Policy coherence between disaster risk reduction and climate change adaptation

CASE STUDY - NIGER

UNDRR
UN Office for Disaster Risk Reduction

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Acronyms et abbreviations

CC	Climate Change
CCA	Climate Change Adaptation
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EWS	Early Warning System
GCF	Green Climate Fund
GEF	Global Environment Facility
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
SDGs	Sustainable Development Goals
RA	Risk Assessment
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNFCCC	United Nations Framework Convention on Climate Change

Niger

ACMAD	African Centre of Meteorological Applications for Development
AGRHYMET	Training Center for Agro-Meteorology and Operational Hydrology
AGRICA	Climate Risk Analyses for Adaptation Planning in Sub-Saharan Africa
DGA	Directorate-General of Agriculture (under the Ministry of Agriculture and Livestock)
DGCP	Directorate-General of Civil Protection (under the Ministry of the Interior)
ESDP	Economic and Social Development Plan
EWS/CU	Early Warning System Coordination Unit

GoN	Government of Niger
HCI3N	High-Commission for the Initiative 3N (“Nigeriens nourish Nigeriens”)
MEFD	Ministry of the Environment and the Fight against Desertification (previously called the Ministry of the Environment, Urban Sanitation and Sustainable Development)
NDM	National Directorate of Meteorology
NECSD	National Environment Council for Sustainable Development
NFCPMM	National Food Crisis Prevention and Management Mechanism
NP-DRR	National Platform for Disaster Risk Reduction
NSAP-CCV	National Strategy and Action Plan on Climate Changes and Variability
NSDRR	National Strategy on Disaster Risk Reduction
SNAP-CCA	Strategy and National Adaptation Plan to Climate Changes in the Agricultural Sector
WFP	World Food Program

Introduction

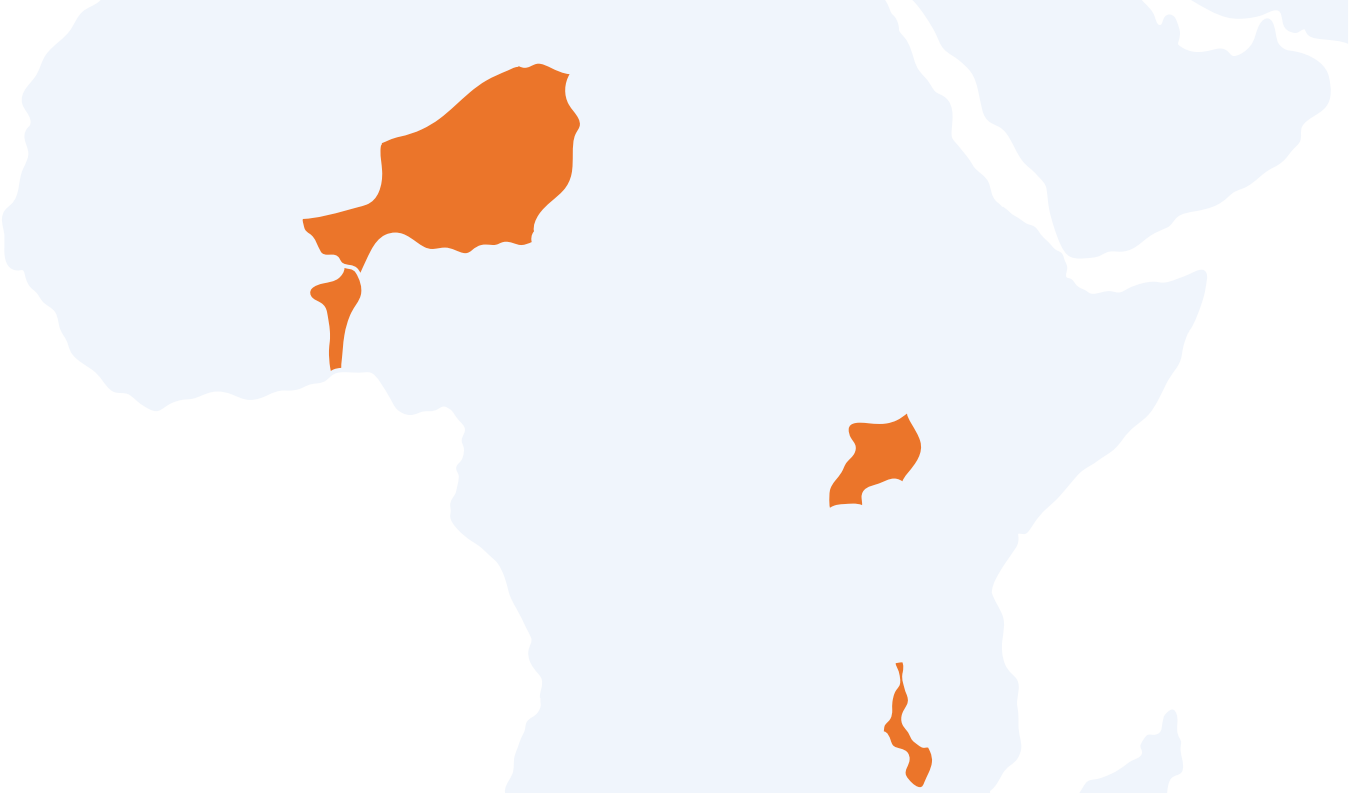
Background

In the past ten years, 83 per cent of all disasters triggered by natural hazards were caused by extreme weather- and climate-related events, such as floods, storms and heatwaves, and killed more than 410,000 people worldwide (IFRC, 2020). In 2020 only, 80 disasters were recorded across 36 African countries. Among them, floods affected seven million people and caused 1,273 deaths, the highest figure since 2006 (CRED & UNDRR, 2020a).

Disasters in Africa are predominantly hydro-meteorological, comprising cyclones, storms, floods, extreme temperatures, wildfires, and droughts. Other forms of hazard affecting the region include earthquakes, epidemics, volcanic eruptions, and landslides (GFDRR, 2018), causing devastating socioeconomic impacts. The high vulnerability and exposure to disasters have been attributed to rapid population growth, fast but poorly planned urbanization, environmental degradation and climate variability and change (GFDRR, 2018). Climate change is expected to increase the frequency and intensity of natural hazards in the continent, leading to increased disaster risk and derailment of sustainable development. Thus, these disasters are posing a serious challenge to Africa's economic growth and achievement of the sustainable development agenda.

The Sendai Framework for Disaster Risk Reduction (2015-2030), the SDGs and the Paris Agreement are guiding countries towards sustainable development. In particular, the Sendai Framework recognizes that DRR is a cross-cutting agenda that needs coherence with other development frameworks, thereby requiring collaboration and cooperation with a wide range of stakeholders including scientists and the local communities, to help governments in its implementation. Design and implementation of effective disaster risk reduction strategies is one of the tools the countries in Africa are using to combat recurrent and future disaster risks, through a multi-hazard approach in prevention, preparedness, response, and recovery, as well as reconstruction. In addition, climate change adaptation strategies, National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs) establish countries' ambitions and plans to achieve adaptation.

Several studies have shown that the two approaches of disaster risk reduction (DRR) and climate change adaptation (CCA) share commonalities and convergences in the problems they seek to solve in sub-Saharan Africa (UNDRR, 2020a; GFDRR, 2018). They also share similar approaches, tools, objectives and outcomes, including similar



understanding of risk as a product of three elements: exposure, hazards and vulnerability. Besides, their commonalities can be exploited to better inform discussions as the region seeks to develop and update policies and strategies.

In response to the need to support efficient implementation of the 2030 Agenda and the Sendai Framework in sub-Saharan Africa, the United Nations Office for Disaster Risk Reduction (UNDRR) is supporting closer engagement of DRR and CCA practices, communities, and institutions. This is aimed at fostering coherent implementation of DRR and CCA measures, taking advantage of their interlinkages underpinned by shared objectives, concepts, and activities, despite different institutional and political settings at global and national levels. To this end, UNDRR is supporting the application of comprehensive climate and disaster-risk management (CRM) principles and guidance. The latter aims to strengthen synergies between DRR and CCA, identifying mutually beneficial opportunities across policies and programmes, and enhancing the capacity of governments for cross-sectoral planning while ensuring vertical alignment.

To gain a better understanding of coherence policies and practices from the perspective of practitioners involved in DRR, CCA and SDGs, UNDRR conducted three multi-stakeholders' workshops between 2019 and 2020, and undertook a desk review of DRR and CCA policies and strategies (including NAPs) in sub-Saharan Africa. Key Informants Interviews (KII) with researchers and colleagues from the UN system and the IFRC were also undertaken. The results of this analysis are reflected in the working paper titled Disaster risk reduction and climate change adaptation, Pathways for policy coherence in Sub-Saharan Africa (2020). Building upon the recommendations from the working paper, UNDRR ROA sought to complement the regional analysis with case studies focusing on four national contexts in sub-Saharan Africa, namely **Benin, Niger, Malawi, and Uganda.**

Objectives

The case studies aim to enhance the understanding of policy design and implementation practices in support of DRR and CCA, identify good practice examples and provide recommendations to advance coherence between DRR and CCA practices in the four countries. In addition to the policy and planning perspective, the case studies also aim at gaining a better understanding of the role that budgeting, finance and risk assessments can play in bringing DRR and CCA practices and communities together at national level.

The target audience for the case studies includes policymakers, technical partners and other stakeholders in Benin, Niger, Malawi and Uganda working on DRR, CCA and SDGs policy design and implementation. Furthermore, the case studies may provide useful insights for other government stakeholders in sub-Saharan Africa, UN System, the Red Cross Movement, INGOs, Civil Society Organizations (CSOs), academia, donors and other actors supporting policy coherence between CCA and DRR policies and practices in the region.

Outline

All case studies have a common introduction presenting the overall objectives and methodology, as well as a summary of findings from the four case studies. In addition, each case study outlines the national policy landscape and institutional arrangements for the two practices, and presents the findings from the policy review according to strategic, conceptual, institutional, operational and financial considerations. Further to the policy landscape, the case studies also include a particular focus on two areas of work that present entry points for policy coherence between DRR and CCA: budgeting and finance (Malawi and Uganda) and risk assessments (Benin and Niger). Drawing upon these insights, the case studies provide key messages and priority actions for enhancing policy coherence between DRR and CCA practices at national level in Benin, Niger, Malawi, and Uganda. Table 1 summarizes the case studies foci.

