



WORKING
PAPER N° 4

DISASTER PREPAREDNESS IN COUNTRIES AFFECTED BY CLIMATE CHANGE: THE EXAMPLE OF FLOODING IN N'DJAMENA (CHAD)

DECEMBER 2025

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DISCLAIMER:

This working paper was produced for review by the REcAP Network. It was prepared by an independent research team under the working paper on 'Building Multi-Stakeholders' Collaborative Partnership for the Prevention of Conflict and Violent Extremism in the Sahel'. The authors bear sole responsibility for the contents of this report, and its views do not necessarily represent those of the REcAP Network.

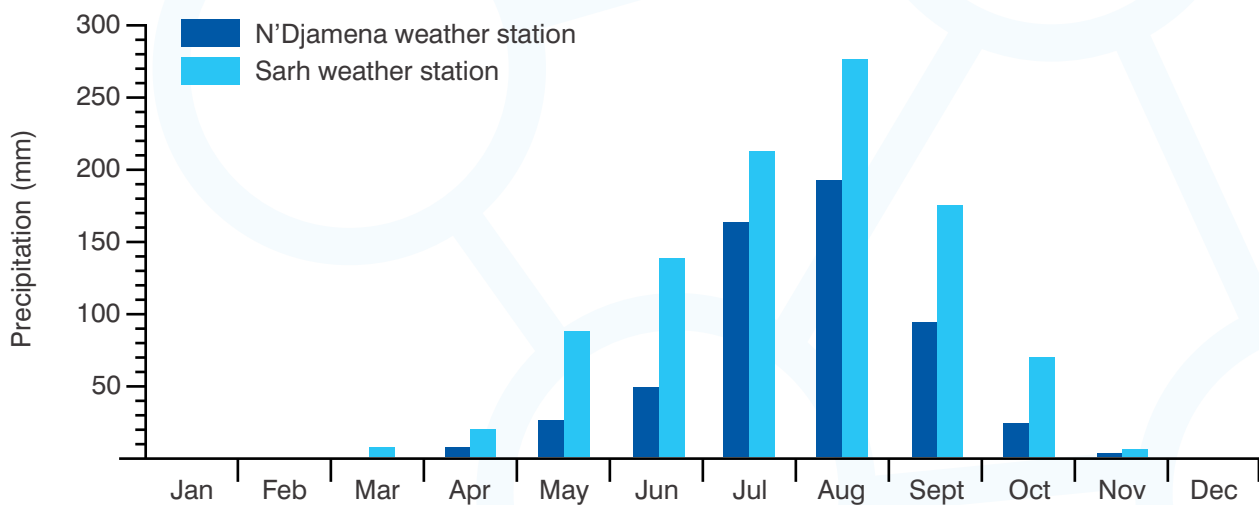
ACRONYMS AND ABBREVIATIONS

ANAM	National Meteorological Agency
CAP	Community Action Plan
CDA	Departmental Action Committee
CERF	UN Central Emergency Response Fund
CNARR	National Committee for the Reception and Reintegration of Refugees and Returnees
CONASI	National Commission for Assistance to Flood Victims
CPA	Provincial Action Committee
CRT	Community Response Team
DGPC	Directorate-General for Civil Protection
DPC	Directorate for Civil Protection
DRE	Directorate of Water Resources
EWS	Early Warning Services
GATI	Governance and Integrated Territorial Approach
MATHU	Ministry of Land-Use Planning, Housing and Urban Development
ONASA	National Food Security Office
PACIN	Flood Crisis Support Project
PILIER	Integrated Flood Management and Urban Resilience Project
PLIME	Project to Combat Flooding in Moundou
RSU	Unified Social Register
SGRI	Flood Risk Management Service
SISAAP	Food Security and Early Warning Information System

Firstly, the Chari-Logone river system plays a central role in flooding. This basin has an annual flood cycle, which begins with the first rains in May-June, intensifies in July, and peaks in October, before gradually decreasing from late October to the following May (Mahamat Nour, 2019). During this flood, the Chari River overflows into its floodplains, including the Massenya and Yaéré depressions (Map 1). It is important to note that floods can occur without local rainfall in N'Djamena, as rains in the southern part of the basin (the Sarh and Manda regions) take two to three weeks to reach the capital. This dynamic explains why floods can occur even during dry weather in the region. The maximum flow in the N'Djamena plain has reached 5,160m³/s (Gouataine Seingue, 2023), and the so-called 'hundred-year' flood of 1961, the strongest since 1933, was measured at 9.10 metres. Significant floods have also been observed more recently, with peaks of 8.14m in 2022 and 8.18m in 2024.

Furthermore, rainfall patterns in the region have changed significantly over the decades. After a wet period in the 1950s and 1960s, the 1970s and 1980s were marked by severe drought. Since the 1990s, increased rainfall variability has been observed, with a trend towards higher levels and more intense episodes (Alhassane et al., 2013). In N'Djamena, annual rainfall varies greatly, ranging from 226mm in 1984 to 711mm in 2006, with an average of 544mm. In Sarh, in the far south-east of the country, extremes ranging from 641mm to 1,276mm have been observed, with an average of 972mm.

GRAPH 1: MONTHLY MEAN RAINFALL IN N'DJAMENA AND SARH, 1984 TO 2014



Source: A. Mahamat Nour, 2019.

Rainfall can also be very intense: for example, on 2 August 2022, 160mm fell in a single day in N'Djamena, equivalent to a year's worth of rainfall. However, the ability to predict these extreme weather events remains limited: the sparse network of weather stations and the poor quality of the data they provide make it difficult to model and effectively prevent risks (République du Tchad & UNDP, 2022).

Another aggravating factor is the morphology of the city of N'Djamena. It is located on a very flat alluvial plain, with a slope facing northwards, rather than towards the Chari River, which hinders natural drainage (Beller, 1990; Dobingar, 2001), causing prolonged water stagnation in certain neighbourhoods during floods. In the few slightly undulating areas, such as in the 7th arrondissement, low-lying depressions create pools, which weaken nearby homes (Mahamat Nour et al., 2021).

Finally, the type of soil exacerbates the severity of flooding. N'Djamena's clay-silt soils swell when saturated, becoming impermeable, which prevents infiltration and promotes runoff. This also weakens the foundations of buildings, making them more vulnerable to collapse during wet periods.

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DEMOGRAPHIC AND URBAN FACTORS CONTRIBUTING TO FLOODING IN N'DJAMENA

N'Djamena's vulnerability to flooding stems not only from physical factors but also from demographic and urban dynamics. Historically, the city was built in a naturally marshy area at the confluence of the Chari and Logone rivers, making it particularly vulnerable to flooding. This geographical configuration has been compounded by rapid and uncontrolled urban growth. The city grew rapidly from an area of only 570 hectares in 1950, to 4,515 hectares in 1984, 7,120 hectares in 1999, and nearly 40,000 hectares in 2016 (Kem-Allahte et al., 2021). This expansion was accompanied by a high population growth rate of around 5% per year, according to census data³. The population grew from 1,207,596 inhabitants in 2013 to approximately 1,699,208 inhabitants in 2020, representing nearly 45% of Chad's urban population and 10% of the country's total population (Mahamat Hemchi et al., 2021). This rapid population growth is putting significant pressure on urban areas and leading to largely uncontrolled development. According to the World Bank (2023), more than 60% of N'Djamena's neighbourhoods are informal settlements, located in flood-prone areas without adequate drainage infrastructure. In fact, more than 90% of the city's surface area is exposed to flood risk, which is exacerbated by the lack of basic infrastructure such as sanitation systems, appropriate roadways, and stable dykes (World Bank, 2023).

Despite an urban development plan drawn up in 1996 aimed at directing the city's development towards non-flood-prone areas (on the west side), urban growth has mainly spread towards flood-prone areas, contrary to initial recommendations (Dobingar, 2001). This rapid expansion took place without prior development to ensure the safety, sanitation, and health of the new neighbourhoods. A significant example is the 9th arrondissement, whose population tripled between 2009 and 2022, from 74,000 to nearly 230,000 inhabitants. Located between the Chari and Logone rivers, this neighbourhood is at high risk of flooding. Furthermore, inhabited areas upstream of the Chari and Logone rivers also lack these protections, with the result that large parts of the city are exposed to flooding (Kem-Allahte et al., 2021).

MAP 2: GEOGRAPHICAL RELATIONSHIP BETWEEN N'DJAMENA AND ITS RIVERS

THE CHARI, ITS CATCHMENT AREA AND TRIBUTARIES



Source: Reproduced from the Open Street Map 2022 and the map of the Chari watershed on Wikimedia (2010)

COURSE OF THE CHARI THROUGH N'DJAMENA



Source: From the OpenStreetMap 2022

STUDY ZONE



Source: Based on satellite imagery, June 2022, Google Earth Pro

 Top right: study zone

Source: P. Bassena and M. Febo, 2023.

³ Haut-Commissariat au Plan, [Recensement général de la Population et de l'Habitat](#).

INSTITUTIONAL DEVELOPMENTS IN FLOOD PREVENTION AND MANAGEMENT

THERE HAS BEEN A MOVE AWAY FROM A DISASTER RESPONSE MINDSET TOWARDS A MORE INTEGRATED APPROACH TO ANTICIPATORY RISK MANAGEMENT

Since the major floods of 2022, a gradual shift has been observed in the institutional approach to flood management in N'Djamena. There has been a move away from a disaster response mindset towards a more integrated approach to anticipatory risk management. Chad's regulatory framework for natural disaster management is relatively comprehensive. Several planning documents have been adopted in recent years, such as:

- the *Plan d'action national de renforcement des capacités pour la réduction des risques de catastrophes* (National Action Plan for Capacity Building for Disaster Risk Reduction) (2015–2020);
- the *Plan d'actions pour la mise en œuvre du cadre national pour les services climatiques* (Action Plan for the Implementation of the National Framework for Climate Services) (2016–2020);
- the *Stratégie nationale pour la gestion des risques de catastrophes* (National Strategy for Disaster Risk Management) (2020);
- the *Plan national d'adaptation* (National Adaptation Plan) (2022);
- the *Plan de contingence multisectoriel* (Multisectoral Contingency Plan) (2017, revised in 2022).

Nonetheless, the persistent gap between strategic intentions and their implementation on the ground remains a major limitation. The difficulty lies not so much in drafting texts as in putting them into practice. Most of these plans struggle to materialise owing to a lack of technical, human, and financial resources, inter-sectoral coordination, and local capacities. However, the floods of 2022 triggered a renewed awareness, prompting the government to engage in important discussions on the framework for action, including:

- an annual review of the flood contingency plan;
- the development of a national flood protection strategy;
- the preliminary drafting of a national civil protection law;
- an update to the *Plan d'organisation des secours du Tchad* (Chad Relief Organisation Plan, ORSEC).

In addition, certain new measures are emerging, such as the creation in 2022 of a Direction générale de la protection civile (Directorate-General for Civil Protection), discussions on a national crisis management centre, the gradual establishment of a national fire brigade corps, and the creation of decentralised protection focal points. But here again, the operational capacities of these structures remain very limited, both in terms of material resources and available human skills.

The international community is playing an important role in strengthening these capacities, through several structural projects:

- The *Gouvernance et approche territoriale intégrée* (Governance and Integrated Territorial Approach, GATI) project and the *Projet de lutte contre les Inondations à Moundou* (Project to Combat Flooding in Moundou, PLIME), both funded by the French Development Agency;
- the Chad Hydromet and Early Warning Services (EWS) project and the Integrated Water Resources Management and Early Warning System for Climate Change Resilience in the Lake Chad Basin project³, both led by the World Meteorological Organization;
- the *Projet Intégré pour la Lutte contre les Inondations et la Résilience Urbaine à N'Djamena* (Integrated Flood Management and Urban Resilience in N'Djamena Project, PILIER), led by the World Bank.

