake Chad

#### **Massive environmental and social changes**

The Lake Chad Basin, shared by the republics of Cameroon, Chad, Central Africa, Niger and Nigeria, represents a huge reservoir of natural resources. The estimated 200 million population of the region are heavily dependent and inextricably linked to the natural resources of the basin for their livelihoods. Fisheries, agriculture, and livestock rearing constitute major socio-economic livelihood portfolios, generating income, food/nutrition security, employment and labour for the riparian rural households and the wider society. In this context, these natural resources have made and are making significant contributions to both the national and regional economies of the area. In general, the fisheries, agriculture, livestock production, and other goods and services provided by the basin have been undergoing a steady decline since the 1970s due largely to the massive environmental changes that have occurred in the region as a result of climate change and human stream-flow modification. In particular, the reduction in lake water from an area of over 25,000 km<sup>2</sup> in the 1960s to an area of between 2,500 to 6,000 km<sup>2</sup> has adversely impacted the natural resources and the livelihoods of the rural population that are dependent on them.

The beginning of the 21<sup>st</sup> century sees a renewed interest in Sahelian wetlands. The international climate change agenda identifies the vulnerability of the African continent and its water resources. These highly productive areas are coveted by many investors, both foreign and domestic-urban, who want to increase agricultural production for export and for the growing regional market. Faced with production stakes, conflicting

access to natural resources, and the challenge of food and population growth, the Lake Chad region is becoming increasingly insecure, especially since the arrival of the terrorist group Boko Haram.

### **Lake resources as Commons**

The lake areas constitute arenas where actors act according to their own strategies and the historical legacies that govern the groups, but which also constitute opportunities to think about new forms of governance. Faced with the conflicts that are multiplying between the actors, it is important to take into account the local ecological conditions and their variability in order to devise new rules of co-management between users, local authorities, territorial communities, and State services. The modalities of access to resources are at the heart of the debates, as they are difficult to settle by national legislations that are not adapted to the notion of the transboundary common-pool resource that the lake ecosystem constitutes for the users.

From the 1980s onwards, the extension of cultivated areas, the increase in the number of herds, and the new importance of fishing in the marshlands led to the overlapping of agricultural uses, pastoral uses, and fisheries. The increasing use of marshy pasture has led to the emergence of new complementarities between different livestock farming systems. In the Cameroonian zone of the region, herders have thus developed avoidance strategies consisting of changing grazing areas according to the mobility of other herders, demonstrating a very good knowledge of each other's respective husbandry practices. These arrangements remain implicit and their legitimacy is restricted to the group of herders sharing the same pastoral practices. When farmers and herders began to exploit the same spaces, the inevitable damage to the plots of land raised the question of sharing the use of space in a new way. The sub-prefect and the sultan of the region thus arbitrated, recognising the rights of herders over all non-worked areas, in particular on plots of land up to sowing and after harvesting. This fluidity in the modes of coordination between farmers and stockbreeders was the basis for the spatiotemporal reorganisation of agricultural and pastoral activities under the effect of changes in the environment, the densification of the plot of land, and the increase in the number of herds. In this part of Lake Chad, the rules are not fixed in space and time. However, the practical coordination between users is remarkably efficient and equitable, providing the fluidity necessary to adapt to environmental changes and population growth. Far from decentralised management, the refusal to exclude groups has made it possible to push the sharing of the use of resources and space as far as possible.

## **A threatened system**

Nevertheless, from the 2000s onwards, conflicts over resources have multiplied in this part of the Lake, reflecting a double threat. Indeed, technical changes (the use of herbicides and the massive development of capital-intensive fishing techniques), pastoral pressure, and the densification of land parcels have created competition between fishermen, stockbreeders, and in some places, between farmers and stockbreeders, reinforced by power games resulting from democratisation and decentralisation policies (political manipulation, clientelism, etc.).

Above all, the Boko Haram uprising and its repression have led to major upheavals in the Lake Chad region.