TABLE 1. CASE STUDIES FOCI

	Policy, planning and institutional arrangements	Finance and budgeting	Risk assessments
BENIN	✓		✓
MALAWI	✓	✓	
NIGER	✓		✓
UGANDA	✓	✓	

Source: author

Methodology

A qualitative research methodology was the main approach used in the study, including (i) a desk review of DRR, CCA and sustainable development regulatory frameworks, policies, strategies, plans and project documents and, (ii) interviews with key stakeholders working on DRR, CCA and SDGs in the four countries, referred to as Key Informant Interviews (KIIs) in the document. The findings of the desktop review are incorporated with the findings of the KIIs. The full methodology for each of the three research areas (policy, budget and finance, risk assessments) is available in Annex 1.

The analytical framework below, adapted from UNDRR (2020a), served as basis for the analysis developed in the case studies. According to the analytical framework, policy coherence for DRR and CCA can be assessed through five aspects that help establish the extent to which consistency occurs between DRR and CCA within countries (Table 2). The level of integration depends on the extent to which any of the five coherence aspects are addressed. Accordingly, results of the analysis are presented considering the five dimensions outlined below.

TABLE 2. SUMMARY OF THE FIVE DIMENSIONS OF DRR AND CCA COHERENCE

Dimension	Characteristics
Strategic	Looks at whether DRR and CCA are explicitly addressed jointly or if there is an aim to strengthen the relationship and linkages between the two fields.
Conceptual	Explores how countries link DRR and CCA conceptually, in particular through the concepts of risk and resilience.
Institutional	Considers whether there are intentions to promote coordination between DRR and CCA institutions and the institutional provisions for such coordination.
Operational	Looks at measures, actions and activities that bring together DRR and CCA practices, and, to which extent planning is considered cross-sectoral.
Financial	Explores whether and how funding strategies and investments bring together DRR and CCA.

Source: UNDRR (2020a)

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Summary of findings

Strategic coherence

- **Coherence between DRR and CCA occurs from both a technical necessity and a strategic focus.** From a technical perspective, there are a number of similarities between DRR and CCA, which leads to overlapping mandates, similar projects and duplication of funding and efforts. At a strategic level, the integration of both agendas makes sense, but in practice it is not straightforward, notably because DRR and CCA are managed within different departments and agencies, and horizontal and vertical collaboration has not been institutionalized.

- One of the main issues at strategic level is which one of the two policy agendas should be leading the strategic direction. Currently, climate change dominates international discussions and priorities (including funding), while DRR is often absent or secondary in national planning. **National development plans and funding have a strong role to play in bringing together the two practices.** National development plans can clarify the linkages, roles and responsibilities between the two fields, as well as promote joint mainstreaming into other sectors plans and budgets.

Conceptual coherence

- **Conceptually, the notion of risk (i.e., hazard, exposure, vulnerability) is well understood by both DRR and CCA communities**, although they may not always use the same wording.
  A shared understanding of risk can be an entry point to fostering closer conceptual coherence, leading to more-aligned agendas.

- **At national level, DRR and CCA communities tend to work separately on the development of risk assessments and there are currently no harmonized methodologies for developing risk assessments (RAs)**. RAs are conducted in the context of projects, and based on various procedures using different sources of data, methods, and approaches. Consequently, it is rare to see an integration of results from various assessments in other assessments. Harmonizing risk-assessment methodologies through the development of guidelines for DRR and CCA communities could provide a frame to

easily analyse and link results, avoid duplication of efforts and resources, and ensure the assessments are fit for purpose. The guidelines should also inform RAs at sub-national level.

- **Developing risk assessments requires diverse data and information from a wide range of stakeholders** (including data providers, technical sectoral agencies, academic and research institutions, and the private sector). National working groups, committees (e.g., Niger on food insecurity) or a regular dedicated agenda point of the National DDR Platform (e.g., Benin) on risk understanding can facilitate exchanges across relevant stakeholders on risk assessments.

- **Capitalizing on data collected and results produced in the context of risk assessments is important.** A common open knowledge platform could be established at national level to host DRR and CCA data, methodologies, and results of studies. Such platforms can foster use and application of data and results across the communities, particularly in planning processes where multiple sources of evidence are required.

Institutional coherence

- **DRR and CCA are managed by different departments with different mandates, but institutional coherence is being established through various coordination mechanisms** at national level such as national platforms (e.g., National DRR-CCA Platform in Benin) or technical committees (e.g., Technical committee on climate change and DRM in Malawi). In Malawi, the Technical Committees for DRR and CCA were merged in 2019 due to the practical necessity of optimizing resources. In Benin, the National DRR platform became the National DRR and CCA Platform in 2012 following the 2011 severe floods. Regular formal meetings and decision-making power

Operational coherence

- **Operationally CCA and DRR share common measures and activities**, notably related to prevention of hydrometeorological hazards. However, joint planning for these actions seems to be limited.

- **Several planned activities at national level can bring coherence between DRR and CCA** through risk knowledge, the harmonization of methodologies and the development of a national framework for risk mapping.

- **Programming and planning are mostly driven by international funding mechanisms** such as the Green Climate Fund (GCF), the Adaptation Fund, and the Global Environment Facility (GEF), **which are mainly addressing CCA concerns**, while DRR is mostly driven by post-disaster funding.

Financial coherence

- **To finance DRR and CCA common objectives, more focus should be put jointly towards investing in prevention against hydrometeorological hazards.** For example in Uganda, the NDP 3 (2021-2026) advocates for a programme approach for implementation, identifying lead implementers and other responsible parties across the different ministries and agencies. This approach provides opportunities for DRR-CCA stakeholder consultation, which could be focused on understanding climate risks, exploring common priorities for DRR and CCA, in order to prioritize resources and assess financial needs to implement them.

- **The financial architecture for DRR is donor-driven and with a focus on managing disasters rather than disaster risk.** At the moment, most international as well as domestic financing for DRR have been more reactive to disasters and not based on implementation of national plans.

- **Climate change budget-tagging is becoming institutionalized, but the disaster component is missing.** CCA financing often includes DRR activities especially if tagged as resilience or infrastructure-building activities. However, often this is not clearly understood, and is more accidental than programmatic. Ministries of Finance should foster the joint integration of DRR and CCA into sector plans and budgets. Furthermore, more capacity development is needed to both Ministries of Finance and a number of sectors on how to integrate CCA and DRR issues into budgeting and planning.

- **Domestic public spending on DRR and CCA is low, with DRR public spending being lower than CCA.** This is further exacerbated by a lack of national funds to mobilize domestic DRR and CCA financing. Reliance on foreign inflows to finance DRR and CCA is unsustainable since one cannot plan for donor funds because its scope and eventual release is beyond the control of the government.

Case study - Niger

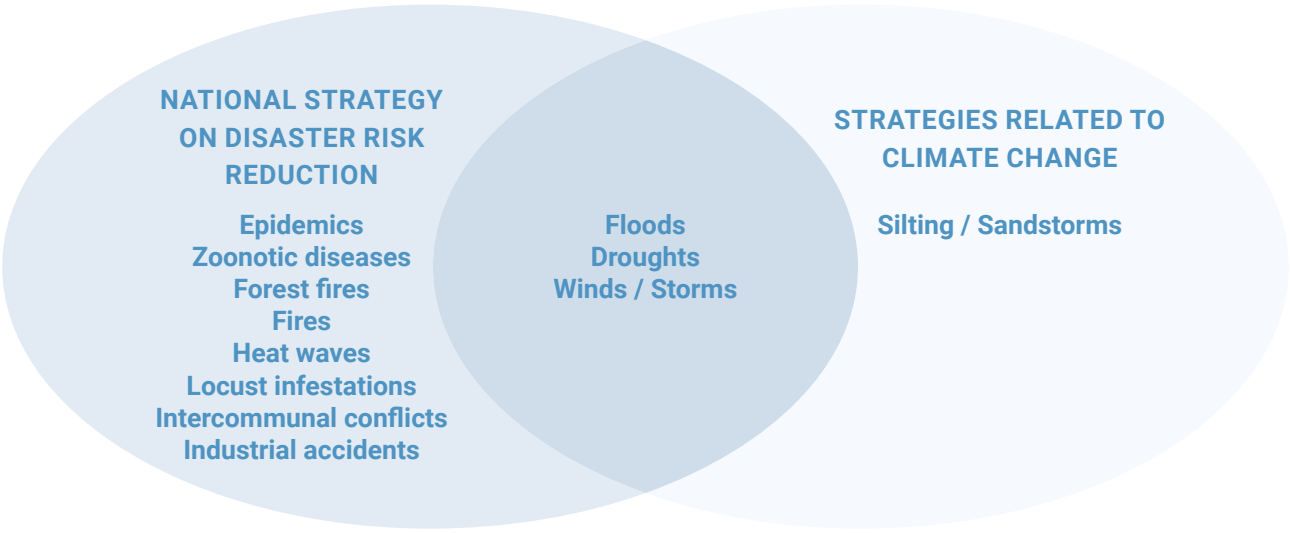
This case study focuses on the national approaches to the design and implementation of climate change adaptation (CCA) and disaster risk reduction (DRR) policies in Niger. First, it briefly describes the political landscape and institutional arrangements in which these two practices take place, before introducing the results of the policy review in light of 5 dimensions – strategic, conceptual, institutional, operational and financial. Moreover, the case study includes a preliminary analysis of risk assessments, considered as entry points to encourage the coherence of DRR and CCA practices. Lastly, the case study lists recommendations to improve the coherence of DRR and CCA policies in Niger.

1. National context

1.1 Main disaster and climate risks

Between 1973 and 2013, Niger recorded 3,702 disasters which were responsible for economic losses estimated at 1.765 billion CFA francs (more than USD 3,277,623) and led to the death of at least 10,625 people (PN-RRC, SNRRC, 2021). **Droughts, floods, fires, heat waves, violent winds, dust and sandstorms, locust invasions and biological hazards** are among the most frequent and damaging hazards in Niger. The national strategic planning documents related to DRR, CCA and sustainable development in Niger insist particularly on the following risks: **droughts, floods and storms**. Figure 1 shows the hazards mentioned / covered by DRR and climate change strategies in Niger.

FIGURE 1. HAZARDS MENTIONED IN THE DRR AND CLIMATE CHANGE STRATEGIES



All the hazards mentioned above are one way or another related to the climate (table 3).

