



ADAPTATION FUND

AFB/PPRC.36/Inf.19
15 September 2025

Adaptation Fund Board
Project and Programme Review Committee
Thirty-sixth Meeting
Bonn, Germany, 7-8 October 2025

PROPOSAL FOR CHAD, TOGO



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regional Project Concept

Countries/Region: Chad and Togo

Project Title: ECOVERSE – Enhancing Community Resilience to Climate Extremes Across Diverse African Landscapes in Chad and Togo

Thematic Focal Area: Disaster risk reduction and early warning systems

Implementing Entity: Sahara and Sahel Observatory

Executing Entities: **Chad:** Triple Capital Tchad, Association pour le Developement Integré Togo: Sustainable Solutions for Africa (SSA), Directorate of Environment under the Ministry of Environment and Forestry (DE/MERF) and Les Instituts de la Formation en Alternance pour le Developement (IFAD)

AF Project ID:

IE Project ID:

Reviewer and contact person: Alexandra Munoz

IE Contact Person:

Requested Financing from Adaptation Fund (US Dollars): 24,895,000

Co-reviewer(s): Ahmad Ghosn

<p>Technical Summary</p>	<p>The project “ECOVERSE – Enhancing Community Resilience to Climate Extremes Across Diverse African Landscapes in Chad and Togo” aims to [state project/programme objective]. This will be done through the five components below:</p> <p><u>Component 1:</u> Climate-Resilient Infrastructure Development (USD 6,625,000);</p> <p><u>Component 2:</u> Climate-Smart Agriculture and Water Management (USD 6,050,000);</p> <p><u>Component 3:</u> Local Adaptation Financing Mechanisms (USD 2,500,000);</p> <p><u>Component 4:</u> Ecosystem Restoration and Risk Reduction (USD 3,300,000);</p> <p><u>Component 5:</u> Regional Knowledge and Learning Platform (USD 1,900,000).</p> <p><u>Requested financing overview:</u> Project/Programme Execution Cost: USD 2,260,000</p>
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	<p>Total Project/Programme Cost: USD 22,635,000 Implementing Fee: USD 2,260,000 Financing Requested: USD 24,895,000</p> <p>The proposal does not include a request for a project formulation grant and/or project formulation assistance grant.</p> <p>The initial technical review raises several issues, such as the lack of an initial gender assessment, specific information about potential overlapping and/or complementary with other projects, and the overall risk category from the screening process, as is discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.</p> <p>Please be advised that the findings of the AFB Secretariat's review of the funding proposal(s) do not reflect, indicate, or prejudice the outcome of the reaccreditation process currently underway. The Implementing Entity (IE) shall acknowledge that the funding proposal will not be approved by the Board if the IE's accreditation has expired, and reaccreditation has not been achieved at the time of the Board's decision. Notwithstanding this potential risk, the IE has elected to proceed with the development of the funding proposal.</p>
Date	August 22, 2025

Review Criteria	Questions	First Technical Review Comments August 22, 2025
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol and/or the Paris Agreement?	Yes. Chad and Togo have signed both the Kyoto Protocol and the Paris Agreement.
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	Yes. At the regional level, West and Central Africa face overlapping vulnerabilities. Chad is highly vulnerable to climate change and is recognized amongst the hottest countries; about 75% of its territory is desert. Temperature is rising faster than the global average, threatening food security, due to the vulnerability of the agriculture, livestock, fisheries, and land use sectors to climate change. Togo's central regions are characterized by dual rainy seasons and frequent dry spells, causing erratic crop yields. Climate change leads to unpredictable rainfall, dry spells during key planting periods, and more intense storms.

Project Eligibility	1. Have the designated government authorities for the Adaptation Fund from each of the participating countries endorsed the project/programme?	Yes. As per the Endorsement letters dated August 6, 2025 (Chad) and July 28, 2025 (Togo).
	2. Does the length of the proposal amount to no more than fifty (50) pages for the project/programme concept, including its annexes?	Yes. The concept note is 46 pages including the annexes. CR1: Please add title to each table, for example, "Table 1: XX", for better referencing.

3. Does the regional project / programme support concrete adaptation actions to assist the participating countries in addressing the adverse effects of climate change and build in climate resilience, and do so providing added value through the regional approach, compared to implementing similar activities in each country individually?

Yes, but further information is needed.

Part II.A, pages 18-24, provides information about concrete adaptation actions in both countries. Some examples of the concrete actions are constructing permeable road surfaces and planting green corridors; installing water collection and treatment systems; promoting low-cost technologies to improve crop yields; and restoration of 2,000 ha of degraded land. The proposed regional project contributes to the thematic focal area: Disaster risk reduction and early warning systems. However, the Theory of Change does not clearly establish the relationship between the objectives and the activities, and therefore, it is not clear how they would lead to substantial tangible outcomes. In addition, it is not clear what Adaptation Fund Strategic Objectives are supported with the activities, and the value from the regional approach should be accompanied by sound justification.

CR2: Kindly revise the Theory of Change to clearly outline how the proposed interventions will lead to the intended long-term change including the assumptions being made, the possible constraints, the required inputs and how they link to the various project components. Please also include a diagram of the Theory of Change for better understanding of the relationship between outcomes, outputs, and activities.

CR3:

1. Please add some brief details supported with quantification for each activity to demonstrate the size of work conducted and to substantiate allocated budgets if available. If not available please give a clear indication within the proposal that this will be done at the fully developed proposal stage.
2. In addition, please provide broad goals for the outcomes.

CR4:

1. Some activities under Component 3 “Local Adaptation Financing Mechanisms” (outputs 3.1 and 3.2) imply

		<p>some potential USPs. Please clarify and identify these USPs along with a brief discussion on how to manage them as per AF requirements. Please consult USP guidance at Guidance Document for Project/Programme with Unidentified Sub-Projects.</p> <p>2. In addition, please clarify the good initial results that iCSEBs had in Togo and what are the specific benefits its use and why it was selected instead of other energy efficiency housing options such as passive design.</p> <p>CR5: Please clearly outline the specific adaptation actions the project will lead to, including their tangible outcomes and measurable impact.</p> <p>CR6: Kindly add a sound justification of the proposed regional cooperation, including how it adds value compared to national-level interventions. It should be specific to the countries and clearly stated why these countries were selected.</p> <p>CR7: At Part II Section B at the end of para 82, Kindly indicate explicitly how the project supports one or more of the Adaptation Fund Strategic Results, ensuring consistency of these outcomes with those indicated in Part III.A table, page 39.</p> <p>CR8: At para 61 "...deployment of small scale irrigation of water saving technologies' please confirm that this applies for both countries.</p> <p>CR9: At para 66 "regional value lines in testing multiple finance models across different social ..." Please confirm how the models to be tested with be selected and provide any other details possible.</p>
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	<p>4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?</p>	<p>Yes, but further information is needed. The proposal outlines expected economic, social and environmental benefits under Part II.C, pages 25-26, including a gender and diversity perspective. Some of those benefits have a broad estimated quantification. It provides a logical explanation of the relationships between objectives, activities and results. However, it does not clearly identify indigenous groups nor demonstrate how benefits will be equitably distributed among vulnerable communities.</p> <p>CR10: Please outline if indigenous peoples will benefit from the proposed project and, if so, describe how benefits will be equitably distributed.</p> <p>CR11: Kindly indicate the estimated number of direct and indirect beneficiaries by specific objective and gender-disaggregated when possible.</p> <p>CR12: Kindly describe how gender and diversity considerations will be integrated at the activity level, whenever they correspond.</p> <p>CAR1: Please include an Initial Gender Analysis under Part II.C, that describes the different needs, roles and knowledge sources of women and men in the areas of intervention, for each country, clearly stating how the change in gender dynamics might drive lasting changes.</p>
	<p>5. Is the project / programme cost-effective and does the regional approach support cost-effectiveness?</p>	<p>Yes. As per information provided in Part II.D, pages 26-27.</p>

	<p>6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments? If applicable, it is also possible to refer to regional plans and strategies where they exist.</p>	<p>Unsure.</p> <p>The concept note provides a list with national (Chad and Togo) and regional strategies/plans relevant to the proposed project, under Part II.E, pages 27-28. However, the information provided is broad and the relation with the proposed project is not clear for each one. Also, the dates of the listed plans in the table on page 28 need to be revised for more clarity.</p> <p>CR13: Please amend the table on page 28 according to the following:</p> <ul style="list-style-type: none">(a) The information should be included using one row per strategy/plan to provide specific information to clearly state the consistency of the proposed project with each strategy/plan.(b) If corresponds, kindly include any poverty-reduction strategy or land strategy/plan (national or regional level). Also, double check the related national and regional plans under the obligations of UNCCD and UNCBD and add, if deemed relevant.(c) Please revise the dates in the table on page 28 for more clarity and add the missing ones.
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	<p>7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?</p>	<p>Yes, but further information is needed. The proposed project briefly mentions national technical standards for both countries but does not identify specific standards nor outline a plan for compliance. In addition, building codes and standards for Togo are not provided, and the dates of some standards are missing.</p> <p>CR14: Please specify all national technical standards applicable to the proposed project (e.g., EIA, water use regulations, agricultural input standards) and explain how it will comply with each one of these. For Chad it should identify the relevant standards applicable to the proposed project instead of referring to them as a group. For example, instead of using “National Building Codes”, use “The building code number XXX”. In addition, please include all related building standards/codes for Togo and provide date for all listed standards in the table on pages 29-30.</p>
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	<p>8. Is there duplication of project / programme with other funding sources?</p>	<p>Unsure.</p> <p>The concept note provides broad information about relevant projects in both countries, under Part II.G, pages 30-31. However, it requires specific information for each case to revise potential overlapping or complementary areas with the proposed project.</p> <p>CR15: Kindly include a more comprehensive list of projects that are or have been implemented in Chad and Togo and are related to the proposed project. For all projects, please include in table format: (i) main project interventions, (ii) timeline, (iii) target population, (iv) specific location within the country, and (v) complementarity and synergies with proposed project.</p> <p>CR16: Within this table, kindly explain how duplication will be avoided, how the project is complementary to other projects, and what synergies will be built. The lack of overlap should be clearly justified (e.g. by indicating the distinct geographic locations and/or types of interventions) for each related project identified.</p>
	<p>9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?</p>	<p>Yes, but further information is needed.</p> <p>The proposed project includes Component 5 that is fully dedicated to Learning and knowledge and dissemination activities. However, it is not clear how it will be able to keep track of the experiences shared and lessons learned.</p> <p>CR17: Kindly elaborate in Part II.H, how, who and when will be tracking the experiences gained and for the bi-country digital knowledge hub.</p>

	<p>10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Yes, but further information is needed. Initial consultations have been conducted and further consultation with concerned local communities will be conducted at full proposal stage (Part II.I, pages 31-34). However, the consultations summary table on pages 32-33 need to be revised to include consultation events along with the date for each event, and number of participants disaggregated by gender.</p> <p>CAR2: Please revise the consultations summary table on pages 32-34 to reflect the specific consultation events, the date of each event, and number of participants disaggregated by gender.</p>
	<p>11. Is the requested financing justified on the basis of full cost of adaptation reasoning?</p>	<p>Yes. As per information provided in Part II.G, pages 34-35.</p>
	<p>12. Is the project / program aligned with AF's results framework?</p>	<p>Yes, but further information is needed. The concept note provides the project alignment with the Results Framework of the Adaptation Fund under Part III.A, page 39. However, the alignment table need to be revised to ensure consistency at Adaptation Fund outcome and output levels. Based on the information provided in this table, the supported AF outcomes include outcomes 4, 5, 6 and 7.</p> <p>CR18: Kindly revise Part III.A alignment table to ensure consistency with related Adaptation Fund results framework and revise the supported Adaptation Fund outcomes in the upper part of the table with those associated with the output level (lower part of the table).</p> <p>CAR3: In the Table at Section L, please remove the current column 2 with risk level. Please relocate that information to the Potential impact column.</p> <p>CAR4: Please include a paragraph on USPs at section L and the risks associated with the possible USPs and how these will be addressed through an ESMP.</p>

	<p>13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?</p>	<p>Unsure. Under Part II.K, pages 35-36, the concept note provides a discussion about the sustainability of the proposed project through local actor empowerment, capacity building and integration with national and subnational policies. However, there is no mention of regulations and resources specifically needed, and therefore, it is not clear how the project will be sustained in the long run, nor if replication and scaling up will be able to achieve. All for both countries.</p> <p>CR19: Please restructure/revise the discussion under Part II.K to clearly demonstrate sustainability aspects under dedicated subheadings (environmental, social, economic, financial, institutional, etc.). Also, discuss the sustainability of the O&M of the facilities/ infrastructures/ interventions established by the project.</p> <p>CR20: Kindly identify the adaptation benefits that can be sustained after this project ends and explain if this can be replicated and/or scale up.</p>
	<p>14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?</p>	<p>Unsure. The proposed project provides an assessment of the 15 risks in table on pages 37-38, including potential impacts and risk level. However, the project classification (A, B or C) from the screening is not stated, and more details are needed.</p> <p>CR21: Please provide a brief discussion on the expected project risks. Also make reference to initial gender assessment, in both countries, at relevant AF principles of the check list, as well USPs, if any.</p> <p>CR22: Please include all potential direct, indirect, transboundary, and cumulative impacts and risks that could</p>

		<p>result from the proposed project based on the 15 Adaptation Fund ESP principles.</p> <p>CAR4: Kindly state in Part II.L the category of the project from the screening process (Category A, B or C).</p>
	<p>15. Does the project promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms?</p>	<p>Yes.</p> <p>As per information provided in Part II.B, page 25. The proposed project includes innovative solutions such as low-cost, climate-resilient infrastructure solutions; climate-smart agriculture systems; and regional digital knowledge hub. The project contributes to: <i>“Developing, encouraging and accelerating new innovative adaptation practices, tools and technologies”</i>.</p>
Resource Availability	<p>1. Is the requested project / programme funding within the funding windows of the regional projects/programmes?</p>	<p>Yes.</p>
	<p>2. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 10 per cent of the project/programme for implementing entity (IE) fees and at or below 10 per cent of the project/programme cost for the execution costs?</p>	<p>Yes.</p> <p>All figures are rounded to a whole number, and fees are correct in size (10% each). However, numbers do not add up correctly. No PFG is requested.</p> <p>CR23: Kindly fix the grant amount for each outcome in table under Part III.A. The amount of the outcome should be the same as the one per component in the Project Components and Financing table on page 17. For example, Component 1 is USD 6,625,000, while grant required for outcome 1 is USD 7,131,250. They should be the same as there is one outcome per component.</p>
Eligibility of IE	<p>1. Is the project/programme submitted through an eligible Multilateral or Regional Implementing Entity that has been accredited by the Board?</p>	<p>No.</p> <p>Sahara and Sahel Observatory (RIE) is in re-accreditation process.</p> <p>Please be advised that the findings of the AFB Secretariat’s review of the funding proposal(s) do not reflect, indicate, or prejudice the outcome of the reaccreditation process currently</p>

		underway. The Implementing Entity (IE) shall acknowledge that the funding proposal will not be approved by the Board if the IE's accreditation has expired, and reaccreditation has not been achieved at the time of the Board's decision. Notwithstanding this potential risk, the IE has elected to proceed with the development of the funding proposal.
Implementation Arrangements	1. Is there adequate arrangement for project / programme management at the regional and national level, including coordination arrangements within countries and among them? Has the potential to partner with national institutions, and when possible, national implementing entities (NIEs), been considered, and included in the management arrangements?	n/a at concept stage
	2. Are there measures for financial and project/programme risk management?	n/a at concept stage
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund? Proponents are encouraged to refer to the Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy, for details.	n/a at concept stage
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage
	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage
	6. Is a detailed budget including budget notes included?	n/a at concept stage
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage

	8. Does the M&E Framework include a breakdown of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a at concept stage
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a at concept stage
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage



ADAPTATION FUND

CONCEPT NOTE FOR REGIONAL PROJECT

Title of Project/Programme: ECOVERSE – Enhancing Community Resilience to Climate Extremes Across Diverse African Landscapes in Chad and Togo

Countries: Chad and Togo

Thematic Focal Area¹: Disaster risk reduction and early warning systems

Type of Implementing Entity: Regional Implementing Entity

Implementing Entity: Sahara and Sahel Observatory

Executing Entities: Chad: Triple Capital Tchad, Association pour le Development Integre
Togo: Sustainable Solutions for Africa (SSA), Directorate of Environment under the Ministry of Environment and Forestry (DE/MERF) and Les Instituts de la Formation en Alternance pour le Development (IFAD)

Amount of Financing Requested: 24,895,000 U.S Dollars Equivalent

Project Formulation Grant Request: Yes No

Amount of Requested financing for PFG: N/a

Letters of Endorsement (LOE) signed for all countries: Yes No

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>

Stage of Submission:

- This proposal has been submitted before including at a different stage (pre-concept, concept)
- This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: [Click or tap to enter a date.](#)

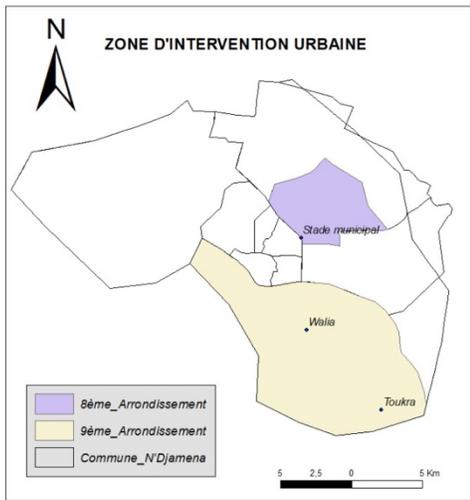
Please note that the Concept note proposal document should not exceed 50 pages, including annexes.