However, these external efforts, although essential, cannot alone compensate for the lack of fully operational national mechanisms, or resolve the problems of multisectoral coordination or local governance. In this context, Chad provides a relevant case study for observing the development of public policy on risk management, particularly in an environment marked by significant institutional fragility and socio-economic vulnerability.

³ A regional project supported by the Adaptation Fund.

OBJECTIVES OF THE STUDY

The main objective of this study is to identify and describe the approaches, practices, and perceptions associated with disaster preparedness and management programmes in the city of N'Djamena.

More specifically, it aims to:

1. Identify and evaluate the design and implementation of different types of public policies for risk anticipation and management;
2. Map the networks of actors and stakeholder involved in flood preparedness and management in order to understand this fragmented field of public action;
3. Evaluate the mechanisms for prevention and emergency response to existing local needs and contexts, and their inclusive nature.

METHODOLOGY

The study is based on a qualitative approach combining:

- fifteen semi-structured interviews with institutional, associative, and community actors;
- an in-depth review of regulatory and legislative frameworks;
- academic literature on public policy and risk management in countries belonging both to the Global North and the Global South.

The focus on the city of N'Djamena is relevant but brings certain methodological limitations. The institutional and community mechanisms observed in the capital are not necessarily representative of those deployed in other regions of the country. There is a significant gap between the responses implemented in N'Djamena and those applied in the rest of the country, reflecting structural inequalities in governance, access to public services, and crisis-response capacities. These inequalities are closely linked to the spatial and infrastructural disparities found in the country. The low population density, ranging from 0.1 inhabitants/km² in the desert north to more than 50 inhabitants/km² in the south, leads to an uneven distribution of resources and institutional capacities (INSEED). Furthermore, the lack of basic infrastructure (road networks, drinking water supply, electricity, and facilities for sanitation and education) in remote areas increases the vulnerability of populations and limits the effectiveness of government and humanitarian interventions. These gaps in infrastructure coverage also hamper the coordination and speed of crisis response. As a result, governance mechanisms, which are often concentrated in N'Djamena, do not always reach the provinces effectively, thereby widening the gap between the better equipped and organised capital and the peripheral territories.

Nonetheless, the choice to focus on N'Djamena remains justified insofar as the capital city is the country's decision-making centre, where the major strategic guidelines for flood prevention and management are developed and promoted, and from which they are disseminated. It therefore represents a relevant starting point for studying institutional dynamics, political trade-offs, and interactions between national and international actors in the implementation of risk management policies. Finally, one of the limitations of this study is the limited number of interviews conducted⁵. This choice can be explained, firstly, by the time allocated to the study, and, secondly, by the expertise of BUCOFORE members on the subject: their knowledge, as well as previous work already carried out by them, was mobilised in the context of this research.

THE INSTITUTIONAL AND COMMUNITY MECHANISMS OBSERVED IN THE CAPITAL ARE NOT NECESSARILY REPRESENTATIVE OF THOSE DEPLOYED IN OTHER REGIONS OF THE COUNTRY

⁵ However, the number of 15 interviews was validated by the sponsor in the start-up report.

THE FLOODS OF 2022: AN EXCEPTIONAL AND UNANTICIPATED CRISIS

'Between August and December 2022, exceptional flooding—first from rainfall, then from the rivers—hit the capital, destroying several protective dykes and forcing many residents to seek refuge with host families or, failing that, in disaster relief centres. Despite the warning issued by the meteorological services to the relevant authorities, the state and its partners were very slow to respond. The central municipal council did attempt to drain the rainwater while preventing the river from rising by closing floodgates, but overall very few preventive measures were taken.' (Petitdemange & Hubert, 2025)

It was only after the dyke protecting the southern districts of the city broke on the night of 18 October 2022 that the Head of State declared a state of emergency. On the 23rd, at his request, the Chadian military engineering corps was deployed to rescue victims in the 9th arrondissement and set up reception sites, with the support of the French military force Barkhane. The state then coordinated the humanitarian response, under the leadership of the ministère du Genre et de la Solidarité nationale (Ministry of Gender and National Solidarity) (Petitdemange & Hubert, 2025). By the end of December 2022, when the waters had receded, only 41% of the funds required for the Plan conjoint de réponse aux inondations (Joint Flood Response Plan) had been received or committed, out of an initial request for US\$69.8 million (OCHA, 2022).

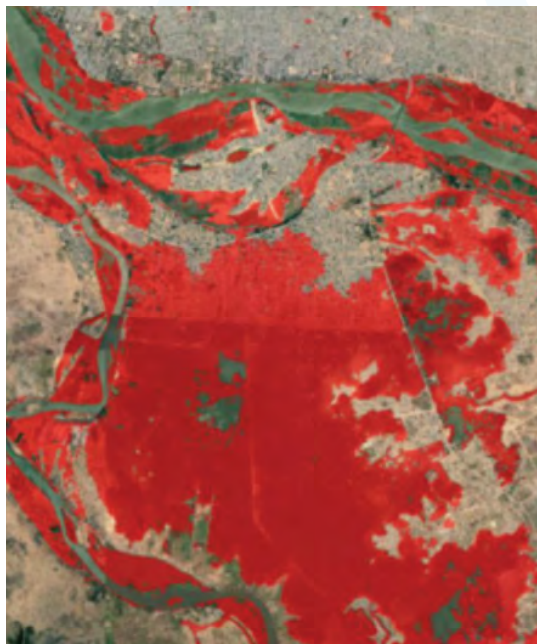
**“ DESPITE THE
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RESPOND ”**

.....

AREAS OF N'DJAMENA AFFECTED BY THE FLOODS OF 2022 (IN RED)



18 SEPTEMBER 2021



30 OCTOBER 2022

Source: Google Earth Satellite and United Nations Satellite Centre (UNOSAT).

FROM DISASTER MANAGEMENT TO RISK MANAGEMENT: A SLOW PARADIGM SHIFT

BEFORE 2022, CIVIL PROTECTION WAS GIVEN VERY LITTLE CONSIDERATION IN NATIONAL PRIORITIES. ALTHOUGH INTERNATIONAL PARTNERS SHOWED SOME INTEREST IN THESE MATTERS, THIS ATTITUDE WAS NOT REALLY SHARED BY LOCAL AUTHORITIES, WHO WERE MORE FOCUSED ON ECONOMIC DEVELOPMENT AND POLITICAL STABILISATION.

For a long time flooding had simply been tolerated, and it was only after the events of 2022 that the impacts of flooding began to be perceived as a public problem. Since then, there has been a slow transition from a model of disaster management, focused on managing emergencies and facilitating recovery after a disaster has occurred, to a model of preventive risk management, which aims to reduce impacts before they occur (UNISDR, 2009). As one municipal official observed:

« In 2022, the only problem was that we weren't prepared. We never imagined we would reach such a situation. But people learned a lot. In 2024, honestly, it was better. »

This collective learning process illustrates what sociologists refer to as the social construction of disasters⁶ (Walter, 2008; Giry, 2023). For a disaster to elicit a political response, it must be constituted as a public issue through controversies and discussions that allow it to be objectified and included on the agenda of political decision-makers. In the case of Chad, the floods of 2022 marked a turning point. Whereas the risk of flooding had previously been tolerated or ignored, it then became the focus of various associative, scientific, and development-focused initiatives, which helped to make it a national security issue on the political level. While there has been a gradual shift from disaster management to a policy of preventive risk management, reflected in particular in improved institutional structures, major limitations remain. These relate more specifically to information sharing, coordination, and the financial response.

TOWARDS A MORE STRUCTURED RESPONSE FRAMEWORK

Risk management in Chad has historically been characterised by a lack of consideration for climate-related disasters, which have been relegated to the background in favour of priorities such as securing political power and fighting for access to essential economic resources. Furthermore, in a context of weak state institutions, the implementation of public policies is often limited, and highly susceptible to international influences. As a result, the basic elements of Chad's regulatory framework for risk management stem less from home-grown principles than from the importation of international standards and references, without any real integration into national administrative practices.

Following the devastating 2004 Indian Ocean tsunami, 168 states, including Chad, gathered in Kobe, Japan, un-



der the auspices of the UN, to adopt the Hyogo Framework for Action (2005–2015) aimed at reducing disaster risk. In response, Chad developed a Plan d'action national pour le renforcement des capacités en réduction des risques de catastrophes (National Action Plan for Capacity Building for Disaster Risk Reduction) (2015–2025), as well as a Plan d'organisation des secours (Relief Organisation Plan, ORSEC) in 2014. However, these documents have never been fully implemented. Similarly, following the recommendations of the Sendai Framework for Disaster Risk Reduction (2015–2030), the Chadian government adopted a Stratégie nationale et un Plan d'action pour la gestion des risques de catastrophes (National Strategy and Action Plan for Disaster Risk Management) in 2020, the technical and operational implementation of which was to be carried out by the Direction de la protection civile (Civil Protection Directorate, DPC). This directorate, created by Decree No. 384/PR/PM/MAT/2002 of 17 September 2002, was initially placed under the authority of the ministère de l'Intérieur (Ministry of the Interior), and then under that of the ministère de l'Administration territoriale (Ministry of Territorial Administration), but remained largely ineffective owing to a lack of resources and institutional recognition, thus compromising the implementation of the Stratégie nationale de gestion des risques de catastrophes (National Strategy for Disaster Risk Management). To carry out its missions, it relied on two key structures: the Commission nationale d'assistance aux sinistrés des inondations (National Commission

⁶ "Risk is considered after a phase of social objectification and evaluation [...]. In this way, it comes to be not only envisaged, but also regarded as probable and calculable, depending on how certain antagonistic social groups position themselves in the face of its possible occurrence. Risk then results from a relationship between social or economic practices on the one hand, and representations on the other" (Seca, 2012). All translations from French into English are our own.

for Assistance to Flood Victims, CONASI), which no longer exists, and the Comité national d'accueil et de réinsertion des réfugiés et rapatriés (National Committee for the Reception and Reintegration of Refugees and Returnees, CNARR), which has been attached to the ministère de l'Action sociale et des Affaires humanitaires (Ministry of Social Action and Humanitarian Affairs) since 2024. However, the governance of disaster risk reduction suffered from a lack of coordination: no institutional structure truly took responsibility for this policy. The DPC, which was supposed to play this role, was not very visible, lacked resources, and was ignored by other actors. As Mbaisssem Koulayo (2014) put it, 'in short, it is regrettable that there is no clarity in the Chadian government's policy on disaster management'. Until 2022, civil protection remained far down the list of public priorities. Plans such as ORSEC and the National Strategy for Disaster Risk Management were little known to local actors, and their implementation remained underfunded. As one civil protection actor put it:

'Before 2022, civil protection was not taken seriously. Partners came to see us, but without any real commitment behind it. No one in Chad knew about ORSEC. It was just a document filed away in a drawer to meet international requirements.'

