

## Disaster Risk Management and Reduction in Niger: A Review of Tools, Structures, and Mechanisms

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### Abstract

*Niger, a vast landlocked country in the arid Sahel region of West Africa, is constantly faced with disasters, with their attendant loss of human life, material goods, economic damage, and damage to critical infrastructure. However, in terms of disaster risk management and reduction, the country has policies and strategies that are consistent with regional and global disaster risk reduction frameworks and instruments. An analysis carried out based on secondary data collection on disaster risk management and reduction tools, structures, and mechanisms revealed the need to make better use of what already exists by improving overall coordination. This can be achieved by putting in place a strong structure that can drive the mobilization of resources and by placing a strong emphasis on the development of operational tools that focus on prevention rather than emergency response. To achieve this, it is important to review data collection methods by simplifying them using geographical information, which could lead to the collection of relevant and timely data to improve the alert mechanism so that it is as rapid as possible and allows the implementation of preventive actions rather than emergency responses. Improving the GRC framework will also require the implementation of coherent land use and urban development strategies with appropriate building standards, supported by adequate funding mechanisms to build resilient infrastructure.*

**Keywords:** Disaster risk management, Prevention, Emergency response, Recovery, Niger.

### Introduction

Niger is a vast landlocked country in the arid Sahel region of West Africa, with a surface area of 1,267,000 km<sup>2</sup> and a population of 26 million. Most of it is desert, sparsely populated or uninhabitable, with a low population density of around 18 inhabitants per km<sup>2</sup>. As a result of climate change, the frequency and intensity of natural disasters have increased [1]. Over the last decades, the country has had to deal with increasingly recurrent disasters of various kinds, each of which has caused considerable losses for the country and made its people even more vulnerable.

According to a retrospective analysis of losses suffered over 40 years (1973-2013), it is estimated that on average more than 40 billion CFA francs are lost each year due to disasters. Since then, flood-related disasters have increased and occurred more frequently in 2015, 2017, 2019, 2020, and 2022 [1]. In 2020, for example, the damage caused by floods will result in almost 150 deaths, with more than USD 800 million in damage and losses suffered by the population [2].

As the country is heavily dependent on agriculture, droughts also have a significant economic impact in Niger. Estimated in terms of

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gross value, agricultural production was significantly reduced seven times by adverse events between 1991 and 2010 [3], [4]. In some of these years, Niger experienced a 10-20 percent drop in underlying production trends, resulting in losses of more than US\$100 million. Drought was the main cause of the most significant shocks, sometimes in combination with other events. The cumulative impact of successive shocks such as these can be devastating for an economy like Niger, where agriculture accounts for 40 percent of GDP [5], [6].

In addition to the impact on agricultural production, adverse events, particularly droughts, can affect foreign exchange earnings, reduce GDP growth and per capita income, lead to loss of government revenue, and require substantial financial resources for emergency response and recovery [3], [7]. The volatility of the national GDP growth rate and GDP per capita growth rate in Niger over a 26-year period (1984 - 2010) is evidence of this. A strong correlation can be observed between the decline in GDP growth rate and the occurrence of adverse events. The GDP growth rate was negative in 8 of the 26 years analyzed; in 6 of these years, the declines can be partially explained by drought events [8].

Other factors such as poverty, poor governance, demographic pressure, rapid and uncontrolled urbanization, conflict, and instability all contribute to increasing its vulnerability to the effects of disasters. Recurrent disasters lead to a continuing deterioration of livelihoods, expose populations to deep-seated poverty and food insecurity, and undermine their resilience to the shocks and stresses that occur. Although the country has made progress in disaster risk reduction (DRR), the focus is still on emergency response [9]. Post-disaster interventions are often characterized by a lack of coordination, short-term vision, and little involvement of the affected population.

Given the current international context, the whole world and Niger are facing immense challenges in terms of sustainable development. Billions of people continue to live in poverty and deprived of their dignity. Inequalities are increasing within and between countries. There are huge disparities in opportunities, wealth, and power. Gender inequality remains a major problem. Unemployment is a major concern, especially youth unemployment. Global health threats, increasingly frequent and intense natural disasters, the resurgence of conflict, terrorism, and related humanitarian crises, and forced population displacement threaten to reverse much of the development progress of recent decades. The depletion of natural resources and the adverse effects of environmental degradation, including desertification, drought, land degradation, scarcity of freshwater resources, and loss of biodiversity, have added to the list of challenges facing humanity today, making the situation even more difficult.