Pastoralists and their herds can no longer move freely; neither do they have access to certain routes. Their mobility is once again perceived as a factor of insecurity. In addition, pastoral populations are particular victims of the terrorist group (livestock thefts, murders, rapes, and hostage-taking.). Boko Haram thus aggravates the crisis of the regional informal economy and undermines the resilience of pastoralist systems. In this insecure context, young pastoralists are turning away from their activities to engage with the terrorist group. The Boko Haram crisis is thus all the more likely to reinforce the trend towards clientelisation of access to resources as land becomes a major political issue in the post-conflict period.

Before returning to an equitable management of resources, it should already be recognised that pastoralism in this region can be a factor of integration by providing jobs and income for the younger generations; a factor of security by occupying the periphery; a means of reconciling production and preservation of fragile ecosystems; and a factor of territorial development, as was strongly illustrated by the dynamism of the economy of Lake Chad before the crisis. This will require the sustainability of regional consultation frameworks that bring together the four riparian countries to build and operationalise a shared vision of pastoralism while improving the access of pastoral populations to citizenship by promoting their political representation, their participation in local governance, and their access to basic services.

### **3.2.3 Peace through environmental cooperation: The case of the Kavango-Zambezi Transfrontier Conservation Area**

#### **Environmental peacebuilding, an emerging concept**

In recent decades, the International Union for Conservation of Nature (IUCN) has shown an increased willingness to promote the concept of "environmental peacebuilding" through the creation of "parks for peace". This has fostered the idea

that cooperation in resource management can be an effective means of reducing confrontation and promoting a general culture of peace and mutual support. Natural resources are no longer perceived as a source of conflict. On the contrary, the environment can serve as an effective platform for dialogue, promoting confidence-building among countries in conflict.

The Transfrontier Conservation Area (TFCA) is a category unique to Southern Africa and is one of the transboundary cooperation processes that facilitate or improve natural resource management. Introduced by the World Bank in 1996 and adopted by the Southern African Development Community to promote regional cooperation in the development of common frameworks for the conservation of natural resources and the enforcement of laws governing sustainable use, these areas also strengthen regional economic integration.

### **A transboundary treaty for biodiversity conservation**

On 18 August 2011, Angola, Botswana, Namibia, Zambia, and Zimbabwe signed the treaty establishing the Kavango-Zambezi Transfrontier Conservation Area (KaZa TFCA). Its overarching goal is to sustainably manage the ecosystems and cultural heritage within the region while also enhancing the socio-economic conditions for local communities through benefits from conservation and tourism activities. It is supported by the Peace Park Foundation, a non-profit organisation heavily engaged in promoting and facilitating the establishment of transboundary conservation areas across sub-Saharan Africa.

According to its proponents, the transboundary approach would be an 'antidote' to the inefficiency and/or absurdity of the borders drawn by colonisers, who often cut the unity of ecosystems and reduced or destroyed their integrity. The integrated management it introduces would increase efficiency and streamline the management of ecosystems. It is also argued that these areas have the capacity to transform socio-economically marginalised areas, relegated to borders, into new centres associated with a transport and communication network that would open up what previously presented themselves as hindrances to social ties and trade. The 'peace park' then appears as a geographical entity in its own right, overlapping political borders, a framework in which ecological, cultural, and social links are gradually being restored through legislation that restores rights.

At first glance, the constituent articles of the KaZa TFCA treaty make it an inclusive and equitable treaty: it has a multilateral cooperation agreement concluded by the States (criterion 3) on the basis of which a joint management mechanism must be put in place by the agencies responsible for the protected areas involved in the transboundary area

(criterion 4), as well as cooperative management and development programmes, so as to involve all interested stakeholders (criterion 5). This includes the joint development and application of environmental protection and natural resource conservation 'rules' to (re)build trust and confidence and then address more sensitive issues.

Thus, other forms of political and social cooperation are proposed, emphasising the ability to encourage collaboration, not only across borders, but also between different stakeholders from government, civil society, and the private sector.