¹ Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.

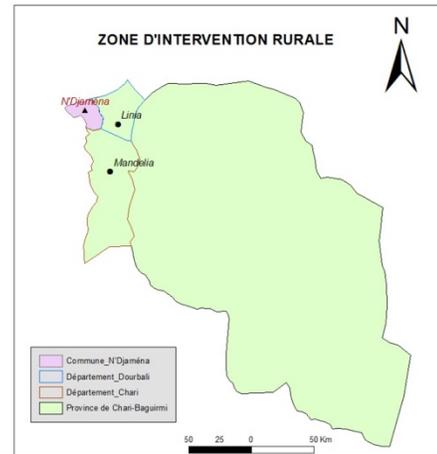
Background and Context:

Geographical location and project sites

1. Africa is experiencing an intensification of climate-related risks, with rising temperatures, increasing rainfall variability, more frequent and severe extreme weather events, and accelerating ecosystem degradation. These shifts are affecting food systems, infrastructure, water availability, and the health and livelihoods of the most vulnerable communities both in rural and urban areas. While these challenges are pan-African, they manifest differently across ecological zones, creating a need for targeted, context-specific adaptation strategies. At the regional level, West and Central Africa face overlapping vulnerabilities:
 - Urban centers in the Sahel suffer from extreme heat, flooding during brief rainy seasons, and prolonged dry periods that strain water and health systems.
 - Transitional zones between forests and savannahs experience intense runoff, soil erosion, and the disruption of rural connectivity.
2. The Enhancing Community Resilience to Climate Extremes Across Diverse African Landscapes in Chad and Togo - ECOVERSE project addresses these challenges through a multi-country approach that integrates site-specific adaptation solutions while fostering cross-country learning and replication. The project will be initially implemented in two countries with diverse climate stressors:
Chad – N'Djamena and surrounding departments (Sahelian Urban and Peri-urban Zone) -
3. Chad is one of the Least Developed Countries (LDCs) in the world and is highly vulnerable to climate change. The country is recognised amongst the hottest countries, and about 75% of its territory is desert. Since the 1970s, Chad has already experienced an increase in mean annual temperature. Temperature is rising in Chad faster than the global average, threatening food security, due to the vulnerability of the agriculture, livestock, fisheries, and land use sectors to climate change. Chad is particularly affected by low yields and declining harvests, which are exacerbated by weak forecasting, preparedness, response and adaptation. Rural areas in the country are most at risk from climate change because that's where most of the poverty is found. However, urban areas are not safe either, as the country's growing cities struggle to accommodate the arrival of new residents.
4. The project sites include 2 urban localities, N'Djamena's 8th and 9th districts. These are densely populated urban areas, with poor drainage infrastructure, exposing informal settlements to health and economic risks during seasonal floods. The project will also be implemented in peri-urban and rural areas of Linia and Mandelia, located in the neighboring Chari Department of the Chari-Baguirmi Province, approximately 30 km east of N' Djamena. The province of Chari-Baguirmi is located in southwestern Chad. It is part of the Sahelian region and borders the capital, N'Djamena, to the northwest (Figure 2). It is an agro-ecological transition province between the capital city and rural areas.
5. Both urban and rural areas are subject to severe flooding over the last few years. For most of the year, residents face water scarcity, exposure to extreme heat (often above 40°C), and a lack of green or shaded infrastructure. Socioeconomically, high poverty rates and limited public services make the region especially vulnerable.



Source: Ministère de l'Administration du Territoire et de la Décentralisation

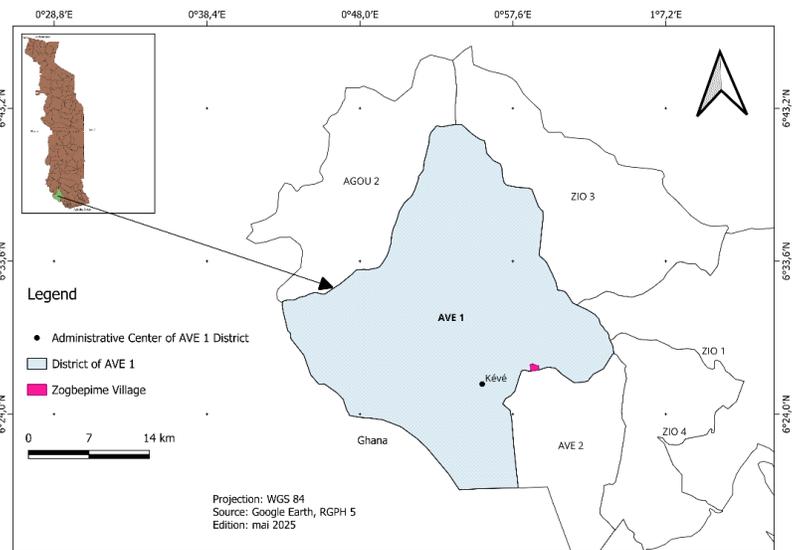


Source: Ministère de l'Administration du territoire et de la Décentralisation

Location of urban and rural project sites in Chad: 8th and 9th District of N'djamena,

²Togo – Zogbepimé (Ave 1 Commune, Forest–Savanna Transition Zone) –

6. Togo is a West African country located in the Gulf of Guinea spanning an area of 56,600 km². Togo is a low-income country and poverty rates remain high, with an estimated 69% of rural households currently living below the poverty line. Togo's central regions are characterized by dual rainy seasons and frequent dry spells, causing erratic crop yields. The project will be implemented in the Zogbepimé region, which is located in the forest-savannah transition area. Agriculture is the predominant activity in the area, mostly composed of rudimentary farming systems, heavily reliant on rainfall. The region suffers from precarious infrastructure, with limited access to electricity and drinking water. Heavy rains cause severe topsoil erosion and the degradation of unpaved roads from runoff regularly cuts off access to markets, healthcare, and schools, exacerbating rural isolation. Smallholder farmers, many of whom are women, face declining land productivity, food insecurity, and limited access to climate-resilient inputs and finance.



Location of project sites in Togo: Zogbepimé

Climate and weather conditions

7. Chad and Togo, though ecologically distinct, are both increasingly exposed to the adverse impacts of climate change. Chad, situated in the Sahelian zone of Central Africa, is characterized by a hot semi-arid climate with high temperatures year-round and a short, intense rainy season. The country is experiencing more frequent

²https://www.google.com/maps/place/Mandjij/@-0.8818805,9.7610129,6.96z/data=!4m6!3m5!1s0x1a7d9f3a50a912df:0xb17f8c80fc9a9918!8m2!3d-1.733333!4d10.95!16s%2Fq%2F12pgc_sbs?entry=itu&g_ep=EgoyMDI1MDYxNi4wIjIXMDS0ASAFAw%3D%3D

and prolonged droughts, increasing average temperatures, and severe rainfall variability, all of which are exacerbating water scarcity, desertification, and food insecurity. Togo, located in West Africa, exhibits a tropical savanna climate with a bimodal rainfall pattern—two rainy seasons and two dry seasons. However, climate change is disrupting this pattern, leading to unpredictable rainfall, dry spells during key planting periods, and more intense storms. Both countries are grappling with the consequences of rising temperatures and erratic precipitation, which threaten natural ecosystems, infrastructure, and the livelihoods of their most vulnerable populations.

8. N'Djamena, located in the Sahelian belt of Chad, and its neighbouring rural provinces experience a hot semi-arid climate characterized by prolonged dry seasons and brief, intense rainy periods. Average annual temperatures in the city range between 28°C and 33°C, with daily highs frequently exceeding 42°C during the peak months from April to June. The rainy season typically spans from late June to early September, but precipitation is both erratic and declining in recent decades, averaging between 300 to 600 millimeters annually. Rainfall often occurs in short, intense bursts, with events exceeding 30 mm/hour becoming increasingly common. These sudden downpours overwhelm N'Djamena's limited drainage systems and result in frequent urban flash floods, particularly in the vulnerable 8th and 9th district, where over 60% of residents live in informal settlements situated in low-lying flood-prone areas. Outside the rainy season, the city endures over 8 months of aridity, with relative humidity often dropping below 20%, and prolonged exposure to Harmattan winds from the Sahara that bring fine dust and exacerbate respiratory illnesses. With projected warming of 2.0–4.4°C by 2050 under medium- to high-emissions scenarios, climate-induced stress on water resources, public health, and urban infrastructure is expected to increase dramatically, placing immense pressure on already underserved populations in N'Djamena's peri-urban neighborhoods.

N'Djamena, Chad



Jun Sep

- 300–600 mm rainfall
- 2.0–4.4°C temperature increase by 2050
- Flash flood risk

Zogbepimé, Togo



Apr-Jul 9ep-Oct

- 1,000–1,200 mm rainfall
- 1.6–3.0°C temperature increase by 2050
- High
- Soil erosion risk

N'Djamena, Chad

Flood Risk



- Average
- Moderate
- Low
- City

Zogbepimé Togo

Erosion Risk

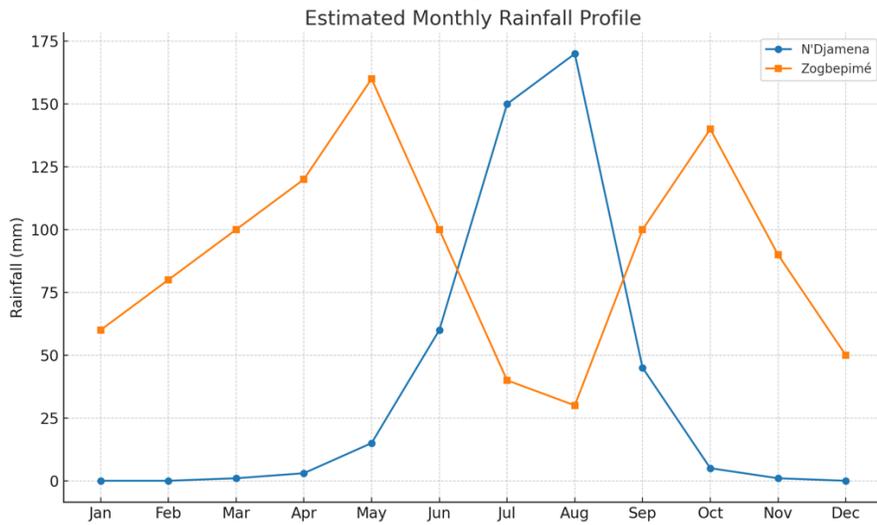


- 1,000–1,200 mm rainfall
- 1.6–3.0°C
- City

9. Zogbepimé, situated in Togo's forest-savanna transition zone within Avé 1 Commune, is characterized by a tropical savanna climate with two distinct rainy seasons and two intervening dry periods. The long rainy season occurs from April to July, while the short rainy season spans September to October. Annual precipitation ranges between 1,000 and 1,200 millimeters, though recent decades have seen greater intra-seasonal variability, with false starts to the rainy season and an increased frequency of 10–15 days dry spells occurring within critical planting periods. Average daily temperatures vary from 22°C in July to 32°C in March, with climate projections indicating an increase of 1.6–3.0°C by mid-century, along with a likely 10–20% decline in seasonal rainfall. Zogbepimé's undulating topography makes it highly susceptible to runoff-induced soil erosion, with some slopes losing up to 30 tons of topsoil per hectare annually during heavy rain events. The

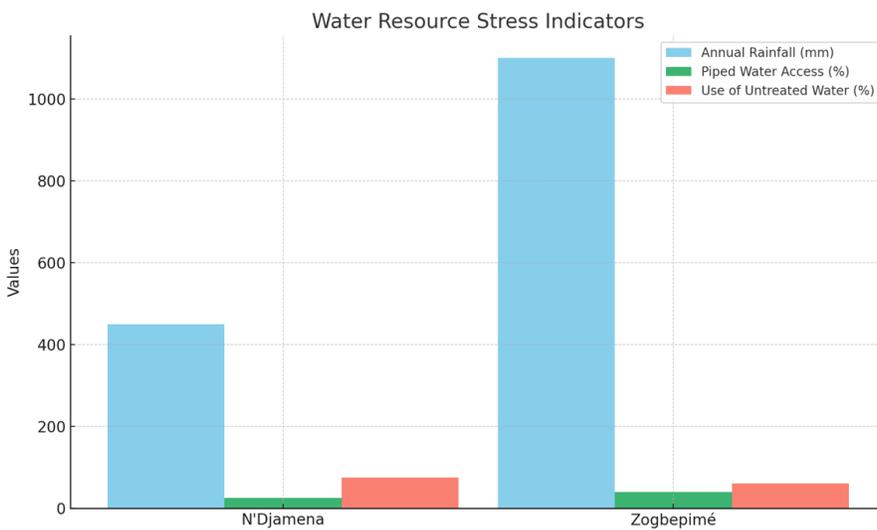
degradation of unpaved roads due to erosion and seasonal flooding frequently cuts off access to essential services—markets, schools, and health posts—particularly for the 70% of the population reliant on subsistence agriculture. As rainfall becomes less predictable and dry spells more prolonged, farmers face significant crop losses and growing food insecurity. These converging climatic and topographic factors render

Zogbepimé a hotspot for climate vulnerability, underscoring the urgent need for integrated adaptation strategies that combine erosion control, climate-smart agriculture, and resilient infrastructure.



Water resources

10. Water availability in both Chad and Togo is shaped by geographic, climatic, and hydrological factors, all of which are being profoundly affected by climate change. Chad’s water resources are predominantly concentrated in its southern region, where seasonal rainfall feeds major rivers such as the Chari and Logone, transboundary waterways that collectively supply over 90% of the inflow to Lake Chad. However, the country’s overall water security is fragile: more than 70% of Chad’s territory is arid or semi-arid, and per capita renewable water availability has been declining due to population growth and diminishing rainfall. Lake Chad itself has lost over 90% of its surface area since the 1960s, shrinking from 25,000 km² to less than 1,500 km² in recent dry years. Meanwhile, Togo benefits from a relatively denser river network, including the Mono, Haho, and Zio rivers, and experiences higher annual rainfall, especially in the forest–savanna transition and coastal zones. However, rainfall is increasingly erratic, and access to water is highly uneven, with over 30% of rural populations relying on unprotected wells or surface water. Deforestation, land degradation, and weak water governance also contribute to seasonal imbalances, where flash floods alternate with dry season shortages.