Climate change represents one of the greatest challenges of our time, and its impacts risk preventing countries like Niger from achieving sustainable development. At the end of the resolution (70/1) adopted by the General Assembly on 25 September 2015, UN member countries selected 17 sustainable development goals to address responses to these challenges [8]. At the national level, the National Strategy for Sustainable Development, and Inclusive Growth (SNDDCI) Niger 2035 and the Economic and Social Development Plan (PDES) are inspired by and aligned with these SDGs and set out the actions to be undertaken and the resources to be mobilized to achieve the sustainable development goals by 2030.

Regarding disaster risk reduction, UN member countries have adopted the Sendai Framework for Action [10], which sets four priorities for 2035: (i) understanding disaster risk, (ii) strengthening disaster risk governance to better manage it, (iii) investing in disaster risk reduction for resilience, and (iv) strengthening disaster preparedness to respond effectively and

“build back better” during the recovery and rehabilitation phase.

At the African region and at the national level, the Sendai Action Framework for Action has been translated into a regional strategy [11], [12], and at the national level, disaster risk reduction policies and strategies have been implemented with plans, tools, and specialized structures to create the conditions for a good disaster risk management and reduction framework.

However, despite the efforts made in Niger to build an adequate disaster risk management and reduction framework and to put in place structures and deploy tools in the field, the country is constantly faced with disasters, particularly those linked to floods, with their consequences in terms of loss of life, material goods, economic damage, and damage to the country’s critical infrastructure. It, therefore, seems necessary to understand how the disaster risk management and reduction system works, through an analysis that would highlight its strengths and weaknesses, and to see how the use of geographical information to improve data collection methods can help to strengthen preventive action [1], [13] rather than emergency response, to move towards a more efficient approach to disaster risk management and reduction.

## Methods

### Research Method and Data Collection

Qualitative research is conducted using a methodological approach that involves collecting and analysing secondary and primary qualitative data to describe and understand the disaster risk management and reduction mechanisms in place and the tools used to make them work.

The data collection method used is semi-structured interviews with stakeholders and institutions involved in disaster risk management in Niger.

The scope of the qualitative research covered the following key points of disaster risk management and reduction:

1. **Framework, policies, strategies, and plans in place:** visions, objectives, main axes and principles of implementation.
2. **Specialized technical institutions, risk management bodies and tools:** A look at the types of institutions, their roles, and responsibilities,
3. **Early Warning Systems (EWS) in place:** EWSs are such an important system these days that it is useful to have robust and functional systems in place to provide early warning to vulnerable communities. Secondary data will be collected, and semi-structured interviews conducted. This should provide an understanding of the capacity to collect data, the types of data collected, and their quality and relevance.
4. **Disaster response and coordination:** How disaster response mechanisms are developed and strengthened at national, regional, and local levels. Frameworks for coordination, pre-positioning of emergency supplies, and training of actors in the event of an emergency,
5. **Climate change adaptation plan:** How are the long-term impacts of climate change, particularly on flooding, considered and how are climate change adaptation measures integrated into flood management strategies?
6. **Financing and risk transfer instruments:** What financing and insurance products and mechanisms are in place and how do they work to provide financial protection against flood-related losses?
7. **Post-disaster recovery and reconstruction:** Are there comprehensive plans for post-disaster recovery and reconstruction, with a focus on improved reconstruction and the integration of flood resilience measures into infrastructure and housing projects?

## **Interpretation and Report Writing**

The SWOT (strengths, weaknesses, opportunities, and threats) analysis method was used essentially to highlight the key aspects of the results in terms of strengths and gaps to be covered to move toward an effective disaster risk management system.

## **Results**

The field of risk and disaster management and reduction is very dynamic in Niger, in that numerous efforts are being made to align the country with international and regional frameworks and improve the national framework for risk and disaster management. To this end, several institutions have been set up and national policies, strategies, and plans adopted to support this area, given the country's level of exposure and vulnerability to multiple hazards. The results of the analysis presented below reflect the situation. They are presented on a case-by-case basis.