TABLE 3. MAIN CLIMATE HAZARDS IN NIGER AND THEIR STRATEGIC INCLUSION

Floods	In the past decade, Niger has suffered from floods in 2010, 2012, 2016 et 2017 (PN-RRC, 2019a). Floods increase food insecurity (crop and stock destruction) and the risk of epidemics (proliferation of carriers of disease such as malaria, cholera, etc.) (GoN, 2021).
Droughts	In Niger, the recurrent rainfall deficits have caused many droughts (notably in 1968, 1973, 1981, 1984, 1987, 1990, 2000, 2004, 2009 and 2011), with serious impacts on agropastoral production and the population, leading to migration, intercommunal conflicts and food crises (GoN, 2014), because of reduced food production (GoN, 2021).
Epidemics	Epidemics of meningitis, measles, cholera, polio and malaria are recurrent risks in Niger. Meningitis occurs during the dry season while malaria and cholera spread during the rainy season (GoN, 2021).
Sandstorms	Sandstorms negatively affect agriculture, livestock, public health and human lives. They can cause silting in rivers and on cultivated land, speed up soil erosion and increase the risk of respiratory and cardiac illnesses (GoN, 2021). The national planning documents on climate change in Niger mention the necessity to respond to the impacts caused by sandstorms, especially on agriculture and infrastructures.
Locust infestations	Locust infestations inflict substantial losses on the agricultural sector and contribute to food insecurity by destroying crops and pastures.

Source: author

The **scenarios on climate change** developed by the National Environment Council for Sustainable Development forecast a temperature rise between 1 and 3°C by the year 2050, a significant increase in rainfall between +5 and +90% and a rise in interannual variability (shorter rainy seasons and more violent rain episodes). In the agricultural sector in particular, **climate variability will lead to a decrease in yields and a significant reduction of arable lands** (GoN, 2017). In terms of water resources, climate change scenarios forecast a significant reduction in river flows and the vanishing of most permanent water holes.

Agriculture is at the heart of the economy and it remains the biggest contributor to the GDP (42%), with 80% of the labour force working in this sector (ministère de l'Économie et des Finances, 2020). Drought and other natural hazards pose a major threat to the population and the economy. That is why development, CCA and DRR policies and strategies, including the Initiative 3N ("Nigeriens nourish Nigeriens"), all insist on strengthening and adapting the agricultural sector.

Coherence between DRR and CCA approaches in Niger is essential to offer an efficient response to disaster risks and climate change, while avoiding redundant efforts.

1.2 Institutional arrangements for disaster risk reduction and climate change adaptation

Table 4 below lists the institutions and coordination mechanisms for disaster risk reduction and climate change adaptation in Niger.

TABLE 4. OVERVIEW OF INSTITUTIONAL ARRANGEMENTS FOR DRR AND CCA

LEAD INSTITUTION	DDR	Office of the Prime Minister (National Platform for Disaster Risk Reduction; Permanent Secretariat of the National Food Crisis Prevention and Management Mechanism; Early Warning System Coordination Unit) Ministry of Humanitarian Action and Disaster Management
	CCA	Office of the Prime Minister (National Environment Council for Sustainable Development and its Executive Secretariat) Ministry of the Environment
COORDINATION MECHANISM	DDR	National Platform for Disaster Risk Reduction
	CCA	National Environment Council for Sustainable Development

Source: author

Key institutions

In Niger **DRR and CCA issues and their lead institutions are placed under the authority of the Office of the Prime Minister**. For DRR, the Chief of Staff of the Prime Minister is the Chair of the National Platform for Disaster Risk Reduction and of the National Food Crisis Prevention and Management Mechanism. For CCA, the Chief of Staff of the Prime Minister is also the Chair of the National Environment Council for Sustainable Development, and its Executive Secretariat falls under the Office of the Prime Minister.

Disaster Risk Reduction Institutions

Established by decree in 2012, the **National Platform for Disaster Risk Reduction** (NP-DRR) is a mechanism for coordination, analysis and advice in terms of DRR. As such, the NP-DRR plays a catalyzing role by bringing together state and non-state actors to support the Government in the implementation of the National Strategy on Disaster Risk Reduction and its Plan of Action at the local, regional and national level, in accordance with national policies, laws and regulations (PN-RRC, 2021a). The NP-DRR is responsible for defining the national risk prevention framework, designing coordination and harmonization frameworks for risk prevention and reduction activities related to natural hazards, designing an integrated information and communication system, assessing risks, building the capacities of all actors for disaster risk prevention, etc. (PN-RRC, 2021a).

The National Food Crisis Prevention and Management Mechanism was established in 1998 to reduce the vulnerability of the population to food insecurity. As such, it is in charge of preventing, mitigating and managing disasters. The Mechanism consists of a Permanent Secretariat and three units: an Early Warning System Coordination Unit (EWS/CU), a Food Crisis Unit and a Social Safety Net Unit (PN-RRC, 2021a).

The EWS/CU is responsible for the management of information related to food security and disaster risks. It produces, centralizes, analyzes and disseminates information on food security and disaster risks, identifies risk areas and actions to undertake to prevent and mitigate food and nutrition crises. Until recently, **the EWS/CU was the Permanent Secretariat of the National Platform for DRR**, it prepared and executed the decisions of the Platform, including coordinating the implementation of the National Strategy on Disaster Risk Reduction. **These responsibilities were transferred to the Ministry of Humanitarian Action and Disaster Management in June 2021 (decree 2021-477, 2021)**.

At the regional and local level, **there are committees for the prevention and management of disasters and food crises**. These committees bring together all stakeholders (technical services, NGOs and civil society) to collect, validate and analyze information on the situation and coordinate crisis prevention and management activities in their administrative entity (CADRI, 2014, p.30).

The other ministries and institutions with prerogatives related to disaster risk reduction and prevention are: :

- the **Ministry of Humanitarian Action and Disaster Management**. Created in 2012, it works closely with the Food Crisis Mechanism, to design, implement and assess disaster management strategies, programmes and projects (République du Niger, 2021) and it has now become the Permanent Secretariat of the NP-DRR.
- the **Directorate-General of Civil Protection**, under the Ministry of the Interior. It is responsible for the protection of people and assets, the protection of the environment against disaster risks, the organization and coordination of emergency relief and participation in humanitarian assistance. At the national level, the missions of the Directorate and the Food Crisis Mechanism sometimes overlap (CADRI, 2014).

In Niger, responsibilities for DRR coordination and implementation are fragmented across several institutions with partially overlapping mandates (NP-DRR, Food Crisis Mechanism and Ministry of Humanitarian Action). **Clarifying roles and responsibilities in terms of DRR could contribute to better coordination of DRR practices and with other fields such as CCA**.

Climate Change Adaptation institutions

Created in 1996 under the Office of the Prime Minister, **the National Environment Council for Sustainable Development** is the UNFCCC focal point in Niger and is responsible for ensuring the integration of climate change and adaptation into development policies, strategies and programmes; mobilizing the necessary financial resources for the implementation of climate change and adaptation activities; and ensuring climate governance and the administration of funds related to climate change and adaptation (République du Niger, 2011). The Council is composed of representatives from the government, the private sector and civil society. Its **Executive Secretariat**[1] supports its functioning and is responsible for the implementation of its decisions (CNEDD, 2021). The Executive Secretariat also coordinates the National Adaptation Plan. Under the leadership of the Council, **the National Technical Commission on Climate Changes and Variability**, created in 1997, supports the Executive Secretariat in designing, implementing and monitoring the national climate change policy (GoN, 2014, p.71). As the mechanism in charge of institutional coordination and capacity building, the Council is not present at the local level. The **Ministry of the Environment** is the lead institution for the practical implementation of climate change adaptation actions.

Coordination mechanisms

In Niger, responsibilities for DRR and CCA are divided between several ministries, departments and agencies. However, both fields are within the purview of the Office of the Prime Minister and the following mechanisms have been set up to coordinate DRR and CCA actions: **the Environment Council, the National Platform for DRR and the Food Crisis Mechanism**. But the National Strategy on Disaster Risk Reduction (2021) underlines that coordination between DRR and CCA institutions is weak, and the National Strategy and Action Plan on Climates Changes and Variability also stresses the lack of coordination between actors involved in the fight against climate change.

[1] Composed of several divisions including a division on climate change and variabilities.

1.3 Policy landscape for DRR and CCA

A landscape of DRR and CCA policies and strategies was developed by mapping legal frameworks and strategic and planning documents for DRR, CCA and sustainable development in Niger. The complete list of strategic and planning documents is presented in Table 5. The Economic and Social Development Plan 2017-2021 was also considered since it is the overarching framework for the implementation of all development activities in the country. Although many sectoral policies and strategies include DRR and CCA considerations, they were not part of the scope of this study.

TABLE 5. NATIONAL SUSTAINABLE DEVELOPMENT, DRR AND CCA POLICIES AND STRATEGIES

Field	Document	Lead Institution
SUSTAINABLE DEVELOPMENT	Sustainable Development and Inclusive Growth Strategy "Niger 2035", 2017	Ministry of Planning
	The Economic and Social Development Plan 2017-2021	Ministry of Planning
	Initiative 3N, Strategy for food security, nutrition and agricultural development of Niger, 2012	High-Commission for the Initiative 3N
DISASTER RISK REDUCTION	National Strategy on Disaster Risk Reduction 2019-2030	National Platform for Disaster Risk Reduction
	Action Plan for the Implementation of the National Strategy on Disaster Risk Reduction 2019-2030	National Platform for Disaster Risk Reduction
CLIMATE CHANGE ADAPTATION	National Strategy and Action Plan on Climate Changes and Variability, 2015-2019	National Environment Council for Sustainable Development
	First Nationally Determined Contribution, 2015	Ministry of the Environment, Environment Council
	National Policy on Climate Change, 2012	Environment Council

Source: author

Legal framework relevant to CCA and DRR

Niger does not have a DRR or CCA Law. **However, Niger does have a Law on the Management of the Environment from 1998**, which regulates environmental policies and the management of natural resources. Although the Law does not refer to climate change, it recognizes that the government is responsible for the development and implementation of environmental policies, including « **the initiation and coordination of actions necessary to combat disasters and major catastrophes** or any other environmental emergency » (article 12). The Law puts particular emphasis on the following risks: natural and industrial hazards (article 8), desertification and drought (article 10). The Law states that "the Ministry of Interior, in collaboration with Ministries in charge of industry, the environment and other administrations, establishes the rules to prevent technological and natural risks" (article 76).

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Sustainable development policies and strategies

Resilience to climate change and disaster risk reduction are identified as priorities in the main development policies, strategies and plans, including the Sustainable Development and Inclusive Growth Strategy Niger 2035, the Economic and Social Development Plan and the Initiative 3N.

