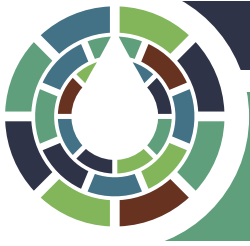# Water, Peace and Security

Water and conflict in the Inner Niger Delta:
a governance challenge

June 1 | 2022

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1. Introduction

Conflicts in the Sahel region are mounting[1]. The Inner Niger Delta, located in the Sahelian zone of central Mali at the crossroads between lusher south Mali and Saharan northern Mali[2], is one of the areas most affected by conflict. Livelihoods in the Inner Niger Delta are determined by the rhythms of the seasonal rains, the tide of the Niger River and the rotations of herd movements. It is within this context that competition over access to water and pasture plays out and has given rise to conflicts.

A unique ecosystem, the Inner Niger Delta features a wide network of channels, swamps and lakes in an otherwise arid landscape. The second largest inland delta in Africa, this vast flood plain is 300 kilometres long and covers an area of 41,195 square kilometres.

The delta ecosystem is a rich but fragile resource, key to the productive activities of many different groups, including farmers, herders and fishermen. These productive activities are critical to Mali's economy: the delta provides 15% of the country's cereals, represents 80% of the national fish trade, 30% of rice production and feeds 60% of the livestock during the dry season. The total ecosystem value of the services provided by the Inner Niger Delta was estimated at US$500 million a year in 2020.[3] The delta ecosystem relies in part on bourgou, a floating grass which grows in deep water. The bourgou fields are breeding grounds for fish during the flood and provide vital food resources for cattle during the dry season.

The delta is dependent on water flowing in from the Niger and Bani rivers and is affected by seasonal and annual variations in flow. Each year, the plain floods, with water rising between June and October, remaining high in November and December, and ebbing between January and March, reaching its lowest level between April and June.

Along with demographic growth and more intensive use of the resources, changing water
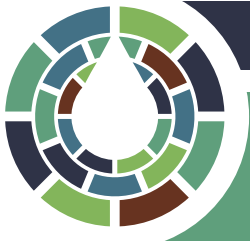
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PICTURES: Ousmane Makaveli

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The Inner Niger Delta at low tide near Djenné – When the flood recedes and the water level is very low, children from fishing communities catch the small fish left behind, complying with the fish preservation legislation. © Ousmane Makaveli/International Alert

levels and rhythms are bringing different groups' needs for resource access increasingly into conflict. This tension is set against changing social and political structures, a crisis in the legitimacy of both the state and traditional leaders, as well as an active armed conflict between Malian armed forces, Islamic extremist groups and local self-defence groups.

This Water, Peace and Security (WPS) Partnership report aims to inform global decision-makers and practitioners about the links between water, peace and security in the Inner Niger Delta. It interrogates the different types of grievances from communities on water governance, water-related conflicts, the mechanisms for managing those conflicts, and relations between water-related conflicts and the wider insecurity in the region.

The report finds that livelihoods of the Inner Niger Delta communities are under threat (section 1), causing tensions and conflicts within and between these communities (section 2). Existing systems to manage these tensions and conflicts see their legitimacy challenged (section 3), leading to the emergence of alternative governance options (section 4).
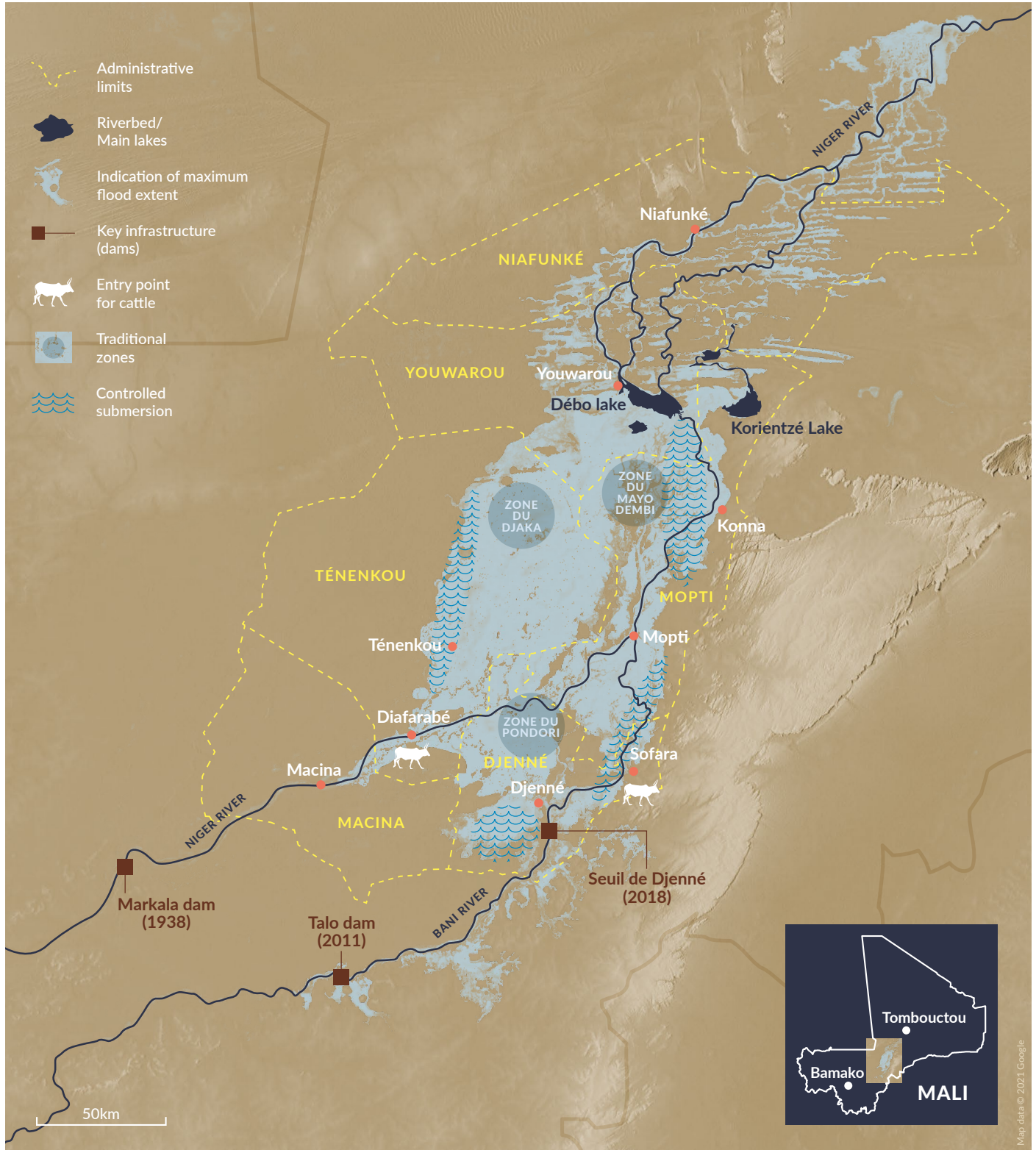
2. Methodology