## **Framework, Policies, Strategies, and Plans in Place**

The Sendai Framework for Action [10] is an international reference for Niger in terms of disaster risk management, and, as such, current strategies and plans are closely aligned with it. At the regional and subregional level, the African Regional Strategy for Disaster Risk Reduction [15], the ECOWAS Humanitarian Policy [12] and the Strategy of the Interstate Committee for Drought Control in the Sahel (CILSS), the FAO's Disaster Risk Management Strategy in West Africa and the Sahel [15], are also reference documents in terms of DRM alignment. At the national level, policy documents, strategies, and plans have been adopted in line with the framework established in the following. These include the National Strategy for Disaster Risk Reduction (NS-DRR), adopted in 2017 and revised in 2019, which is strongly aligned with the Sendai Framework's four priorities for action, namely (i) understanding disaster risk, (ii) strengthening

disaster risk governance to better manage disaster risk, (iii) investing in disaster risk reduction for resilience, and (iv) strengthening disaster preparedness to respond effectively and "build back better" during the recovery, rehabilitation, and reconstruction phase. There is also the National Strategy for Sustainable Recovery (SNRD), technically adopted in 2019, whose vision is to ensure continuity between pre-disaster and post-disaster development planning, with the aim of filling existing development gaps and addressing new challenges arising from disasters. The National Humanitarian Action and Disaster Management Policy is one of the latest national-level documents to be adopted by the government in 2020. This policy considers the above national documents and is well-aligned with regional and international frameworks. Its vision looks ahead to 2035, with a view to responsible governance and effective, inclusive management of humanitarian action with a view to significantly reducing the impact of crises and disasters on people's lives and livelihoods, as well as on the country's socioeconomic infrastructure. The country also has a national climate change adaptation plan, adopted in 2022, which targets five priority sectors (health, livestock, forestry, transport, and wetlands), for which adaptation options have been proposed. Numerous other documents are also in place and complement the documents listed above.

## **Specialized Technical Institutions**

In Niger, many institutions in place in Niger that play as varied as they are relevant in the field of risk management and disaster management and reduction. Key players are described below by the central, devolved, and local levels.

**At central and regional levels,** the key disaster risk management institutions are (i) the Ministry of Humanitarian Action and Disaster Management (MAH/GC), whose missions are essentially concerned with setting up humanitarian action and disaster management policies and strategies, as well as coordinating

the implementation of response and early recovery actions, (ii) the Ministry of the Interior and Decentralization (MI/D), which is responsible for civil protection, whose mission is to organize, coordinate and monitor disaster risk reduction activities, and (iii) the Ministry of the Interior and Decentralization (MI/D), which is responsible for civil protection, whose mission is to organize, coordinate, and monitor disaster risk reduction activities, and (iv) the Ministry of the Interior and Decentralization (MI/D), which is responsible for civil protection, whose mission is to organize, coordinate and monitor disaster risk reduction activities, (iii) the National Food Crisis Prevention and Management Mechanism (DNPGCA), created under the Prime Minister's Office by Order No. 00208/PM of 28 August 2012, which is one of the very first institutional disaster management mechanisms, but has undergone several changes, including the one currently in For its operation, it has several committees and units, including the early warning system coordination unit (CC/SAP), the food crisis unit (CCA), and the social safety nets unit (CFS). It also has regional and departmental branches. It should be noted, however, that some sectoral ministries have yet taken risk management into account. Responsibilities in this area do not yet seem to be clearly defined.

**At the local authority level**, vulnerability monitoring observatories (OSVs) have been established under the responsibility of the chairmen of municipal councils, and at the village level, community early warning and emergency response systems (SCAP/RU) have been established under the supervision of local authorities. These two bodies provide relevant support to the early warning system coordination unit at the local level.

### **Actors and Tools for Disaster Risk Management and Reduction**

As far as the bodies in place are concerned, the most relevant are (i) the national platform for the reduction of risks and natural disasters, set up by Order N°0030/PM of 9 February 2012, whose

mission is to promote the prevention and reduction of disaster risks at various levels, (ii) the operational centre for monitoring, alert and crisis management (COVACC), which is the interministerial crisis management tool and is dedicated to permanent monitoring and crisis management throughout the national territory. As far as tools are concerned, the ORSEC emergency organization plans, and safeguard plans are the crisis management and action tools currently being put in place by the National Civil Protection Service at the municipal level.