The Strategy Niger 2035 outlines the long-term vision for Niger's development. In this document, **climate change and disaster risks are mainly considered in relation to their impact on rural development**. The diagnosis of the Strategy states that climate change will have a significant impact on the agricultural sector and the population. Under Axis 4, one of the objectives is to reduce the vulnerability of the population to climate change and disaster risks by reforming, strengthening and diversifying the current agricultural system (GoN, 2017). DRR and CCA are therefore part of the long-term vision of the Government.

The **Economic and Social Development Plan 2017-2021 is the tool for the implementation of the Strategy Niger 2035**. In terms of structure, the Plan comprises 5 strategic axes which will be implemented through 11 programmes. The plan aims to strengthen the resilience of the agricultural production systems to climate change and to recurring food and nutritional crises. This includes undertaking transformations in the agricultural system, while strengthening and mainstreaming emergency management (GoN, PDES, 2017).

Completing the Strategy Niger 2035, the Initiative 3N, "Nigeriens Nourish Nigeriens", defines the vision to end food insecurity in Niger. Adopted in 2012 after the 2011 food crisis, its specific goal is "**to strengthen national capacities for food production, supply and resilience to food crises and natural disasters**" (GoN, 2012). The document has been compared to a DRR plan for drought (CADRI, 2014).

Disaster risk reduction policies and strategies

There is no specific national policy for DRR or a national policy for disaster preparedness and management. Nonetheless, Niger does have a validated **National Strategy on Disaster Risk Reduction**, which is the overarching framework for the implementation of DRR activities in the country. The timeframe of the document is 2021-2030 and a five-year plan of action accompanies the Strategy (2022-2026). The National Platform for Disaster Risk Reduction oversees and implements the strategy along with its regional branches. The Strategy revolves around four strategic goals, which are aligned to the four priorities of the Sendai Framework (1: Understand risks; 2: Strengthen risk governance; 3: Promote investments in DRR; 4: Strengthen disaster preparedness).

In terms of CCA, the National Strategy on DRR explicitly refers to the National Policy on Climate Change (2012) and associated strategies. In addition, the Strategy notes that, to ensure the coordination of interventions in DRR and CCA, institutions such as the Ministry of Humanitarian Action and Disaster Management, the National Food Crisis Prevention and Management Mechanism and the National Environment Council for Sustainable Development have been established. But the Strategy points out the weak integration of DRR and CCA in development policies, strategies, and programmes, as well as the **persistence of reactive disaster management at the expense of prevention,** the fragmentation of the institutional framework and the

weakness of coordination and consultation mechanisms among disaster risk prevention and management stakeholders (PN-RRC, 2021a).

Climate change adaptation policies and strategies

Niger ratified the Paris Agreement and submitted its first **Nationally Determined Contribution** in 2015. This document defines the main national priorities to address climate change in Niger, using both mitigation and adaptation objectives. Priority adaptation measures focus on **agriculture, livestock, water resources, transport and public health**, with additional cross-sectoral objectives focused on technology transfer, increased research capacities, awareness-raising, education, training, and information. **The document is structured around the concept of resilience but does not explicitly mention DRR objectives or stakeholders**. However, emphasis is put on «climate-smart agriculture» measures, which encompass climate risk knowledge, early warning, disaster risk management, insurances, etc. (CDN, 2015).

The **National Policy on Climate Change**, adopted in 2012, provides the strategic framework to address the impacts of climate change. Structured around 7 axes, the policy includes 5 axes related to climate change adaptation which aim to (1) improve knowledge and disseminate information on climate change; (2) strengthen and develop climate change adaptation capacities; (4) integrate climate change considerations into national, regional and local planning tools; (5) strengthen the capacities of all actors; (7) mobilize resources for the implementation of the policy. Several strategies and plans provide pathways and concrete actions for the implementation of this strategic framework, including the National Strategy and Action Plan on Climate Changes and Variability 2015-2019, the National Adaptation Plan or the Strategy and National Adaptation Plan to Climate Changes in the Agricultural Sector.

Drafted in 2014, **the National Strategy and Action Plan on Climate Changes and Variability** obviously does not include references to the post-2015 international frameworks and agreements related to sustainable development, climate change and DRR. Although there are references to older international processes and agreements dedicated to the fight against climate change (UNFCCC, National Adaptation Programmes of Action, etc.), there is no mention of DRR and sustainable development international and regional processes. The main objective of the Strategy is to "**contribute to the fight against the negative effects of climate change**". This objective is sub-divided into three specific goals, including one dedicated to adaptation - improve the adaptation and resilience of communities and socio-economic sectors vulnerable to climate change (axis 1). Although the strategic goals are structured around resilience to climate change, **the document does not specifically refer to DRR practices, policies, and frameworks**.

The **Strategy and National Adaptation Plan to Climate Changes in the Agricultural Sector 2020-2035** is the most recent document in Niger which addresses climate change and disaster risks through a sectoral lens. It acknowledges that the Directorate-General of Civil Protection and the Food Crisis Mechanism are key players for CCA in the agricultural sector (GoN, 2020, p.32). In particular, the Food Crisis Mechanism will be in charge of supervising the implementation of actions under Axis 5, as per its mandate (GoN, 2020, p.57). This Axis is comprised of 5 programmes aiming to (i) mitigate the impacts of climate and ecological risks on the livelihoods of producers, (ii) safeguard the livelihoods of the most vulnerable farming populations, (ii) strengthen the capacities of local communities to respond to grain or fodder deficit, amongst others. This will be achieved through actions such as improve risk knowledge (5.1.1), establish/implement emergency plans (5.1.2), strengthen/establish social safety nets (5.2.1), support the decentralization of early warning systems (5.3.1), strengthen capacities of the Civil Protection for prevention and response (5.4.2) etc. In terms of risk knowledge, actions emphasize disaster risk data collection, management and analysis and make provisions for the support of the EWS Coordination Unit in establishing a permanent and continuous data collection system. This document shows that **progress has been made since the development of the Strategy on Climate Changes (2014) to recognize the role and mandates of DRR institutions in the implementation of activities proposed in the context of CCA planning processes**.

TABLE 6. OVERVIEW OF DRR AND CCA POLICIES AND STRATEGIES

	DISASTER RISK REDUCTION	CLIMATE CHANGE ADAPTATION
INSTITUTIONS		
LEAD INSTITUTIONS	Office of the Prime Minister (National Platform for DRR, Permanent Secretariat of the Food Crisis Mechanism, EWS Coordination Unit) Ministry of Humanitarian Action and Disaster Management	Office of the Prime Minister (National Environment Council and its Executive Secretariat) Ministry of the Environment
COORDINATION MECHANISMS	National Platform for Disaster Risk Reduction	National Environment Council for Sustainable Development
REGULATORY FRAMEWORKS		
LEGAL AND REGULATORY FRAMEWORKS	• No law on disaster risk reduction • The Law on the Management of the Environment (1998) recognizes the responsibility of the government in coordinating actions necessary to tackle disasters and major catastrophes or any other environmental emergency	• No law on climate change
POLICIES AND STRATEGIES		
NATIONAL FRAMEWORKS	• National Strategy on Disaster Risk Reduction • Action Plan for the implementation of the NSDRR (2022-2026)	• National Policy on Climate Change, 2012 • National Strategy and Action Plan on Climate Changes and Variability, 2015-2019
COMMONALITIES	Areas covered by DRR and CCA: risk knowledge; meteorological information and early warning systems; awareness raising; capacity building. Sectors: emphasis on the agriculture and health sectors. Education, housing and infrastructures are also important sectors.	
REMARKS AND IMPROVEMENT AREAS	The two strategies include activities that can be redundant: (1) data collection on disasters and climate change; (2) strengthening meteorological observation, including for EWS; and (3) integration of DRR and CCA in education programmes. In the absence of action plans which would define roles and responsibilities, efforts could become redundant. Lastly, the two Strategies do not describe the links between DRR and CCA practices and do not include any actions aimed at stimulating coordination between DRR and CCA at the institutional, operational and financial level.	

Source: author

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2. Results from the policy review

A summary of the results from the analysis of DRR and CCA strategies is presented below. Only strategic documents have been analyzed using the analytical framework on coherence described in the introduction (see Annex 1 for the full methodology). The analysis was complemented by Key Informant Interviews in order to provide additional practical insights.

TABLE 7. OVERVIEW OF THE LEVEL OF COHERENCE FOR DRR AND CCA INSTRUMENTS IN NIGER

Dimensions	Strategic	Conceptual	Institutional	Operational	Financial
Economic and Social Development Plan	●●	●	●	●	●
National Strategy on Disaster Risk Reduction and Action Plan[2]	●	●	●●	●	●
Stratégie nationale sur les changements climatiques et Plan d'action (SNPA-CVC)	●	●●	●	●	●

● Limited ●● Partial ●●● Substantial

Source: author

[2]The National Strategy on Disaster Risk Reduction will be implemented through two 5-year plans of action. The first plan of action for the Strategy is a separate document which should be read along with the Strategy. Following a workshop conducted in Niamey (Niger) in January 2020 on DRR, CCA and SDG policy coherence, the Strategy was revised by DRR stakeholders at the decentralized level, as well as by the Environment Council, in order to ensure policy coherence between DRR and CCA. When this study was conducted, the revised Strategy 2021-2030 and its new plan of action for 2022-2026 had not yet been validated. As of June 2021, the revised draft was being reviewed for adoption by the Government. The analysis is therefore based on the Strategy 2019-2030 and its Plan of Action for 2019-2023. During the KIIs, it was noted that there were no major changes in the new version.

The study found that integration of DRR and CCA practices in strategies is relatively limited across all the dimensions, but some progress has been observed. Indeed, the most recent strategic and planning documents – the National Strategy on DRR 2019-2030 and the Strategy and NAP to Climate Changes in the Agricultural Sector 2020-2035 - show improvements in institutional coherence. In addition, the policy review found that there are synergies that can be leveraged at the operational level, including on risk knowledge. At the conceptual level, there is a clear recognition of the linkages between DRR and CCA, which needs to be further exploited for the integration of DRR and CCA practices and their mainstreaming into other sectors. A better understanding of risks between the two communities could contribute to improve coherence at the strategic, institutional, operational, and financial levels. Some existing institutional relations can also be reinforced for better coordination in planning and implementation.

2.1 Strategic coherence

Strategic coherence looks at whether DRR and CCA are explicitly addressed jointly or if there is an aim to strengthen the relationship and linkages between the two fields.

At the strategic level, integration of DRR considerations in CCA frameworks and vice-versa is limited. The National Strategy on Disaster Risk Reduction does refer to global, regional and national frameworks and processes related to DRR and climate change, but there is no integration of CCA considerations in the vision, goals or principles. Similarly, the National Strategy and Action Plan on Climate Changes and Variability does not refer to DRR practices, policies and frameworks.