The first stage of this research entailed a detailed review of available literature related to the context and conflict dynamics of the Inner Niger Delta in 2020. This led to the formulation
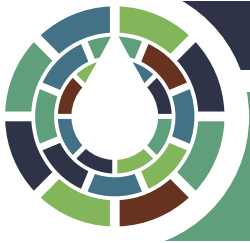
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Figure 1. Map of the Inner Niger Delta

Administrative and resource map of the Inner Niger Delta © International Alert

Legend:
- Administrative limits
- Riverbed/Main lakes
- Indication of maximum flood extent
- Key infrastructure (dams)
- Entry point for cattle
- Traditional zones
- Controlled submersion

Map labels: NIGER RIVER, Niafunké, NIAFUNKÉ, YOUWAROU, Youwarou, Débo lake, Korientzé Lake, ZONE DU MAYO DEMBI, ZONE DU DJAKA, Konna, TÉNENKOU, MOPTI, Ténenkou, Mopti, Diafarabé, ZONE DU PONDORI, DJENNÉ, Sofara, Macina, Djenné, MACINA, NIGER RIVER, Seuil de Djenné (2018), Markala dam (1938), Talo dam (2011), BANI RIVER, 50km

Inset map: Tombouctou, Bamako, MALI, Map data © 2021 Google

of hypotheses that were explored through field research in the Inner Niger Delta, with a focus on the three administrative cercles of Mopti, Djenné and Konna.

Data was gathered from a total of 204 informants, 68 informants per administrative cercle, through focus groups and interviews. Most data collection was conducted in person in summer 2021 and a few follow up and clarification phone calls were made in autumn 2021.

Most of the informants (174) were members of the community and local NGOs, while 30 informants were members of the local administration or elected officials. The sample included an even distribution of workers in different sectors, including farmers, livestock herders and fishermen, and those working in other professions, such as manufacturing, trading and services. Despite efforts to seek gender balance, only 15% of the respondents were women. Researchers cited the reluctance of women to engage on the topic of conflict, noting that women found that subject too sensitive or culturally inappropriate.

3. Key findings

This research finds that the livelihoods of Inner Niger Delta communities are under threat; that the threat of shrinking available ecosystem services is causing tension and conflicts within and between the communities; that there are challenges to the legitimacy of the existing systems for managing conflicts; and that alternative governance options are emerging. These findings are further elaborated below:

a. **Livelihoods in the Inner Niger Delta depend on the water and natural resources provided by the ecosystem. Climate change, political decisions and human behaviour have contributed to shrinking ecosystem services.**

i. The annual rhythm of different groups' usage of the delta resources

The different cultural or ethnic groups living in the Inner Niger Delta have traditionally specialised in their own specific productive activities. Thus, socioeconomic status and ways of living generally coincide with identity groups. The various groups use the water and land of the delta in different ways at different times of year. This dynamic is described in more detail in Figure 2. The patterns of livestock herding, crop farming and fishing in the delta are generalised as follows:

• **Livestock herding** is practised mainly by the Fulani (or Peulh) communities. The herds graze on non-flooded areas in the rainy season, from June to September. When the flood waters recede, herders move their animals to graze on the exposed bourgou fields. Men are responsible for moving herds and tending to animals, while women are also involved in the herding and process dairy products for sale. Traditionally, the Fulani are nomadic, migrating with their herds. Where migration still takes place, women play a key role in moving the households.

• The Bambara and Dogon tend to cultivate upland areas, growing millet, sorghum or cowpea. The sowing period is between May and July, and the harvesting takes place between November and January. In both communities, women play an important role alongside men working in the fields and processing harvested cereals for the family to eat. They also grow vegetables in the dry season to support and feed their families. The Markas cultivate rice or bourgou in the flood plains and irrigated areas. The rice sowing and harvesting periods are respectively May to July and November to December. Where there are irrigated perimeters, the Markas also practice off-season cultivation, which usually begins in the cold season.
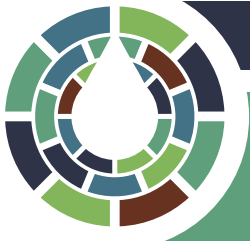
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• **Fishing** is mostly practised by the Bozos or Somonos communities. These fishing communities are both settled and nomadic. When the delta floods, the fisher people follow the migrations of the fish along the river and its branches. The ebb of the flood[4] is the main fishing period on the river, its branches and tributaries. The low water period, March to May, is the time for fishing in the ponds and lakes which currently constitute important fish reserves. While men are involved in the fishing itself, women are involved in the processing of fishery products so that surplus fish can be sold and generate income. The women usually follow the men in their fishing migration.

Such descriptions of the economic behaviour of different ethnic groups is stereotypical but remains key to understanding the local inter-group dynamics in the Inner Niger Delta. Migrating communities (herders and fishermen) are increasingly becoming settled and engage in self-subsistence farming as secondary income. This tendency may be due to the upset in climate trends, the competition for space and resources in migration destinations or the success of campaigns by various non-governmental organizations to diversify revenues. The interests of each socio-professional category (herders, fishermen and farmers) nonetheless remain represented in the hands of the groups described above.

ii. Water dynamics and impact on livelihood strategies

Climate change is causing increasingly erratic water availability in and across seasons, in terms of volume and predictability. Mali has seen an increase in average annual temperatures of 0.7 Celsius since 1960. Projections indicate a temperature increase of 1.2 to 3.6 degrees Celsius by 2060, with larger increases in the southwest (Kayes) and central regions (Mopti, Gao).[5] Communities observe that average daily temperatures have increased, leading to warmer nights and days and longer dry spells.