### **Early Warning Systems in Place**

Niger is a pioneer in setting up early warning systems (EWS) in West Africa. An EWS has been in place since 1989, and the process has now culminated in the Early Warning System Coordination Unit (CC/SAP). This system focusses on early warning in food security and, since 2017, as a complement to the existing system, the Climate Risks and Early Warning System (CREWS) initiative has been used to build the capacity of technical services in early warning of sudden and dangerous hydrometeorological events. To achieve its mission, the EWS relies on various existing information systems, such as the Agricultural Market Information System (SIMA), the Livestock Market Information System (SIMB), the Crop Forecasting and Estimation Survey (EPER), and the Interdisciplinary Working Group (GTI). It is based on the target indicators for monitoring the situation, i.e., the rainfall situation, crop monitoring, the pastoral situation, secondary (non-agricultural) sources of income, the state of cereal, livestock, and consumer markets, the health and nutrition situation, warning signs, adjustment capacities, and the previous year's diagnosis (index). The process of monitoring food security, nutrition and disaster management situation is based on the targeting of vulnerable areas, vulnerable populations, and permanent monitoring of specific areas.

In terms of hydrometeorology, a recent diagnosis by the World Bank showed that the HYDROMET system is operational and can be used to concentrate and analyze data but needs to be modernized to make it denser and automate

the data collection and information processing system. This has made it possible to set up a warning mechanism with appropriate tools for each structure, as shown in the table below.

**Table 1.** Structures, Tools, and Warning Products in Place

<b>Structure</b>	<b>Tools/Products</b>
Prime Minister	COVACC: steering
DMN	Database/Rain/Weather, Daily bulletins.
DHL/MHA	Database/Hydro, Bulletins
CC/SAP/DNPGCA	Notes on vulnerability, monitoring of sentinel sites.
DGPC/MI/D	Regular vigilance notes, ORSEC plan, regular data on flood impacts, etc.
DPAC/MAH/GC	Steering of SAP flooding, validation of impact data <a href="http://www.risques-niger.ne">www.risques-niger.ne</a>

CREWS, Niger, 2022

### **Disaster Response and Coordination**

An analysis of the institutions, tools, and frameworks in place certainly reveals the existence of an arsenal of consistent instruments for managing and reducing risks and disasters in Niger. Even if the issue of coordination seems complex and, therefore, difficult to pin down, there are relevant tools for responding to disaster crises. Each of these tools has an operating model governed by texts that are often contradictory [16]. In terms of emergency response, Niger has three key tools: (i) the support plan for vulnerable populations affected by crises, (ii) the common intervention funds which finance the support plan, and (iii) the national stock of reserves.

The support plan for vulnerable populations and/or populations affected by crises is the main reference framework for all interventions to prevent and manage food crises. It is the planning and programming tool for the interventions that DNPGCA and its partners implement to meet the needs of vulnerable populations identified using a participatory and inclusive approach. It includes the relevant activities for an appropriate response that contributes to the food and nutritional security of vulnerable populations and target groups. The

common intervention fund and the national reserve stock are two emergency response tools provided for in a framework agreement between the State of Niger and donors to strengthen the implementation of the support plan.

### **Adapting to Climate Change**

In 2022, the country adopted a national plan for adaptation to climate change, the vision of which is that, by 2035, Niger's socioeconomic development will be ensured by the establishment of (i) a climate resilient society and measures to reduce climate risks to communities and ecosystems, and (ii) the integration of adaptation to climate change into socio-economic development sectors and national policies. The overall objective of the NAP is to contribute to the sustainable development of the country by reducing the negative impacts of climate change. Specifically, this involves (i) reducing vulnerability to the impacts of a changing climate by strengthening the adaptive capacity and resilience of populations and natural ecosystems, and (ii) facilitating the integration of CCA into new and existing policies, programs, and activities and development planning and budgeting processes and strategies, in all sectors concerned and at various levels.

## **Risk Transfer and Financing**

To date, there are few products in Niger in this field. According to documentary analyses and interviews with certain structure managers, two products have been announced: (i) the Pan-African Risk Management Mutual (ARC) of the African Union, of which Niger is a member and has an insurance company involved in the transfer of drought-related risks, and (ii) index-based agricultural insurance (AAI), which is currently being prepared.