The **Economic and Social Development Plan 2017-2021 achieves partial strategic coherence**. Although DRR and CCA practices are not explicitly addressed together at the strategic level, there is some recognition of their linkages at the operational level as a means to reduce climate risks (section 1.2.4.4. Adaptation/mitigation of climate change impacts and disaster risk reduction, p.52). The study also found that there is a **specific focus on climate change while DRR is a secondary issue** in the Plan. First, the document refers to international and national agreements and frameworks on climate change, including the UNFCCC, the Paris Agreement, as well as Niger's National Adaptation Programme of Action and its Nationally Determined Contribution. The Plan does not however refer to DRR international agreements and national policies and strategies.

Next, enhancing CCA capacities and practices is specifically mentioned as an objective of Axis 5 and as part of Programme 11. DRR practices are mentioned as a means to strengthen the health and agriculture sectors (Axes 2 and 3), through risk prevention and in the context of climate change goals. Indeed, sub-programme 11.3 related to strengthening mitigation, adaptation and resilience capacities sets DRR goals (implementation of multi-hazard contingency plans; governance in terms of environment, disaster management and sustainable development).

During KIIs, it was noted that the **Plan has a role to play in bringing DRR and CCA stakeholders and practices closer together**. The new Plan for after 2021 plans to include a DRR programme managed by the Ministry of Humanitarian Action and Disaster Management, giving more space to DRR questions.

The new Plan could also play an important role in clarifying the linkages between DRR and CCA practices at strategic and conceptual levels, in order to facilitate their mainstreaming into other sectoral policies.

2.2 Conceptual coherence

Conceptual coherence explores how countries link DRR and CCA conceptually, in particular through the concepts of risk and resilience.

Conceptual coherence was assessed as limited in all documents. While they recognize that climate change increases the frequency and intensity of disaster risks and that the main disaster risks in Niger are either hydrometeorological or will be exacerbated by climate change, they fail to establish linkages between the two fields. First, there are **no details provided on the synergies and differences between DRR and CCA**. Although the Strategy on Climates Changes and Variability states that it takes into consideration new themes such as DRR, the document does not provide further details on its linkages with CCA. Similarly, the National Strategy on DRR recognizes the lack of integration between DRR and CCA policies, strategies, and programmes, but without clarifying the relations between the two fields.

Secondly, in terms of risk knowledge, the study found that the documents are not based on harmonized disaster and climate risk assessments and that there is no plan to link the two fields by developing joint risk assessments or methodologies. **In terms of data, all the analyzed documents use different datasets, sources and timespans to contextualize the strategies**. For instance, the National Strategy on DRR uses historical data on disasters, while the other documents do not use such data. The same Strategy also refers to climate change projections from the IPCC without specifying timespans, while the Strategy on Climate Changes and Variability is based on climate change vulnerability studies, conducted in the context of a 2005 National Adaptation Programme of Action.

Moreover, **the documents differ in their approaches to risk analysis and underlying concepts** (hazard, exposure, and vulnerability). Definitions, approaches and risks analyses are not harmonized across the different planning documents. For instance, the Strategy on Climate Changes and Variability does not refer to “hazards” but to «climate extremes» instead. Furthermore, the lists of hydrometeorological hazards considered by the strategic frameworks are not fully aligned. For example, sand and dust storms are not considered in DRR frameworks but are central to CCA instruments.

During the KIIs it was underlined that increasing the understanding of risk is the first step towards better DRR, CCA and development planning. Comparing and aligning the lists of hazards relevant to DRR and CCA practices could help build a common understanding of risks between the two communities and clarify synergies and differences between the two fields. Additionally, in-depth risk assessments, which identify the main hazards, map areas at risk and identify vulnerabilities, should inform development planning. **Increasing available data and the update of disaster and climate risk information are necessary**.

It is also necessary to **increase coordination to exchange existing data and information**. certain structures already exist such as the Committee for the analysis and identification of risk areas and populations in situations of food and nutritional insecurity, which includes many national structures to exchange information on food insecurity. The

data exchanged in this framework makes it possible to update databases on disasters in Niger such as the Local Early Warning System against Floods of Sirba (known by its French acronym SLAPIS) and DesInventar. Indeed, numerous ministries, departments and agencies already possess data which can inform risk assessments. For instance, the Ministry of Health has information on areas vulnerable to epidemics and the Ministry of Agriculture has data on agricultural production.

The ANADIA project is led by the Biometeorology Institute (IBIMET), the National Directorate of Meteorology of Niger (NDM) and the Polytechnic University of Turin and is cofinanced by the Italian Cooperation Agency. It is an example of a project **which encourages coordination between national DRR and CCA actors** (the NDM, the EWS Coordination Unit, the Environment Council, the Ministry of the Environment and the Ministry of Agriculture and Livestock) **around the exchange and management of data related to flood risks**. With its main objective being "strengthening the capacities of different actors at the national, regional and local level in order to introduce adaptation to climate change and the reduction of disaster vulnerability in land planning and management", the project led to the setup of a database on floods (BDINA), the SLAPIS and flood risk reduction plans, among others. The ANADIA project is a concrete example of a project which fosters cooperation between DRR and CCA actors at the conceptual and operational level. In order to strengthen the integration of DRR and CCA, it is important to capitalize on projects like ANADIA.

2.3 Institutional coherence

Institutional coherence considers whether there are intentions to promote coordination between DRR and CCA institutions and the institutional provisions for such coordination.

There is a **lack of institutional coherence in spite of efforts deployed by DRR stakeholders to include CCA institutions** in their planning processes and instruments.

First, the Social and Economic Development Plan refers to a coordination mechanism - under the authority of the Office of the Prime Minister - for the implementation of activities. Secondly, the Strategy on Climate Changes and Variability refers to the main actors responsible for planning and implementing climate change measures in Niger (the Executive Secretariat of the Environment Council and the National Technical Commission on Climate Changes and Variability) and lists the categories of stakeholders involved in climate change (the government, private sector, media, people, local authorities etc.). But there is no mention of institutions in charge of DRR and there is no detailed plan of action outlining responsibilities for the implementation of the activities scheduled for 2015-2019.

The National Strategy on Disaster Risk Reduction is the only document which reaches a certain degree of institutional coherence. It describes the institutions which ensure the coordination of DRR and CCA actions, including the Ministry of Humanitarian Action and Disaster Management, the Food Crisis Mechanism, the National Platform for DRR and the Environment Council. In addition, the document outlines the architecture for the implementation of the Strategy, which includes a steering committee responsible for strategic orientation and implementation. Both the Ministry of the Environment and the Environment

[3]www.slapis- niger.org
[4]https://www.inondations-niger.org/

Council are members of the Steering Committee. Although the Plan of Action does not distinguish between DRR and CCA activities, it describes lead institutions and entities involved in the implementation of activities. Both the Environment Council and the Ministry of the Environment are mentioned as implementing partners for some activities. In particular, the Executive Secretariat of the Environment Council is the institution in charge of activity 4.4.1.1. related to the inclusion of climate change scenarios into disaster preparedness and response policies, plans and programmes (PN-RRC, 2019b, p.48).

The study also found that documents usually identify external actors who will contribute to the financing and implementation of activities outlined in the plans of action, but that there is no specific mention of their role in the context of coherence. The lack of details concerning responsibilities at the national level is mirrored at the decentralized level: in all the analyzed frameworks, there is no reference to DRR and CCA coordination at the sub-national level. Nonetheless, **DRR institutions have established coordination mechanisms down to the local level, which could contribute to institutional coherence at the decentralized level**.

KIIs revealed that practices are evolving towards **increasing institutional coherence in strategic processes and, to some extent, at the operational level**. Indeed, the recent example of the review of the National Strategy on DRR by the Environment Council to include CCA considerations illustrates progress towards a better engagement and coordination between the two communities. Respondents also noted that the EWS Coordination Unit, which represented the National Platform for DRR until June 2021, takes part in almost all activities organized by the Environment Council, including the drafting process for the Nationally Determined Contribution of 2021.

To conclude, Niger lacks a formal mechanism for the coordination of DRR and CCA matters. Engagement happens in several fora (Environment Council, National Platform for DRR) but it is not clear to which extent they directly address DRR and CCA coordination. The fact that **the National Platform for DRR, the Environment Council and the coordination mechanism for the implementation of the Social and Economic Development Plan are all at the highest political level, under the Office of the Prime Minister, provides the opportunity for better institutional coherence**.

2.4 Operational coherence

Operational coherence looks at measures, actions and activities that bring together DRR and CCA practices and, to what extent planning is considered cross-sectoral.

Operational coherence was rated limited as none of the planning documents included specific provisions to boost coherence between DRR and CCA practices.

The documents prioritize their activities according to different rationales and do not specify who is responsible for implementing DRR and CCA activities. In the Social and Economic Development Plan, DRR and CCA practices are included into several strategic axes, in relation to the prevention of epidemics (axis 2), strengthening the resilience of rural populations (axis 3) and improving living conditions (hygiene, housing etc.), and the fight against climate change (axis 5). The National Strategy on DRR is structured around the four priorities of the Sendai Framework whereas the Strategy on Climate Changes and Variability adopts a sectoral approach to adaptation and prioritizes the following sectors: agriculture, livestock, water, forestry, infrastructures, wildlife, fisheries and health.

Only the Action Plan for the Implementation of the National Strategy on DRR provides further details on institutions responsible for activities as well as on implementation partners at the national level. What

emerges is that some DRR activities are implemented in coordination with the Environment Council, especially when it comes to risk knowledge, raising awareness and DRR capacity building. Besides, the Action Plan includes specific actions led by the Environment Council which aim to develop and update climate change scenarios for disaster preparedness and emergency plans (activity 4.4.1.1.).

The Social and Economic Development Plan acknowledges that the country has weak capacities to pursue an integrated and pluri-disciplinary approach, which would combine emergency response and long-term perspectives.

Beyond the identification of measures and activities intended to increase coherence between DRR and CCA stakeholders and practices, the analysis also looked at whether there were overlapping or complementary activities. The results of this analysis are presented in Table 8 below.

The National Strategy on DRR and the Strategy on Climates Changes and Variability include activities which may overlap such as: (1) data collection on disasters and climate change; (2) strengthening early warning systems and meteorological observation systems; and (3) integrating DRR and CC into education programmes. In the absence of detailed plans of action outlining roles and responsibilities, these activities could result in a duplication of resources. It should be noted that in practice, these responsibilities might be clearly attributed. During the KIIs it was underlined that there was good complementarity between data collected by the EWS Coordination Unit and the Environment Council. Indeed, the Environment Council has data on climate change which can inform studies of the Coordination Unit on populations vulnerable to food crises, while the Coordination Unit provides historical information on disasters to the Environment Council, including to inform the new Nationally Determined Contribution.