These rising temperatures have an impact on water, notably on evapotranspiration - surface runoff and groundwater recharge. The negative impacts associated with rising temperatures are compounded by increasingly variable interannual rainfall.

While climate change is a significant longer-term risk, in the immediate shorter term, the volume of water in the Inner Niger Delta is being affected by infrastructure projects such as dams and large-scale irrigation projects upstream on the Niger and Bani rivers. This impact on water volume will be affected further by more infrastructure projects currently in the planning stages.

The ways that such infrastructure is decided upon, planned, developed and operated is key to guaranteeing the fair sharing of water resources across the river basin.[6]

Figure 2 describes the annual variations in the water levels in the Inner Niger Delta, superimposed with the concurring water use by fishermen, farmers and herders.
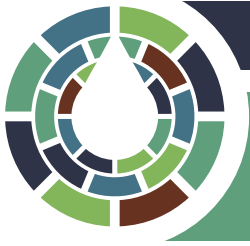
The increasing unpredictability of water resource availability is leading individuals to adopt coping strategies that can be harmful for social cohesion and the environment.

> *"Water is life. If you are the owner of hundreds of herds or a major producer of rice or millet, it only takes one year of drought for you to be ruined. This is happening in our farming, herding and fishing villages now. In this insecure situation that we are experiencing today, everything is getting worse."*
>
> - A civil society leader from Djenné

Climate deterioration, demographic pressure and an increasing number of infrastructure developments, such as irrigation systems and upstream dams, have all led to a reduction in available flood areas and productivity,

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Figure 2. A year in the Inner Niger Delta

Cultivators, fishermen and herders all compete for access to land and water resources provided by the Niger river. Availability of those resources is increasingly unpredictable due to changes of Niger's flood regime, because of climate variation and upstream water allocation.
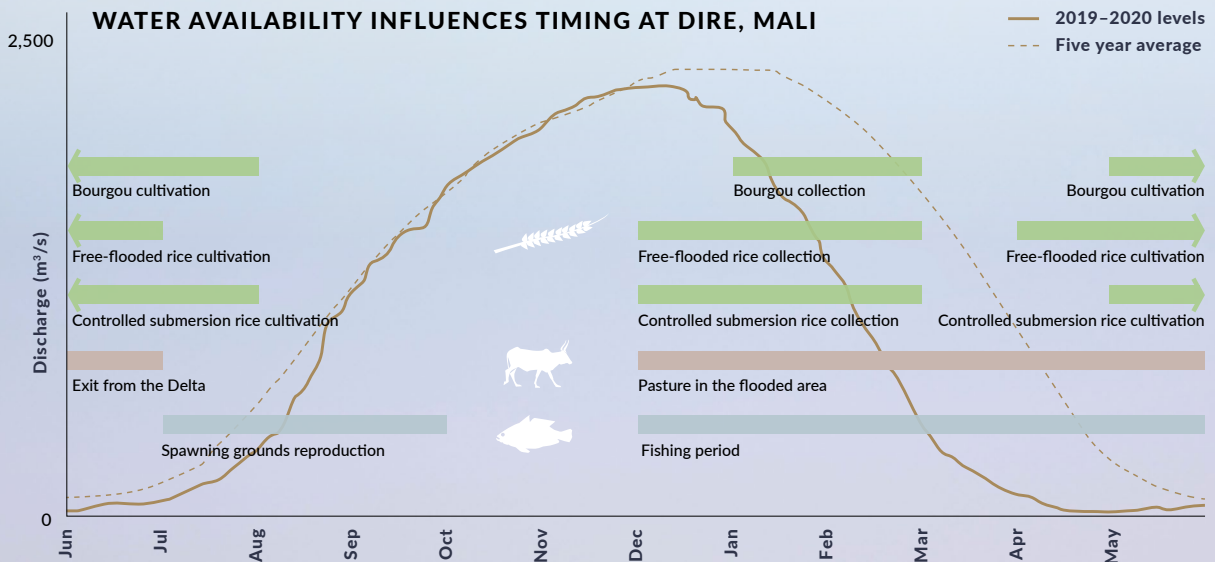
FARMING
Farmers cultivate crops such as rice and bourgou, an aquatic grass. Bourgou is a cereal grain, a fish nursery when under water, and cattle fodder as the flood recedes.

CATTLE HERDING
Herders bring their cattle into the wetlands to graze when the flood recedes sufficiently. They remain into the dry season.

FISHING
Fishermen need an undisturbed environment for fish to reproduce. This used to happen in May but is now August/September.

WATER AVAILABILITY INFLUENCES TIMING AT DIRE, MALI

— 2019–2020 levels
- - - Five year average

2,500

Discharge (m³/s)

0

Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May

Bourgou cultivation

Free-flooded rice cultivation

Controlled submersion rice cultivation

Exit from the Delta

Spawning grounds reproduction

Bourgou collection

Free-flooded rice collection

Controlled submersion rice collection

Pasture in the flooded area

Fishing period

Bourgou cultivation

Free-flooded rice cultivation

Controlled submersion rice cultivation

Graphic © International Alert. Photo © John Warburton-Lee Photography/Alamy Stock Photo
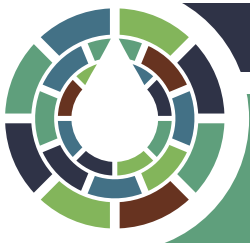
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overexploitation and degradation of the resources and, as a result, conflicts between land resource users.

Traditionally within the Inner Niger Delta, land was rarely put to a single use. Instead, it was used variously, both cultivated and grazed, according to the season. Population growth and an increased number of hydro-agricultural developments have meant that traditional agricultural areas are being developed, fenced off or monitored, to prevent damage which may be caused by herds trampling the land.[7] This has led to open competition for space among fishing, pastoral and agricultural communities.