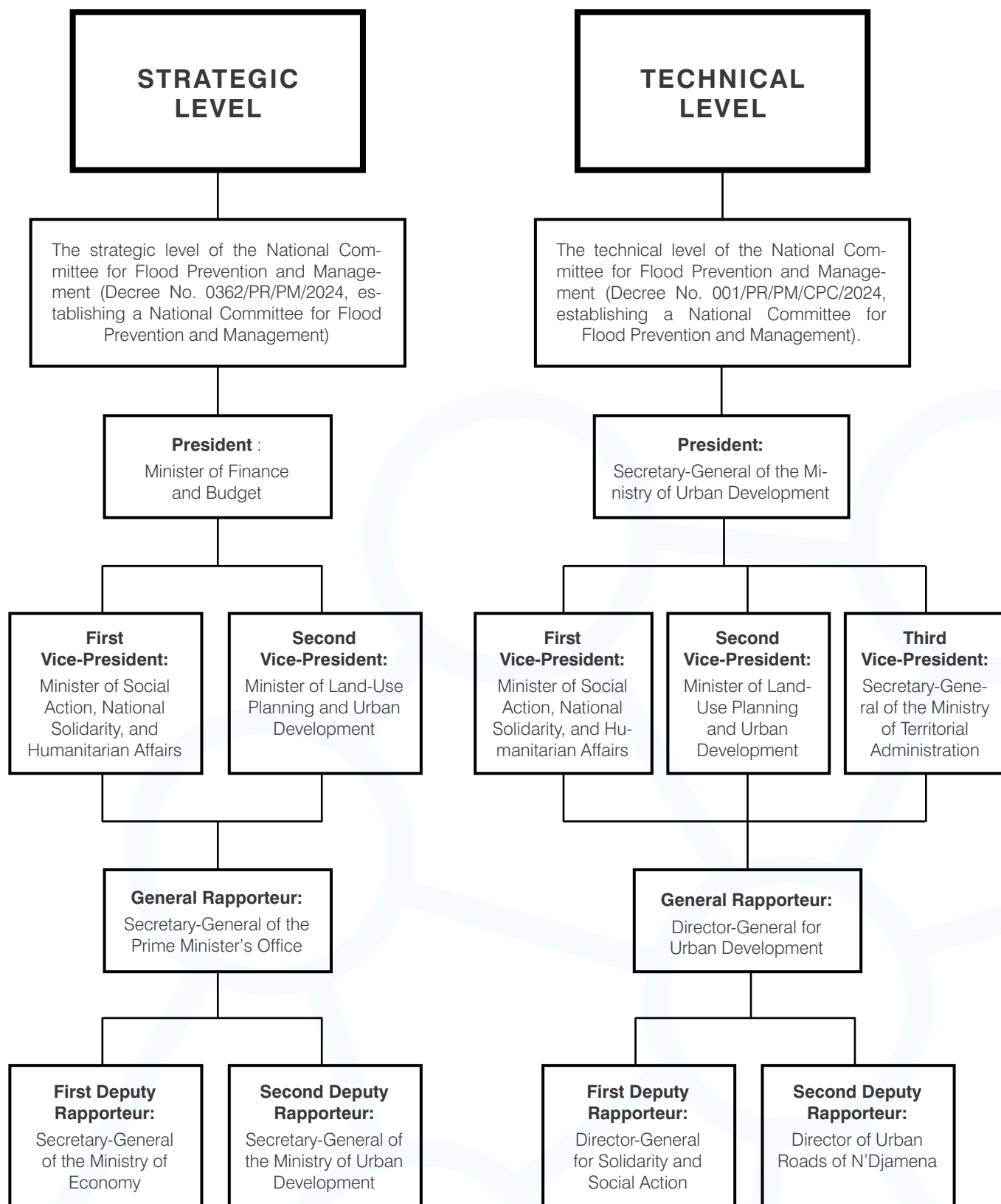
The floods of 2022 appear to have been a turning point, setting in motion a more anticipatory approach to risk on the part of government authorities. Since 2024, the creation of the National Flood Prevention and Management Committee, chaired by the ministre des Finances (Finance Minister), has marked a significant change. This committee benefits from significant support from the Integrated Flood Management and Urban Resilience in N'Djamena Project (PILIER), which is funded by the World Bank. This interministerial and multi-actor structure, which also involves the participation of technical and financial partners (TFPs), is subdivided into technical subcommittees (communication, humanitarian affairs, logistics, etc.). Although it existed under other names during previous crises, the particular strength of the 2024 committee lies in the regularity of its monitoring and its commitment to operational coordination. The fact that the first meeting was held in May 2025—whereas traditionally these meetings were only held at the beginning of the rainy season—and the consideration of recommendations based on the experience of 2024, demonstrate a real effort at institutional learning. Regular meetings and reports are now produced, giving the government a clear vision of the actions to be taken (see appendix). Several workshops for reflection and consolidating knowledge have also been organised under the auspices of the committee.

In July 2025, the Plan nationale de contingence inondations (National Flood Contingency Plan) and the Stratégie de réponse à la crise des inondations (Flood Crisis Response Strategy) were both approved, which refined and extended the Plan national de contingence multirisque (National Multi-Risk Contingency Plan) developed in 2017 and revised in 2022. This updated document formalises a clearer division of responsibilities between state institutions and humanitarian partners. For example, in the context of flood site management, the central municipality of N'Djamena is working in collaboration with the ministère de l'Aménagement du Territoire, de l'Habitat et de l'Urbanisme (Ministry of Land-Use Planning, Housing and Urban Development, (MATHU) to identify and develop reception sites, with technical support from civil engineering. Inter-agency coordination is provided by the Humanitarian Country Team (HCT) for Chad, which brings together all humanitarian actors under the coordination of OCHA (UN Office for the Coordination of Humanitarian Affairs) and the supervision of the Comité national de prévention et de gestion des inondations (National Committee for Flood Prevention and Management). Unlike in previous years, the 2025 plan emphasises the need for regular, consolidated, real-time monitoring. It therefore explicitly calls on 'the HCT, humanitarian partners, sectoral clusters, and all other stakeholders to systematically transmit to the Direction générale de la protection civile ([Directorate-General for Civil Protection,] (DGPC) all relevant data relating to changes in the situation on the ground, identified needs, and response actions undertaken, as well as any other information useful for crisis management' (Plan nationale de contingence inondations National Flood Contingency Plan, 2025). This provision reflects the gradual rise in power of the DGPC (upgraded from a directorate to a directorate-general in 2023), which now plays a central role in the institutional architecture of risk governance, no longer just as a technical actor, but as the hub of the national coordination system. At the same time, efforts have been made to clarify coordination between the decentralised and central levels, in particular through the establishment of provincial committees for flood prevention and management, chaired by the governors of each province. In addition to centralising field data, these committees aim to coordinate all sectoral humanitarian actions, establish a provincial flood contingency plan, and assist victims. In the medium term, the objective is to establish protection focal points at the level of each Comité Provinciaux d'action (Provincial Action Committee), thereby enabling better management and smoother transmission of information between provinces and the DGPC.

This evolution in the institutional landscape therefore reflects a genuine effort to structure, coordinate, and capitalise on the experience gained following the floods of 2022 and 2024. Global awareness of the link between climate risk and disaster reduction has also played a role, as this has facilitated access to international funding. The floods of 2022 therefore represent a 'policy window' (Kingdon, 1984), influenced by international policy norms, local political issues (the end of the political transition period, marked by the advent of presidential, legislative, and municipal elections), and the mobilisation of various 'issue entrepreneurs' (see below). In three years, we have seen a shift from a piecemeal, reactive response to a structured, learning-based approach.

**“ BEFORE 2022,
CIVIL PROTECTION
WAS NOT TAKEN
SERIOUSLY ”**

FIGURE 2: COORDINATION MODEL FOR FLOOD MANAGEMENT ESTABLISHED BY DE-CREEE NO. 0362/PR/PM/2024 OF 5 AUGUST 2024, ESTABLISHING A COMITÉ NATIONAL DE PRÉVENTION ET DE GESTION DES INONDATIONS (NATIONAL COMMITTEE FOR FLOOD PREVENTION AND MANAGEMENT)



Source: Plan national de contingence des inondations, 2025.

THE ROLE OF INSTITUTIONAL ACTORS: BETWEEN PATH DEPENDENCE AND A WILL TO REFORM

Despite this political will, the effectiveness of coordination mechanisms remains fragile. Chad's administrative culture, marked by strong segmental and competitive dynamics, combined with the relative novelty of public risk and disaster management, are significant obstacles. An examination of the strengths and weaknesses of the structures responsible for implementation reveals a complex interplay between reformist dynamics and institutional limitations.

The Agence nationale de la météorologie (National Meteorological Agency, ANAM) plays a key role in seasonal forecasting and the transmission of hydrometeorological alerts. It produces regular bulletins that are sent to the DGPC and technical services, in partnership with the Direction des ressources en eau (Directorate of Water Resources, DRE) and the University of N'Djamena. The main meteorological and climatological products and services developed and disseminated by ANAM, as listed in the National Adaptation Plan (2022), are:

- ten-day agro-meteorological bulletins and seasonal forecasts (cumulative rainfall for July, August, and September) for monitoring agro-pastoral seasons;
- agrometeorological assistance to producers, including ten-day forecasts and advice, as well as calendars for sowing dates;
- weather monitoring for the general public, via daily weather reports and climatological studies.

However, despite this regular production, the quality of the data remains limited: data collection is often intermittent or incomplete, and some stations are obsolete, generating discontinuous series of data, which may be unreliable (Plan national d'adaptation 2022). Furthermore, even when data are available, they are rarely taken into account in policy-making. According to an actor from the Ministry of Humanitarian Affairs: 'ANAM transmits the data, but their dissemination remains fragmented, and the political impact is limited'. For example, although weather forecasts for the 2024 rainy season were available as early as April, they were not publicly communicated through the press until 30 May. This delay nevertheless represents a significant improvement over 2022, when the official alert was not issued until August, even though the forecast data had been available since May (Petitdemange & Hubert, 2025). Another notable improvement observed during the 2025 flood season was that ANAM's daily weather reports started to be shared on WhatsApp groups run by community organisations, making them more widely available and likely to reach more people at risk.

FIGURE 3: EXAMPLE OF A WEATHER REPORT RELAYED ON THE WHATSAPP GROUP OF A COMMUNITY ORGANISATION IN THE 9TH ARRONDISSEMENT WITH 565 MEMBERS



The Direction des ressources en eau (Directorate of Water Resources, DRE) is responsible for hydrometric monitoring of the Chari and Logone rivers. The DRE is supported by the Institut de recherche pour le développement (French National Research Institute for Sustainable Development, IRD) and the University of N'Djamena, in particular the Hydro-Geosciences and Reservoirs research group. It has set up a forecasting centre with responsibility for coordinating the collection of data from the country's rainfall stations, in partnership with ANAM, and for providing hydrological modelling for forecasting purposes. In collaboration with the University of N'Djamena, the DRE produces regular hydrological bulletins, which are sent to the members of the Technical Committee for Flood Prevention and Management. However, these data and alerts are not systematically taken into account in decision-making, which limits their operational impact. In 2023, a scientist from the Hydro-Geosciences research group described the situation in the following terms:

'For this year, ANAM produced a forecast bulletin, and the DRE distributed the AGRHYMET bulletin. We thought that between the DRE and us, the university, we would hold a small conference to tell them what was going to happen and see how we could relay this to the press. Bulletins have been issued, but we don't know how they're being relayed.'

Furthermore, as with ANAM, several measuring stations remain non-functional, making it difficult to monitor flood developments accurately and in real time. In the medium term, the data collected will be fed into a national disaster management centre, still in the planning stage, which may be managed either by the central municipal council or by the Directorate-General for Civil Protection (a decision has not yet been made).