Under the ARC-Insurance Company Limited, countries subscribe, and in the event of extreme drought events, the insurance company's disbursements are based on reaching thresholds defined by the country through customisation of the Africa Risk View software, which is the technical engine of ARC insurance and based on the severity of the rainfall deficit measured by the drought index in the countries. If the threshold is exceeded, insurance indemnities are theoretically paid out within 2 to 4 weeks of the end of the agricultural season. This is to enable the affected countries to start implementing the response before vulnerable populations start resorting to negative survival strategies. By combining traditional approaches to organizing relief and quantifying the damage caused by natural disasters with risk pooling and transfer, the ARC has been able to implement a drought response mechanism that covers the whole of the African continent.

Regarding index-based agricultural insurance, a committee was set up by Order No. 0058/PM of 18 March 2022 to oversee the process, including a diagnosis of the situation and the drafting of legislation governing the product. This work is underway with the support of the World Bank.

## **Post-disaster Recovery and Reconstruction**

It is true that the Government of Niger has technically adopted a national strategy for sustainable recovery, but the funding mechanisms in place are not very relevant and/or

not functional, according to a diagnostic analysis carried out to evaluate recovery funding instruments [17]. From this analysis, the tools used so far are projects and certain targeted recovery operations and a tool relating to the World Bank's Immediate Response mechanism, which is active at the request of the Government to rebuild damaged infrastructure and the resilience of societies shattered by the disasters that have occurred.

## **Discussions**

Disaster Risk Management and reduction (DRM) encompasses a series of elements aimed at reducing the impact of disasters on communities and improving their resilience. An analysis of the mechanism in Niger reveals a proactive policy of setting up institutions and tools to ensure that the country has a good DRM framework. Strengths and weaknesses are identified and described in relation to the following key points: (i) policies, strategies, and governance; (ii) community participation and involvement; (iii) risk assessment; (iv) the early warning system; (v) disaster preparedness and response planning; (vi) infrastructure and physical protection measures; (vii) recovery and rehabilitation; and (viii) risk financing.

In terms of GRC policies and governance, the country has appropriate documents and governance structures at the central, devolved, and local levels. These include the establishment of the Ministry of Humanitarian Action and Disaster Management and a policy adopted to this end, the operational centre for crisis monitoring, analysis and management (COVACC), the warning code, etc. However, while these policies are well implemented with appropriate structures, the DRM framework seems to suffer from insufficient coordination and very limited appropriate resources to enable the framework to function properly. As far as community participation and participation are concerned, the framework in place in Niger has made great strides, due to the establishment at the local level of vulnerability monitoring

observatories and community early warning and emergency response systems. Even more recently, as part of the CREWS initiative, women leaders in disaster risk management have been targeted, trained, and organised, engaging both gender and the dynamics of disaster risk management and reduction at the local level. The major limit to this community's participation and commitment currently remains the functionality of the structures that have been set up, but also their generalisation to all the country's local authorities.

As far as early warning systems are concerned, while the framework put in place enables data to be collected for early warnings, it is still not edifying for the types of sudden-onset disasters that require rapid warnings, such as floods. However, it should be noted that a major advance has been made in this area because of the work carried out with CREWS resources, which has made it possible to improve the collection and automatic transmission of data for the instant generation of alert and warning information. This achievement needs to be strengthened by installing modern equipment and building the capacity of HYDROMET services to make the best use of it.

As far as risk assessment is concerned, some timidity has been noted, mainly due to the methods used, which appear to be inflexible and even cumbersome, requiring a great deal of resources that the country often struggles to mobilize. The use of new approaches based on geographical information using the standardized rainfall index, calculated based on proxy rainfall data collected at many sites [1], [13], will allow a major advance to be made in the identification, analysis, and assessment of the hazards, vulnerability, and exposure of communities or a region to different types of disaster. This will enable us to understand risks and their potential impacts, which is essential for effective disaster risk management planning.

In the area of disaster preparedness and response planning, the GRC framework in place in Niger benefits from important civil protection

tools, governed by Law No. 2017-006 of 31 March 2017, determining the fundamental principles of the organization of civil protection and the warning code adopted in 2018, relief organization plans prepared and tested at the level of certain municipalities, and the start of establishing infrastructures to receive disaster victims. However, major efforts need to be made to improve the framework for anticipating and assessing the impact of disasters. In both cases, this will provide reliable data for better planning and/or more efficient responses.