Today there is less pastureland (including bourgou) and more cultivated land, with negative consequences for herders, who need more access to water points, riverbanks and lake shores as the cattle numbers in their herds grow. This is also putting stress on the fishing communities who require space on the riverbank to charge and
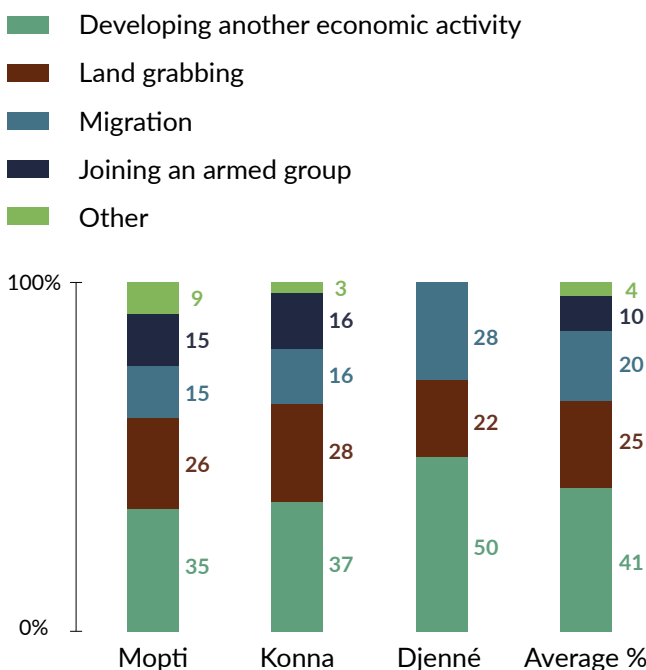
discharge their equipment and catches. Moreover, land grabs by wealthy individuals see those most privileged economic actors increasingly controlling significant tracts of land that was once owned by local community families.

Pressures on water and land resources have led individuals to deprioritise their traditional occupations and diversify into other activities, thereby putting further stress on a long-standing social system based upon finely balanced sharing of resources between groups. In WPS research, developing new economic activities was reported as a strategy to cope with this pressure by 35% of the informants in Mopti, 37% in Konna and 50% in Djenné.
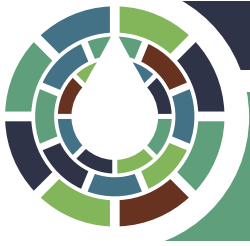
Examples of this occupational diversification include traditional fishermen struggling to make ends meet starting to look for land on which to cultivate crops or market stalls so they can engage in trade. In Mopti and Djenné, some farmers reported that when the fields do not produce much, they exploit the surrounding forest to obtain and sell timber and charcoal for income, thus depleting the environment and potentially infringing on environmental protection law. Deforestation is also used to create space for cultivation by 'new' farmers. Amongst its other environmental impacts, deforestation leads to increasing silting of the river.

The findings in this report emphasise that occupational diversification is one of many coping strategies that individuals may choose to adopt. Others include migration (identified by 15% of respondents in Mopti, 16% in Konna and 28% in Djenné) or joining criminal or extremist groups (identified by 15% of respondents in Mopti and 16% in Konna), which are discussed further in this report. The tensions caused by these coping strategy choices challenge the effectiveness of pre-existing conflict mechanism structures, as discussed below.

Figure 3. Coping strategies of local actors in response to the reduction of ecosystem services

- Developing another economic activity
- Land grabbing
- Migration
- Joining an armed group
- Other

b. Increased competition for access to water resources increases tension and conflict between and within communities.

Conflicts are developing both within and between groups of herders, farmers and fishermen. Different groups are increasingly competing for the use of water and land resources which are recognised as insufficient to meet everyone's needs or unfairly allocated.

Moreover, climate change and reduced water levels have led to disruption of previous usage patterns, bringing different groups into conflict with each other. The conflicts tend to increase in number and intensity at specific periods during the calendar year, such as at the start of cultivation, during harvesting and the times of departure and return in the seasonal shifting of transhumant animals[8].

i. Water-related conflicts occur either between or within different communities

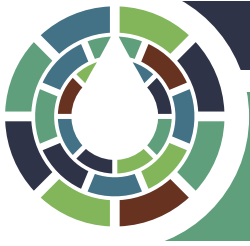This research underlines the main conflict dynamics between different water-resource users, as follows:

- **Conflicts between farmers and herders** are mainly over access to water and relate to the use of land adjacent to rivers or waterpoints. The issues are frequently around livestock ruining crops or farming taking place on herding routes. Such conflicts normally occur at the end of the period when livestock enter the delta in May-June or when they leave and return in June- July and October-November.

- **Conflicts between farmers and fishermen** mainly take place over the use of flooded land, either because fishing communities feel that farmers have extended beyond the land designated to them by the local traditional authorities and occur often around May-June, or because the farmers accuse fishermen of putting fishing traps in their rice fields or in the river, often around January-February, leading to the clogging of irrigation systems or silting of the riverbed.

- **Conflicts between fishermen and herders** are occurring frequently because herders are increasingly resorting to fishing as a complementary livelihood opportunity, hence increasing the competition for limited resources. Conflicts also occur when the herders' livestock drowns in the artificial channels that fishermen make to catch fish. Fishermen also complain about passing cattle destroying their nets, which is particularly likely when the water is rising in July-August or falling in January-February.

While WPS research suggests that inter-community conflicts are more frequent and more intense than intra-community conflicts, those conflicts occurring within the same community tend to arise in the following situations:

- **Conflicts within farming communities** relate mainly to land usage and are therefore over field boundaries, the establishment of new fields and irrigation systems, and during transplanting and harvesting. These conflicts tend to take place in May-June and at the beginning and the end of the farming season.

- **Conflicts within herding communities** occur over access to bourgou fields and pasture for cattle and can arise from a perception that the rules of precedence which govern access have not been observed. Such conflicts most often happen when the herds return to the delta in October-December.

- **Conflicts within fishing communities** relate to access to the richer stretches of water or fish stocks. They can be triggered by the arrival of migratory fishermen into an area claimed by settled fishermen, whenever fishermen set up booms in areas claimed by others, or in cases of failure to observe local, agreed fishing rules. These conflicts are most likely to take place during December-January, the time of most intense fishing.

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Women and children fetching water at low tide near Konna – The intensity of the flood impacts the daily life of Konna residents. As the flood recedes, women and their daughters need to go further outside town to fetch water for daily use in laundry or hygiene. The smaller the flood, the farther they must go to achieve this task. © Ousmane Makaveli/International Alert

ii. Gender, age and conflict

This WPS research finds that the communities themselves believe that water shortages are contributing to increasing gender and generational inequality.

Mali remains a very patriarchal society in which women and youth have, in practice, limited access to land or decision-making power. This is the case especially in villages and traditional communities. Despite progress in the legislative framework and increased agency[9], the challenges that women and young people must face to own land lead to a cascade of other forms of economic vulnerability, including inability to own a house or secure a bank loan.