11. In N'Djamena, one of the capital's most densely populated and underserved urban zones, water insecurity is a chronic and growing crisis. Despite its proximity to the Chari and Logone rivers, the district lacks formal water distribution systems, and less than 25% of households have access to piped water. Most residents depend on shallow hand-dug wells, informal boreholes, or water vendors who sell untreated river water at inflated prices. During the 8–9-month dry season, these informal water sources often dry up or become contaminated, forcing families especially women and children, to travel long distances to access safe water, which can cost up to 10% of daily household income. In the rainy season (June to September), the situation shifts but does not improve: flash floods inundate low-lying neighborhoods, and runoff from poorly drained streets contaminates water sources with faecal matter and solid waste, increasing the incidence of waterborne diseases such as cholera, typhoid, and diarrhoea. The absence of a comprehensive water storage, purification, and stormwater management system has turned seasonal rainfall into both a missed opportunity and a major public health hazard. Urban heat and dust further compound the stress on water demand, particularly for cooling and hygiene.



12. Zogbepimé, located in the forest–savanna transition zone of southern Togo, faces a contrasting yet equally precarious water situation, driven by rainfall variability, sloped terrain, and insufficient infrastructure for water harvesting and conservation. Annual rainfall in the area averages 1,000 to 1,200 mm, but it is unevenly distributed across two main rainy seasons (April–July and September–October). Without adequate water retention infrastructure such as tanks, farm ponds, or check dams, most of this rainfall is lost as runoff, leading to both erosion and missed opportunities for water storage. In the dry season (November–March), shallow wells often run dry, and the few mechanized boreholes serve multiple villages, resulting in long wait times and intercommunal tensions. Women and girls are disproportionately affected, often walking 3–5 kilometers daily to fetch water, which compromises school attendance and household well-being. Moreover, slope-induced erosion clogs streams and reduces groundwater recharge, degrading both water quality and availability. Smallholder farmers, who rely on seasonal rainfall for food production, are particularly vulnerable, as inconsistent water supply leads to crop failure, limits dry season gardening, and constrains livestock rearing. Despite relatively higher annual rainfall compared to Chad, Zogbepimé's water system remains highly fragile due to poor management, lack of infrastructure, and increasing climate stress.

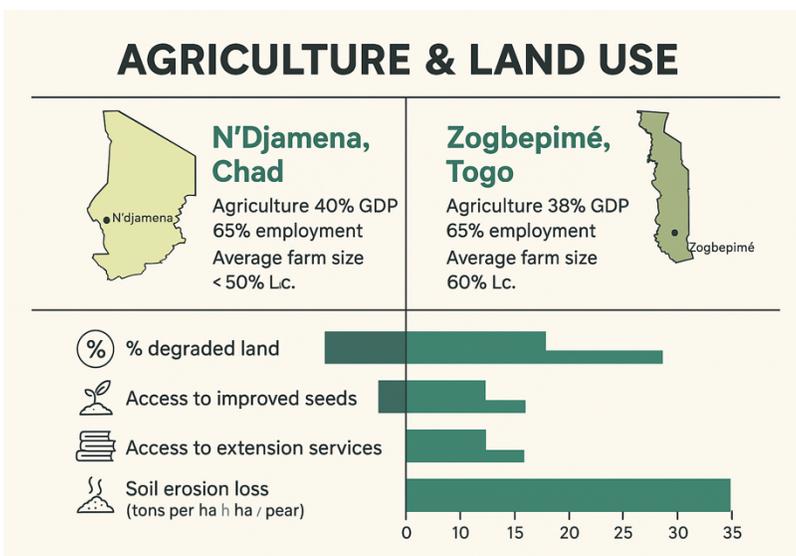
Agriculture and Land use

13. Agriculture across sub-Saharan Africa is increasingly under pressure due to the accelerating impacts of climate change, land degradation, and demographic shifts. The region's predominantly rain-fed farming systems are highly sensitive to changes in precipitation and temperature, with over 60% of the population relying on subsistence agriculture for food and income. Soil fertility depletion, erosion, and deforestation are rampant, driven by unsustainable practices such as slash-and-burn farming, overgrazing, and poor land tenure systems. According to the FAO, the continent loses an estimated 2.8 million hectares of forest annually, much of it converted to low-productivity cropland. As rainfall patterns become more erratic and extreme weather events increase in frequency, agricultural productivity has stagnated or declined in many areas, raising concerns about food security, rural poverty, and ecological sustainability. The need for climate-

smart agriculture, soil conservation, and integrated land-use planning is therefore urgent, particularly in fragile ecosystems like the Sahel and forest–savanna transition zones.

14. In Chad, agriculture accounts for nearly 40% of GDP and employs more than 75% of the population, yet productivity remains low due to outdated techniques, land degradation, and climate shocks. Farming is concentrated in the southern and central zones, where rainfall is relatively more reliable. Key crops include millet, sorghum, groundnuts, and maize, often cultivated under traditional systems with minimal inputs. The northern and Sahelian zones, including areas around N’Djamena, are more arid and depend on pastoralism and small-scale rain-fed cultivation. Over 13 million hectares of land in Chad are classified as degraded, primarily due to wind erosion, nutrient depletion, and unsustainable land use. Agricultural expansion into marginal lands has led to increasing conflict between farmers and herders, while limited access to improved seeds, irrigation, and finance further constrains productivity. Despite the government’s commitment to climate-smart agriculture, uptake remains limited due to weak extension services and lack of infrastructure.

15. In N’Djamena, agriculture plays a secondary but vital role in household resilience. While the district is primarily urban, many residents engage in peri-urban agriculture, cultivating small plots of maize, okra, and leafy greens, and keeping poultry or goats for income and food security. Agriculture activities are more important in the peri-urban and rural areas surrounding N’Djamena.

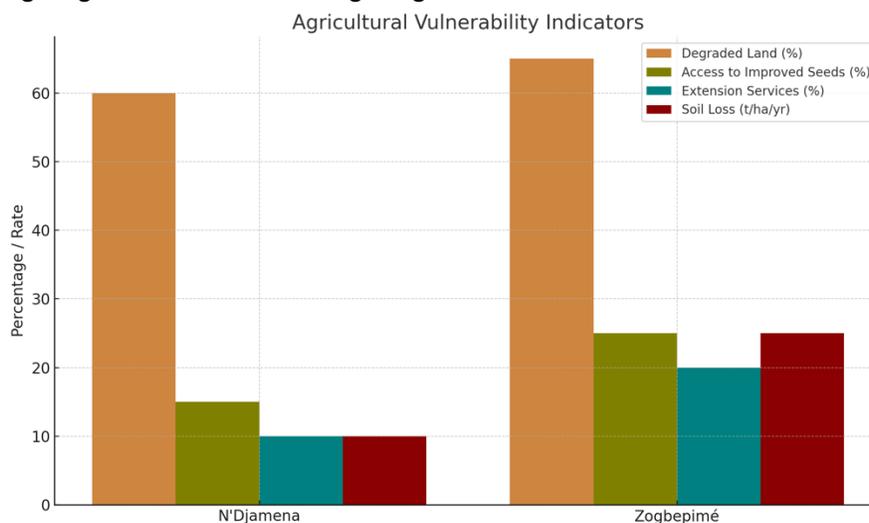


This informal agriculture is often practiced on degraded land along drainage corridors, riverbanks, and vacant lots, without access to irrigation or soil amendments. Erratic rainfall and poor soil fertility, compounded by waste pollution and waterlogging during the rainy season, significantly limit productivity. Moreover, urban expansion has led to encroachment on arable land, while lack of zoning and tenure security creates disincentives for sustainable land management. Without interventions to support soil improvement, water harvesting, and micro-irrigation, these systems remain trapped in a cycle of low yield and vulnerability to climate stress.

16. In Togo, agriculture is similarly central to the economy, contributing about 38% of GDP and employing 65% of the labor force. The country’s fertile southern and central regions support diverse farming systems that produce maize, cassava, yams, groundnuts, and cash crops like cocoa and coffee. However, land use pressures are growing due to population expansion, forest clearance, and soil erosion particularly in the forest–savanna transition zone. More than 80% of agricultural land is cultivated by smallholder farmers using basic tools and little external input, making the sector vulnerable to climate variability. Land degradation, particularly due to erosion and nutrient depletion, affects an estimated 60% of cultivated land, threatening long-term productivity. Although national strategies such as the Togo Climate-Smart Agriculture Investment Plan and the REDD+ framework promote sustainable practices, implementation is uneven, and many rural communities still lack access to adaptation knowledge, technologies, and credit.

17. In Zogbepimé, Avé 1 Commune, agriculture is the primary livelihood, with over 90% of households engaged in smallholder farming. The terrain is hilly and prone to erosion, particularly during heavy rains, which strip topsoil and reduce crop productivity. Farms are typically less than 2 hectares, and rely on rain-fed systems to grow maize, cassava, yams, and legumes. Shifting rainfall patterns, combined with lack of terracing or erosion control, have led to significant land degradation, with some fields losing 20–30 tons of soil per hectare

annually. Livestock rearing, mainly goats and chickens, supplements income but is constrained by water scarcity and grazing limitations during the dry season. Few farmers have access to extension services, improved seeds, or post-harvest storage, and there is limited use of agroforestry or conservation agriculture. The result is declining yields, rising food insecurity, and growing pressure on surrounding ecosystems. Introducing climate-smart land management practices and community-based soil restoration is therefore essential for reversing degradation and building long-term resilience.



Biodiversity and Forests Ecosystems

18. Globally, biodiversity and forest ecosystems are under increasing threat due to deforestation, habitat fragmentation, climate change, and land-use conversion. According to the IPBES (2019), over 1 million species are at risk of extinction, and forest degradation is a major driver of biodiversity loss. Sub-Saharan Africa holds one-fifth of the world's remaining tropical forests and some of the planet's richest biodiversity hotspots, but these ecosystems are rapidly shrinking³. The Sahelian and savanna zones in West and Central Africa, once rich in grassland and woodland biodiversity, are now facing desertification, declining wildlife populations, and ecosystem collapse due to overgrazing, wood harvesting, agricultural expansion, and climate variability. The degradation of forest and savanna ecosystems undermines carbon sequestration, water regulation, and food systems, making communities more vulnerable to climate shocks and reducing nature's ability to buffer extreme events. The restoration and conservation of biodiversity and forests is therefore critical to adaptation, food security, and regional ecological stability⁴.

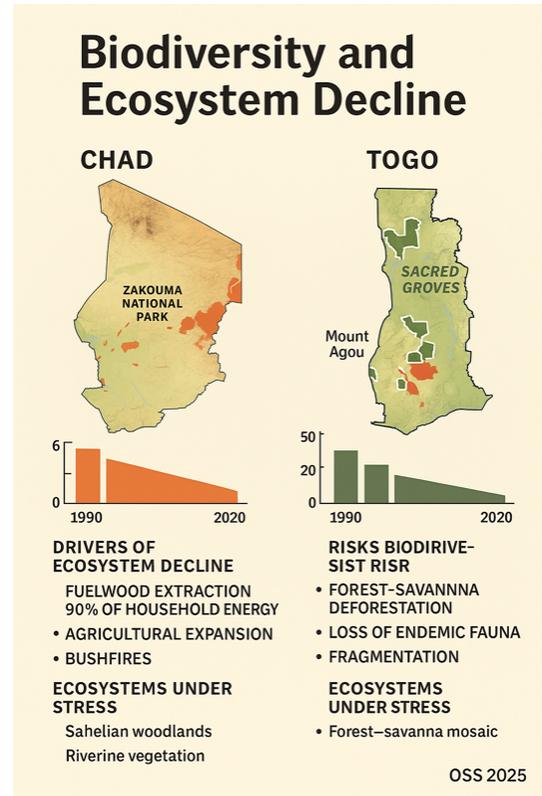
³ IPBES Global Assessment Report on Biodiversity and Ecosystem Services (2019) – <https://ipbes.net/global-assessment>

⁴ CBD Aichi Target 11 Dossier – Chad – <https://www.cbd.int/pa/doc/dossiers/chad-abt11-country-dossier2021.pdf>

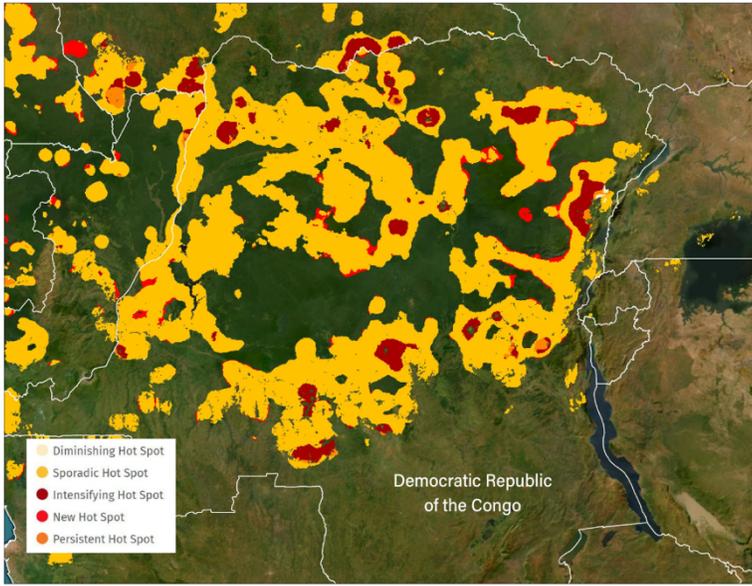
19. Chad possesses a diverse range of ecosystems spanning from Saharan deserts in the north to Sahelian savannas and Sudano-Guinean woodlands in the south. The country is home to key biodiversity hotspots such as Zakouma National Park, which shelters endangered species like the Kordofan giraffe and Central African lion. However, widespread deforestation, estimated at 0.6% annual forest loss, is driven by agricultural expansion, fuelwood collection (which meets 90% of household energy needs), and uncontrolled bushfires. In the Sahelian zones, including around N'Djamena, biodiversity is already under acute stress due to low vegetative cover, soil degradation, and water scarcity. Wildlife populations have declined dramatically, and native species face increasing habitat loss. Community and urban forests are sparse and poorly protected, while tree cover in peri-urban zones is continually encroached upon by informal housing and sand mining.

20. Togo, although a small country, contains a variety of ecological zones including coastal wetlands, savannas, and relict forest patches. Historically, Togo's southern and central regions supported dense semi-deciduous forests, but forest cover has declined from 32% in 1990 to under 18% today, largely due to logging, charcoal production, and slash-and-burn agriculture. The forest-savanna transition zone, including areas like Avé 1 Commune, has seen some of the most rapid degradation due to population pressure and erosion. Despite these losses, Togo still harbors significant biodiversity, including over 3,000 plant species and several endemic reptiles and amphibians⁵. The country's protected area system remains under-resourced, and most forest management is community-based but weakly enforced. Fragmented forest patches continue to serve vital ecological roles such as water retention, pollination, and soil stabilization.

21. In N'Djamena's and surrounding areas, biodiversity and forest ecosystems are severely depleted. The 8th and 9th districts are largely urbanized, with very limited natural vegetation remaining. However, remnants of riverine vegetation along the Chari and Logone floodplains still support pockets of native flora and fauna, including migratory bird species and small mammals. These riparian zones are under pressure from encroachment, sand extraction, and dumping of solid waste. Urban expansion has led to the near-total clearance of shade trees and green belts, increasing the urban heat island effect and reducing natural flood buffering capacity. The scarcity of green spaces in the district undermines urban resilience and environmental health, making investments in reforestation, green corridors, and community greening essential for restoring ecological balance and public well-being.