THE DGPC'S STRATEGIC PLAN, DEVELOPED WITH FUNDING FROM THE WORLD METEOROLOGICAL ORGANIZATION, INCLUDES THE CREATION OF A CRISIS MANAGEMENT CENTRE, A NATIONAL DATA COLLECTION MECHANISM, AND A NATIONAL FIRE BRIGADE CORPS

The Direction générale de la protection civile (Directorate-General for Civil Protection, DGPC), created in 2023 (it previously existed with the lower status of 'directorate'), is attached to the Ministry of Territorial Administration. With a broad mandate⁸, it is struggling to establish itself in the institutional landscape. Its short history, combined with the lack of training for its staff, limits its capacity for action. As one official commented: 'we disseminate ANAM data, but we don't even understand what they mean'. The DGPC's strategic plan, developed with funding from the World Meteorological Organization, includes the creation of a crisis management centre, a national data collection mechanism, and a national fire brigade corps. However, its cross-sectoral mandate makes implementation complex, as it requires coordination between all ministerial actors, which is no easy task given that Chad's administrative culture is characterised by fragmentation. The director of the DGPC notes that:

'Leadership in civil protection is defined by law and should be provided by the DGPC. But everyone acts on their own, which makes coordination difficult. We have alerted the highest authorities to this issue.'

However, as mentioned above, the inclusion of the DGPC in the strategic response documents for the 2025 floods is a step forward. At the decentralised level, the DGPC relies on provincial action committees and departmental action committees, which are responsible for collecting data and then transmitting them to the provincial flood prevention and management committees. As the members of these committees have little training, the long-term plan is to appoint focal points within these structures, dedicated specifically to civil protection.

The fire brigade illustrates the institutional tensions that exist within civil protection governance. It was historically attached to the municipal authority, but now sits between the municipality (via the municipal police department) and the DGPC, which reports to the Ministry of Territorial Administration. As the commander of the capital's fire brigade points out:

'You know that, at the town hall, we're under the supervision of the municipal police and civil protection department. Because there were two departments. There was a civil protection department at the level of the Ministry of Territorial Administration, and another, which reports to the city of N'Djamena and is housed at the town hall. We report to the town hall. Now the civil protection directorate at the ministry is trying to take us back under its wing.'

The fire brigade was mobilised during previous floods to rescue people and property, and to supply drinking water to disaster areas. However, its capacity for action remains severely constrained by several factors

- informal recruitment, without standardised criteria or national examinations, which raises problems in terms of qualifications;
- insufficient and irregular training, with officers often trained on the job, without any structured programme or system for updating skills;
- the lack of a single operational call centre for handling emergencies, which lengthens response times and complicates coordination;
- a notoriously insufficient workforce: barely 180 firefighters for the entire capital, whereas needs far exceed this capacity;
- an almost non-existent presence in other provinces and regional capitals, thus concentrating all resources in the city of N'Djamena alone;
- the absence of a separate operating budget, as the fire brigade is part of the overall budget of the N'Djamena municipality, which provides them with approximately four million CFA francs per month (excluding fuel).

⁸ The DGPC's mission is to 'ensure the protection of people, property, and the environment against the risks of accidents, disasters, and catastrophes of all kinds in times of peace, crisis, or war'. See Decree No. 0508 of 31 March 2023.

IN LIGHT OF THESE FINDINGS, THE DGPC HAS BEGUN WORK ON A DRAFT DECREE ON THE CREATION OF A NATIONAL PROFESSIONAL CORPS, REFLECTING THE GROWING RECOGNITION OF THE STRATEGIC ROLE OF THE FIRE BRIGADE AND CIVIL PROTECTION

A few ad hoc training sessions are provided, notably by the Chadian Red Cross, but in the absence of a national programme of continuing training these efforts remain fragmented. In light of these findings, the DGPC has begun work on a draft decree on the creation of a national professional corps, reflecting the growing recognition of the strategic role of the fire brigade and civil protection.

N'Djamena municipal authority: the election of a new municipal executive in 2025 marked a turning point in local risk governance. This political change quickly resulted, in March 2025, in the adoption of a special flood action plan, structured around a strategic roadmap and supported by an ambitious provisional budget of 8 billion CFA francs. The approach adopted by the new municipal authorities is comprehensive, combining emergency actions, structural prevention measures, and greater involvement from local communities. As the director of sanitation explains:

'The new executive has drawn up a roadmap [...]. The issue of flood prevention has become a priority, given the damage caused in 2022 and 2024 [...]. This has already begun, notably with the cleaning of drainage channels, which is the first link in the prevention chain.'

With the support of the PILIER project, the municipal authority has strengthened its technical and operational capacities, in particular through the acquisition of heavy equipment, the organisation of systematic drainage cleaning campaigns before the start of the rainy season, and the development of strategic documents (Plan urbain de référence, Plan directeur d'urbanisme, Schéma directeur d'aménagement et d'urbanisme—the Urban Reference Plan, the Urban Master Plan, and the Development and Urban Planning Master Plan). This proactive strategy contrasts sharply with the often improvised emergency responses of 2022, which were the result of a lack of resources and anticipatory action. The municipal authority found itself 'with its back against the wall', forced to deal with the sudden collapse of the main earthen dyke protecting the 9th arrondissement. At the time, sandbags and other materials, which were in short supply, were distributed in an uncoordinated manner. A municipal official recalls:

'It's true that, given the scale of the demand, what the municipality did wasn't much. There were so many requests. Everyone was calling to ask for this or that. The municipality tried to prioritise. People were lining up to ask for materials, but at a certain point, we had to stop because we couldn't meet their expectations anymore. We're can't say people are wrong when they say it wasn't enough.'

In response to this experience, in areas identified as being at risk through prior mapping, the pre-positioning of stocks of equipment (wheelbarrows, shovels, bags, filling materials) managed by the technical services of the N'Djamena municipal authority now represents a major step forward in terms of anticipatory management.

District councils (for city arrondissements) and municipal technical services also play a key role. The former are responsible for distributing pre-positioned stocks, but also for working with associations in their arrondissement on prevention and awareness-raising activities. As part of the risk management strategy, they are responsible for distributing equipment to associations and receiving their requests. NGOs generally go through district councils to identify the associations that they can support. Technical services manage the city's various sanitation and drainage systems. Each year, they must close the cofferdams at the 27 sluice gates located along the river. They are also responsible for implementing the solid waste management plan, which does not currently exist.

THE STRUCTURING BUT LIMITED ROLE OF TECHNICAL AND FINANCIAL PARTNERS

In a context marked by limited knowledge of risk management, technical and financial partners (TFPs) play a central role in the emergence and structuring of these public policies. Their intervention is not limited to logistical or financial support: they also act as vectors of international standards (Finnemore & Sikkink, 1998), transferring not only tools, but also analytical frameworks, procedures, and ways of acting.

The technical support provided by OCHA to the National Flood Prevention and Management Committee is a prime example of this process. This partnership has helped to harmonise practices by promoting the development of reference documents, such as contingency plans, the sharing of a common technical language, and the creation—albeit still fragile—of multi-sectoral coordination procedures, such as the multi-actor capitalisation workshop held in 2024. This transfer of skills is not limited to the documents produced, but also includes the transformation of the professional practices of local actors. The medium-term objective is for national structures such as the DGPC to be able to independently produce their own maps of affected areas, or for the Ministry of Social Action to develop its own protocols for targeting and distributing humanitarian aid. An actor attached to the PILIER project, which is funded by the World Bank, summarises the training approach adopted for ministerial urban planning actors as follows:

'We identify key people in the institutions. They are supported by a trainer throughout the year, with practical workshops. It's really about hands-on learning. The aim is for these managers to then be able to independently update reference documents on land use, urban planning, and other areas.'

THE MEDIUM-TERM OBJECTIVE IS FOR NATIONAL STRUCTURES SUCH AS THE DGPC TO BE ABLE TO INDEPENDENTLY PRODUCE THEIR OWN MAPS OF AFFECTED AREAS

THE 2024 PLAN NATIONAL D'INTERVENTION (NATIONAL RESPONSE PLAN), WITH COSTS ESTIMATED AT US\$129 MILLION, HAD ONLY BEEN FUNDED TO THE TUNE OF US\$20.4 MILLION BY 1 OCTOBER OF THAT YEAR, REPRESENTING A SHORTFALL OF 84%

In this same vein, activities such as the DGPC's visit to Madagascar also have a horizontal learning effect, forming part of a 'policy learning' process whereby national actors draw lessons from other countries' experiences in order to improve their own policies (Rose, 1993).

However, the transfer of expertise alone is not enough if it is not accompanied by an increase in the value placed on scientific knowledge in public decision-making (see Chapter 2) and a clear political and budgetary commitment from the state. Yet humanitarian funding remains well below actual needs, and actions carried out using the state's own funds remain limited. The 2024 Plan national d'intervention (National Response Plan), with costs estimated at US\$129 million, had only been funded to the tune of US\$20.4 million by 1 October of that year, representing a shortfall of 84% (OCHA, 2024a).

The CERF (UN Central Emergency Response Fund) provided a total of US\$13 million in support, broken down as follows:

- US\$8 million allocated in September 2024 to support the provinces of Lac, Mayo-Kebbi East, and Mandoul as part of the emergency response (CERF, 2024);
- US\$5 million released under the Cadre d'action anticipée (Anticipatory Action Framework), activated on 28 September 2024, based on forecasts exceeding pre-established trigger thresholds.

This anticipatory action mechanism has made it possible to target more than 200,000 people at risk through cash transfers, the distribution of hygiene and reproductive health kits, and the provision of agricultural equipment (OCHA, 2024b). In N'Djamena, more than 86,000 people received assistance ahead of the floods, although the lack of a national social registry hampered its implementation (OCHA, 2024c). At the national level, emergency measures supported by public funds were adopted on presidential instructions, including:

- the free distribution of 16,713 tonnes of rice by the Office national de sécurité alimentaire (National Food Security Office, ONASA);
- financial support to the municipal authority of N'Djamena (83 million CFA francs) and the ten arrondissements (nearly 150 million CFA francs);
- aid to the provinces (Tibesti: 103 million CFA francs; Mbaibokoum and Guéra: 30 million CFA francs each) (Comité national de gestion et de prévention des inondations, 2025).

These efforts, while commendable, remain insufficient given the size and isolation of the country and the deterioration of its infrastructure. Physical access to aid is a major constraint. The collapse of bridges and the deterioration of roads have restricted humanitarian access to certain areas, such as in the province of Ouaddaï, where food distribution was suspended throughout September 2024 in the camps of Dougui, Alacha, and Arkoum, which are only accessible by pirogues (small boats) (Wilson Center, 2024). The reduction in the overall humanitarian budget only exacerbates this vulnerability. In 2025, following measures taken by the US government, the United Nations humanitarian budget for Chad was reduced from US\$1.4 billion to US\$836 million, a 43% decrease, which has had the effect of limiting assistance to 2.8 million people, compared to the 7 million initially planned (Radio France Internationale, 2025). Finally, the Fonds de solidarité nationale (National Solidarity Fund), managed by the Ministry of Social Action, still relies heavily on contributions from international donors. The 2025 Contingency Plan, estimated at US\$80 million, far exceeds the state's current budgetary capacity. This imbalance reveals the fragility of risk financing mechanisms and highlights the urgent need to develop sustainable internal and regional sources of funding to ensure long-term resilience.