Women are at risk of gender-based violence and the risk escalates when there is conflict. This situation may cause women to make security decisions that increase their economic vulnerability – such as not undertaking economic activities or education opportunities which they think may expose themselves to violence.[10]

Women are not viewed as combatants but may still play a direct role in the conflicts between groups, such as when livestock invades the women's vegetable gardens or fields and the women's male family members attack the herders who are responsible for the livestock. Women have a direct role in managing the natural resources within the household (water, fuel, food) and therefore should have a place in the mechanisms for resolving resource conflicts.
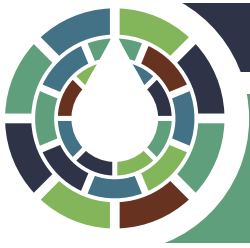
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Young people are heavily implicated in the conflicts in this region. They are most vulnerable to recruitment by armed groups, a choice they may make either for subsistence or to address their grievances. Young people are also most likely to be mistreated by the state for suspicion of being members of armed groups or they may suffer other injustices which encourage them to join armed groups.[11] Furthermore, young people may be called upon to protect their communities, including being part of armed self-defence militias or when conflict flares between different groups.

In a patriarchal society where age is the primary indication of status, young people have a range of grievances, including the fact they are often excluded from local and customary mechanisms of decision-making and they are relegated to the poorest and least profitable land, despite the 2006 agriculture law prioritising their access to

land and means of production. Respondents have described this as generational discrimination. The radical upheaval of armed conflict may therefore appeal to young people seeking a means to address these grievances.[12]

Respondents also raised the issues of mismanagement of resources and favouritism in assigning limited access. Some identified the requirement of connections or money to gain access, thus further marginalising the more vulnerable groups, such as youth, or populations that have recently settled in the area.

c. The state and traditional leaders face a crisis of legitimacy which limits their capacity to resolve resource conflicts
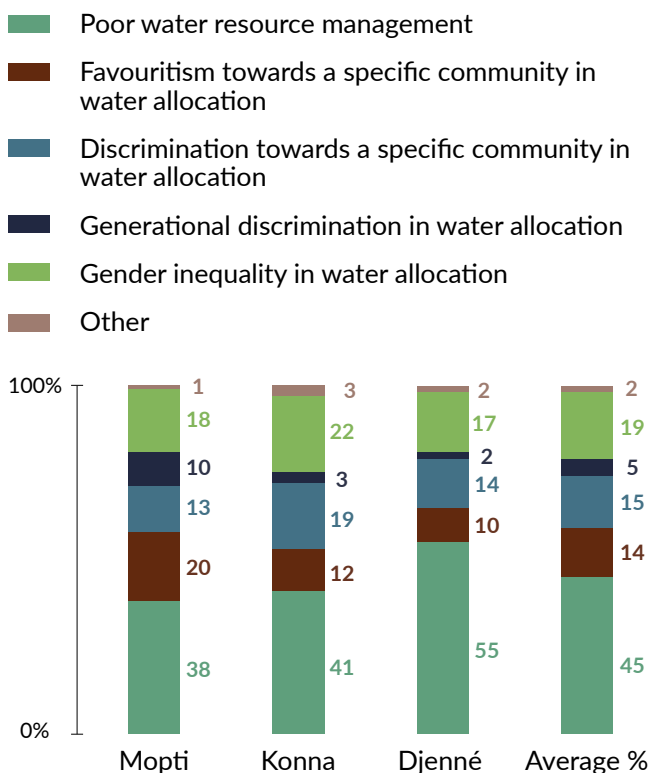
When communities experience the conflicts outlined in the previous section, both formal and informal governance systems are available to address the conflicts. However, both these systems are contested. Evidence suggests that local populations rely more heavily on the informal mechanisms. This section focuses on these formal and informal governance systems and the ways in which the two systems interact.
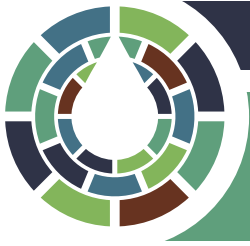
i. Traditional mechanisms for managing resources and their interaction with the modern state

The centrality of water to the communities in the Inner Niger Delta has meant there are many traditional management methods which the communities have relied upon to establish access to and ownership over resources and to resolve resource-related disputes. In addition to these complex customs and practices on resource use, there are traditional leaders who manage the resources in their local areas.

The *Djowro* traditionally manages the pastoral movement and access to grazing and water arrangements between the Fulani herders and the farming communities. The master of the water (*Djitigui* in Bambara) manages the fishing calendar, access to ponds and fishing areas, and conservation of *frayères* – fish reproduction

Figure 4. The impact of water stress on local populations and societies

- Poor water resource management
- Favouritism towards a specific community in water allocation
- Discrimination towards a specific community in water allocation
- Generational discrimination in water allocation
- Gender inequality in water allocation
- Other

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spaces. In both these realms, precedence of clan or lineage affects the decisions on access to resources. A master of lands (*bessèma* in Bambara) oversees the repartition of land plots amongst farmers using the power delegated to him from the *Djowro*[13]. The predominant position of the *Djowro* dates to the *Dîna* empire (1815-1853) which established much of the Fulani class system and the structures governing livestock migration and land allocation. Various social pacts exist between these traditional leaders and in theory these pacts are regularly renewed during cultural festivals or through formal or informal associations, such as the *griots* (purveyors of oral traditions) or the network of traditional communicators for development, known as RECOTRADE.

All these positions are based on traditional and patriarchal class structures and therefore pass to higher status older men. Unsurprisingly, the decisions of these traditional leaders tend to support existing power structures and contribute to the marginalisation of young people, women or outsiders, as described above.

The traditional governance mechanisms of the Inner Niger Delta have been interacting with government institutions since colonial times. Under the conditions of the modern state, laws and official bodies specifically govern the management of resources at the national level. Key national policies governing resource use include the National Water Policy, the National Livestock Development Policy, the Fisheries and Aquaculture Development Policy, the Domestic Energy Strategy, the National Irrigation Development Strategy and the National Food Security Strategy. However, implementation of these national policies and strategies has not always been achieved effectively nor are they necessarily aligned with traditional and local practice.
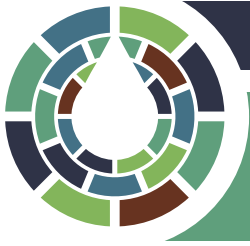
District, regional and local level governance structures do not play specific roles in water management but are central to land management and conflict mediation processes.