⁵ CBD Country Profile – Togo – <https://www.cbd.int/countries/profile/?country=tg>

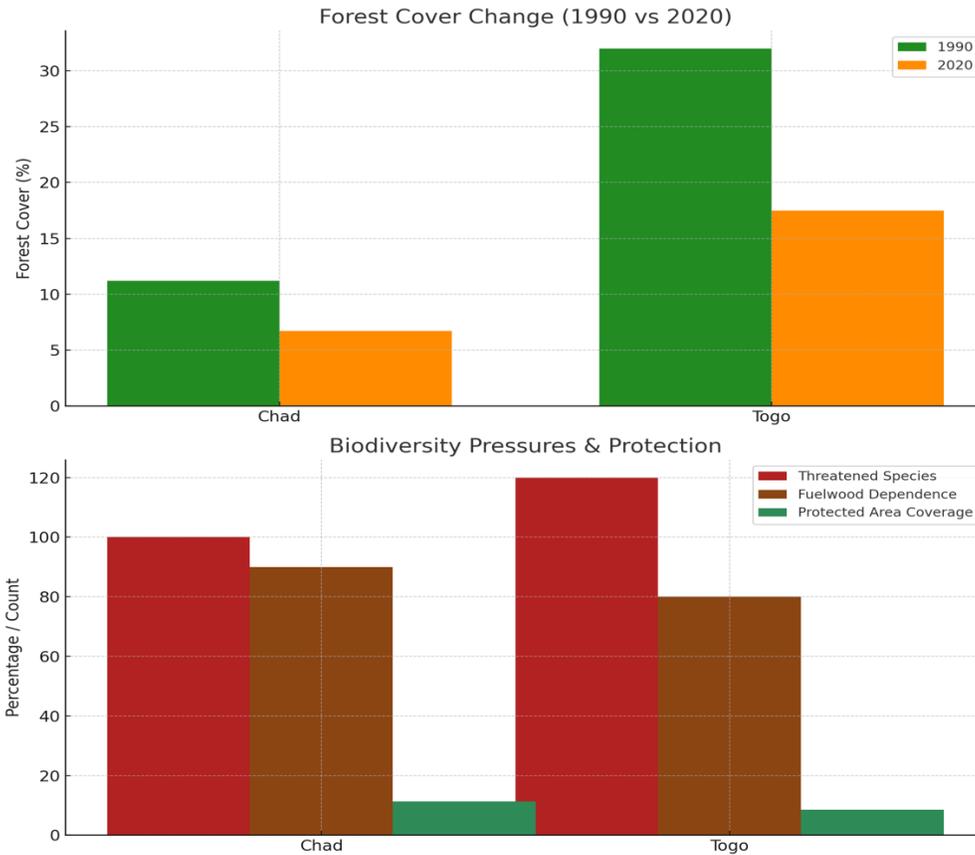


Primary forest loss emerging hot spots, 2002-2023 (Harris et al. 2017). New hot spots represent new patterns of statistically significant loss in 2023.



22. In Zogbepimé, Avé 1 Commune, the forest–savanna mosaic has been heavily fragmented due to decades of agricultural encroachment and fuelwood harvesting. Once characterized by mixed woodland with species such as *Daniellia oliveri*, *Isoberlinia doka*, and *Vitellaria paradoxa*, much of the natural vegetation has been cleared for subsistence farming, leaving behind fallow shrubland and degraded patches⁶. Biodiversity loss is evident in the decline of pollinators, soil fauna, and bird species critical to agro-ecosystem balance. Sacred groves and remnant forest patches still play important cultural and ecological roles but are increasingly threatened by shifting cultivation and lack of protection. Soil erosion further strips organic matter and reduces vegetation regeneration potential. The loss of

biodiversity and ecosystem services directly undermines agricultural productivity and climate resilience, highlighting the need for integrated landscape restoration and agroforestry approaches.



⁶ Forest-Cover Change and Land Use Study in Togo – <https://www.mdpi.com/2073-445X/11/11/1889>

Infrastructure and Urban Environment

23. Urbanization in sub-Saharan Africa is occurring at one of the fastest rates globally, with over 60% of urban dwellers living in informal settlements lacking basic services⁷. Rapid population growth has outpaced infrastructure development, leading to severe deficits in transport, water supply, sanitation, drainage, and housing. According to UN-Habitat, only 45% of urban populations in the region have access to safely managed sanitation, and solid waste collection rates are below 30% in many cities⁸. Additionally, urban centers are increasingly exposed to climate risks such as flash floods, urban heat, and droughts, yet few have resilient infrastructure in place to manage these challenges. Poor spatial planning, weak enforcement of land-use regulations, and underinvestment in basic services exacerbate urban vulnerability, particularly in low-income neighbourhoods⁹.
24. Chad's urban infrastructure is underdeveloped, particularly outside N'Djamena. The capital has grown rapidly, with an estimated population of 1.5 million but faces severe deficits in roads, drainage, sanitation, electricity, and housing¹⁰. According to the World Bank, only 15% of roads in N'Djamena are paved, and most neighborhoods lack functioning stormwater systems¹¹. Access to improved sanitation stands at 23%, while only 9% of households have access to piped water in urban areas. Informal settlements dominate the urban landscape, where residents often build on floodplains without tenure security or infrastructure support. The expansion of informal housing is largely unregulated, with limited coordination between urban planning agencies and local authorities¹².
25. The project sites are in Chad characterized by unplanned development, poor road conditions, and lack of drainage infrastructure. They are also prone to seasonal flooding and the poorly drained streets and clogged canals result in stagnant water that poses serious public health hazards, especially for waterborne diseases like cholera and dysentery. Only a small fraction of households are connected to the electricity grid, and open defecation remains common in several neighborhoods. Public infrastructure such as markets, schools, and health posts is often dilapidated or under-resourced. Informal housing expansion on reclaimed wetlands has reduced the city's natural drainage capacity, while rising land prices in the city center push vulnerable groups further into risk-prone zones.
26. Togo's urban population is growing at over 3.8% annually, with increasing pressure on cities such as Lomé, Kpalimé, and Tsévié¹³. Despite this, basic infrastructure coverage remains limited. Only 36% of Togolese households have access to improved sanitation, and solid waste management systems cover less than 20% of municipalities¹⁴. Urban road networks are poorly maintained, particularly in semi-rural communes where feeder roads become impassable during the rainy season. Rapid urban sprawl in peri-urban areas like Avé 1 Commune has outpaced public service delivery. Weak land administration systems and fragmented institutional mandates further limit effective urban governance. Many settlements in secondary towns rely on self-built infrastructure, resulting in low resilience to erosion, floods, and public health risks¹⁵.
27. Zogbepimé, a rural-urban fringe community in the forest-savanna transition zone, faces a different set of infrastructure challenges. The area lacks paved roads, and during the rainy season, key feeder roads become inaccessible due to flooding and erosion¹⁶. Most households rely on communal wells for water, but these often dry up or become contaminated during the dry season. Sanitation is limited to traditional pit latrines, and formal waste collection services are non-existent. Schools and health centers exist but are often

⁷ UN-Habitat. (2022). World Cities Report 2022: Envisioning the Future of Cities. <https://unhabitat.org/wcr/>

⁸ WHO/UNICEF JMP. (2021). Progress on household drinking water, sanitation and hygiene 2000–2020. <https://washdata.org/>

⁹ IPCC. (2022). Sixth Assessment Report: Urban Systems and Settlements – Chapter 8.

¹⁰ World Bank. (2022). Chad Country Profile: Urban and Infrastructure Indicators. <https://data.worldbank.org/country/chad>

¹¹ UN-Habitat. (2020). N'Djamena City Profile and Urban Vulnerability Assessment.

¹² Global Facility for Disaster Reduction and Recovery (GFDRR). (2021). Chad Urban Flood Risk Assessment.

¹³ World Bank. (2022). Togo Urbanization Review: Building Cities for Growth and Inclusion. <https://documents.worldbank.org>

¹⁴ African Development Bank (AfDB). (2019). Togo Urban Sector Review and Infrastructure Needs.

¹⁵ Government of Togo. (2021). Plan National d'Aménagement du Territoire (PNAT) – Avé Prefecture.

¹⁶ Government of Togo. (2021). Plan National d'Aménagement du Territoire (PNAT) – Avé Prefecture.

overcrowded and under-equipped. Housing is predominantly made of mud bricks, vulnerable to both heavy rains and termites. The lack of climate-resilient infrastructure in Zogbepimé increases vulnerability to weather shocks, while weak land-use planning leads to scattered development and inefficient service delivery. Community demand for sustainable infrastructure such as water harvesting systems, improved roads, and solar energy, remains high but largely unmet.

Population and Socioeconomic

28. Across sub-Saharan Africa, rapid population growth and high poverty rates pose significant challenges to sustainable development. The region hosts 17 of the world's 20 fastest-growing populations, with a median age under 20 years and annual growth rates exceeding 2.5% in many countries¹⁷. Despite economic progress in some areas, over 400 million people remain in extreme poverty, and approximately 80% of workers are engaged in informal employment¹⁸. These dynamics exacerbate inequality, constrain access to education and health services, and increase pressure on land, water, and infrastructure. Rural–urban migration is accelerating, driven by climate change, insecurity, and lack of economic opportunity, yet urban labor markets often fail to absorb new entrants, especially youth and women. Gender disparities remain widespread, with sub-Saharan Africa exhibiting some of the world's lowest rates of women's participation in formal employment and decision-making processes¹⁹.
29. Chad's population is estimated at 18.1 million (2024), with a 3.0% annual growth rate, making it one of the fastest-growing populations in Central Africa²⁰. The population is overwhelmingly young, more than 65% are under the age of 25 and primarily rural, with only 23% residing in urban areas. The country ranks 190th of 191 on the UNDP Human Development Index (HDI 2023), with over 42% of the population living below the national poverty line²¹. Illiteracy is high, particularly among women, with female literacy at just 28%, compared to 48% for men²². Unemployment and underemployment are widespread, particularly among youth. Access to basic services remains severely limited: only 8% of rural populations have access to electricity, and 45% to improved drinking water²³. Gender inequalities are pronounced, especially in land rights, education, and economic participation, with deeply rooted sociocultural norms limiting women's roles in public life and decision-making.
30. The majority of residents live in informal settlements characterized by insecure land tenure, inadequate housing, and limited access to basic services. Livelihoods are largely informal, with residents engaged in small-scale commerce, artisanal work, and day labor. Women and youth face disproportionate challenges: female-headed households are common, yet often lack secure access to credit, land, or public services. School attendance is inconsistent due to overcrowded facilities and economic hardship, and dropout rates remain high especially for girls after primary school. Health indicators are also poor, with frequent outbreaks of cholera and malaria linked to inadequate sanitation and drainage infrastructure. The compounded effects of poverty, youth unemployment, and climate-related shocks (flooding, drought) exacerbate vulnerability and increase reliance on unsustainable coping strategies²⁴.
31. Togo's population is estimated at 9.1 million (2024), with an annual growth rate of 2.5%. The country is undergoing rapid urbanization currently at 43% urban population with key cities such as Lomé, Tsévié, and Kpalimé expanding rapidly. Togo ranks 162nd of 191 on the Human Development Index (HDI 2023), with a national poverty rate of 46.4%, and even higher rates in rural areas [5]. The education system has improved in recent years, but disparities remain: female secondary school enrolment stands at 44%, compared to 55%

¹⁷ United Nations Population Division (2023). World Population Prospects. <https://population.un.org>

¹⁸ World Bank (2023). Poverty and Shared Prosperity Report. <https://www.worldbank.org/en/publication/poverty-and-shared-prosperity>

¹⁹ African Union (2022). African Gender Scorecard.

²⁰ World Bank Open Data. Chad and Togo Country Indicators. <https://data.worldbank.org>

²¹ UNDP (2023). Human Development Report. <https://hdr.undp.org>

²² UNESCO Institute for Statistics (2022). Education Indicators for Chad and Togo.

²⁴ Government of Togo. (2021). Monographie de la Commune d'Avé 1.

for males. Informal employment constitutes over 85% of all jobs, and rural youth face high barriers to formal employment. Gender gaps persist across sectors, especially in agriculture, where women provide 70% of labor but own less than 10% of land. Access to health, financial services, and infrastructure is lower in rural and peri-urban areas, particularly in regions like Plateaux and Maritime, where Avé 1 Commune is located.

32. Zogbepimé is a peri-urban farming community located in the Plateaux region, within the Avé 1 Commune. The area has a population of approximately 6,500 residents, most of whom rely on subsistence agriculture and petty trade for their livelihoods. Poverty levels are high, with an estimated 65% of households living below the national poverty line, and limited access to essential services such as clean water, healthcare, and electricity. Youth unemployment is a growing concern, particularly due to seasonal migration and limited off-farm job opportunities. Households are typically large, with women playing a central role in agriculture, food processing, and child-rearing. However, women's access to land and extension services remains minimal, and they are underrepresented in local decision-making structures. Vulnerability to climate shocks such as erratic rainfall, erosion, and dry spells further undermines household resilience. Despite these challenges, the community has strong social networks and local leadership structures that could be leveraged to support inclusive development and adaptive capacity.

Climate Change, droughts, heat vulnerability and threats

33. Climate change is intensifying the frequency and severity of extreme weather events globally, with sub-Saharan Africa among the most vulnerable regions despite contributing less than 4% of global greenhouse gas emissions²⁵. Increasing global temperatures have led to more frequent and prolonged droughts, reduced rainfall reliability, and intensified heatwaves²⁶. According to the IPCC's Sixth Assessment Report, West and Central Africa are projected to experience temperature increases of 2–3°C by 2050 under medium emission scenarios, along with a heightened risk of agricultural failure, water stress, and heat-related health crises. The combination of climate hazards, weak infrastructure, and high poverty levels contributes to compounded climate risks, particularly in fragile and semi-arid states.
34. Chad is highly vulnerable to climate change, particularly due to its geographic position in the arid and semi-arid Sahel. The country ranks among the 10 most climate-vulnerable countries globally in the ND-GAIN Index²⁷. Average temperatures have already increased by 1.2°C since the 1970s, and extreme heat days are becoming more frequent especially in Sahelian zones like N'Djamena, where summer temperatures regularly exceed 44°C²⁸. Rainfall is highly variable, with the rainy season shrinking in duration and intensity over the past decades. Droughts have become more frequent and prolonged, leading to reduced agricultural productivity, food insecurity, and mass livestock losses²⁹. Additionally, climate-induced stress on water resources including the shrinking of Lake Chad by over 90% since the 1960s has contributed to displacement, conflict, and livelihood disruptions in both urban and rural areas³⁰.
35. Chad does not have many studies on projections and the evolution of climate hazards. Some of the recent studies predict that the air temperature in Chad is expected to increase by 2.1°C to 4.3°C by 2080, depending on different GHG emission scenarios. The number of very hot days per year (days when the maximum temperature exceeds 35°C) is also expected to increase with a high degree of certainty across the country. For the RCP6.0 scenario, the median of the multi-model ensemble (average for the whole country) predicts 17 additional very hot days per year in 2030 compared to 2000, 31 in 2050 and 49 in 2080. In some parts of the country, particularly in the centre, this equates to more than 300 very hot days per year by 2080. Future projections of precipitation in Chad are less certain than projections of temperature change due to high natural

²⁵ IPCC (2022). Sixth Assessment Report – Working Group II: Climate Impacts, Adaptation and Vulnerability.

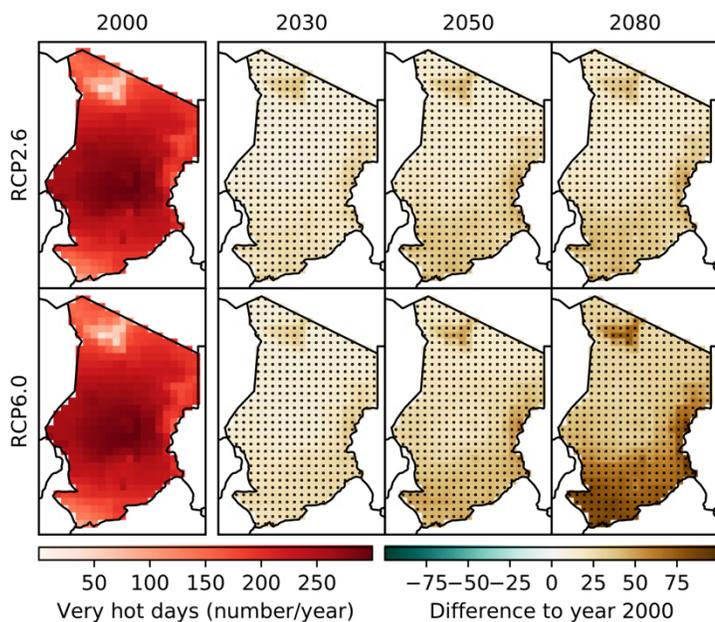
²⁶ UNDRR (2022). Global Assessment Report on Disaster Risk Reduction.

²⁷ University of Notre Dame. (2023). ND-GAIN Country Index – Chad. <https://gain.nd.edu/our-work/country-index/>

²⁸ World Bank (2021). Climate Risk Profile: Chad. <https://climateknowledgeportal.worldbank.org>

²⁹ FAO (2020). Building Climate Resilience in the Sahel – Chad Country Brief.