The case of Chad illustrates a gradual but still incomplete transformation in flood management. Historically marked by an improvised approach focused on emergency response, governance is now shifting towards a more anticipatory, structural, and risk-reduction-orientated approach. Catalysed by the disaster of 2022, flooding has become a priority on the national political agenda, no longer just as a humanitarian emergency but also as a cross-cutting security issue. This change has been reflected in several institutional and strategic advances: the creation of new structures (national and provincial committees for flood control, the institutionalisation of the DPC as a directorate-general, and the future development of a national fire brigade corps); enhanced coordination between public actors, (notably through the national committee's consultation mechanisms, growing recognition of the role of the DGPC, and the future establishment of focal points at the decentralised level); and the development of various short- and medium-term plans and legislative frameworks, with the support of TFPs (annual review of the flood contingency plan, development of a national flood protection strategy, preliminary drafting of a national civil protection law, updating of the ORSEC Plan).

However, numerous constraints still hinder the effective implementation of risk governance in Chad. The majority of agencies involved in early warning continue to face structural shortcomings, including heavy dependence on external funding, lack of equipment, limited human resources, and uneven technical capacities. In other words, the development of a risk management culture in Chad remains fragile. These factors, which we have already identified as major obstacles, now call for a more complex examination of the underlying dynamics, which we will develop in the following sections.

THIS IMBALANCE REVEALS THE FRAGILITY OF RISK FINANCING MECHANISMS AND HIGHLIGHTS THE URGENT NEED TO DEVELOP SUSTAINABLE INTERNAL AND REGIONAL SOURCES OF FUNDING TO ENSURE LONG-TERM RESILIENCE

FLOOD RISK MANAGEMENT: A POLITICAL AND TECHNICAL CHALLENGE

FAR FROM BEING MERE TECHNICAL RESPONSES TO CLIMATE DISASTERS, FLOOD RISK MANAGEMENT POLICIES IN CHAD ARE EMBEDDED IN COMPLEX POWER STRUCTURES, WHERE POLITICAL INTERESTS, INSTITUTIONAL RIVALRIES, AND ISSUES OF LEGITIMACY INTERSECT. UNDER THE GUISE OF TECHNOCRATIC NEUTRALITY, THE MEASURES IMPLEMENTED ARE SHAPED BY STRATEGIES OF POLITICAL REAPPROPRIATION, WHILE REFLECTING THE WEAKNESSES OF CHADIAN GOVERNANCE, PARTICULARLY IN TERMS OF TECHNICAL AND ORGANISATIONAL SKILLS.

INSTITUTIONAL CHALLENGES IN COORDINATING AND SHARING RISK INFORMATION

Despite the growing involvement of local and international actors in flood risk management in N'Djamena, operational capacities remain limited by poor coordination and limited human and technical resources. This configuration reflects what Pelling and Wisner (2009) refer to as 'fragmented risk governance': the proliferation of mechanisms is not enough when local structures lack autonomy and stable resources. There are numerous overlaps in responsibilities, the mandates of the various institutions remain ambiguous, and although attempts are being made to improve coordination, this process remains incomplete. As a development worker seconded to the DGPC put it: *'the first step is to ensure that everyone adheres to national coordination'*. This transformation requires time, supervision, and close political and technical support.



Furthermore, difficulties in operationalising the coordination system are hampering the effectiveness of the data collection and sharing system. During the floods of 2024, a system for reporting information from the provinces via their governors was put in place, but final validation remained the responsibility of ministers at the central level, leading to significant delays in the humanitarian response. The Director of Humanitarian Affairs stated: *'this year, we want to digitise the system and mandate only a few structures to process and validate data, without having to systematically wait for approval from ministers'*. This delay impacts both emergency and prevention actions, particularly the dissemination of early warnings. The data-sharing platform shared between ANAM and DGPC also fails to ensure effective dissemination to the general public, although some progress has been noted for 2025 (see above). Official communication remains centralised at the ministère des Transports (Ministry of Transport), which, as of 2025, still results in a two-month delay between the identification of risks and the public announcement of alerts (see above). As a ministerial actor explained: *'the information is only available in the office, and even if we have it, we don't use it, we let it pass'*. No national structure currently centralises data on risks (floods, droughts, vulnerabilities, exposures, etc.) or transforms it into integrated decision-making aids. Apart from the Système d'information sur la sécurité alimentaire et d'alerte précoce (Food Security and Early Warning Information System, SISAAP), no multisectoral warning system is operational. Sectoral assessments are generally quantitative, with little geographical detail, and rarely integrated into geographic information system (GIS) tools. The lack of technical skills for analysing this data are a hindrance, as noted by a researcher at the Hydro-Geosciences research group:

'We produce models that we send to the Comité technique national [National Technical Committee]. After that, we don't know what happens to them. The information stays among technicians. It doesn't reach decision-makers. The risk maps we have developed with our partners are not integrated. It's still new, and few managers know how to read them. We need to hold more meetings.'

This testimony highlights the lack of political value placed on scientific data and the limited skills available to process and interpret technical information. As a result, tools for assisting decision-making remain underused in decision-making processes. Despite the institutional shortcomings, local communities are developing their own resilience mechanisms, often based on endogenous knowledge. In Mani and N'Djamena-Fara, for example, residents have set up community early warning systems based on observation of natural phenomena and collective memory of floods. These mechanisms, although informal, enable anticipation at the local level (Ground Truth Solutions, 2024).

Ultimately, the coordination of flood risk prevention suffers from both technical and political weaknesses. The lack of information flow, the absence of a centralised, multi-sectoral warning system, and the neglect of meteorological data contribute to a situation where risk governance still leaves much room for improvement.

THE LIMITATIONS OF TARGETING AND CENTRALISATION EFFORTS VIA THE UNIFIED SOCIAL REGISTER

In order to improve the targeting of beneficiaries and thereby strengthen coordination between aid actors, the Chadian government wishes to revitalise the Registre social unifié (Unified Social Register, RSU), created in 2019 and currently managed by the Institut national de la statistique et des études économiques et démographiques (National Institute of Statistics and Economic and Demographic Studies, INSEED), with the support of the European Union and the World Bank. Designed as a comprehensive database on poor and vulnerable people to enable the rapid implementation of social safety net programmes, the RSU is not yet used as a shared targeting basis for all aid actors. The RSU currently has records of 500,000 households, but the government wishes to extend it to all provinces and turn it into a reliable digital database shared by stakeholders, as recommended by the 2024 post-flood capitalisation report. The extension of the RSU to the national level and its dissemination to partners should help to harmonise interventions, improve transparency, and strengthen public management capacities, as highlighted by an official from the Ministry of Humanitarian Affairs: *'no NGO will be able to work in isolation anymore. This avoids duplication and strengthens our management'*.

DESIGNED AS A COMPREHENSIVE DATABASE ON POOR AND VULNERABLE PEOPLE TO ENABLE THE RAPID IMPLEMENTATION OF SOCIAL SAFETY NET PROGRAMMES, THE RSU IS NOT YET USED AS A SHARED TARGETING BASIS FOR ALL AID ACTORS

THE POLITICAL DYNAMICS SURROUNDING FLOOD CONTROL PROJECTS

Although rooted in technical and operational objectives, risk and disaster management projects can also serve to legitimise institutions and boost political visibility, particularly when they involve a significant infrastructural component. These projects therefore belong to a governance dynamic in which technical issues and political considerations are intertwined.

Launched in 2022, the *Projet intégré pour la lutte contre les inondations et la résilience urbaine à N'Djamena* (Integrated Flood Management and Urban Resilience in N'Djamena Project, PILIER) is a flagship example of partnership in the field of urban climate governance in Chad. Funded by the World Bank to the tune of US\$150 million over a six-year period (2023–2029), PILIER aims to equip N'Djamena with enhanced capacity to adapt to flood risks and the growing effects of climate change. It is being rolled out along four structural axes, combining immediate responses and long-term investments:

- flood protection and drainage infrastructure;
- planning and response services for flood resilience;
- project management and monitoring;
- emergency response for contingencies.

The decision to host the project at the ministère de l'Aménagement du territoire, de l'Urbanisme et de l'Habitat (Ministry of Land-Use Planning, Housing and Urban Development, MATHU) has enabled strategic centralisation, facilitating access to resources and ministerial coordination. Although the project is supposed to mobilise all stakeholders, its management is described by our interviewees as highly verticalised and technocratic. The exclusion of certain local authorities from the planning and implementation processes illustrates the limitations of a compartmentalised approach, as observed by an actor belonging to the Ministry of Territorial Administration:

'For me, the problem with PILIER is that the administrative authorities are not involved. It's just a few senior officials. But this isn't the responsibility of a single ministry! It's multi-sectoral, but only on paper. There's a problem of understanding and ownership. Local authorities need to demand information and be kept in the loop. The municipal authority finds out about the cleaning of drainage channels at the same time as local residents. That's not acceptable!'

While information sharing seems, according to our fieldwork, to be in need of improvement—as shown by the example of the cleaning of drainage channels, which the technical teams at the municipal authority only found out about after the event—the centralised power granted to MATHU is also problematic because it undermines the participatory and bottom-up dynamics of other actions. As a humanitarian actor involved in another flood prevention project explains:

'The World Bank decides to finance the government. The government creates PILIER. And PILIER is an arm of the government. When PILIER goes to see the mayor, it doesn't have the same standing as us. We go empty-handed. PILIER goes with proposals: 'Madam Mayor, we're going to build this and that. We're going to bring in such-and-such a person to work for you. You're going to support such and such a thing', and she (the mayor) has to go along with it!'

Other actors, without the same resources, legitimacy, or power, may find that their proposals do not receive the same level of attention. It can be assumed that the project led by this actor, which focused on training and awareness-raising, did not correspond to the short-term interests of the former mayor of N'Djamena. Indeed, the most visible outcomes of protection and development efforts, such as the construction of dykes, allow leaders to take short-term political credit, and thus allow the central government and the municipal authority of N'Djamena to present themselves as 'good managers' of the crisis. Press articles featuring visits by the Minister of Land-Use Planning to construction sites illustrate this process of legitimisation, which helps to restore an institutional image that was tarnished by the serious shortcomings revealed during the 2022 floods.

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PHOTO 1: PHOTO ILLUSTRATING THE ARTICLE 'DIGUE DU 9^E ARRONDISSEMENT DE N'DJAMENA: LE MINISTRE DE L'AMÉNAGEMENT DU TERRITOIRE INSTAURÉ DE FINIR LES TRAVAUX', TCHADINFOS, 3 JULY 2025



THE ACHIEVEMENTS OF THIS PROJECT RELY ENTIRELY ON EXTERNAL FUNDING FROM THE WORLD BANK, WHICH RAISES QUESTIONS ABOUT THEIR LONG-TERM SUSTAINABILITY

Although the infrastructural work that has been undertaken is necessary, the presentation of this work as a success story should be qualified. The achievements of this project rely entirely on external funding from the World Bank, which raises questions about their long-term sustainability. With this in mind, PILIER is currently exploring mixed economic models, for example involving private actors in solid waste management (collection, sorting, recovery), and wishes to gradually hand over responsibility for cleaning and maintaining drainage infrastructure to technical services.