TABLE 8. COMPARISON OF ACTIVITIES INCLUDED IN DRR AND CCA STRATEGIES

Overlaps	Complementarities	
	NATIONAL STRATEGY ON DRR	**STRATEGY ON CLIMATES CHANGES AND VARIABILITY**
RISK KNOWLEDGE		
Collection of similar data or that could be useful to the other field. Align tools and methodologies for data collection and ensure interoperability of databases to avoid redundancy	• Strengthen DRR data collection, analysis and management systems • Produce risk assessments and mappings • Promote access to Geographic Information System data	• Set up databases related to exposed units of the sectors identified as most vulnerable to climate change (agriculture, livestock, forestry, energy, infrastructures, health) • Improve climate databases • Strengthen national capacities to use methodologies for climate change studies
METEOROLOGICAL INFORMATION AND EARLY WARNING SYSTEMS		
Not direct overlap but it is important to ensure that activities related to meteorological observation are coordinated	• Strengthen the EWS (1.1.1.5) • EWS financing (4.4.1.2)	• Use meteorological, agrometeorological and climate data and information • Strengthen the meteorological observation network
AWARENESS RAISING		
No direct overlap but it is important to establish links between DRR and CCA activities in education programmes	• Include a culture of disaster risks in all educational systems (1.1.3.5). Implemented by the Ministry of Education in partnership with the Environment Council	• Disseminate information on climate change • Include climate change considerations in educational programmes • Increase communication on results obtained in the framework of the UNFCCC
CAPACITY BUILDING		
	• Strengthen the knowledge of decision-makers in terms of DRR (1.1.3.1) • Promote dialogue and cooperation between the scientific community and decision-makers (1.1.3.2) • Strengthen technical and scientific capacities of the EWS Coordination Unit in terms of risk assessments (1.1.3.4)	• Improve national competencies to use the tools and methodologies in order to develop studies on climate change (A4.4) • Include climate change dimensions in national and local planning (A4.8, A4.9)

Source: author

Overlaps Complementarities

	NATIONAL STRATEGY ON DRR	STRATEGY ON CLIMATES CHANGES AND VARIABILITY
CONTINGENCY PLANS		
	• Develop/update contingency plans by considering climate change scenarios (4.4.1.1). Implementation by the Environment Council • Creation of community centers (4.4.1.4) • Organize simulations and training exercises (4.4.1.5) • Increase the availability of emergency stocks at the local level (4.4.2.5)	
SOCIAL SAFETY NETS		
	• Strengthen social protection mechanisms (3.3.2.4)	

In terms of sectors, both the DRR and CCA strategies include activities related to agriculture, health, infrastructures and education. Most development documents in Niger focus on the agricultural sector, which can be a good entry point to better coordinate CCA and DRR practices. The implementation of the National Adaptation Plan to Climate Changes in the Agriculture Sector (GoN,2020) provides an opportunity to improve coordination.

This preliminary analysis could serve as a basis for bringing DRR and CCA stakeholders together at the strategic and operational level, to discuss and clarify potential overlapping and complementary areas. DRR and CCA stakeholders could also capitalize on examples of good practice to enhance operational coherence (e.g., project ANADIA).

2.5 Financial coherence

2.5 Financial coherence explores whether and how funding strategies and investment bring together DRR and CCA.

Financial coherence is limited. Although all documents include a budget estimate, strategies and plans for DRR and CCA do not include detailed budget estimates to conduct joint DRR and CCA activities nor do they specify a minimum provision for DRR and CCA activities. The Strategy on Climate Changes and Variability only makes provisions for the integration of climate change in the development budget, with no mention of DRR. The documents do not include provisions for the use of risk insurance plans to reduce the impacts of climate change and multiple hazards. Although the National Strategy on DRR mentions the need to strengthen insurance mechanisms to limit the socioeconomic impacts of disasters, there is no reference to the impacts of climate change.

Further studies on DRR and CCA budgets and expenditures are needed to better understand how resources are mobilized and disbursed. There is also a need to design financing strategies that can enhance the coherence of activities between the two practices. As such, the development of the new Social and Economic Development Plan 2022-2026 provides an opportunity to discuss the allocation of budgets and the mobilization of resources for both practices.

3. Risk assessments as entry points for DRR and CCA coherence

The study of risk assessments was undertaken to better understand how to promote conceptual coherence. In this regard, the analysis focused on the way risk information is produced and used to guide CCA and DRR projects in Niger. It includes a description of the projects selected for the present study, a mapping of stakeholders involved in these projects, an analysis of the methodologies used in the risk assessments of these projects and lastly, the results of the analysis.

3.1 Projects selected for the analysis which use risk assessments in the context of DRR and CCA

The **AGRICA** project focuses on climate risk analyses, the identification and assessment of adaptation strategies in sub-Saharan Africa and is based on a strong scientific basis (Röhrig, 2020). It is being implemented by the Potsdam Institute for Climate Impact Research (PIK), on behalf of the German Ministry for Economic Cooperation and Development, in collaboration with the Niger branch of the German cooperation organization GIZ. For this project, quantitative and qualitative methods were used and include an analysis of temperatures and precipitations as well as impacts on water availability, infrastructure, future crop yields, agricultural production and health. Present and future estimates are generated to assess impacts on the different sectors.[5]

The Support Project for the Concerted Formulation of a Strategy and National Adaptation Plan to Climate Changes in the Agriculture Sector (PAFC-SPN2A) 2019-2020 was designed to provide information which would guide the strategy and plan to reduce the impacts of climate change on the agricultural sector (GoN, 2020). Both quantitative and qualitative methods were used, based on observation and projection data as well as on a literature review. The risk assessment in the Strategy is based on two studies: a study of climate change impacts on land degradation, crop yield and biomass production (Lona I. et al, 2019) and a climate projection study with a rainfall and temperature trend analysis (Ly M, Toune N., 2019). The Environment Council spearheads the implementation of the project, which is funded by the French Development Agency.[6]

The **Technology Needs Assessment** (EBT) was conducted in 2020 to identify and prioritize the technologies that are needed to mitigate and adapt to climate change in Niger in the agro- silvo-pastoral sector (PNUE-DTU, 2020). The risk assessment used quantitative (hydroclimatic data analysis) and qualitative methods (literature review). No future projection was produced. Results show the various technologies needed to strengthen food security in the agricultural and water sectors. The project is implemented by the Environment Council, with the support of the United Nations Environment Programme (UNEP) and a financial contribution from the Global Environment Facility (GEF).

[5] More details can be found online at: https://www.pik-potsdam.de/en/institute/departments/climate-resilience/projects/project-pages/agrica/giz_climate-risk-profile-niger_en.
[6] More details available at: https://reca-niger.org/spip.php?article1487.

The **National Capacity Assessment for Disaster Risk Reduction** (CADRI) of 2014 was led by the Directorate-General of Civil Protection to assess institutional capacities in disaster risk reduction (DGPC, 2014). The assessment relied on qualitative methods, using field data collection and a literature review of the Directorate's documents. Results include statistics on losses and damages due to floods in Niger before 2010.

The Project for the Relaunch of the National Climate Service Framework (PR-CNSC) 2020 aims to produce information for early warnings through monthly newsletters about (1) the climate and DRR, (2) the climate, agriculture and food security, (3) the climate and water resources, and (4) the climate and health. The project is led by the National Directorate of Meteorology and is funded by the World Food Program. The risk assessment is based on a quantitative method, which includes a study of risk statistics and climate data. No projection is made, only monthly assessments of the state of risks are produced. Warnings are disseminated through news bulletins.

A summary table of the abovementioned projects is provided in Annex 4.

3.2 Analysis

Stakeholder mapping

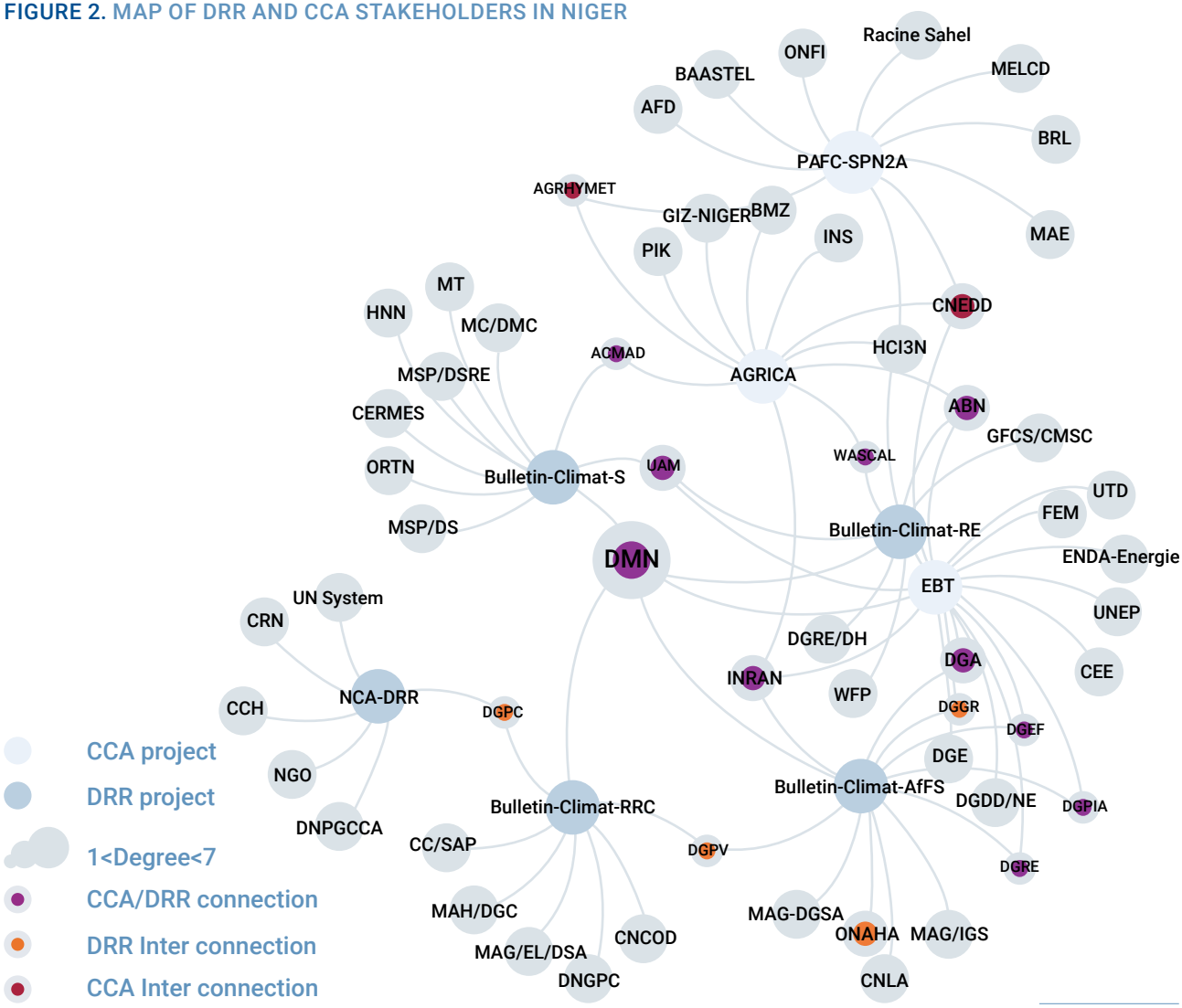
A map of the projects led by stakeholders is presented in figure 2. The projects included in this analysis were conducted by CCA and DRR stakeholders.