³⁰ UNEP (2019). Lake Chad: A Climate-Induced Crisis.



year-to-year variability. Heavy precipitation events are expected to become more intense. At the same time, the number of days with heavy precipitation events is expected to increase.

36. Togo experiences a tropical climate, with increasing variability in rainfall and rising temperatures that affect both the coastal and inland zones. Mean annual temperatures have risen by 1.1°C since 1960, and climate models project an additional 1.5–2.5°C rise by 2050. The numbers of hot days and hot nights increased by 15.5% and 21.5%, respectively. The country is experiencing more erratic rainfall patterns, leading to both flooding and drought within the same agricultural cycle. This is particularly impactful given that living conditions are significantly shaped by the climate conditions wherein more

than 50% of the population is engaged in rainfed agriculture, which represents almost 45% of the country's GDP. The northern and central regions are particularly affected by seasonal droughts and dry spells, while flash floods are increasing in the south due to intense rainfall events. Heat-related stress is rising, especially in semi-urban and rural communities with limited cooling or shelter infrastructure. The combined impacts of drought and heatwaves are reducing crop yields, straining water availability, and increasing the prevalence of vector-borne diseases³¹.

37. Future climate projections for the whole country predicted an increase in mean temperature by 1.3°C and 2°C (2021-2050) as compared to the baseline (1976-2005) for the RCP4.5 and RCP8.5, respectively. The regions of Savannas, Kara, Southwestern Plateaux, and Maritime will experience significant changes in ambient temperature. Meanwhile, heatwaves have already become a common threat across the country, with significant impacts on livelihoods, human and animal health, and natural resources (Fig 1)8. Annual rainfall is projected to increase in the western zones of Plateaux and Kara regions, while reduction is predicted in the Savanes and Maritime regions under RCP4.5 and RCP8.5. This trend is expected to persist until 2071-2100, except for the Kara region which will experience a significant decrease in precipitation under RCP4.5. In the long run, an increase in the occurrence and intensity of extreme rain events is projected almost on the whole country (RCP4.5 and RCP8.5).
38. In N'Djamena and the neighbouring areas, residents are increasingly exposed to the compounded effects of extreme heat, seasonal flooding, and prolonged drought. The area experiences average daily temperatures exceeding 40°C for several months annually, with poor housing materials exacerbating indoor heat stress. Informal settlements, often located in low-lying floodplains, face frequent inundation during intense rain events between June and September. Flash floods often contaminate shallow wells and disrupt mobility, leading to health risks and economic loss³². Outside the rainy season, the district suffers from acute water scarcity due to long dry spells and limited access to piped water. Urban vegetation cover is minimal, eliminating natural cooling mechanisms. Vulnerability is highest among women, children, and elderly residents who lack access to cooling, healthcare, and evacuation options during climate extremes.
39. Zogbepimé is increasingly affected by erratic rainfall, droughts, and heatwaves that disrupt local agriculture and livelihoods. Once predictable seasonal patterns have shifted, with rains arriving late or ceasing early,

³¹ Togo Ministry of Environment (2022). Second National Communication on Climate Change.

³² UN-Habitat (2020). N'Djamena Urban Vulnerability Profile.

leading to crop failure rates of up to 40% in bad years³³. The area lacks water retention infrastructure, so droughts leave fields parched, while heavy rains quickly wash away topsoil. High temperatures during the dry season often reaching 38°C, accelerate soil moisture loss and increase heat stress on vulnerable populations. Women farmers, who make up the majority of agricultural labor, are particularly affected due to limited access to irrigation, shade, or climate-resilient inputs. These climatic extremes have led to seasonal out-migration of youth and reduced household food security, particularly in female-headed households.

40. Future projections suggest that the Ave 1 region will continue to experience rising temperatures, with significant warming expected by the end of the century, especially under the worst-case CO2 emission scenario (SSP5-8.5). In this scenario, minimum and maximum temperatures are predicted to rise significantly between 2021 and 2050, at rates of 0.46 and 0.4 degrees Celsius per decade, respectively. From 2071 to 2100, the rates of increase are expected to accelerate to 0.81 and 0.76 degrees Celsius per decade for minimum and maximum temperatures, respectively. Under an intermediate scenario, temperatures are also anticipated to rise, but at a slower pace compared to the worst-case scenario.
41. Regarding climate hazards, the analysis suggests that indicators of heat stress, such as the frequency, number, and intensity of heat waves, are expected to increase significantly in the Ave 1 region in the future compared to the baseline. This rise in heat stress could adversely impact the local economy and daily life. Indeed, increased temperatures could heighten the demand for water, not only for agriculture but also for forestry, fisheries, and aquaculture, thereby straining water resources. Additionally, higher temperatures and more frequent heat waves could exacerbate health problems, increase energy consumption, and place additional strain on Togo's hydroenergy-dependent country, which relies heavily on water resources for energy generation. In addition, heat stress could disrupt educational activities, and place additional burdens on healthcare and social services.

Project Objectives

42. The main objective of the ECOVERSE project is to enhance the climate resilience and adaptive capacity of vulnerable communities across diverse ecological zones in Chad and Togo by implementing integrated, context-specific adaptation solutions and fostering cross-border learning, regional cooperation, and policy alignment.
43. Specific Objectives is:
 1. To reduce the vulnerability of urban, peri-urban, and rural populations to climate-related hazards (e.g., extreme heat, flooding, landslides, and drought) through the design and implementation of resilient infrastructure and nature-based solutions.
 2. To restore and sustainably manage land and water resources in areas affected by degradation, deforestation, and climate-induced soil erosion through the adoption of climate-smart agriculture and water conservation practices.
 3. To empower local communities especially women and youth by establishing inclusive, community-driven financing mechanisms (e.g., micro-grants, revolving funds, savings groups) that support locally led adaptation initiatives and enhance economic resilience.
 4. To build and institutionalize knowledge-sharing systems to strengthen local technical capacity, promote cross-country learning, and facilitate the dissemination of effective adaptation strategies.
 5. To support evidence-based policy development and scaling of effective adaptation models through bi-national collaboration, engagement in regional platforms, and integration into national adaptation planning frameworks.

³³ IFAD (2023). Rural Vulnerability Assessment – Plateaux Region, Togo.

Theory of Change (TOC) and paradigm shift

44. The ECOVERSE project is anchored in the theory of change that **IF** climate-vulnerable communities across two distinct ecological zones, urban Sahelian settlements in Chad and forest–savanna farming systems in Togo, are equipped with the tools, infrastructure, knowledge, and financial opportunities to lead their own adaptation efforts, **THEN** they will be able to reduce their exposure to climate-induced hazards, restore ecosystem functionality, and improve their livelihoods amid increasing climate shocks. This transformation is possible **BECAUSE** targeted, context-specific interventions, such as climate-resilient housing, ecosystem-based agriculture, slope stabilization, and community-managed adaptation funds, directly address the structural drivers of vulnerability, including degraded land, inadequate infrastructure, limited access to finance, and weak local institutions.
45. By combining locally led planning with regionally informed best practices, ECOVERSE enables communities to adopt and sustain adaptive behaviors that are socially inclusive, economically viable, and ecologically sound. Furthermore, engaging national and subnational institutions in the design, implementation, and scaling of these approaches helps strengthen the enabling environment for long-term resilience. Because the project embeds systems to document, share, and translate successful local experiences into policy guidance, ECOVERSE is positioned to deliver not only direct adaptation benefits, but also contribute to the long-term governance architecture for climate resilience in West and Central Africa.
46. ECOVERSE represents a paradigm shift away from top-down, sectoral, and externally driven adaptation programming toward an integrated, community-led, and ecosystem-based approach. Historically, climate adaptation in the region has been fragmented, limited in scale, disconnected from the realities of vulnerable populations, and overly reliant on technical solutions introduced without local ownership. ECOVERSE disrupts this model by empowering communities as co-creators of their own resilience pathways, supported by resilient infrastructure, inclusive finance mechanisms, and peer-to-peer learning systems rooted in local contexts.
47. This shift is both structural and systemic. Structurally, the project integrates interventions across urban infrastructure, climate-smart agriculture, water resource management, community financing, and ecosystem restoration, recognizing that resilience must be cross-sectoral and place-based. Systemically, it strengthens the institutional capacities and governance systems that allow local innovation to scale, through decentralized planning, devolved financing, and bi-national cooperation. The establishment of a regional knowledge-sharing and policy engagement platform ensures that local solutions are not isolated, but inform broader transformations in how climate adaptation is conceptualized, financed, and delivered in Africa. By operationalizing this dual shift, ECOVERSE lays the foundation for equitable, durable, and scalable resilience—moving communities from coping with climate risks to thriving in the face of them.

Project Components and Financing

Project Components	Expected Outcomes	Expected Outputs	Countries	Amount (USD)
1. Climate-Resilient Infrastructure Development	Urban and peri-urban populations have increased protection from heat, floods, and water scarcity	Earth-brick climate-resilient housing units	Chad, Togo	2,500,000
		Permeable drainage roads and shaded community spaces	Chad, Togo	2,375,000
		Rainwater harvesting and solar-powered water systems	Chad, Togo	1,750,000
Total Component 1				6,625,000
2. Climate-Smart Agriculture and Water Management	Smallholder farmers adopt sustainable land use practices and improve productivity	Agroforestry systems (e.g., intercropping)	Chad, Togo	2,300,000
		Contour bunding and erosion control infrastructure	Chad, Togo	1,900,000
		Household and community-level water conservation systems	Chad, Togo	1,850,000
Total Component 2				6,050,000
3. Local Adaptation Financing Mechanisms	Community members access financial support for locally led adaptation solutions	Community micro-grants awarded to grassroots initiatives	Chad, Togo	900,000
		Community savings groups and revolving funds established	Chad, Togo	950,000
		Financial literacy and inclusion training provided	Chad, Togo	650,000
Total Component 3				2,500,000
4. Ecosystem Restoration and Risk Reduction	Landscapes and ecosystems are rehabilitated and climate risks reduced	Restoration of degraded forest and agricultural land (2,000 ha)	Chad, Togo	1,200,000
		Landslide risk areas stabilized with vegetation	Chad, Togo	1,400,000
		Urban green corridors and reforestation activities	Chad, Togo	700,000
Total Component 4				3,300,000
5. Regional Knowledge and Learning Platform	Bi-national cooperation strengthens local capacity and informs policy	Regional knowledge-sharing hub created	Chad, Togo	650,000
		Annual adaptation conferences and peer exchange visits	Chad, Togo	700,000
		Digital tools for capturing, analyzing, and sharing lessons	Chad, Togo	550,000
Total Component 5				1,900,000
TOTAL (Components 1–5)				20,375,000
Project Execution Cost				2,260,000
Total Project Cost				22,635,000
Project Cycle Management Fee (10%)				2,260,000
Total Project Cost				24,895,000

Projected Calendar:

Milestones	Expected Dates
Start of Project Implementation	June 2026
Mid-term Review (if planned)	October 2028
Project/Programme Closing	April 2031
Terminal Evaluation	October 2031

PART II: PROJECT JUSTIFICATION

A. Description of Project Components.

48. Sub-Saharan Africa faces mounting climate threats, despite contributing minimally to global emissions. According to the 2022 IPCC Sixth Assessment Report, the region is experiencing accelerated warming, heightened drought occurrences, and increased flood risks. These climate threats are further exacerbated by pervasive poverty, weak institutional readiness, and inadequate infrastructure, making adaptation efforts particularly challenging.
49. Chad is one of the world's most climate-vulnerable and least-prepared countries, ranking 187th out of 191 on the ND-GAIN index. Since the 1970s, the Sahelian region, including N'Djamena, has seen temperature increases ranging from 0.5°C to 1.7°C, with projections reaching 2.4°C by 2050 and up to 4.5°C by 2100. Frequent hydrometeorological disasters, including the devastating 2022 floods that displaced over 139,000 people and caused over USD 400 million in damage, highlight escalating climate risks. Lake Chad has lost over 90% of its surface area since the 1960s, contributing to massive displacement and heightening humanitarian needs across the basin. The country also suffers from weak early warning systems, with nearly 80% of its weather-monitoring equipment nonfunctional, severely limiting preparedness for future climate events. These overlapping threats are exacerbating food insecurity, migration, and conflict, with over 87% of the population affected.
50. Togo, though less vulnerable than Chad, also faces significant climate challenges. It ranks 49th in vulnerability and 119th in readiness globally on the ND-GAIN index. Since 1960, average temperatures have risen by about 1.1°C, with projections of an additional 1.5 to 2.5°C by mid-century. The country is experiencing increasing variability in rainfall, marked by both droughts and flash floods. Critical adaptation capacity gaps exist, especially in rural areas like Avé 1 Commune, which lacks sufficient agro-meteorological services, water reservoir infrastructure, and early warning systems. These issues threaten agricultural productivity, accelerate soil degradation, and strain water availability in zones like Zogbepimé.
51. In N'Djamena, which hosts about 10% of Chad's population (approximately 1.7 million), climate vulnerability is driven by rapid urbanization (4.8% annual growth), heatwaves, flash floods, and weak infrastructure. Adaptation strategies outlined in Chad's NAP, NDC, and SNC emphasize the need to prioritize urban resilience through improved housing, drainage, and water systems.
52. Zogbepimé, located in the Plateaux agro-ecological zone of Togo, is highly vulnerable to erratic rainfall, erosion due to sloped terrain, and agricultural disruptions. National and local frameworks identify this area as a priority for watershed management, sustainable land use, and infrastructure rehabilitation, particularly for women-led farming communities.
53. The selection of Chad and Togo as project countries for ECOVERSE is justified by some shared characteristics of their vulnerability and institutional gaps. Heatwaves, floods, and droughts are undermining urban, peri-urban and rural livelihoods and pressuring basic service delivery. Current climate interventions are fragmented, largely externally driven, and insufficiently tailored to urban needs. The ECOVERSE project introduces an integrated, community-led approach that combines local leadership with climate-smart infrastructure, ecosystem restoration, and decentralized finance. This design addresses root vulnerabilities while offering a scalable model for adaptation across the region's ecological zones.
54. In addition, together, the selected locations provide a robust platform for testing integrated resilience measures that address urban, rural, and transitional landscapes across West and Central Africa. The regional diversity allows for comparative learning and enhances the transferability of successful adaptation practices across similar settings. The table below provides the scenario and cross cutting criteria for implementation of activities in proposed project areas as presented in the comparative justification table below with a cross-cutting criteria.

Selection Criteria	N'Djamena and Chari-Baguirmi Region (Chad)	Zogbepimé – Avé 1 Commune (Togo)	Cross-Cutting Relevance to ECOVERSE
Climate Stressors	Heatwaves, flash floods, prolonged drought, urban heat island	Erosion, erratic rainfall, dry spells, sloped terrain runoff	Demonstrates the need for climate-resilient infrastructure and NbS solutions tailored to different ecological zones
Vulnerable Populations	Urban and rural poor, informal settlers, limited infrastructure access	Smallholder farmers, women/youth in subsistence agriculture	Enables gender-responsive and socially inclusive financing mechanisms
Adaptation Gaps	Lack of resilient housing, poor drainage, unreliable water systems	Degraded land, poor roads, insufficient watershed management	Supports demonstration of CSA, infrastructure rehabilitation, and water-smart technologies
Policy Alignment	Reflected in Chad's NDC, NAP, Vision 2050	Integrated in Togo's NAP, PND 2025, regional resilience goals	Anchors project in national and regional adaptation planning for greater scalability and impact
Transformation Potential	Urban adaptation model for Sahelian cities	Agro-ecological innovations for rural savanna zones	Contributes to paradigm shift toward locally led, ecosystem-based resilience strategies

55. The ECOVERSE Project will be implemented through 5 components. All five components are mutually reinforcing to support multifaceted resilience; Infrastructure (Component 1) reduces exposure to a primary climate risk in the region, agriculture (Component 2) builds adaptive capacity and enhances economic resilience of vulnerable communities, local finance (Component 3) empowers action and ensures sustainability, ecosystem restoration (Component 4) strengthens natural and environmental capital, and knowledge systems (Component 5) enable scale-up and policy uptake. Implemented together, they create a comprehensive, multi-layered approach to resilience that combines physical, social, ecological, and institutional dimensions, delivering far greater impact than isolated national initiatives.