The case of the *Projet d'appui à la crise d'inondation* (Flood Crisis Support Project, PACIN) highlights the failure of the principle of local co-construction due to a gap between technical design and political reality. Funded by the *Agence française de développement* (French Development Agency, AFD) to the tune of 984 million CFA francs, and implemented by the French Red Cross in partnership with the Chadian Red Cross, PACIN aimed to strengthen N'Djamena's urban resilience through the training of community response teams (CRTs) and the creation of a *Service de gestion des risques d'inondation* (Flood Risk Management Service, SGRI) integrated into the municipal authority⁹. This initiative, designed as an autonomous technical structure, aimed to depoliticise disaster response by bypassing traditional hierarchical channels and providing the municipal authority with a directly deployable operational tool. One of the project's actors sums up this vision as follows:

'When we want to deal with flooding at the town hall, we no longer go through the mayor. We go through the flood management service. That was the idea behind the project. The services didn't exist before. It's like where I live, we have an autonomous volcano risk management service that intervenes directly.'

'WHEN WE WANT TO DEAL WITH FLOODING AT THE TOWN HALL, WE NO LONGER GO THROUGH THE MAYOR. WE GO THROUGH THE FLOOD MANAGEMENT SERVICE'

While this vision is in line with modern risk governance principles—particularly its focus on mobilising autonomous technical services capable of responding quickly, knowledgeably, and without political bias—its implementation has been hampered by the politicisation of the administration and competition between its various actors. Internal conflicts within the municipal authority have led to institutional paralysis, preventing the official creation of the service, even as the project nears completion.

Furthermore, the project's objectives of strengthening the community fabric have been significantly revised under pressure from the new executive team—elected in February 2025—which is now imposing the creation of a committee of volunteers comprising around 1,000 people spread across the ten arrondissements. The creation of this committee, although presented as inclusive¹⁰, is more akin to an opportunistic politicisation of risk management, in which electoral considerations take precedence over the sustainable development of local capacities.

The municipal decree formalising this volunteer committee gives it a broader scope of intervention covering all types of disasters—natural and health-related—partially replacing the role of the fire brigade, civil protection services, and local associations. As one local actor points out: *'the volunteers are a committee in their own right within the town hall. They're neither the civil protection service nor part of the CRTs. They're a third structure.'*

The coexistence of these different structures and actors leads to a duplication of roles and mandates, further complicating the already unclear risk management system. In other words, the new organisation, which was designed to strengthen civil protection measures, paradoxically tends to replace existing services or even weaken them. Added to this is an imbalance in the distribution of resources: a large budget is devoted to communication, to the detriment of technical training, which is crucial to the professionalisation of volunteers. A PACIN project trainer explained:

'I'm a disaster risk management trainer. I don't work like that. [...] Disaster risk management training is a cycle: mitigation, preparedness, response, recovery. Three days minimum. Two days, maybe. But not one day.'

⁹ A third infrastructure component was initially included, but has since been transferred to the PILIER project. ¹⁰ The creation of this committee stems partly from recommendations made during citizen consultations held over three days in April 2025 in N'Djamena, bringing together around 500 participants.

Finally, little or no thought has been given to sustainability—how to retain volunteers in the long term—and the size of this committee, particularly in terms of the ratio of volunteers to population density in the arrondissements. As a result, the initial ambition for the co-construction of a local community risk prevention system based on skills and needs rooted in local realities has gradually been diluted in a process of political standardisation of the project. Rather than promoting the emergence of a local strategy, PACIN has been reduced to financing a system already pre-constructed by the municipal team and its consulting partners, effectively excluding bottom-up and micro-local dynamics.

Analysis of flood risk governance mechanisms in Chad highlights a constant tension between the technicisation of public policies and the tendency for them to be politicised. Institutional fragmentation, centralised control, and power struggles over aid illustrate the difficulty of building a truly inclusive, coordinated, and sustainable risk management system. Echoing dynamics of international aid observed elsewhere, flood control projects in Chad have been reconfigured in line with local power relations in ways that compromise their sustainability and impact. Thus, while the PILIER project demonstrates a strong commitment to long-term planning, supported by significant investments in infrastructure, the highly centralised nature of its management highlights the need to strengthen processes of inclusion and multisectoral coordination, promote greater local ownership, and enhance its complementarity with other initiatives. Similarly, PACIN shows an ambition to structure the response to flooding at the community level, but has encountered challenges related to institutional coordination and integration into existing systems.

ANALYSIS OF FLOOD RISK GOVERNANCE MECHANISMS IN CHAD HIGHLIGHTS A CONSTANT TENSION BETWEEN THE TECHNIFICATION OF PUBLIC POLICIES AND THE TENDENCY FOR THEM TO BE POLITICISED

4

CITIZEN PARTICIPATION AND RECONFIGURATION OF RISK GOVERNANCE

The rise of citizen associations and collectives in flood risk management in N'Djamena illustrates a process of local empowerment. This dynamic reflects a profound transformation in risk governance towards a more horizontal approach, based on the participation of all actors and the mobilisation of the concepts of resilience, adaptation, and vulnerability reduction (Boehnsku & Leitch, 2014; Daluzeau et al., 2013). In this context, government action is sometimes perceived as insufficient, and individuals and territories are encouraged to prepare themselves for the possibility of such crises. However, in Chad, as in other countries in the Global South, this form of participatory and community-based management can be interpreted as a form of government abdication. Under the influence of a new model of neoliberal governance, the promotion of resilience reflects a gradual transfer of prevention responsibilities to the local and individual levels, emphasising personal responsibility and thus relieving the state of this mission (Quenault, 2013).

In this section, we will see that, while local empowerment has led to the emergence of dynamic community initiatives, these cannot address all the issues, owing to their limited financial, logistical, and knowledge capacities. Nevertheless, these initiatives are a major lever in the emergency response and, at the very least, make it possible to compensate for certain shortcomings in the institutional system.

RISK CULTURE: SOCIAL AND BEHAVIOURAL BARRIERS

In N'Djamena, the perception of flood risk remains marginal in the daily concerns of residents. Urgent social issues—employment, health, housing—relegate natural disasters to the background. This phenomenon, well documented by Thouret (1994), partly explains why vulnerability is often highest at the moment when a major hazard occurs, resulting in severe damage: a lack of anticipation is then combined with high exposure. 'Risk culture', understood as the knowledge, attitudes, and behaviours of a society in the face of danger (Beck, 1992), is still relatively undeveloped in this context. Warning systems are often ignored, misused, or even abused. As explained by a firefighter, who is confronted with this situation on a daily basis:

'We often get calls like this to bother us, saying, 'I want units, phone credit'. They don't understand the importance of these numbers. Sometimes it's a woman calling to say, 'I saw you on TV, I really like you'. But there's nothing we can do. We continue to raise awareness.'

This misuse of emergency channels reflects a profound lack of awareness. During evacuations, many families refuse to leave their homes, not because they are unaware of the danger, but because they are afraid of their homes being looted. The same firefighter explained it in the following terms:

'You know, in the mindset of our African countries, even to pull someone out of danger, you have to use a little force. You're thinking about saving lives, but he's thinking about thieves. He's thinking that thieves will come while he's away. The father leads everyone out, but he stays behind.'

THESE BEHAVIOURS REFLECTS A SUBJECTIVE HIERARCHY OF RISKS, WHERE EVERYDAY INSECURITY (THEFT, ECONOMIC PRECARIETY) TAKES PRECEDENCE OVER EXCEPTIONAL HAZARDS

These behaviours reflect a subjective hierarchy of risks, where everyday insecurity (theft, economic precarity) takes precedence over exceptional hazards. Added to this logic is the lack of truly viable public temporary rehousing solutions, despite the existence of a few reception sites. However, these are often perceived as makeshift, overcrowded, and poorly equipped (see Chapter 4). Faced with these constraints, and in the absence of accommodation provided by family networks, remaining in vulnerable housing often appears to be the only option. Finally, these behaviours are reinforced by dynamics of territorial anchoring, combining attachment to the place ('I was born here'), a sense of community belonging, and sometimes a financial inability to consider even temporary relocation. In this context, flood-prone areas are neither perceived nor experienced as dangerous places, but as living spaces that are difficult to leave, despite their vulnerability. How, then, can awareness be raised effectively if the exposed territory is not socially recognised as such? An international expert seconded to MATHU reflected in the following terms on the failure of prevention campaigns, highlighting the lack of collective memory of floods:

'There is no memory of the flood. A flood marker was installed next to the Digangali high school to mark the 2020 flood. The 2022 flood, however, was not marked. After 2020, we ran an awareness campaign with Wenakclub, distributing flyers throughout the 9th arrondissement to explain what to do and what not to do during floods... But in 2021, there was nothing. So people didn't anticipate it. It was a flop.'

This tendency to forget—or to erase memories—is exacerbated by the vandalism of certain prevention tools: several rain gauges installed on the river have been stolen, presumably to be resold, demonstrating a lack of understanding of their usefulness.

LOCAL ASSOCIATIONS PLAY A KEY ROLE IN PREVENTION AND MANAGEMENT DYNAMICS

In the Chadian context, local associations and their networks of volunteers appear to be central actors in risk prevention and management. The floods of 2022 demonstrated that these associations—formalised to varying degrees—fulfil a number of essential functions: they provide community monitoring, help to maintain light infrastructure (dykes, drainage channels, basins), mobilise residents, and act as a link between populations and formal aid mechanisms. Acting as 'social warning systems' (Blaikie et al., 2004), these associations and informal structures have developed self-organising mechanisms to compensate for the shortcomings of public assistance. In 2022, the spontaneous mobilisation of 'youth brigades'¹¹, tasked with sealing and monitoring the dykes before they broke, helped to compensate for the shortcomings of the state and to wage a two-month battle against the river waters. The actions of a collective in the 9th arrondissement during the floods of 2024 demonstrate the role of community dynamics in cushioning the impact of the crisis. One of its members explained:

'We've set up a collective flood prevention and management mechanism. The way it works is simple: we mobilise young volunteers from at-risk areas, who act as awareness-raisers by relaying official alert information in their neighbourhoods. We've also trained teams of volunteers stationed around exposed areas. They report risks and intervene according to the means available. After floods, they raise awareness about the risks of drinking water contamination.'

LOCAL ASSOCIATIONS AND THEIR NETWORKS OF VOLUNTEERS APPEAR TO BE CENTRAL ACTORS IN RISK PREVENTION AND MANAGEMENT

¹¹ The categorisation of the inhabitants involved in these brigades is quite broad and flexible, with the term 'youth' referring to any physically able male actor, that is, someone capable of carrying out reinforcement work and withstanding sleep deprivation and cold weather (Petitdemange & Hubert, 2025).

This same collective, acting without institutional support, also organised the evacuation, temporary rehousing, and return of several families affected by the disaster to an area not targeted by international NGOs because it was far from major roads and difficult to access:

'During the floods of 2024, our volunteers asked the neighbourhood leaders to clear a space that was not flooded. We helped the victims to settle in with makeshift shelters made from branches. It was an isolated area, inaccessible to aid from the state or [international] NGOs. We built three pirogues to help elderly women cross. It had become an island. Our volunteers became piroguiers. Once the water receded, they went door to door to clear away the rubble: community service work.'

PHOTO 2: A 'PIROGUE' BUILT BY THE ATPAD ASSOCIATION TO FACILITATE THE EVACUATION OF VICTIMS



Source: ATPAD Association.

This ability to respond quickly and effectively confirms the indispensable role of community actors before, during, and after disasters. As another association actor put it: 'When it comes to disaster risk management, the response is always local first. The state always comes later.' However, this dynamic comes up against a reality: when disaster strikes, community capacities are themselves weakened. One association representative summed up this tension as follows:

'Community activities are mainly about prevention, mitigation, and preparedness. At that stage we can raise awareness, talk about hygiene, water treatment, etc. But once the disaster hits, even those who lead these actions are themselves affected. Everything stops. Community activities die with the disaster.'