### **Difficulties in articulating transboundary conservation and local participation**

For its critics, this large-scale conservation method moves away from community-based conservation, and is a return to a top-down approach where local community participation becomes minimal and local needs and priorities are neglected in favour of the vested interests of international conservation NGOs and government agencies.

In the end, although transboundary conservation suggests the promise of a transfer of power from central authorities to local communities through spatial reorganisation, transboundary protected areas represent, in practice, an extension of the power of central authorities and international organisations, often in remote and marginal areas that were more or less ignored before. In order to really involve local communities and guarantee them a minimum of power, it is essential to ensure their access to land and resources. However, texts on this subject are either insufficient or lacking, including in the framework of the KaZa TFCA. At the same time, conservation organisations limit themselves to 'consulting' the populations, confining them to symbolic and passive roles, where they should actually see their role evolve towards supporting these local groups and their institutions. Most transboundary protected areas have so far proved to be high-level technocratic affairs, and several have been criticised for marginalising the interests of local communities living there. The interests of the private sector may be favoured over those of local communities and economic values may take centre stage at the expense of social and cultural values.

### **Peacefully meeting conservation objectives**

While Treaty governance is a functionalist arrangement, it can nevertheless fulfil a function desired by the actors concerned. As a result, it seems that consensus rather than conflict and power struggles have prevailed among the different political actors, as they have all realised the need to safeguard wildlife and natural resources.

It seems that KAZA TFCA was a top-down initiative. Yet, while the very creation was reliant on top political actors, recent studies show its reproduction appears to a large extent to be dependent on local engagements in terms of the implementation of

regulations and policies on an operational level. Involving the communities concerning, for example, in information sharing and co-management thus seems to be another important aspect for this transboundary institution to be sustained.

Nevertheless, the longevity and success of transboundary initiatives also depend critically on the participation of local communities and resource users. One of the main takeaway messages is hence that in order to effectively sustain and develop the transboundary initiative, more effort needs to be devoted to policy harmonisation as well as to the strengthening of state capacity and legitimacy in the eyes of communities and resource users.

### 3.3 Key lessons for international cooperation: Principles for establishing transboundary Commons addressing the environment-development-security nexus

The perspective of transboundary Commons calls for institutional innovations in order for cross-border environmental cooperation and environmental peacebuilding to benefit from the potential of Commons to develop fine-tuned governance frameworks jointly addressing environmental, development, and security dimensions.

The three case studies show the potential of Commons for addressing the environment-development-security nexus at a transboundary level, but also the limits that the considered process can reach due to either a lack of direct engagement or of an upscaling of local Commons towards, and its connection to, a State and interstate institutional framework. We also acknowledge that preventing and solving conflicts over natural resources requires case-dependent combinations of factors which cannot be limited to the implementation of a Commons-based approach.

In order successfully tap in to the potential of transboundary Commons, a primary condition is for States engaged in transboundary cooperation over threatened natural resources to adopt a perspective that is not only focused on the resource itself but also *takes into consideration the communities that depend on it as active contributors in the stewardship of the resource*. This requires moving from a public-private framework of analysis and action towards a threefold framework considering the public sphere, the private sphere, and the sphere of the Commons and their articulation by setting up new forms of *public/Commons partnerships* (Bollier, Helfrich, 2015). In particular, a principle of *subsidiarity* should be applied, defining objectives at different levels and leaving sufficient room for the self-organisation of users supported by public authorities, NGOs, and possibly international organisations. Thus, at the international level, development policies based on local communities should be developed, to

respond precisely to their needs, while at the national level, a reflection on the laws that govern the management of natural resources (notably land resources) is necessary. At the local level, tools to manage natural resources in common must be developed for local communities depending on the same resources.

Here, the perspective moves from classical perspectives of consultation or participation of stakeholders towards an objective of creating favourable conditions for resource users to actively engage in the stewardship of the resource. Within a multi-scale governance system driven by subsidiarity, the rule-making rights of community members at the different scales should be respected by outside authorities according to Ostrom's principles. Subsidiarity also includes a time perspective for the repartition of roles between public actors, international organisations, the private sector, and Commons to evolve through time as Commons progressively develop.