Component 1: Climate-Resilient Infrastructure Development

56. This component introduces context-appropriate infrastructure to mitigate the impacts of extreme heat, flooding, and chronic water stress, especially in urban and peri-urban environments. Key adaptation activities include the construction of thermally efficient earth-brick housing in both countries using locally sourced materials to enhance climate resilience while generating local employment. In Chad, the focus will be on the installation of permeable drainage systems and green corridors in flood-prone neighborhoods of N'Djamena and the Chari-Baguirmi Province, which are highly exposed to flash flooding and extreme heat. These interventions will also include the restoration of degraded riparian zones along the Chari and Logone rivers to improve stormwater management and restore urban ecosystem buffers. In Togo, interventions will target Zogbepimé and surrounding areas in Avé 1 Commune, with a focus on rainwater harvesting systems equipped with solar-powered purification units, designed to address dry-season water scarcity. Additionally, shaded agroforestry corridors will be developed along key rural pathways to reduce surface runoff, lower ambient temperatures, and facilitate erosion control. These measures directly reduce climate exposure by improving shelter, enhancing drainage, and ensuring water availability throughout the year. At the regional level, this component allows diverse climate-resilient infrastructure models, such as urban flood-proofing in Sahelian cities like N'Djamena and water harvesting in tropical zones like Zogbepimé, to be compared, refined, and transferred across countries. By integrating local materials and labor, the approach also fosters economic co-benefits through job creation and skills development. This component supports Component 2 by protecting agricultural land from waterlogging and runoff, and complements Component 4 by integrating green infrastructure that enhances ecosystem functions and supports biodiversity conservation.

Outcome 1: Urban and peri-urban populations have increased protection from heat, floods, and water scarcity

57. This outcome focuses on enhancing the resilience of vulnerable urban and peri-urban communities, particularly in flood-prone and water-scarce areas, through the construction of climate-smart infrastructure such as earth-brick housing, green corridors, water-harvesting systems, and improved drainage networks. These measures help reduce exposure to extreme temperatures, seasonal flooding, and prolonged droughts.

Output 1.1: Earth-brick climate-resilient housing units

58. This output supports the construction of low-cost, thermally efficient housing using interlocking compressed stabilized earth blocks (iCSEBs) to reduce heat stress and vulnerability to floods in urban and peri-urban settings. These structures offer passive cooling, improved durability, and lower environmental impact compared to conventional housing. They reduce households' exposure to extreme heat and displacement during floods, while also promoting energy efficiency. The use of this technology was initially tested in Togo with good initial results. This project is building on and expanding such experience. Regionally, this model can be adapted and replicated in other hot and flood-prone zones across Africa. It links directly to Output 1.2 by creating integrated climate-resilient urban environments and to Output 3.1 by enabling communities to access micro-grants for home improvements.

Activity 1.1.1.1: Conduct technical feasibility studies and participatory design workshops

Activity 1.1.1.2: Construct model housing units using interlocking compressed stabilized earth blocks (iCSEBs)

Activity 1.1.1.3: Train local masons and artisans on earth-brick production and low-carbon building techniques

Activity 1.1.1.4: Restore damaged or unsustainable community or socio-economic infrastructures using the iCSEBs technology

Activity 1.1.1.5: Develop community maintenance plans for long-term upkeep

Output 1.2: Permeable drainage roads and shaded community spaces

59. This output focuses on urban climate resilience through infrastructure that addresses flash flooding and urban heat. Activities include constructing permeable road surfaces, planting green corridors, and developing shaded public areas. These interventions reduce surface runoff, mitigate urban heat islands, and improve mobility and social cohesion. By comparing implementation across different ecological zones (e.g., Sahelian vs. tropical climates), ECOVERSE generates regionally applicable best practices. This output complements Output 1.1 by supporting safe and accessible neighbourhoods, and connects with Output 4.3, which focuses on urban greening for climate buffering.

Activity 1.1.2.1: Assess urban flood risk zones and erosion-prone road segments

Activity 1.1.2.2: Design and construct permeable paving and drainage systems

Activity 1.1.2.3: Establish green corridors in heat-exposed areas through afforestation and reforestation

Activity 1.1.2.4: Conduct trainings to municipal workers in climate-proof road maintenance

Output 1.3: Rainwater harvesting and solar-powered water systems

60. This output ensures year-round access to clean water through the installation of decentralized water collection and treatment systems, including rooftop rainwater harvesting tanks and solar-powered pumps. These activities reduce reliance on vulnerable centralized water systems and protect communities from droughts and waterborne diseases. Implemented across the two countries, the output allows for testing different water-access models suitable for urban, peri-urban, and rural settings. It complements Output 2.3 by supporting climate-resilient agricultural irrigation and links to Output 3.1, which may fund household-scale systems.

Activity 1.1.3.1: Develop and Install rooftop or ground-level rainwater collection infrastructure

Activity 1.1.3.2: Procure, supply and set up solar-powered water pumps and purification units

Activity 1.1.3.3: Undertake WASH training to households on safe storage and water hygiene

Component 2: Climate-Smart Agriculture and Water Management

61. This component focuses on enhancing rural productivity and land restoration through nature-based, climate-adaptive farming practices. Activities include the establishment of agroforestry systems e.g., , moringa and acacia in Chad, construction of contour bunds and erosion barriers in Togo, and deployment of small-scale irrigation and water-saving technologies. These interventions improve soil health, increase food security, and buffer communities from rainfall variability and dry spells. Implemented regionally, the component enables peer learning across different agro-ecological contexts, allowing for the refinement of a flexible climate-smart agriculture toolkit. It builds synergies with Component 1 by aligning infrastructure (e.g., access roads, storage) with productive landscapes, and with Component 3 by ensuring farmers can access the financial resources needed to implement and scale adaptive practices.

Outcome2: Smallholder farmers adopt sustainable land use practices and improve productivity

62. This outcome promotes the adoption of climate-resilient agricultural techniques among smallholder farmers. Activities include agroforestry, soil conservation methods (e.g., contour bunds), and drought-tolerant crop varieties. These practices restore degraded land, reduce erosion, and enhance food security and income stability despite climatic variability.

Output 2.1: Agroforestry systems e.g., intercropping

63. This output promotes sustainable agriculture by integrating trees into farming systems involving drought-resistant or soil-stabilizing trees. These systems enhance carbon sequestration, improve soil health, diversify income sources, and increase resilience to climate shocks. The regional implementation facilitates adaptation of agroforestry models across ecological zones. Output 2.1 is closely tied to Output 2.2 (soil conservation) and supported by Output 3.2, which provides financing for adopting agroforestry techniques.

Activity 2.1.1.1: Identify and map degraded or underutilized areas for agroforestry

Activity 2.1.1.2: Establish community led nurseries

Activity 2.1.1.3: Provide seedlings (moringa, acacia, etc.) and tools

Activity 2.1.1.4: Train farmers on SLM techniques through intercropping and climate-smart land management

Activity 2.1.1.5: Establish community demo plots and farmer field schools

Output 2.2: Contour bunding and erosion control measures

64. This output aims to reduce land degradation through physical and biological erosion control measures such as contour bunds, grass strips, and check dams, particularly in hilly and runoff-prone zones of Togo. These measures retain topsoil, regulate water flow, and improve land productivity. When implemented regionally, diverse terrain-specific practices can be compared and optimized. This output reinforces Output 2.1 by improving the viability of agroforestry on slopes, and is supported by Output 3.1, which can fund community labour and materials for bund construction.

Activity 2.1.2.1: Conduct topographical mapping to identify priority erosion zones

Activity 2.1.2.3: Construct contour bunds, vetiver grass strips, and check dams

Activity 2.1.2.4: Train local communities on soil conservation techniques

Output 2.3: Household- and community-level water conservation systems

65. This output strengthens water security for smallholders through low-cost technologies such as drip irrigation, farm ponds, and greywater reuse systems. These tools help manage rainfall variability and dry spells, improving crop yields and reducing climate vulnerability. The regional approach tests water-efficient farming in diverse rainfall regimes. Output 2.3 complements Output 1.3 (domestic water access) and Output 2.1 (agroforestry), and is linked with Output 3.3 through training on water-use planning and system maintenance.

Activity 2.1.3.1: Design and install low-cost irrigation systems (e.g., drip, treadle pumps)

Activity 2.1.3.2: Undertake capacity building trainings to households in greywater reuse and water-efficient farming

Activity 2.1.3.3: Support construction of micro-reservoirs or farm ponds

Activity 2.1.3.4: Provide maintenance toolkits and manuals to communities

Component 3: Local Adaptation Financing Mechanisms

66. This component aims to unlock locally led adaptation by strengthening access to financial resources for vulnerable groups, particularly women and youth. Key activities include the establishment of community-managed micro-grant funds, savings and lending groups, and delivery of training in financial literacy and entrepreneurship. These mechanisms enable communities to invest in adaptation priorities that they define themselves such as water access, livelihood diversification, or ecosystem protection, ensuring greater ownership and sustainability. The regional value lies in testing multiple community finance models across different social and institutional settings and developing shared methodologies for transparency, inclusivity, and accountability. This component underpins Components 2 and 4 by financing micro-projects in agriculture and ecosystem restoration, and reinforces Component 5 by serving as a case study for community-driven adaptation financing.

Outcome3: Community members access financial support for locally led adaptation solutions

67. This outcome aims to remove financial barriers by establishing inclusive climate finance mechanisms, such as revolving funds and micro-grants. These tools empower women, youth, and other marginalized groups to invest in adaptive livelihoods and implement local resilience solutions that would otherwise be financially inaccessible.

Output 3.1: Community micro-grant schemes launched

68. This output empowers communities to implement adaptation solutions of their choosing via transparent, competitive micro-grant schemes. Grants may fund home retrofitting, water systems, small-scale agriculture, or ecosystem restoration. By decentralizing decision-making, this output fosters ownership and responsiveness to local needs. Regionally, grant design and targeting approaches are refined through cross-country learning. Output 3.1 finances the uptake of innovations under Outputs 1.1–2.3 and 4.1–4.3.

Activity 3.1.1.1: Conduct participatory calls for proposals at community level

Activity 3.1.1.2: Award grants for adaptation initiatives (e.g., drought-resistant farming, climate services)

Activity 3.1.1.3: Monitor grant implementation and document success stories

Output 3.2: Savings groups and local adaptation funds established

69. This output supports the formation of savings and credit groups that provide continuous access to capital for adaptation investments. These groups build financial resilience and social cohesion, particularly for women and youth. Operating across diverse sociocultural contexts allows comparison of governance models and sustainability strategies. This output sustains the impacts of Output 3.1 and supports all other components by enabling co-financing and ongoing adaptation action beyond the life of the project.

Activity 3.1.2.1: Mobilize and form savings and lending groups in target areas

Activity 3.1.2.2: Provide training on group governance, savings, and risk management

Activity 3.1.2.3: Link groups to financial service providers and local cooperatives

Activity 3.1.2.3: Establish a community-level revolving adaptation fund

Output 3.3: Financial literacy and inclusion training provided

70. This output builds the capacity of community members to manage adaptation finance effectively. It includes training in budgeting, business planning, and digital financial tools. It ensures that vulnerable groups, especially women, can fully participate in adaptation decision-making and benefit from financing mechanisms.

This output underpins the success of Outputs 3.1 and 3.2, and supports Outputs 2.1 and 2.3 by building confidence in investment in productive activities.

Activity 3.1.3.1: Develop tailored training materials for rural and marginalized groups

Activity 3.1.3.2: Organize capacity-building sessions on budgeting, recordkeeping, and investment

Activity 3.1.3.3: Promote women- and youth-led entrepreneurship in climate-resilient sectors

Activity 3.2.3.4: Provide follow-up mentorship and coaching

Component 4: Ecosystem Restoration and Risk Reduction

71. Component 4 addresses the degradation of forested, sloped, and agricultural lands, which increases the risk of landslides, floods, and biodiversity loss. It includes the restoration of 2,000 hectares of degraded land, stabilization of erosion-prone slopes using bioengineering and vegetation, and creation of urban green spaces to mitigate temperature and runoff. These activities improve the integrity of ecosystems, which in turn provide vital services such as water regulation, soil fertility, and climate moderation. The regional approach enables the comparison of nature-based adaptation strategies in different settings, from Sahelian drylands to rainforest slopes, providing a broader evidence base for replication and scaling. Component 4 reinforces Components 1 and 2 by ensuring that built and agricultural systems are integrated with healthy ecosystems, and is supported by Component 3 through funding for community-led restoration.

Outcome 4: Landscapes and ecosystems are rehabilitated and climate risks reduced

72. This outcome supports ecosystem-based adaptation by restoring degraded forest and savanna ecosystems, stabilizing slopes, and reducing landslide and flood risks. Ecosystem services are enhanced to serve as natural buffers against climate impacts while supporting biodiversity and livelihoods.

Output 4.1: Restoration of 2,000 ha of degraded land

73. This output restores degraded land through natural regeneration, enrichment planting, and assisted afforestation. These measures improve watershed stability, soil fertility, and biodiversity, while sequestering carbon and reducing climate-related disaster risks. The regional scope allows testing of restoration strategies in dryland, savannah, and forested areas. It links directly to Outputs 2.1 and 4.2, reinforcing the ecological base of agriculture and risk reduction.

Activity 4.1.1.1: Conduct participatory land-use planning and vegetation surveys

Activity 4.1.1.2: Carry out assisted natural regeneration and enrichment planting

Activity 4.1.1.3: Fence and demarcate restoration zones to prevent overuse

Output 4.2: Landslide risk areas stabilized with vegetation

74. This output reduces landslide hazards in high-risk zones, through slope stabilization using bioengineering and indigenous species. It protects lives, infrastructure, and farmland. Lessons from different slope conditions and vegetation types are shared regionally to build a flexible toolkit for other mountainous regions. This output supports Output 4.1 and is functionally linked to Output 1.2, where erosion control aligns with road safety.

Activity 4.1.2.1: Map high-risk slopes using GIS and community input

Activity 4.1.2.2: Undertake slope stabilization using bioengineering (e.g., vetiver, bamboo)

Activity 4.1.2.3: Train local teams in low-tech slope restoration

Activity 4.1.2.4: Integrate local early warning and hazard response measures

Output 4.3: Urban green corridors and reforestation activities

75. This output enhances climate resilience in urban and peri-urban spaces by creating shaded corridors, reforesting public lands, and planting street trees. These interventions reduce urban temperatures, improve air quality, and create recreational and biodiversity-friendly spaces. Regional exchanges help tailor tree species, maintenance strategies, and community engagement models. Output 4.3 complements Outputs 1.2 and 1.1 by building green, liveable urban environments.

Activity 4.3.3.1: Identify urban areas for reforestation and greening

Activity 4.3.3.2: Procure and plant native trees and maintain public green spaces

Component 5: Regional Knowledge and Learning Platform

76. This component provides the knowledge backbone for ECOVERSE by facilitating cross-country learning, building technical capacity, and informing policy. Activities include the development of a tri-country knowledge hub, organization of annual regional forums, field exchanges, and production of policy briefs and adaptation toolkits. This component captures lessons from Components 1–4, enabling shared learning on climate-resilient infrastructure, agriculture, finance, and ecosystem restoration. Its regional scope ensures that the unique experiences of each country are harnessed to create a pan-African learning ecosystem, avoiding duplication, accelerating innovation, and enhancing institutional capacities. The knowledge generated here feeds back into national adaptation plans and supports alignment with continental strategies, such as the African Union’s Climate Change and Resilient Development Strategy and Action Plan.

Outcome 5: Bi-country cooperation strengthens local capacity and informs policy

77. This outcome creates a regional learning platform to foster cross-country knowledge exchange, harmonize adaptation strategies, and inform national and regional policy. By facilitating shared learning and institutional strengthening across Chad and Togo, the project builds lasting capacity for climate governance and replicable adaptation models.

Output 5.1: Knowledge hub and digital learning system

78. This output establishes a virtual platform that houses adaptation data, tools, and stories from across the two countries. It enables practitioners and policymakers to access practical resources and track adaptation progress. It connects to all technical components by capturing and sharing lessons and innovations, and it directly feeds into Output 5.3 for policy influence.