Faced with the risk of worsening floods, the role of the community fabric is essential, demonstrating the greater responsiveness of the local and micro-local levels, compared to initiatives driven at the national level, in the face of the same threat.

THIS ABILITY TO RESPOND QUICKLY AND EFFECTIVELY CONFIRMS THE INDISPENSABLE ROLE OF COMMUNITY ACTORS BEFORE, DURING, AND AFTER DISASTERS

AS THE BOUNDARY BETWEEN INVOLVEMENT IN ASSOCIATIONS AND ACTIVISM IS PARTICULARLY BLURRED, SOME ACTORS BECOME REAL FIGURES OF INFLUENCE

THE ROLE OF ASSOCIATIONS AS EARLY WARNING SYSTEMS AND PUBLIC WATCHDOGS

Beyond their role as community relays, local associations also position themselves as true ‘issue entrepreneurs’ (Snow & Benford, 1988) and early warning systems, particularly through the use of digital platforms. WhatsApp groups set up by associations enable rapid, real-time information sharing and daily monitoring of the situation on the ground. Thanks to videos posted daily on these groups, local residents and association actors were able to coordinate their efforts and call on political authorities and private actors to take action. For example, thanks to live broadcasts in 2024 by informants from the ATPAD association showing the rising waters, the ANDA company, in charge of building the main dyke in Walia, urgently launched the construction of a second protective structure. Another example is that, in 2023, Abbé Madou, parish priest of Walia Goré, was able to use his connections with politicians and journalists to mobilise prominent figures, who in turn lobbied the government, enabling the parish to quickly receive food supplies from the ministère de la Femme (Ministry for Women) (Petitdemange & Hubert, 2025).

As the boundary between involvement in associations and activism is particularly blurred, some actors become real figures of influence. The example of activist Ahmat Haroun Larry is emblematic. He was very active on Facebook, where he strongly criticised the central municipal authority’s inaction during the floods of 2022. His videos went viral and prompted an immediate response from the municipal authority, forcing it to make an official statement. However, this role as a ‘watchdog’ and counterweight to power is not without risks, and those who raise the alarm sometimes pay a high price for their commitment. Following his criticisms, Ahmat Haroun Larry was imprisoned¹². In 2024, a local geographer was arrested and accused of spreading ‘false alarms’. This repressive climate shows the limits of citizen action in a context where freedom of expression remains fragile. One actor in an association summed up this ambivalence as follows: ‘we can’t take the risk of raising the alert and ending up in prison’.

Thus, in a context where official communication is perceived as lacking credibility, social media, in the specific case of flood prevention and control, become not only vectors of information, but also instruments of social regulation and even environmental justice. They highlight dysfunctions, express popular anger, and sometimes contribute to pressure for faster responses.

THE PROTECTIVE DYKE IN THE 9TH ARRONDISSEMENT AS A FORM OF HYBRID RISK GOVERNANCE

The attention paid to the Walia dyke illustrates the way mechanisms of hybrid governance, characterised by processes of construction that are more improvised than planned, can function in a context of crisis. This form of pluralistic organisation, in which the state, civil society, and private actors coexist and cooperate—often out of necessity—sheds light on how public risk prevention measures are developed in emergencies in contexts where institutional mechanisms are fragile or failing.

The floods of 2022 acted as a catalyst, encouraging the mobilisation of issue entrepreneurs, most of whom came from local civil society. Collectives such as Jeunesse active du 9e arrondissement (Active Youth of the 9th Arrondissement) and the Comité de défense des intérêts de Walia (Walia Interest Defence Committee), as well as community leaders such as Abbé Madou, sought to put the construction of the protective dyke on the public agenda while condemning the state’s inaction. Faced with this pressure, relayed in particular on social media (see above), in May 2023 the state launched a project to restore 30km of dykes, costing 22 billion CFA francs, which was largely financed by the PILIER project. However,

¹² *Tchad One*, interview with Ahmat Haroun Larry, 25 June 2023: ‘Chad has the means to provide immediate solutions to flooding. However, those in power seem deliberately unable to find solutions, suggesting that flooding is being used as a punishment against the Chadian people.’

delays in execution, interruptions in construction, and suspicions of embezzlement fuelled criticism from civil society, which was relayed by the media. In August 2024, with the rainy season raising fears of further flooding, the daily newspaper Ndjiam Post noted:

'Work on the renovated Walia-Toukra dyke seems far from completion. It has been halted due to a 'lack of funding'. Erosion is gaining ground and metalwork has been abandoned. The dam is likely to break if nothing is done.'

PHOTO 3: THE PROTECTIVE DYKE IN THE 9TH ARRONDISSEMENT, BUILT FOLLOWING THE FLOODS OF 2022



Source: Author.

The Comité de suivi des infrastructures du 9^e arrondissement (9th Arrondissement Infrastructure Monitoring Committee, COSPI), composed of several local associations, religious actors, and community leaders, played a key role in the alert system. In 2024, this group documented the ongoing construction work, organised press briefings, and appeared on radio programmes to mobilise public opinion and challenge decision-makers on the fragility of the dyke. Despite these risks, the dyke held firm, and the state widely publicised its infrastructural 'success', thus obscuring both the essential financial contribution of the PILIER project and the strength of informal and tacit support. Behind this official narrative, other dynamics were at play, which were less the result of planned coordination and more that of a convergence of circumstantial interests. The support of ANDA, the company awarded the contract to build the main Walia dyke, illustrates this logic: its involvement was not solely based on a desire to help, but also on the need to demonstrate the reliability and solidity of its structures. Having built a second protective dyke as a matter of urgency, under pressure from local associations, it was also asked by the latter to reinforce the banks, seal breaches, and erect small dykes.

'We call the company's CEO and pressure him to bring in dump trucks full of sand. He promises, but doesn't always deliver.' (association actor)
I bring in a mechanical digger, sometimes using our own money because it's not part of the project, and we get to work.' (ANDA technical director).'

IN 2024, THIS GROUP DOCUMENTED THE ONGOING CONSTRUCTION WORK, ORGANISED PRESS BRIEFINGS, AND APPEARED ON RADIO PROGRAMMES TO MOBILISE PUBLIC OPINION AND CHALLENGE DECISION-MAKERS ON THE FRAGILITY OF THE DYKE

PHOTO 4: WORKERS FROM THE COMPANY ANDA PLUGGING A BREACH IN FLOOD DEFENCES, FOLLOWING AN ALERT FROM LOCAL RESIDENTS RELAYED BY A LOCAL ASSOCIATION



Source: Author.

This type of improvised cooperation perfectly illustrates the relational and transactional nature of hybrid governance at work: it is based on a logic of essentially informal co-production, negotiated on a case-by-case basis, without a defined contractual framework or coherent strategic steering. In this context, issues of reputation and protection were intertwined, as the interests of the company and the authorities in urgently maintaining the solidity of the dyke coincided with the vital need of local populations to prevent any overflow. This mode of action reveals both the resilience of actors on the ground and the structural limitations of the state. It highlights a complex interplay of actors, where the boundaries between public responsibility and civic engagement are becoming increasingly blurred.

WHAT FORM OF COMMUNITY-BASED APPROACH? BETWEEN LOCAL EMPOWERMENT, FORMALISATION, AND THE RISK OF APPROPRIATION

Recent flood control projects have given pride of place to the community-based approach. As one donor points out: 'we want to work at the community level, even if it's just to do small things.' However, it is essential to question this commonplace expression and identify the possible discrepancies that arise when institutional logic and citizen self-organisation come together. As described in the scientific literature, the community approach is one that holds that the usual responsibilities of the state can be better handled by forms of citizen self-organisation (Ostrom et al., 1973; Ostrom, 2010; Ostrom, 2012). The aim is to give initiative and responsibility back to ordinary citizens by supporting various forms of voluntary organisations, community-based monitoring, social and solidarity economy, and activist collectives, which are more effective than bureaucratic and overly hierarchi-

THIS MODE OF ACTION REVEALS BOTH THE RESILIENCE OF ACTORS ON THE GROUND AND THE STRUCTURAL LIMITATIONS OF THE STATE. IT HIGHLIGHTS A COMPLEX INTERPLAY OF ACTORS, WHERE THE BOUNDARIES BETWEEN PUBLIC RESPONSIBILITY AND CIVIC ENGAGEMENT ARE BECOMING INCREASINGLY BLURRED

cal institutions (Alix et al., 2018)¹³. In the Chadian context, this approach appears relevant in combating both state centralism and the failure of public services. However, in practice, this community dynamic tends to be regulated, structured, and even standardised, often for the purposes of traceability, accountability, and compliance with donor requirements. The PILIER project, for example, is based on Community Action Plans (CAPs), implemented solely through formally constituted and registered civil society organisations. A project manager stated the matter clearly:

'We don't work with neighbourhood leaders, they're local authorities. We target NGOs that are already structured, because we're obliged to have a formal basis for documenting our actions.'

While this requirement for formalisation aims to ensure the transparency and accountability of interventions, it poses two major problems: the exclusion of informal dynamics, which are often central to community life (unregistered collectives, neighbourhood leaders, religious networks), and the gradual bureaucratisation of associations, which become technical relays for donors, aligned with their operating standards (terms of reference, monitoring grids, accounting rules, etc.). An association leader from the 9th arrondissement, who carried out an activity as part of the PILIER project, testifies to the gaps between needs on the ground and project logic:

'An international NGO came to raise awareness about water risks. We wanted to talk about other things, like preparing an emergency kit or protecting our belongings. But they said no, that's not how it works.'

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Formalisation can also increase the risk of institutionalising dynamics that are unrepresentative or exploited by political actors. Some initiatives, such as that of the Red Cross, attempt to counteract these biases through a more participatory approach. As a programme manager explained: 'we don't create the CRTs (community response teams). The communities propose them, after discussion. We avoid situations where the leader simply chooses people from his own family or ethnic group.' But in many cases, the designation of community structures becomes a power issue. In the 9th arrondissement, some of the associations selected to carry out awareness-raising activities were unknown to residents: 'we hear about them, but we've never seen them', said one resident, about an association presented as a local operator. In a context marked by the politicisation of association activities, which are often springboards to political office, delegating the choice of implementing associations to political authorities rather than to the community can reinforce tensions, not only between association actors, but also between association and state actors. In other words, the choice of community operators can be perceived as a means of political co-optation, reinforcing suspicions that distinguish between 'real' and 'fake' associations depending on their degree of proximity to politics (Petitdémange & Hubert, 2025). Finally, certain political initiatives, such as the establishment of the central municipal authority's volunteer committee, can undermine community outreach work that has already been done and make local capacity-building initiatives meaningless.

The study of community dynamics in response to flooding in N'Djamena highlights a dual movement: on the one hand, a rise in the power of local actors in the practical management of risk and, on the other, an implicit delegation of responsibility by an often failing state. Citizen collectives and neighbourhood associations play a crucial role in relaying information, raising alerts, and organising both emergency response and prevention. Their actions, although often improvised and under-resourced, fill the gaps left by institutions, revealing the strength of resilience rooted in local communities. However, these dynamics can be undermined by the community-based approach implemented by projects. Their design tends to exclude informal dynamics, which are central to local responses, and can also encourage politically connected actors to take over autonomous initiatives, stripping them of their original substance.