Regarding the creation of protective and drainage infrastructure, it should be noted that there is unfortunately no formal program adopted by the public authorities in this area. However, the Government of Niger is increasingly adopting resilient infrastructure, population protection and drainage projects, both in urban areas and to protect production assets, particularly agricultural assets. The Disaster Risk Management and Urban Development Project implemented by the Government of Niger has built dikes to protect against flooding on the river at Niamey and on certain hydro-agricultural schemes, as well as drainage infrastructure in certain districts of Niger's main towns. It should be noted, therefore, that this area is not implemented based on a program, but rather in response to identified needs, especially following the occurrence of disasters.

In the field of recovery and rehabilitation, there is certainly a national strategy for sustainable recovery, which aims to ensure coherence in terms of pre- and post-disaster planning with long-term development objectives, but the framework for its application is not very clear in terms of coordination, even though it is clearly established that the field of drought and its impact on food security is the responsibility of the DNP-GCA and that of floods is the responsibility of the MAH/GC. Each of these two institutions is working to implement a response plan, but the focus is much more on emergency response than recovery and



reconstruction. In the case of floods, a three-year flood response contingency plan was adopted in 2022 under the aegis of the MAH/GC, one of the specific objectives of which is to ensure the recovery of people affected by floods. In terms of food and nutritional security, the support plan for vulnerable people remains the main tool in a response that is still focused on emergencies rather than recovery and rehabilitation. The only major initiatives in recovery and rehabilitation after disaster events in Niger are still the two episodes of the immediate response mechanism activated in 2017 and 2020 after the floods that the country experienced.

The final point in this analysis is the funding question, for which the Niger government is facing a major shortfall. According to an estimate by the World Bank [3], Niger has an overall resource base of 126.72 million for crisis preparedness and response to crises, while the cost of drought-related food insecurity is around \$100 million a year, and the cost of overall food security is 150 million a year. According to shock modelling [3], this combined humanitarian and economic financing gap is 768 million dollars for food production shocks that last 1 in 5 years and 1.1 billion dollars for food production shocks that last 1 in 10 years. This clearly demonstrates the limitations of the existing financing instruments, which are essentially made up of the common intervention fund, the national security stock, and the ARC insurance contribution. It is therefore essential to think about new financing instruments that are preferably geared toward recovery and rehabilitation.

## **Conclusion**

This analysis shows that Niger has policies and strategies that are consistent with regional and global frameworks and instruments, in particular the Sendai Framework for Action on Disaster Risk Reduction 2015-2030. It also has functional institutions, notably the Ministry of Humanitarian Action and Disaster Management, the National Food Crisis Prevention and

Management System, and the Directorate General of Civil Protection, all of which have tools and instruments for disaster risk management and reduction in Niger. There are also opportunities with support actors and development partners, in particular the World Bank, which provides Niger with disaster response financing tools, including the immediate response mechanism, which has been activated twice, in 2017 and 2020. The instruments in place and the legal framework may also enable the country to access the Catastrophe Differed Drawdown Option (Cat-DDO), another disaster financing tool of the World Bank Group.

However, despite this existing framework and the efforts that have been made, the country continues to face disaster crises that are often without precedent, as was the case with the floods of 2020, which caused damage and losses of around USD 800 million at the time, and the absence of a strategy for land use planning and the establishment of resilient infrastructures to prevent and reduce the impact of disasters, particularly floods.

To make the most of the country's assets and reverse the recurring trend towards disasters and their negative impacts, it is important to ensure greater consistency in the coordination of interventions. This can be achieved by setting up a strong high-level structure that can bring together all the players and give impetus to the mobilisation of resources. It is also important to place a strong emphasis on the development of operational tools that can lead to an even more sustained implementation of action plans, for which a strong emphasis should be placed on prevention rather than on the emergency response that seems to have been favored until now.

To reverse this trend, it is important to improve data collection methods by simplifying them using programmatic approaches that can provide the system with relevant and timely data to improve the early warning mechanism and allow the implementation of preventive actions

rather than emergency responses. Improving the country's disaster risk management and reduction framework will also require the implementation of coherent land use and urban development strategies, with appropriate building standards to build resilient infrastructures. But this can only be achieved through adequate funding mechanisms that can also ensure the mobilisation of private stakeholders.

## Limitations

There are two major limitations to disaster risk management and reduction in Niger. These

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are access to quality data and the stabilization and capacity-building of the players involved in the existing system.

## Conflict of Interest Statement

All authors declare that they have no conflicts of interest.

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