Activity 5.1.1.1: Develop an online platform with GIS, monitoring, and resource-sharing tools

Activity 5.1.1.2: Curate and upload community-based adaptation case studies

Output 5.2: Annual adaptation forums and cross-country exchanges

79. This output supports regular learning and networking events for stakeholders at all levels. Participants visit project sites, share experiences, and co-develop recommendations. This creates a community of practice that extends the reach of local innovations. It energizes all field-based outputs and reinforces Output 5.1 by populating the knowledge hub with fresh insights. These exchanges will include participants from additional countries to promote scaling up.

Activity 5.2.1.1: Organize regional learning events in rotation between Chad and Togo

Activity 5.2.1.2: Facilitate field visits to demonstration sites and farmer-to-farmer exchanges

Activity 5.2.1.3: Document and disseminate lessons via newsletters and reports

Output 5.3: Policy briefs and knowledge products developed

80. This output translates field experience into actionable knowledge for decision-makers. It includes policy briefs, toolkits, and technical guidelines aligned with national and regional climate strategies. It ensures sustainability by embedding lessons into institutional planning. It builds on Outputs 5.1 and 5.2 and supports future scaling of Outputs 1–4 through informed policy design.

Activity 5.3.1.1: Synthesize field data and learning into national policy briefs

Activity 5.3.1.2: Host multi-stakeholder dialogues with ministries and regional bodies

Activity 5.3.1.3: Publish climate adaptation toolkits and advocacy materials

B. Innovative solutions to climate change adaptation.

81. The ECOVERSE project introduces a range of innovative approaches, technologies, and mechanisms that address the complex and location-specific nature of climate vulnerability across Chad and Togo. It promotes low-cost, climate-resilient infrastructure solutions, such as earth-brick housing, permeable pavements, and solar-powered water systems, that are tailored to the environmental and socioeconomic context of each country. In agriculture, the project fosters climate-smart agroforestry systems, combining indigenous knowledge with modern contour farming and micro-irrigation technologies to restore degraded lands and stabilize slopes.
82. ECOVERSE also pioneers community-driven adaptation finance by launching micro-grant schemes and savings groups that empower local actors, especially women and youth, to design and implement their own resilience projects. Regionally, the project establishes a tri-country digital knowledge hub and supports peer-to-peer learning exchanges, enabling the codification and transfer of innovations across diverse ecological zones. Through this integrated package, ECOVERSE moves beyond traditional top-down interventions and instead builds a locally rooted, replicable model for adaptation that leverages behavioral, institutional, and technological innovation.

C. Economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations.

83. The ECOVERSE project will deliver economic, social, and environmental benefits with attention to vulnerable groups and how it will mitigate potential negative impacts in line with the Adaptation Fund's Environmental and Social Policy (ESP):
84. Economic Benefits - The ECOVERSE project will strengthen economic resilience in climate-vulnerable communities by supporting diversified, climate-resilient livelihoods. Smallholder farmers will benefit from increased agricultural productivity through agroforestry, soil conservation, and water-efficient farming practices, leading to more stable incomes despite rainfall variability. For example, in target zones such as Lina and Mandelia (Chad), 450 hectares of climate-resilient agriculture will be supported, benefiting farmer organizations and ensuring that at least 50% of direct beneficiaries are women. Similarly, in Zogbépimé (Togo), 30 hectares of resilient farming will directly involve 150 farmers, 60% of whom are women, with expected income increases of +20% (+USD 150/year).
85. The project will also stimulate local economies by creating jobs in sustainable construction, ecosystem restoration, and green infrastructure maintenance. Hydraform-based flood-resilient housing illustrates how job creation in construction can simultaneously reduce vulnerability to seasonal floods and secure household assets, particularly for low-income populations living in traditional earth-built houses. Targeted support to women- and youth-led enterprises, through micro-grants, training, and savings groups, will enhance financial inclusion and open pathways to entrepreneurship in climate-resilient sectors such as eco-processing, water services, and sustainable crafts. By empowering community members with skills, capital, and climate-adaptive technologies, ECOVERSE will reduce dependency on fragile subsistence systems and strengthen local value chains.
86. Social and Gender Benefits – The project will enhance social cohesion, empowerment, and equity through inclusive planning and governance mechanisms. Women, youth, persons with disabilities, and other marginalized groups will be meaningfully engaged at all stages of project design and implementation. In Zogbépimé, for instance, participatory consultations identified rural women (due to household and agricultural roles), unemployed youth (ages 18–35), the elderly, and persons with disabilities as priority groups for targeted support. Planned interventions will directly address these needs through a combination of women-focused agroecological training, youth employment in the construction and deployment of eco-technologies, and improved access to health and water services. Notably, part of the climate-resilient infrastructure

component will include the construction and restoration of social buildings such as schools, health centers, and public gathering spaces with features such as thermal-efficient earth-brick materials, shaded courtyards, improved drainage, and clean water access. These measures will reduce heat exposure for vulnerable populations, enhance year-round service delivery, and support the continuity of education and healthcare under climate stress. Specific social inclusion measures will include gender quotas in local adaptation committees, culturally sensitive outreach strategies, and training programs for women in leadership, climate-smart agriculture, and financial literacy. Time-saving infrastructure, such as new wells (e.g., three in Zogbépimé serving over 3,000 people), will reduce water collection time by up to two hours per day per household, directly alleviating burdens on women and girls. Additional support through the establishment of women-led savings groups and producer cooperatives will enhance economic inclusion and decision-making power.

87. Moreover, by integrating water points closer to households, energy-efficient cookstoves, and urban green spaces for cooling, the project will significantly reduce the unpaid care and labor burden that disproportionately affects women and girls. By intentionally addressing gender-based barriers and leveraging investments in public infrastructure, ECOVERSE contributes to women's empowerment, social equity, and more inclusive climate resilience outcomes.
88. *Environmental Benefits* - Through restoration of over 2,000 hectares of degraded forest and farmland, ECOVERSE will enhance ecosystem health, improve biodiversity, and restore critical ecosystem services such as water filtration, soil stabilization, and carbon sequestration. This builds on models like the agroforestry systems in Zogbépimé (20 hectares of ecological restoration and ~100 tCO₂/year sequestration), which demonstrate scalable benefits of integrated tree planting and hedgerow systems in reducing erosion and improving soil fertility.
89. Agroforestry systems and slope stabilization will increase vegetative cover, reduce erosion, and build resilience to landslides and floods. In urban areas, the creation of green corridors, tree-lined streets, and permeable infrastructure will help regulate temperature, improve air quality, and manage stormwater. In flood-prone Ndjamena districts, green infrastructure will complement Hydraform housing interventions to improve drainage and mitigate recurrent flood impacts on informal settlements. These nature-based solutions not only protect communities from climate hazards but also improve long-term environmental sustainability and natural resource security.

D. Cost-effectiveness of the proposed project

90. The ECOVERSE project is designed to maximize financial efficiency and climate impact through a regional, integrated adaptation approach that aligns low-emission and resilient technologies with community-driven development. Operating across Chad and Togo, two countries with contrasting ecological zones but shared vulnerabilities, ECOVERSE applies a comparative model where context-appropriate solutions are piloted and refined locally, then scaled regionally. This reduces duplication, spreads fixed costs (such as design, training, and procurement), and promotes innovation diffusion. By bundling investment across both countries, the regional approach leverages economies of scale in material sourcing (e.g., earth-based construction, solar systems), technical assistance, and knowledge management, reducing per-unit implementation costs by an estimated 15–20% compared to country-isolated efforts.
91. From a scenario analysis perspective, the cost-effectiveness of ECOVERSE is particularly evident in its use of Interlocking Compressed Earth Bricks (ICEBs) for climate-resilient infrastructure. Compared to conventional concrete block construction, ICEBs cut cement use by up to 50% and reduce greenhouse gas emissions by 100–300 kg CO₂ per cubic meter of wall. In high-risk zones like N'Djamena's 8th and 9th Districts in Chad or the peri-urban expansion belts in southern Togo, ICEB buildings offer dual financial and climate benefits: they are more flood-resilient due to minimized mortar joints and better structural integrity, and they significantly reduce cooling costs. A typical household using a small air conditioning unit in Togo, where

electricity costs \$0.20 per kWh, incurs \$336–840 in annual cooling costs. By integrating passive design features such as thick thermal walls, natural ventilation, and shading, ICEB structures can reduce cooling energy demand by 70–90%, saving up to \$700 per household annually and over \$41,000 per village. These savings directly improve household disposable income and reduce strain on the already limited and constrained energy infrastructure.

92. Beyond housing, ECOVERSE prioritizes cost-effective flood management using nature-based infrastructure such as bioswales, permeable pavements, and riparian zone restoration. In Chad, where formal drainage systems are largely absent and large-scale flood infrastructure is prohibitively expensive (e.g., conventional stormwater canals cost \$1–2 million per km), ECOVERSE proposes a modular, decentralized solution. The unit cost of green drainage systems is up to 70% lower than hard infrastructure, while offering co-benefits such as groundwater recharge, biodiversity enhancement, and urban cooling. Scenario modeling suggests that in flash-flood-prone areas, these interventions can reduce property and productivity losses by 25–40% during extreme rainfall events, yielding positive return-on-investment within 3–5 years.
93. In agricultural zones, particularly in the degraded Sahelian belt of Chad and the erosion-prone slopes of Avé 1 Commune in Togo, ECOVERSE promotes agroforestry and soil restoration as “no-regret” measures. With more than 13 million hectares degraded in Chad and over 60% of cultivated land affected in Togo, the marginal productivity losses without intervention are already substantial. Agroforestry systems, when compared to conventional monoculture or fallow systems, have shown yield increases of 20–60% over 5 years, while reducing erosion by 30–50%. These interventions not only buffer farmers against rainfall variability and input cost volatility, but also offer long-term returns through increased land value and food system stability. Restoration investments are costed at \$250–400 per hectare, but benefits in avoided degradation and enhanced yields exceed this within three cropping cycles, based on regional economic data.
94. Sustainability and long-term cost-efficiency are further strengthened by the project’s community finance mechanisms, including rotating savings and credit associations, women-led cooperatives, and decentralized resilience funds. These are particularly impactful in Chad, where financial inclusion is below 20%, and in rural Togo, where access to affordable credit remains limited. By embedding microfinance into adaptation delivery, supporting seed inputs, water infrastructure maintenance, or ICEB equipment leasing, the project fosters ownership and reduces reliance on external funding for operation and scaling. Early estimates show that every \$1 invested in these mechanisms mobilizes \$2–3 in community co-financing or reinvestment, reinforcing the project’s long-term viability.
95. Importantly, this analysis constitutes a preliminary cost-effectiveness assessment. A full cost effectiveness including cost-benefit analysis, ecosystem service valuation, and long-term avoided cost modelling will be conducted during the next phase of project development. This will assess alternative delivery models (e.g., prefabricated housing, centralized water systems) and benchmark ECOVERSE’s interventions against infrastructure, energy, and agricultural baselines in both countries. However, initial scenario modeling already demonstrates that ECOVERSE’s integrated and regionally coordinated design delivers significant climate, economic, and social returns per dollar spent, while building the adaptive capacity of some of the most climate-vulnerable communities in Africa.

E. Consistency with regional, national or sub-national sustainable development strategies

96. The ECOVERSE project is closely aligned with the national and sub-national climate priorities and development frameworks of Chad and Togo, ensuring strong policy coherence and institutional ownership. In Chad, the project supports the country’s National Adaptation Plan (NAP 2019), which prioritizes the development of resilient urban infrastructure, integrated water management, and drought risk reduction. It also aligns with Chad’s Vision 2030 and the Third National Communication to the UNFCCC, which emphasize strengthening the adaptive capacity of vulnerable urban populations, enhancing resilience of agroforestry activities and deploying financial tools. In Togo, ECOVERSE contributes to the objectives of the NAP and the

National Development Plan (PND 2018–2022), which call for sustainable rural development, erosion control, and improved connectivity for remote communities. The project directly supports the Togo Climate-Smart Agriculture Investment Plan and aligns with the Togo REDD+ strategy by promoting forest restoration and agroforestry.

97. At the regional level, ECOVERSE supports the African Union’s Climate Change and Resilient Development Strategy and Action Plan (2022–2032), as well as the Economic Community of Central African States (ECCAS) and ECOWAS regional climate frameworks. The project contributes to the African Forest Landscape Restoration Initiative (AFR100) and complements goals set by the Great Green Wall Initiative in Chad. By aligning with these strategies, ECOVERSE not only ensures relevance and buy-in across policy levels but also enhances its scalability and long-term sustainability. The table below presents consistency with regional, national or sub-national sustainable development strategies of the project:

Country / Region	Relevant Strategies / Plans	Year	Priorities	ECOVERSE Alignment
Chad	<ul style="list-style-type: none"> • National Adaptation Plan (NAP) • Third National Communication to the UNFCCC • Vision 2030 and Chad National Development Plan Tchad “Connexion 2030” (2024-2028) • National Urban Resilience Programme • National Flood Control Program 	2022 2020 2017 2023	<ul style="list-style-type: none"> • Urban resilience, water access, infrastructure • Climate risk assessment and national planning • Agroforestry, water and financial systems Inclusive development and resilience • Urban flood management, basic services 	Targets urban infrastructure resilience, water access, and climate-proof housing in Sahelian cities; supports local implementation of NAP priorities and Vision 2030 goals.
Togo	<ul style="list-style-type: none"> • National Development Plan • National Adaptation Plan • Climate-Smart Agriculture Investment Plan • Togo REDD+ Strategy 	2018-2022 2017 2010-2015 2021	<ul style="list-style-type: none"> • Rural development, infrastructure, poverty reduction • Climate-smart agriculture, water resource management • Sustainable agriculture, resilience building • Forest conservation, emissions reduction 	Supports erosion control, rural infrastructure, and agroforestry in line with Togo’s national rural development and climate-smart agriculture targets.
Regional / Continental	<ul style="list-style-type: none"> • African Union Climate Change Strategy (2022–2032) • ECCAS and ECOWAS Climate Frameworks • AFR100 Initiative • Great Green Wall [Agence Nationale De La Grande Muraille Verte (ANGMV)-Chad] 	2022-2032 2022 2015 2021	<ul style="list-style-type: none"> • Continental resilience, climate policy • Regional adaptation, food and water security • Forest landscape restoration • Desertification, land restoration 	Contributes to regional adaptation priorities, forest restoration, and transboundary resilience building; enables South–South learning and policy harmonization.

F. Alignment with relevant national technical standards complying with the Environmental and Social Policy of the Adaptation Fund.

98. The ECOVERSE project has been designed to comply fully with the relevant national technical standards and environmental regulatory frameworks in Chad and Togo, as well as the Environmental and Social Policy (ESP) of the Adaptation Fund. The selection, design, and implementation of project activities will be guided

by country-specific legislation and sectoral norms, including those governing environmental protection, urban planning, agriculture, water resource management, and infrastructure development.

99. In Chad, the project will comply with the Environmental Code (2018), which requires Environmental and Social Impact Assessments (ESIAs) for infrastructure interventions such as flood management systems and urban housing improvements. Building codes defined by the Ministry of Urban Planning and Housing will inform the design of climate-resilient housing and drainage infrastructure. The project will also align with national guidelines for community consultation and land use planning.
100. In Togo, activities such as contour bunding, road stabilization, and agroforestry development will adhere to national standards under the Environmental Law No. 2008-005 and associated decrees, which govern impact assessments and ecological restoration. Project interventions will undergo environmental screening and, where required, ESMPs will be developed and approved by the National Agency for Environmental Management (ANGE).
101. Across both countries, the project will be executed in accordance with the Adaptation Fund’s Environmental and Social Policy (ESP), ensuring that activities do not result in unjustified environmental degradation or adverse social impacts. A detailed environmental and social risk screening has been conducted using the Fund’s 15 principles, and appropriate risk management measures, including Environmental and Social Management Plans (ESMPs), will be implemented during full proposal development and project execution. The project will adopt a gender-responsive and inclusive approach, safeguard vulnerable groups, respect indigenous knowledge, and uphold human rights throughout its lifecycle.
102. Regular monitoring, participatory audits, and national stakeholder consultations will be integrated into the project’s environmental and social management framework to ensure compliance and responsiveness to emerging risks.