The municipality is managed by a mayor and his elected council and is administered by a sub-prefect, a representative of the state appointed in the Council of Ministers. However, poor infrastructure and geographic remoteness isolates many villages from their administrative centre and thereby increases reliance on village-level governance. Village chiefs and village councils are legally recognised but the process for their selection is not legally defined and in practice, things are left up to tradition.[14] Legal recognition depends on an act of recognition from the prefect, which is not implemented widely.

> *"For us, the representatives of state services (administration and technical services) and elected officials do everything they can to extract money from us, so we have no confidence in their prevention mechanisms and conflict management techniques. We prefer to solve our problems at home with the traditional authorities."*
>
> – A respondent in Mopti

This imperfect recognition of traditional practices by the state has weakened both the traditional governance mechanisms and the state systems themselves. Contestation for the right to manage resources has led to a crisis of legitimacy for the traditional structures and a reduction in their capacity to resolve conflicts. Traditional structures are increasingly viewed as being influenced by large economic or political interests, not reflecting the needs of communities, and instead replicating the unequal power relations which have been explored here in this report. Despite the flawed system, as outlined above, the respondents interviewed in this research still expressed more trust in traditional authorities to resolve conflicts, rather than trusting state representatives, who they viewed as more corrupt. Moreover, communities may view the official judicial processes as expensive, overly lengthy, irrelevant to their local situation and ruled by judges appointed for a fixed term by

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the central government in regions about which they know little. Communities therefore prefer customary law to settle resource disputes. In addition, since 2012, government authorities and agencies have been absent from some areas of central and northern Mali, because they have been targeted directly by various armed groups.
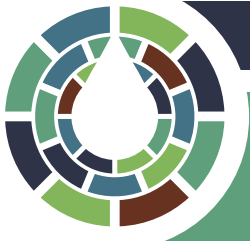
Research by the Stockholm International Peace Research Institute found that, in the event of a conflict or serious crime, most people would consult traditional authorities ahead of any other stakeholder, including state representatives. Most people also reported that the customary justice system was the most impartial. Few people opted for the religious or state justice systems.[15]

However, the coexistence of official and customary means of resource governance does not have to be at odds. Since the advent of a democratic regime in 1993, there has been a switch, from state centralism and legal favouritism for sedentary farmers, to progress on the adaption of legal tools that include different communities in the management of natural resources. In practice, local decision-makers have limited knowledge of these tools and local consultations are imperfectly implemented.

The *Commissions Foncières* (land commissions), colloquially known as CoFo, are one promising mechanism for resolving resource conflicts, merging the traditional and judicial systems at the village level. They bring together the village chief, representatives of the various communities,

Competing space use in Mopti - During the flood recession, farmers, fishermen and herders compete for access to the riverbed in the town of Mopti. The delimitation of vegetable patches (on the right side) and the presence of fishermen on riverbanks limit access to water and adjacent grazing areas for herders. Water constitutes a vital element of the livelihood of each of these communities. © Ousmane Makaveli/International

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traditional leaders and representatives of women's and youth associations to discuss the land issues and find peaceful solutions to conflicts. A judge then approves the minutes of the meeting, forming a link between the two systems.

As the CoFo are a relatively recent innovation[16], it is too soon to tell if they are effective in preventing or resolving conflict. Their successful implementation relies on strong knowledge of the system and good relationships between the commission and the judiciary. Unfortunately, both the commission and the judiciary are too often either misinformed about their role and responsibilities or reluctant to engage. In practice, the most active land commissions are those established, funded and supported by external organisations and international NGOs.[17]

The Pastoralist Charter, adopted in 2000 and implemented since 2001, was part of this pivot of attitudes towards transhumant herders. This document, available in French on the Land Portal[18], sets out how land and access to water points should be organised with the participation of local communities, authorities and representatives of herding communities, considering the following points:

- movement of cattle – local authorities to delimit grazing areas, passage corridors for cattle and access to water points, including ponds, troughs and rivers;

- the preservation and restoration of natural resources; the establishment of an agreed calendar for pastoralist activities; and

- involvement of farmers' cooperatives, local authorities and herder associations in conflict resolution mechanisms.

Another example of a mixed mechanism is the consultative structure built into the Water Code, adopted in 2002[19]. Administrative structures have been created to monitor the application of this code at the local level, including local water committees, *Comités L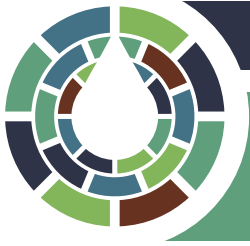ocaux de l'Eau* (CLE). CLE are responsible for preventing and resolving conflicts over water use or its impact on the environment as well as conserving the sustainability of water sources. Four CLE have been established in the Mopti region. As with the land commissions, these CLE include women, youth and members of different communities, making them a potentially promising development for local conflict resolution.

However, in practice all those mechanisms are underfunded and insufficiently supported. Mali has long delegated local resource management in peripheral areas to ancestral traditions. Since the country's independence and as part of the transition to building a modern state, the government has strived to integrate legal systems and traditions. Communities and even some decision-makers lack knowledge of this direction, leading to poor quality legal systems that are unable to resolve conflicts around resource governance.

ii. Conflict between communities and state agencies and state sponsored investments

Formal institutions are not neutral arbiters in conflicts over resources and are seen this way by communities hence their policies can cause or exacerbate conflict. For example, the large-scale irrigation projects established upstream by government entities such as the *Office Riz Mopti* or the *Office du Niger*[20] lead to increased rice yields but also reduced water levels in the delta which subsequently result in negative consequences for local communities, including involuntary displacements, interference with transhumance routes, reduction of grazing periods, drainage and water quality issues. Moreover, the development of new dams in Guinea, such as that of Fomi, risks exacerbating these negative phenomena and thus leading to new conflicts.