¹³ It should be noted, however, that other analyses of the community-based approach are also relevant to risk management issues, particularly in humanitarian aid and development practices. Since the 2000s, and especially with the [Sendai Framework](#) (2015–2030), the community-based approach has become an international standard in disaster risk reduction, involving a more participatory and inclusive approach. In this context, it is based on the recognition of local knowledge, the empowerment of community actors, and the co-construction of responses in line with social and territorial realities. See in particular the publications of UNDRR in their series of '[Words into Action](#)' guidelines and those of the International Federation of Red Cross and Red Crescent Societies (IFRC) on community engagement and accountability.

IN NEIGHBOURHOODS AFFECTED BY FLOODING, THE ISSUE OF HUMAN SECURITY—UNDERSTOOD HERE AS A FRAMEWORK ENCOMPASSING PHYSICAL SECURITY, HEALTH, SOCIAL STABILITY, AND DIGNITY—IS A MAJOR CHALLENGE THAT IS TOO OFTEN RELEGATED TO THE BACKGROUND BEHIND INFRASTRUCTURE-ONLY RESPONSES. BEYOND THE IMMEDIATE HYDROLOGICAL RISKS (DROWNING, MATERIAL DESTRUCTION, ISOLATION OF CERTAIN HOUSEHOLDS), FLOODS GENERATE A SERIES OF SECONDARY RISKS, RELATING TO SECURITY, SOCIAL ISSUES, AND HEALTH, WHICH COMPLICATE DISASTER MANAGEMENT AND INCREASE THE VULNERABILITY OF RESIDENTS.

INFRASTRUCTURE AS A SOURCE OF NEIGHBOURHOOD CONFLICTS

In several neighbourhoods, such as the 9th arrondissement of N'Djamena, flood prevention infrastructure is becoming a source of tension between residents, highlighting deep differences in perceptions of the public interest. Prevention efforts are coming up against neighbourhood conflicts, particularly when it comes to digging drainage channels. No one wants these structures to pass in front of their homes, for fear of weakening their foundations or damaging their land. As one resident summed it up: 'when the waters start to rise, neighbours don't get along. Everyone wants to save their house, but no one wants the channel on their property.' These situations, which have been encountered on several occasions, illustrate the limits of collective action in contexts where the perception of the common good is contingent on individual interests. Mutual aid works as long as the stakes are shared, but breaks down when a group or individual feels aggrieved. The dyke itself, which is supposed to protect the population, sometimes becomes a cause of division. One resident of the 9th arrondissement explained the situation in these terms:

'The dyke separated and divided people. Those in Gardolé were protected, while those on the other side suffered. It's a problem of information; people didn't understand the purpose of the dyke.'

This lack of understanding, combined with a failure to take into account the specific needs of local residents, sometimes fuels acts of vandalism, such as deliberately opening breaches in the dyke. These acts are often described as vandalism in public discourse, but in reality they are opportunistic or survivalist in nature. In 2024, the Minister of Land-Use Planning publicly condemned acts of sabotage that weakened the dyke. However, in reality, as one actor explained: 'the vandals were rice farmers who broke the dyke to let the water through. It was not an act of wanton destruction, but an attempt to save their crops.' Such behaviour reveals the insufficient integration of local perspectives into the planning of infrastructure projects, as well as a lack of consultation upstream.

In response to these tensions, initiatives such as the PILIER project are attempting to incorporate measures to mitigate tensions related to infrastructure, including crossing structures to restore access to homes and mechanisms for reporting complaints¹⁴. The aim is to co-construct infrastructure with local communities, while laying the foundations for dialogue between neighbours. In many cases, neighbourhood leaders serve as the first point of contact, but as soon as disagreements become too sensitive, conflict management is often transferred to the municipal police, who then intervene coercively to impose a solution.

PREVENTION EFFORTS ARE COMING UP AGAINST NEIGHBOURHOOD CONFLICTS, PARTICULARLY WHEN IT COMES TO DIGGING DRAINAGE CHANNELS

¹⁴ At this stage of our research, we have no information on the types of complaints documented or the effectiveness of the mechanism.

VULNERABILITIES THAT ARE INADEQUATELY ADDRESSED

The mass displacement caused by flooding exposes victims to another form of vulnerability: insecurity in reception centres, which are often improvised, overcrowded, and poorly supervised. These places, which are supposed to provide emergency humanitarian assistance, sometimes become hotbeds of violence and social precarity. The site at Toukra, set up in 2022 in the 9th arrondissement of N'Djamena, clearly illustrates this problem. It was created by humanitarian actors with the support of the Chadian military engineering corps, then managed on a voluntary basis by a local association with no expertise in emergency management. It quickly became a site of extreme overcrowding and marginalisation, making the populations all the more vulnerable. An association actor related that: *'there was a lot of violence around the camp. Motorbikes were stolen, women were assaulted. Alcohol and drugs were circulating. We even had to call in the police to restore order.'* The accommodation conditions there were particularly critical. Entire families, sometimes up to ten people, had to share a single tent. This extreme overcrowding, combined with the lack of permanent supervision, facilitated serious abuses, including forms of sexual exploitation. A former displaced person reported that: *'people left the city to come and look for young girls in the camp. It had become a place of informal prostitution. There were condoms everywhere on the ground.'* The prolonged closure of schools for three to four months, until the floods began to recede in December, profoundly disrupted the daily lives of affected families. However, this impact on schooling was given little consideration by the various actors, even though access to education, including in crisis situations, is the responsibility of the state. In fact, few specific measures, whether state or humanitarian, were put in place to ensure the continuity of education. Only a few local associations took action, organising classes with the help of volunteers. In addition, several accommodation sites spontaneously set up by displaced people in school buildings caused significant damage to infrastructure and equipment.

'THERE WAS A LOT OF VIOLENCE AROUND THE CAMP. MOTORBIKES WERE STOLEN, WOMEN WERE ASSAULTED. ALCOHOL AND DRUGS WERE CIRCULATING. WE EVEN HAD TO CALL IN THE POLICE TO RESTORE ORDER'

The issue of human security therefore goes beyond the simple question of shelter or rapid evacuation. In certain areas of the country—particularly in the north and east—flooding endangers populations that are already vulnerable. In the east of the country, the floods are severely affecting Sudanese refugees living in the provinces of Wadi Fira, Sila, and Ouaddai. These populations, often living in flimsy camps or makeshift shelters, face a double vulnerability: on the one hand, the fragility of the infrastructure makes it difficult to protect them from the rain; on the other hand, the wadis (temporary river beds) in these areas become impassable, isolating entire areas for days at a time. In August 2024, several roads connecting the refugee camps of Farchana and Adré were cut off, interrupting food aid deliveries for nearly a week (OCHA report, 2024). This situation is all the more critical as the country faces a significant reduction in international funding, and the withdrawal of certain elements of logistical support is exacerbating these difficulties. As the OCHA coordinator explained: *'before, we could use ECHO's helicopter to distribute food to sites cut off by water. This year, they told us no.'*

The exceptional flooding that affected certain areas of Borkou and Tibesti also caused the dispersal of uncleared landmines. These explosive devices, remnants of past conflicts, can be carried away by flood waters and displaced over several kilometres, seriously compromising post-flood safety. In 2024, an anti-personnel mine displaced by the waters exploded near Bardai, injuring two shepherds, according to testimonies collected by the ICRC.

ULTIMATELY, ALTHOUGH RISK MANAGEMENT IN CHAD REMAINS LARGELY DEPENDENT ON THE SUPPORT OF TFPS, A RISK CULTURE IS GRADUALLY EMERGING, BOTH AT THE MUNICIPAL LEVEL IN N'DJAMENA AND AT THE NATIONAL LEVEL. THIS DEVELOPMENT REFLECTS A SLOW TRANSITION FROM AN APPROACH LONG CHARACTERISED BY REACTIVITY AND IMPROVISATION, FOCUSED ON EMERGENCIES, TO A MORE PROACTIVE APPROACH BASED ON PREVENTION, COMMUNITY RESILIENCE, AND ADAPTATION TO CLIMATE CHANGE.

THE CHALLENGE NOW IS TO MAKE THESE EFFORTS SUSTAINABLE, EXTEND THEM BEYOND THE CAPITAL, AND ENSURE THAT ALL ACTORS, BOTH STATE AND NON-STATE, TRULY TAKE OWNERSHIP OF THEM

However, this transformation remains fragile and unevenly embedded. Although the state has initiated institutional reforms, it remains heavily dependent on TFPS for their implementation. At the same time, community actors—particularly local associations—play a crucial role in alerting, mobilising, and providing initial responses, particularly through social media. This co-presence of state and non-state actors creates a hybrid form of governance that is guided less by planned and co-constructed principles than by circumstantial and contingent interests, and is also marked by an imbalance in human and material resources.

While the responses of development actors in terms of prevention can be exploited for political legitimacy, they remain indispensable in a context of significant financial and material weaknesses on the part of the state. However, the widespread use of the 'community-based approach', which has become a catch-all term, risks increasing mistrust between populations, the state, and NGOs. The targeting of associations and aid beneficiaries should therefore be based on a detailed, micro-territorial approach, in order to maintain the legitimacy and effectiveness of aid.

Finally, the limitations of the humanitarian system—underfunded response, slow mechanisms, future budget cuts—highlight the country's heavy dependence on international aid. In the absence of a sustainable strengthening of national capacities and a clear budgetary commitment from the state, response mechanisms remain fragile and incapable of guaranteeing long-term action.

In conclusion, the risk governance landscape in N'Djamena is undergoing rapid change, marked by a slow transformation in both attitudes and intervention tools. The challenge now is to make these efforts sustainable, extend them beyond the capital, and ensure that all actors, both state and non-state, truly take ownership of them.

RECOMMENDATIONS

1. TO INSTITUTIONAL ACTORS AND TFPS: STRENGTHEN INSTITUTIONAL GOVERNANCE, CLARIFY MANDATES

- Clarify the responsibilities of the structures involved (DGPC, municipal authority, CNARR, ANAM, DRE, etc.) to avoid duplication, by adopting an updated legislative coordination framework.
- Accelerate the updating of the ORSEC Plan, incorporating scenarios from the 2022 and 2024 floods.
- Advocate for the accelerated development and adoption of the decree establishing a national fire brigade corps.
- Strengthen the legislative framework by adopting a law on the prevention and management of risks and disasters.
- Strengthen the strategic role of the DGPC as a pivotal structure.

2. TO INSTITUTIONAL ACTORS, TFPS, AND ASSOCIATIONS: IMPROVE EARLY WARNING SYSTEM MECHANISMS

- Strengthen capacity to disseminate scientific data (risk maps, ANAM bulletins) by prioritising accessible channels (local radio stations, community relays, social media).
- Train institutional technical staff to interpret climate data so that it can be incorporated into decision-making processes.
- Advocate for the accelerated creation of a National Crisis Management Centre.
- Develop transparent public communication on projects and resources mobilised for flood prevention.

3. TO TFPS: ENSURE THE CONTINUITY OF MECHANISMS AT THE END OF PROJECTS

- Develop sustainable public-private management models for services such as waste management, hydraulic infrastructure maintenance, and dredging works.
- Provide training for protection focal points at the decentralised level, as well as for provincial action committees, on flood contingency plan measures and concepts of disaster risk management.

4. TO TFPS AND ASSOCIATIONS: SUPPORT AND PROMOTE INFORMAL COMMUNITY INITIATIVES

- Establish direct funding mechanisms for community initiatives, with simplified criteria adapted to local circumstances.
- Promote a flexible approach that can incorporate informal dynamics and spontaneous initiatives, rather than imposing systematic formalisation.
- Emphasise the real empowerment of communities, allowing them a degree of autonomy in defining priorities and methods.

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Graphic design: Studio Ctrl A

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Funded by the European Union

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