The *process of renegotiating roles between public actors, communities and, possibly, the private sector*, here deploys at a national and at an international level. Such renegotiation at an international level necessitates a degree of direct representation of local communities (and, as they emerge and consolidate, the Commons themselves at different scales) in international negotiations that is not uniquely channelled through the usual representation by State actors.

As autonomy of the process of commoning is a key factor for its success (which should be confused neither with autarky nor with an absence of regulation of the process), *direct cross-border commoning activities* between communities, NGOs, academics and experts, and local authorities *should also be encouraged*. Such cross-border activities, articulated with inter-State cooperation frameworks, also have the potential to better take into account the reality of communities for which cultural identity does not necessarily correspond to State borders (particularly in cases where borders are inherited from colonial times).

The adaptative and evolutionary nature of Commons also calls for *national and transnational institutional frameworks that make room for adaptation* and collective learning in order to let the respective roles of public actors, private actors, and Commons evolve through time as commoners and local communities progressively consolidate.

#### 4. Conclusion

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Dialogue on all levels of cooperation (global, regional, and sub-regional level) is the only way to avoid conflicts over natural resources as they are impacted by actors from all these levels. From this perspective, Commons represent an interesting framework of analysis and a toolbox to address the environment-development-security nexus, with a wealth of possibilities to organise user-driven governance and hybridise it with public institutional frameworks, the potential to encourage the preservation of natural resources by their users and to develop their capacity in a multi-scaled way, and their capacity to accommodate a wide range of objectives. In particular, as they engage resource-users and local communities into developing common understandings and a community of practice, they represent a promising ground for turning conflicts over natural resources into collaboration (as shown in different examples developed in this policy brief) while avoiding overexploitation of these resources.

They have important innovation potential in the fields of nature conservation, development, and peacebuilding. In particular, transboundary Commons pave the way for new international cooperation mechanisms that combine both the legitimacy of interstate cooperation and the flexibility and mobilisation potential of Commons.

This, however, requires a shift of perspective from public actors (and in particular for States), from a role of direct regulation of natural resources to a subsidiarity approach in which they support Commons at different territorial scales (including the transboundary scale), which contributes to public objectives and to a *2<sup>nd</sup>-level type of regulation* in which public actors primarily regulate how subsidiary entities based on Commons regulate the considered natural resources and endorse a role of guarantor of both the autonomy of the Commons, of the effective gathering of the conditions of their development and of their contribution to resource conservation. This shift does not represent a withdrawal of States and public actors, but on the contrary, a reengagement of these actors under new roles and attributes. Through the development of such Commons, the shift of perspective is also from twofold approaches based on a system composed of the public and private sector to a threefold system in which we consider the respective articulations between the public sector, the private sector, and Commons in innovative public/Commons partnerships.

This also requires international dialogue to shift from traditional institutional frameworks based on national sovereignty principles and to make room for conversation with innovative representations of resource users that are not only channelled through State organisations and to organise adequate and innovative representation of the different scales of Commons in transboundary negotiation

forums. In this respect, key actors in international development aid should work not only at the level of States but adopt a multi-scale perspective driven by subsidiarity principles.

It is however still necessary to define the conditions of fruitful articulation between multi-scale Commons, new types of regulation, and the private sector in new institutional settings involving transboundary Commons.

Further development and experimentation of innovative Commons-based approaches for the management of transboundary natural resources under tension requires methodological developments that go further than the scope of this policy brief. This requires bridging different fields: the study of Commons, environmental peacebuilding, international relations, and international cooperation (including its legal and institutional aspects). It also requires dialogue between researchers, civil society, policymakers, and actors in international cooperation in order to identify and experiment with concrete use cases. For both aspects, the Dialogue of Civilizations Research Institute constitutes a useful platform and for proposals to support multi-cultural dialogue on this issue.

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