The projects led by CCA actors are in light blue and the ones led by DRR actors are in dark blue. The actors involved in both CCA and DRR projects are in purple and DRR actors involved in several DRR projects are in orange and identified as "DRR interconnection" in the caption.

The elements with a red dot at the center represent CCA stakeholders which connect CCA projects such as the Environment Council (CNEDD in French) and AGRHYMET (Training Center for Agro-Meteorology and Operational Hydrology).

[7] More details on the project can be found online at: https://tech-action.unepdtu.org/wp-content/uploads/sites/2/2020/05/rapport-ebt-adaptation-niger.pdf
[8] More information available at: https://www.cadri.net/sites/default/files/NIGER-Rapport-d-Evaluation-des-Capacites-en-RRC.pdf
[9] More details available at: https://gfcs.wmo.int/.

FIGURE 2. MAP OF DRR AND CCA STAKEHOLDERS IN NIGER

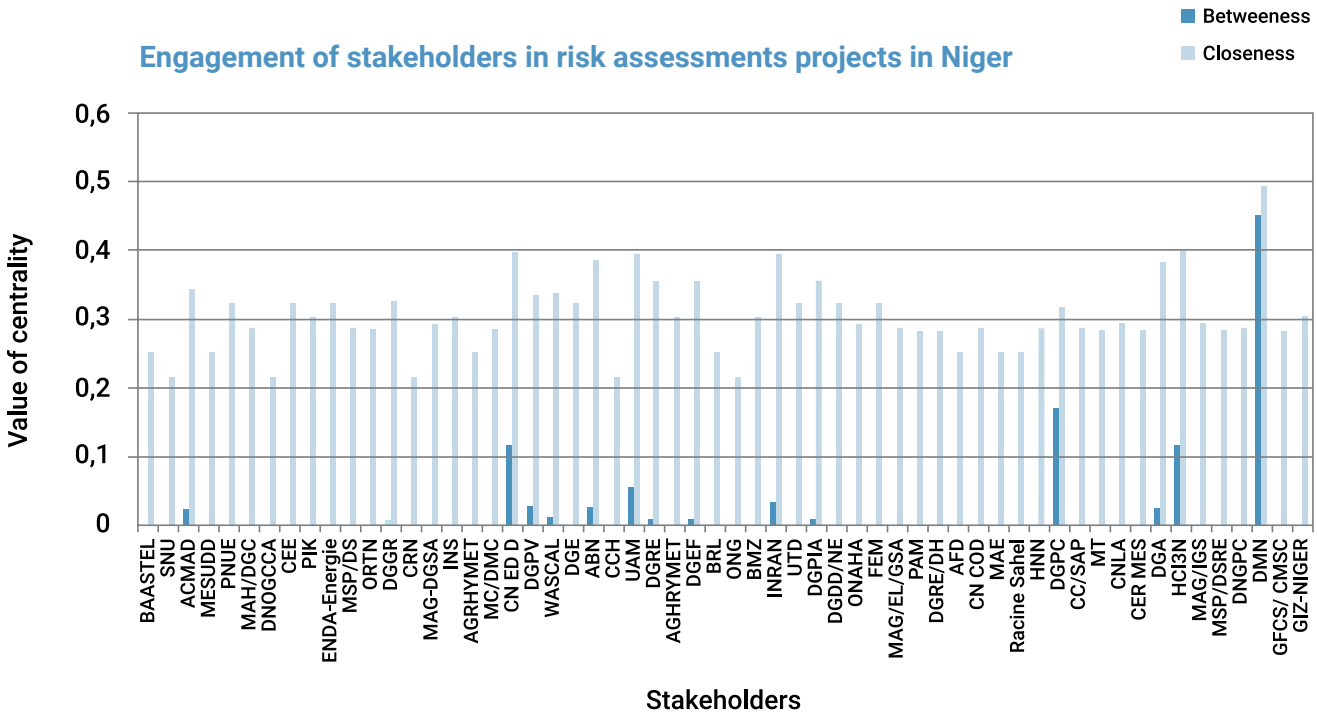


Source: author

The size of the elements depends on their **degree of centrality**. The degree of centrality by closeness is the simplest measure of centrality since it counts the number of connections of a given element. In general, elements with a high degree of centrality by closeness are local hubs but they are not necessarily the most well-connected to the wider network (betweenness). Nevertheless, in Niger, the National Directorate of Meteorology (DMN in French) is the stakeholder with a high degree of centrality by closeness and it also acts as a connector between DRR and CCA projects. Indeed, the analysis revealed that the National Directorate of Meteorology has both the highest closeness and betweenness, followed by the Civil Protection (DGPC in French), the Environment Council (CNEDD in French), the High Commission for the Initiative 3N, the University Abdou Moumouni (UAM), the National Institute of Agriculture Research in Niger (INRAN), the African Centre of Meteorological Application for Development (ACMAD), the Directorate-General for the Protection of Vegetals (DGPV), the Directorate-General of Agriculture (DGA) and the Niger Basin Authority (ABN in French).

Consequently, the **National Directorate of Meteorology is the stakeholder who can quickly receive and disseminate information from and across the network**. However, the Directorate can also slow down or even stop information transmission in Niger's network. Figure 3 shows the closeness and betweenness of stakeholders in Niger.

FIGURE 3. CENTRALITY BY CLOSENESS AND BY BETWEENNESS



Source: author

3.3 Results

Key elements to consider from risk assessments in a discussion of coherence

The three components of risk – hazard, exposure, vulnerability – are not clearly covered in a separate manner in most risk assessment reports as shown by the AGRICA project.

Maps of vulnerable areas rely on combining exposure and vulnerability information for a specific hazard. Therefore, most risk assessments only show the extent of risks and maps of vulnerable areas.

In addition, preliminary work conducted on risk assessments found that dataset types and timeframes are key elements to consider. Though methodologies may look alike, the process and time scope may not be the same. One may be looking at the current situation whereas the other might be considering past and future projections.

The importance of mapping actors

Relationships between actors are showcased by mapping their interconnections. The analysis of centrality provides insights into the elements at the center of DRR and CCA networks. According to the analysis, **the National Directorate of Meteorology is the central actor in terms of closeness and betweenness in Niger**. Consequently, the Directorate could play a key role in the discussion on coherence between DRR and CCA.

A more detailed mapping of actors involved in risk assessments might be useful in order to refine the analysis and could be a starting point to strengthen institutional and operational coherence.

Institutional mandates as obstacles to coherence

The study showed that DRR and CCA communities tend to work separately when it comes to conducting risk assessments. To a certain extent, it can be attributed to the fact that the actors have different mandates and interests. A deeper collaboration between DRR and CCA communities on risk assessments could foster the transfer of knowledge between the two communities.

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4. Recommendations

Strategic

1. Clarify the links between DRR and CCA in the next Social and Economic Development Plan to ensure synergies between actions and their joint mainstreaming into other sectors.

2. Establish a set of goals aiming to boost the coordination of DRR and CCA actors and practices at the institutional, operational, and financial level.

Conceptual

3. Undertake capacity-building activities for DRR and CCA stakeholders to build a common understanding of the main disaster and climate risks to inform planning processes.

4. Conduct a more in-depth mapping of stakeholders conducting risk assessments for DRR and CCA, in the governmental sector (including at the level of departments and divisions) and in the non-governmental sector, as well as at the local level.

5. Establish a harmonized framework and guidelines for the development of DRR and CCA risk assessments
A working could be created under the National Platform for DRR or the Environment Council to facilitate the process.

6. Establish a public platform to capitalize on data collected and results produced in the context of risk assessments. The platform could gather data, methodologies used and results generated during the assessments, including those conducted at the local level such as the ANADIA project on floods..

Institutional

7. Establish a national framework at the strategic level (policymakers) that clarifies the roles and responsibilities of CCA and DRR actors to facilitate work at the technical level.

8. Strengthen the capacities of DRR and CCA government stakeholders at the national and sub-national levels to increase understanding of synergies between the two fields and clarify their roles and responsibilities in the implementation of DRR and CCA activities.

Operational

9. Establish common criteria and monitoring and evaluation frameworks to analyze operations or projects that are being implemented for DRR and CCA.

Financial

10. Conduct a study on DRR and CCA budgets and expenditures to better understand how resources are mobilized and disbursed.

11. Design a funding strategy for DRR and CCA activities which encourages coherence between the two practices, in close coordination with the Ministry of Planning.

12. Increase national budget provisions for DRR and CCA.

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Annex 1: Methodologies

Full methodology for policy review

Desk review and mapping methodology

The following documents were analyzed for this study: regulatory frameworks (laws, acts, decrees), national government policies, strategies and plans for DRR and CCA as well as National Development Plans (NDPs). The documents were sourced from online sources such as UNFCCC, respective country and UNDRR websites. In some instances, the DRR and CCA focal persons in the country supplied these documents.

Analysis of documents

The desk review of documents included two parts: (i) a preliminary screening and (ii) an analysis of how CCA is considered in DRR documents and how DRR is considered in CCA documents. During preliminary screening, the following information was gathered from the instruments:

- Basic information of the document (e.g., name, timeframe, from DRR or CCA etc)
- Stage of development (e.g., draft; adopted; implemented)
- Scope of disasters addressed by the document
- Leading institution and coordination mechanism

In-depth analysis of the DRR, CCA and development documents followed the basic screening guided by the UNDRR coherence analytical framework called the «integration spectrum», which looks at strategic, conceptual, institutional, operational, and financial aspects in order to establish the overall level of coherence of the documents. To determine the level of integration of DRR and CCA into the policy instruments, the five dimensions were examined as explained in the table below.