In the *Office du Niger* zone, access to land and its use gives rise to misunderstandings and even conflicts between the *Office du Niger* and farmers on the one hand, and between the *Office* administrators on the other. According to

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a local source, the conflicts between the *Office du Niger* and the farmers are very often due to lack of communication and awareness, the ignorance (of some farmers) of the content of the contract and poor distribution of water for use in the irrigation of lands. Such conflicts were reported by a member of Mopti City Council. In that case, real estate investors, supported by state representatives, claimed ownership of land that the poor families considered belonged to them. Land registration needs to be clarified and formalised, but this is complicated by the overlap of legitimacies and various legitimate claims to land.

d. Non-state armed groups promote new societal and governance models and contribute to authorities' legitimacy crisis

In addition to the state and traditional governance mechanisms, non-state armed groups have been present in the Inner Niger Delta since 2016. These groups contribute to the complex dynamic in the region and play an increasing role in replacing authorities and regulating all aspects of the lives of the populations under their rule, including in natural resource management.

i. Self-defence groups, jihadis and criminal groups

Non-state armed groups operating in the Inner Niger Delta can be categorised as follows:

- Extremist groups, such as the *Katiba Macina*, named after a sub-area of the Inner Niger Delta, the *Jama'at Nusratul al-Islam wal Muslimine* (Support Group for Islam and Muslims, known by its acronym JNIM or in French GSIM), and to a lesser extent, the Islamic State for Greater Sahara, which has a greater presence in northern Mali;

- Self-defence militias that have been formed by communities to resist the extremist groups. The most prominent militias are the *dozo*, fraternities of Dogon hunters, the most renowned being *Dan Na Ambassagou*. Other militia in the delta include the *Mouvement de Support pour l'Azawad* or *Ganda Izo*, respectively Fulani and mixed Fulani and Songhai groups present in northern and central Mali; and

- Armed bandits, who benefit from and contribute to the general insecurity by stealing property, particularly cattle.
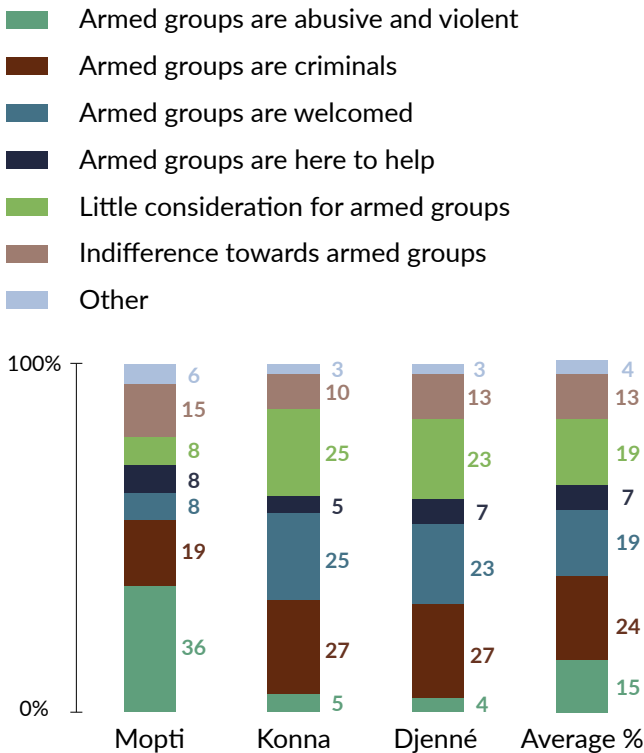
Both the jihadists and the self-defence groups use weak and unfair governance as a justification for their operations but continue to weaken it by contesting state authority and increasing insecurity. The threats of bandits and insecurity further justify their presence to local communities, who in some cases consider the armed bandits as protectors. Tense relationships between the different ethnic groups have been exacerbated by the perception within the law enforcement ranks that the Fulanis make up most of the religious extremists and are supported by the extremists. Although Fulanis are present in some self-defence groups, extremists have exploited the Fulanis' grievances to increase their recruitment. Thus, a conflict amongst recently established actors has tapped into older communal tensions.[21] The egalitarian discourse of jihadism has been used to upset the balance of power between ethnic groups and between Fulani clans in accessing resources and may act as motivation for further inter-communal conflict.[22]

WPS research reveals significant differences in respondent perceptions of the armed groups. The Mopti respondents had the least favourable view of the armed groups and were more likely to report abuses by the armed groups. The differences in responses may relate more to the level of activity of these armed groups in each area rather than a difference in attitude: a greater presence of armed groups in Djenné and Konna leads those communities to feel vulnerable to openly criticise the armed groups.
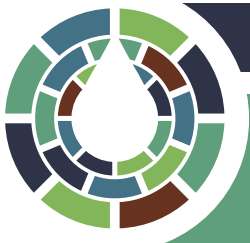
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Figure 5. Community perceptions of armed groups and self-defence militias

- Armed groups are abusive and violent
- Armed groups are criminals
- Armed groups are welcomed
- Armed groups are here to help
- Little consideration for armed groups
- Indifference towards armed groups
- Other

ii. The relationships between armed groups, the state and traditional authorities around resource management

The relationships between the different sources of authority in this region are complex. In some cases, the armed groups are usurping both state and traditional authority. Examples of this include providing security from bandits stealing cattle, assisting community members in need[23] or arbitrating resource conflicts. Enlisting in armed groups, particularly jihadist ones, may be a response to the absence of an effective state actor or where state actors are viewed as playing an active role in worsening the community situations or conflicts. Enlistments may also be driven by economic and other considerations.

In some cases, armed groups are relying on traditional leaders to adjudicate on resource-related conflicts, supporting their authority.

However, the Clingendael Institute argues that even this type of cooperation will eventually lead to the erosion of traditional leaders' authority.[24] According to interviews, the Malian state unofficially supports and collaborates with some of the self-defence groups, such as the *Donzos*. Although self-defence groups are perceived as being 'out in the bush' and recruiting from rural locations, their leaders are often based in the main towns controlled by the Malian state.
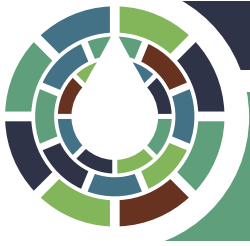
> *"Conflicts or disputes in certain areas are settled by the jihadists from that area. When there is a dispute or misunderstanding, instead of going to the vestibule of the bolongal amirou (village chief), people appeal to the jihadists in their areas. The payment of precedence is no longer made or is done in secret. Instead of the colossal sums collected by the Djowros, they take crumbs. When there is a problem, instead of asking the state to intervene, people call on the jihadists to settle questions of justice and the Donzos for questions related to attacks and/ or threats."*

> – A religious leader from Konna, phone interview, September 2021.

Control over resources is sought by all groups and, particularly in the absence of a strong and effective state presence, is important for the groups' perceived legitimacy. Jihadist groups use the resources they control to raise money, through taxation of harvests and livestock, as well as to punish communities, by preventing access, for example, to gather the harvest or use fishing grounds.[25] Self-defence groups have become involved in challenging restricted resource access on behalf of communities and seeking to control the resources themselves. Some groups have been accused of helping communities to appropriate land from other communities, further stoking conflict.[26]

Extremist groups exerting control over resources often act as arbiters in resource conflicts, a role that strengthens their usurpation of state authority. Thus, they become not only actors in the conflict but actors in conflict management –

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sometimes implementing strict Sharia principles, other times seeking the support of local traditional leaders, and acting, as a last resort.[27] Through these actions, they have changed the established management structures in place for key resources. Interviewees highlight that jihadist groups have taken over the management of bourgou fields from the *Djowros*. They initially objected to payments and traditional ideas of precedence, then began implementing the Zakat (a tax based on Islamic traditions) for access to the resource areas.

According to one respondent, the upheaval of the conflict between extremist groups provides opportunities for young men, who are normally marginalised, t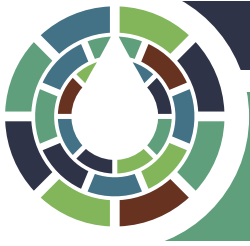o take a greater role in decision-making and resource management. This may motivate recruitment, as discussed above, along with the increasing population and other pressures on livelihoods caused by water level reduction and climate change.

> *"The jihadists have made themselves popular by denouncing the official justice and the security forces who, through their harmful actions, have alienated a large part of the community, without distinction of ethnicity or origin. Having no money or no high-ranking relative in the high spheres of the administration is enough for one's rights to be trampled underfoot by the judges."*
>
> – A breeder from Djenné, September 2021

The Niger River near Konna after flood recession – Silting has caused a change in agricultural and aquaculture production practices. Some farmers are diverting the river flow to their fields by building dikes on the river's branches, thereby depriving downstream herders, farmers and fishermen of water. Silting affects all villages in the flooded area of the Inner Delta, resulting in low fish catches, thus causing the migration of fishermen to other areas of the river. © Ousmane Makaveli/International Alert

5. Conclusion

The livelihoods of the communities of the Inner Niger Delta are highly dependent on the rhythm of the flooding of the Niger River and its tributaries and the seasonal rains. Conflicts arise when communities seek to use the same water and land for different livelihood seasonal strategies (farming, herding or fishing) and tend to happen at predictable times of the year. Scarcity of fertile land and water also leads to, and exacerbates, conflict over access. The water stress caused by the effects of climate change, overexploitation and upstream management decisions results in behavioural change amongst communities in the delta as they seek coping strategies This increases the pressure on land and water, expands generational and gender inequalities of access and has a multiplier effect on inter- and intra-community conflicts related to access and control of resources.

In this context, the ways that water resources are allocated and the disputes around these resources are solved are key issues to securing peace and stability in this region.Ancestral systems for regulating resource allocation and fishermen and herder mobility are losing authority. The legal and administrative management of natural resources is not fully enforced due to the communities' lack of awareness about their rights and agency, and the fact that formal authorities lack the presence and means to implement the management.

This leads to a gap in resource governance. However, some promising models that combine traditional and formal authorities exist and these should be better resourced and supported to build stronger and more peaceful state governance. Participatory and decentralised governance methods that are contextualised to local systems will be needed.

Extremist groups and self-defence groups fill a void of governance left by state and traditional authorities' inability to manage increasingly complex conflict dynamics between and within different communities. This constitutes a threat to social cohesion and to the stability of populations who are finding it increasingly difficult to support themselves.
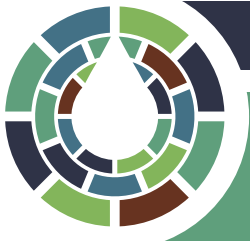
6. Recommendations

The above conclusions lead to the following recommendations for the government of Mali, international supporters, peacebuilding actors, and water and ecosystem experts.

To the government of Mali, at central and regional levels

- Conduct conflict analyses of large-scale irrigation and agricultural projects that might affect the water level in the Inner Niger Delta;

- Increase investment – both financial and in terms of capacity – in local governance that includes communities and traditional governance structures, such as training for village chiefs, councils, judges and other state representatives and awareness raising amongst local communities about their legal rights in relation to resources;

- Support specific participatory mechanisms for managing resources, such as CoFos and CLEs, to resolve conflicts at local, regional and national levels;

- Support communities to diversify their livelihoods in conflict-sensitive and environmentally sustainable ways; and

- Create conditions for the effective return of decentralised services which would provide legitimacy at a local level, such as agricultural support agencies.

To donors and international actors

- Require conflict analyses on infrastructure and large-scale agriculture projects that

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might affect the water level in the Inner Niger Delta. Decisions related to water management should consider the impact that those decisions would have on local communities and include the community point of view;
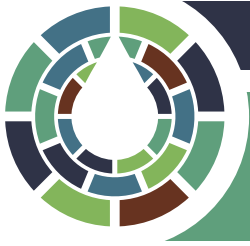
· Support peacebuilding actions at local, national and international levels by including peacebuilding as part of environmental, livelihoods and other programming; and

· Support improved, inclusive and conflict-sensitive management of resources which can show evidence that it works at the local level, then scale up this success at national and regional levels.

To local and international civil society actors

· When planning interventions, take into account the shifting patterns of resource use and the key seasonal flashpoints for conflict;

· Seek to better understand the role of youth and women in each community and engage them in communal peacebuilding processes;

· Understand that while trust in traditional governance structures makes these structures strong entry points for peacebuilding, it is important not to reproduce existing power inequalities that are contributing to conflict and radicalisation;

· Support mixed-method conflict resolution mechanisms, such as the establishment of CoFos and CLEs, or through enhancing the technical, organisational and institutional capacities of traditional authorities;

· Support communities to diversify their livelihoods in conflict-sensitive and environmentally sustainable manners;

· Advocate alongside communities and partners for the Malian government to create the conditions for the effective return of

its decentralised services, especially those which can demonstrate the social role of the government; and

· Support dialogues to restore trust between state representatives, traditional leaders and different communities.

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