Dimension	Characteristics
Strategic	Looks at whether DRR and CCA are explicitly addressed jointly or if there is an aim to strengthen the relationship and linkages between the two fields.
Conceptual	Explores how countries link DRR and CCA conceptually, in particular through the concepts of risk and resilience.
Institutional	Considers whether there are intentions to promote coordination between DRR and CCA institutions and the institutional provisions for such coordination.
Operational	Looks at measures, actions and activities that bring together DRR and CCA practices, and, to which extent planning is considered cross-sectoral.
Financial	Explores whether and how funding strategies and investments bring together DRR and CCA.

A rating of either limited, partial, or substantial, depending on the level of coherence of the instrument, was assigned. A matrix comprised of 15 questions was used for the analysis. The matrix includes detailed questions which are more adapted to the review of strategies, but the same questions can guide the analysis of the other documents (regulatory frameworks and NDPs).

Characteristics of the dimensions

Strategic	• Adheres to international and regional guidance and processes related to DRR and CCA • Addresses DRR and CCA jointly in the vision, goals and principles • Aims to mainstream DRR and CCA jointly into other sectors
Conceptual	• Aims to build resilience to climate and disaster risks • Establishes linkages between disasters and climate-change risks • Discusses synergies or differences between DRR and CCA
Institutional	• Describes coordination mechanisms to support coordination between CCA and DRR stakeholders and activities • Identifies the lead agency for DRR and CCA • Refers to coordination of DRR and CCA practices at the decentralized level • Identifies roles and responsibilities of DRR and CCA actors through a cross-sectoral plan • Identifies external actors who support coherence between DRR and CCA
Operational	• Includes objectives and activities aiming to boost coherence between DRR and CCA • Identifies specific activities and sectors for which DRR/CCA are relevant
Financial	• Includes an estimation of budget in support of joint DRR/CCA activities • Refers to joint funding for DRR and CCA • Promotes risk insurance schemes to reduce the impacts of climate change and multiple hazards

Limits of the methodology

The analytical frame was initially developed to read and analyze DRR and CCA policies, strategies, and plans. In the context of this research, it was also used to analyze the DRR and CCA coherence in other national documents such as national development plans, laws, decrees, and sectoral plans. The analysis revealed that although the five dimensions are useful in order to look at different aspects of these documents, the screening questions are not always relevant when reading more general documents, as DRR and CCA practices may not be explicitly mentioned. The analysis is thus subject to interpretation as to what DRR and CCA practices entail and how they can contribute to achieving planned outcomes (enhancing resilience of vulnerable people etc.). Although some laws and decrees were analyzed through the matrix, the lack of elements to fill in the matrix systematically led to a score of 0 and as such, the scoring system was not used for these documents. For NDPs, the matrix helped identify some strategic, conceptual and operational elements of coherence, but was very weak for assessing institutional and financial coherence. This result has been anticipated as NDPs usually do not explicitly mention DRR and CCA.

Key Informant Interviews

After the desk review, detailed KIIs were conducted over a period of two weeks focusing on the DRR and CCA focal persons and stakeholders using the five dimensions of coherence. The information gathered from the KIIs helped to further analyze coherence achievements and practices. Interviews also helped capture organizational practices and activities that support coherence with regard to DRR and CCA.

Methodology for the risk assessment review

Identification of projects related to floods and droughts

Based on a literature review and information collected during the interviews, five projects were selected.

Scientific aspects of risk assessments

The three components of risk – hazard, exposure and vulnerability – were considered in the analysis. According to the Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction, hazard is defined as a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation (UNDRR, 2020b). Exposure is understood as the situation of people, assets, systems or all other elements present in hazard-prone areas that are exposed to potential losses. Vulnerability encompasses the characteristics and circumstances of a community, a system or an asset which expose it to the damaging effects of a hazard.

Risk assessments can be qualitative or quantitative and aim to determine the probability of a disaster occurring and estimate its potential impacts. The approach is considered quantitative when it uses smooth statistics, or a very solid scientific analysis based on observations and future projections.

Interviews

The main actors were consulted to complement the analysis of projects and methodologies used in the risk assessments.

An initial list of actors was established based on the project reports, participant lists and interviews. A network analysis software was used to map stakeholders. Thanks to this mapping, the degree of centrality by closeness and by betweenness of the actors was calculated to measure how much actors participate in the network. .

- The degree of centrality is measured by the number of direct links with the other elements (Zhang J. et Luo Y., 2017). But entities with the highest degree of centrality are not necessarily the most influential or the best connected to the larger network.
- The degree of centrality by closeness is measure by the distance between an element compared to the other elements and the identification of those that have a large visibility on the network. These people or entities can spread information efficiently through the network.
- The degree of centrality by betweenness between two elements is measured by the number of times an element is on the shortest path between two other elements. It enables the identification of the main relays, the actors who control the information flows in a network.

Analysis of the risk assessment reports and interviews

The analysis of risk assessments relied on the analysis of the project reports and interviews. In the reports, the following elements were identified:

- The actors involved in the risk assessments (name and role)
- The risks analyzed
- The data and risk assessments methods used
- The results that were obtained.

Annex 2: List of documents analyzed

Field	Document
SD	Plan de Développement Économique et Social 2017-2021 (PDES) *(EN) Social and Economic Development Plan 2017-2021*
DDR	Stratégie Nationale de Réduction des Risques de Catastrophe 2019-2030 *(EN) National Strategy on Disaster Risk Reduction 2019-2030*
	Plan d'Action de mise en œuvre de la stratégie nationale de réduction des risques de catastrophe 2019-2023 *(EN) Plan of Action for the Implementation of the National Strategy on Disaster Risk Reduction 2019-2023*
CCA	Stratégie Nationale et Plan d'Action en matière de Changements et Variabilité Climatiques 2015-2019 *(EN) National Strategy and Action Plan on Climate Changes and Variability 2015-2019*
	Contribution déterminée au niveau national (2015) *(EN) Nationally Determined Contribution (2015)*

Annex 3: List of institutions interviewed

For this analysis, there were three rounds of consultations:

- Key informant interviews during the development of the analysis.
- Written consultation on version 1 of the document. The document was shared with those consulted during the research phase, and other stakeholders identified afterwards.
- A multi-country virtual consultation was held on version 1 of the document.

Institutions
Cellule de coordination/Système d'alerte précoce (CC/SAP) *(EN) Early Warning System Coordination Unit*
Conseil National de l'Environnement pour un Développement Durable (CNEDD) *(EN) National Environment Council for Sustainable Development*
Ministère de l'Agriculture et de l'Élevage *(EN) Ministry of Agriculture and Livestock*
Ministère de l'Action Humanitaire et de la Gestion des Catastrophes *(EN) Ministry of Humanitarian Action and Disaster Management*
Ministère de l'Énergie et des Mines *(EN) Ministry of Energy and Mines*
Institut de Potsdam pour la recherche sur les impacts climatiques (PIK) *(EN) Potsdam Institute for Climate Impact Research*
Direction de la Météorologie Nationale (DMN) *(EN) National Directorate of Meteorology*
Université de Zinder *(EN) Zinder University*
Université de Niamey *(EN) Niamey University*

Annex 5: Projects analyzed for the risk assessment study (EN)

	Projects	Title of the reports	Authors/ Lead institutions	Year/ Period	Type	Sector	Risk type	Study area	Assessment method
1	AGRICA – Climate risk analyses for adaptation planning in sub-Saharan Africa	Analyse des risques climatiques pour l'identification et l'évaluation des stratégies d'adaptation au Niger (only in French)	Felictas Röhrig / Potsdam Institute of Technologies	2020-2021	CCA	Water, agriculture, agricultural and animal production	Floods Droughts	Niger River catchment	Quantitative / qualitative
2	Technological Needs Assessment	Rapport : Évaluation des besoins en technologies d'Adaptation aux Changements Climatiques pour les secteurs de l'Agriculture et des Ressources en Eau (only in French)	Office of the Prime Minister/ Environment Council	2020	CCA	Agriculture, water	Floods Droughts	Niger	Quantitative / qualitative
3	National Capacity Assessment for Disaster Risk Reduction	Rapport d'évaluation des capacités pour la réduction des risques de catastrophe au Niger (only in French)	Civil Protection	2014	DRR	Water	Floods Droughts	Niger	Qualitative
4	The Support Project for the Concerted Formulation of a Strategy and National Adaptation Plan to Climate Changes in the Agricultural Sector (PAFC-SPN2A)	Stratégie et Plan National d'Adaptation face aux changements climatiques dans le secteur agricole SPN2A 2020-2035 (only in French)	Ministry of the Environment / Environment Council	2020	CCA	Agriculture, forests, land	Droughts	Niger	Qualitative
		Élaboration de projections climatiques désagrégées pour le Niger (only in French)	Mouhamed LY, Nazirou TOUNE / Env. Council	2019		Water	Droughts		Quantitative
		Évaluation désagrégée de l'impact des changements climatiques au Niger sur les risques de dégradation des terres, les rendements agricoles et la production de biomasse herbacée (only in French)	Issaka LONA, Agali AL-HASSANE, Kadidiatou SOULEY-YERO, Issa GARBA, Damien HAUSWIRTH / Env. Council	2019		Agriculture, land management	Droughts		Quantitative

	Projects	Title of the reports	Authors/ Lead institutions	Year/ Period	Type	Sector	Risk type	Study area	Assessment method
5	The Project for the Re-launch of the National Climate Service Framework (PR-CNSC)	Climat et RRC : Impact des déficits et excédents pluviométriques (only in French)	Barmou Batoure Mahaman Bohari / NDM	Oct-20	DRR	Water	Floods Droughts	Niger	Quantitative
		Climat et ressources en eau : situation hydrologique du fleuve Niger et de la Sirba (only in French)	Mohamed Housseini Ibrahim / NDM	Oct-20		Water	Floods Droughts		
		Climat, Agriculture et Sécurité Alimentaire : Évaluation de la campagne agro-sylvo pastorale (only in French)	OUSMAN ABDOU / NDM	Oct-20		Agriculture	Floods Droughts		
		Climat et santé : Climat et malnutrition (only in French)	ISSAKA Mody / NDM	Oct-20		Health	Health Malnutrition		


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