Country / Region	Standard / Policy	Scope & Relevance to Project	Compliance Approach
Chad	Environmental Code (2018)	Applies to infrastructure development and urban planning; relevant for flood drainage, housing, and water systems.	Activities will undergo ESIA as required. Designs will be approved by relevant national authorities.
	National Building Codes	Applies to design and construction of public and private infrastructure.	Infrastructure such as climate-resilient housing and green corridors will meet building code requirements.
	Municipal Building Permits & Development Bylaws	Governs land subdivision, permitting, and local urban construction standards	Coordinate with municipal technical services to obtain permits and align infrastructure with local zoning and building requirements
	Local Water Supply Regulations (STE & JMP protocols)	Multiple water provision regimes and informal systems require decentralized coordination for water infrastructure	Conduct joint design and approvals with technical teams from STE and local water committees
Togo	Environmental Law No. 2008-005	Covers land rehabilitation, water resource use, and agroforestry development.	Environmental screenings and ESMPs will be prepared for land-based interventions.
	National Agricultural Investment Guidelines	Guides sustainable agriculture practices and climate-smart investments.	Agroforestry and CSA activities will align with these guidelines.
	Commune Climate Adaptation Plan (PCACC) – Yoto 1	Defines local adaptation priorities, community approval processes, and funding commitments for climate actions	Align interventions with local goals and engage the commune for joint planning and resource mobilization
	Decentralization Law & Commune Development Codes	Delegates authority for local infrastructure, planning, and finance to communes and citizen councils	Engage elected municipal councils and technical agents to co-design and approve project infrastructure

	Local Water Committees under IWRM Framework	Guides community-driven water access and governance	Incorporate water committee input for rainwater harvesting system siting and operation
All (Cross-cutting)	Adaptation Fund Environmental and Social Policy (ESP)	Sets 15 principles on human rights, gender, biodiversity, indigenous rights, and environmental protection.	All activities have undergone ESP screening. Risk mitigation measures will be implemented under ESMP.

G. Project duplication with other funding sources.

103. The ECOVERSE project does not duplicate existing initiatives funded by other sources but rather complements ongoing and planned climate adaptation efforts in Chad and Togo. A review of national and regional climate finance portfolios confirms that while several projects funded by the Green Climate Fund (GCF), Global Environment Facility (GEF), World Bank, and bilateral partners address climate-related challenges, they tend to focus either on sector-specific interventions (e.g., water, agriculture, or forestry in isolation) or lack the cross-country, integrated, and community-led adaptation model proposed by ECOVERSE. The table below presents the scenario of no duplication, alignment and lessons learnt for the ECOVERSE Project.

Project	Objective(s)	Scope	Lessons Learned	No Duplication	Alignment with ECOVERSE
Great Green Wall (Chad, GEF-funded)	Combat desertification and restore degraded land across the Sahel	Focus on afforestation and rural land restoration	Importance of community engagement and monitoring for land restoration success	Focuses on rural areas and large-scale afforestation	ECOVERSE complements by addressing urban ecosystem resilience and green infrastructure in N'Djamena
WB Urban Resilience Project (Chad)	Strengthen climate resilience of urban infrastructure	Large-scale investments in major cities	Need for inclusive, scalable solutions and localized planning	Focuses on capital cities only	ECOVERSE targets second-tier cities with community-driven, low-cost solutions
PROJET PADAT (Togo, IFAD-supported)	Improve rural livelihoods and agricultural productivity	Agricultural value chains in rural zones	Bundling extension services with infrastructure boosts productivity	Does not cover erosion-prone transition zones	ECOVERSE reinforces CSA and erosion control in under-served southern rural communities
WB Urban Resilience Project (Chad)	Strengthen climate resilience of urban infrastructure	Large-scale investments in major cities	Need for inclusive, scalable solutions and localized planning	Focuses on capital cities only	ECOVERSE targets second-tier cities with community-driven, low-cost solutions
GCF SAP Project (Togo)	Support resilient agro-sylvo-pastoral systems	Northern Savannas region	Adaptive approaches must be localized and gender-responsive	Restricted to northern Togo	ECOVERSE complements by focusing on forest-savanna transition zone in the south
Enhancing Climate Resilience and Sustainable Development in Rural African Communities (Togo)	Enhance climate resilience and sustainable development in rural African communities	Multi-sectoral spatial planning and investment framework across Togo	Cross-sectoral coordination is key to rural resilience and land-use balance	Initial pilot and first prototype buildings using Interlocking Compressed Earth Brick (ICEB) technique. Established pilot experience for sustainable bricks construction and	ECOVERSE will expand on the pilot experience using Interlocking Compressed Earth Brick (ICEB) technique and scale up the use of the technology, complementing with climate-smart infrastructure and agro-ecological practices to

				production in Zogbepime.	enhance climate resilience in rural transition zones in Togo
AFR100 (Regional)	Restore 100 million hectares of deforested land in Africa	Continental land restoration pledges	Strong need for site-level monitoring and livelihood integration	Broad and high-level with no site-level implementation	ECOVERSE contributes through ground-level ecosystem restoration tied to community livelihoods

H. Learning and knowledge management to capture and disseminate lessons learned.

104. The project includes a robust learning and knowledge management component designed to capture, systematize, and disseminate lessons learned across Chad and Togo, and to inform broader adaptation efforts in Africa. This component leverages both digital and in-person mechanisms to ensure continuous learning among communities, practitioners, policymakers, and regional institutions.
105. A central pillar of this component is the establishment of a bi-country digital knowledge hub, which will serve as a dynamic platform for storing and sharing tools, case studies, data sets, and multimedia resources. This online system will be accessible to local actors and decision-makers, with multilingual content and open-access functionality to promote wide reach and engagement. To complement digital tools, the project will organize annual regional adaptation forums and cross-country learning exchanges that bring together stakeholders from both countries to reflect on successes, challenges, and innovations. These events will include field visits to demonstration sites, practitioner-to-practitioner dialogue sessions, and technical policy workshops. Peer-to-peer learning will be encouraged through community exchanges, particularly among women’s groups, youth networks, and farmers’ associations.
106. Furthermore, ECOVERSE will produce policy briefs, technical guidelines, and adaptation toolkits based on field experiences, co-developed with executing partners and local institutions. These knowledge products will be disseminated through government channels, civil society platforms, and regional forums such as AMCEN and the African Union Climate Change and Resilient Development Strategy implementation mechanisms. This learning architecture is directly linked to project monitoring and evaluation, enabling real-time feedback and course correction. It also supports long-term capacity-building by embedding knowledge into institutional frameworks and informing the design of future adaptation initiatives in the region. Below is an analysis for knowledge generation, learning and dissemination strategy, the following constrains, and proposed actions will be taken into account:

Constraint / Baseline Situation	Proposed Activities
Limited cross-country exchange on adaptation practices and technologies	Organize annual regional learning forums and South–South peer exchanges among Chad and Togo
Lack of digital infrastructure for sharing lessons and data	Develop an online knowledge-sharing platform with multilingual access, housing training modules, case studies, and climate data
Fragmented documentation of local innovations and indigenous knowledge	Conduct participatory documentation exercises with communities and integrate local practices into training content
Weak extension services and absence of structured training for adaptation	Establish a 'Train-the-Trainers' (ToT) program for lead farmers and community facilitators on climate-resilient practices
Low involvement of youth and marginalized groups in adaptation knowledge processes	Create inclusive innovation hubs and school-based climate education pilots targeting youth and women’s groups
Poor feedback loops between practice, policy, and research	Convene national and regional policy dialogues to bridge field-level insights with policy formulation

I. Consultative process

107. Chad and Togo engaged OSS in a preliminary exchange including national institutions, during which both countries formally expressed their interest in formulating a regional project aimed at strengthening climate

resilience and addressing ecosystem vulnerabilities, building on the piloting of Hydraform iCSEBs technology in Togo which is showing initial results as a promising solution for enhancing resilience in rural Africa. They expressed the wish to collaborate on a regional initiative aimed at cross-fertilizing knowledge and creating opportunities for scaling up the approach around the ECOVERSE project more broadly in Africa.

108. These initial exchanges laid the foundation for a participatory approach aligned with national adaptation priorities and development strategies. The choice of the potential project site was informed by national priorities as well as key vulnerability characteristics.

109. In Chad, structured public consultations were organized in July 2025, involving around 140 people in the localities of Linia, Mandelia, and the central town hall of N'Djamena, with a particular focus on the 8th and 9th districts. In Togo, consultations were also conducted in July 2025, and brought together 180 participants across seven villages. The villages consulted were: Zogbépimé, Howuivé, Yoméchin, Tovégan, Ando-Akpuivé, Kévé, and Edzi, with a focus on vulnerable rural communities affected by climate variability and ecosystem degradation. The primary objective of these consultations was to gather stakeholders' concerns, expectations, and proposals to ensure their effective integration into project planning and implementation. They also underscored the need to involve stakeholders not only in the design but also in the monitoring, evaluation, and oversight of project activities, thereby fostering transparency, citizen participation, and social accountability.

110. The methodology adopted was participatory, inclusive, and locally appropriate. Activities included: (i) open community workshops to facilitate collective discussions; (ii) focus groups with women, youth, CSOs, and local leaders; (iii) individual and collective statements; and (iv) qualitative data collection on local needs and practical suggestions for climate adaptation. These consultations engaged administrative authorities, traditional leaders, civil society organizations, women's associations, and youth representatives, ensuring broad-based participation and ownership of the ECOVERSE project.

The table below summarises the consultation feedback in both countries as well as recommendations included in the project design. The project development phase will further integrate these recommendations in the detailed design of the activities. In both countries, local consultations confirmed the strong support of communities for the ECOVERSE project objectives and their need for the proposed interventions.

Period	Participants	Consultations Feedback	Project design recommendations
June 2023 – July 2025	Local authorities, mayors, canton chiefs, youth representatives, women's groups, NGOs, associations, traditional leaders, Town Hall of Commune Ave1, members of the Village Development Committee (VDC), the village chief and elders, agricultural cooperatives, municipal	<p>Infrastructure planning influenced by flooding and erosion concern</p> <p>Local communities in both countries reported the severity of flash flooding, road degradation, and erosion of sloped farmland, and the high impact on their daily lives as it impair access to markets, schools, and healthcare. Communities stressed the need for improved flood prevention and management infrastructure.</p>	<ul style="list-style-type: none"> - Inclusion of permeable paving, green corridors, and stormwater drainage systems under Component 1 to reduce runoff and urban flooding. - Prioritization of contour bunding and erosion control infrastructure under Component 2, informed by local topography and traditional erosion management practices. - Specific targeting of erosion-prone roads and community infrastructure (Output 1.2 and 2.2) based on community-identified hotspots
		<p>Water scarcity and women's burden drove rainwater harvesting solutions</p>	<p>Project design recommendations integrated in the project:</p>

councillors, South Korean partners, and representatives of Sustainable Solutions for Africa (SSA)	<p>In some communities, women and youth emphasized limited access to safe water, especially during dry seasons. Women reported walking long distances and facing health risks due to unsafe sources.</p>	<ul style="list-style-type: none"> - Installation of rainwater harvesting systems and solar-powered water pumps included in Component 1 (Output 1.3) to ensure year-round access - Gender-sensitive infrastructure placement prioritizing proximity to households and markets to reduce time poverty for women - Integration of WASH training and safe water handling modules as part of the ESMP and GAAP
	<p>Local knowledge and agricultural vulnerability guided agroforestry design</p> <p>Farmers and elders shared traditional knowledge about soil fertility decline and crop sensitivity to climate variability, particularly for maize, cassava, and yam. Communities also expressed the need for technical guidance on climate-smart agricultural practices.</p>	<p>Resulting project design changes:</p> <ul style="list-style-type: none"> - Adoption of agroforestry systems (Output 2.1) using context-specific species and traditional intercropping methods to restore soil health - Establishment of community nurseries and demo plots with direct technical input from local agricultural leaders working with experts in climate-smart agriculture - Trainings designed in local languages with elder participation to bridge modern techniques and indigenous knowledge
	<p>Financial constraints and Gender-based exclusions</p> <p>Consultations revealed an urgent need to develop appropriate community financing tools and highlighted structural barriers such as women's limited access to land, credit, and leadership roles, as well as exclusion from decision-making forums.</p>	<ul style="list-style-type: none"> - Design of microgrants and revolving fund with Gender quotas in community committees and affirmative targeting of women and youth in micro-grant and savings group schemes (Component 3) - Tailored financial literacy training and support for women-led enterprises in climate-resilient sectors (Output 3.3) - Explicit provisions in GAAP to reduce care burdens (e.g., closer water points, clean cookstoves) and promote economic empowerment
	<p>Governance weaknesses and exclusion led to participatory monitoring and grievance mechanisms</p> <p>Stakeholders identified weak institutional coordination and limited community voice in planning and project oversight.</p>	<ul style="list-style-type: none"> - Design of locally embedded grievance redress mechanisms with accessible reporting tools at village level - Establishment of participatory monitoring structures, including community feedback forums and real-time dashboards - Social workers embedded in project sites (as suggested by the Prefectural Director of Social Affairs) to track inclusion,

			mediate disputes, and follow up on grievance resolution
		Environmental and Social safeguards informed by site-specific risks Environmental risks such as deforestation, soil degradation, and biodiversity loss were raised, along with social concerns like youth migration and transhumance-related conflicts.	<ul style="list-style-type: none"> - Restoration of 2,000 ha of degraded land (Output 4.1), using assisted natural regeneration and buffer zone demarcation in conflict-sensitive areas - Participatory land-use planning to prevent resource-based tensions and recognize traditional boundaries - Conflict-sensitive programming in zones affected by transhumance, integrating local by-laws and dispute resolution processes

111. In line with the AF's Environmental and Social Policy (ESP), Gender Policy, and Free, Prior and Informed Consent (FPIC) requirements, specific attention was given to vulnerable and marginalized groups, including women, youth, and indigenous communities (e.g., the Mbororo in Chad). Preliminary mapping of these groups was conducted to inform further targeted consultations during the full proposal development phase. Sessions were held in local languages to ensure inclusive participation, with an initial project grievance mechanism presented to promote accountability and transparency.

112. During the development of the full proposal, these initial consultations will be complemented by: (a) community-level consultations in Chad (Linia, Mandelia, N'Djamena) and Togo (Zogbépimé) focusing on participatory site selection and baseline data collection; (b) sub-national consultations involving local authorities and decentralized services; and (c) national level consultations engaging high-level decision-makers, civil society, and private sector actors. These steps will further ensure that the ECOVERSE project is socially acceptable, community-driven, and well-aligned with both countries' climate adaptation priorities.

J. Justification for funding requested, focusing on the full cost of adaptation reasoning.

113. The funding requested under the ECOVERSE project is fully justified based on the full cost of adaptation required to protect vulnerable populations in Chad and Togo from escalating climate risks. The project targets two ecologically diverse, yet highly climate-vulnerable countries, where communities face compounded threats from extreme heat, flooding, erosion, water scarcity, and land degradation. These hazards pose direct risks to lives, livelihoods, health, infrastructure, and ecosystems, particularly among low-income rural and peri-urban populations. Without the proposed interventions, these communities will remain trapped in cycles of poverty and vulnerability, with no capacity to invest in the resilience solutions they urgently need.

114. The ECOVERSE project does not include any co-financing and is designed to stand independently, with funding solely requested from the Adaptation Fund. This approach reflects the urgent need for concessional, grant-based financing to support communities that have limited or no access to commercial or public funding for climate adaptation. The interventions proposed such as interlocking compressed earth brick (ICEB) housing, agroforestry, flood control systems, local adaptation finance mechanisms, and ecosystem restoration are not commercially viable or bankable for the targeted communities, but are critical for their survival and well-being.

115. This financing will fully cover the design, implementation, monitoring, and knowledge sharing of context-appropriate, scalable solutions that would not take place without external support. For example, ICEB-based construction alone is significantly more climate-adapted than conventional cement construction, offering passive cooling and flood resilience with lower GHG emissions and lifecycle costs but requires initial training,

equipment, and technical support to scale in poor rural areas. Similarly, the establishment of rainwater harvesting, peri-urban green corridors, and community adaptation funds provides no direct financial return to attract market actors, yet delivers high public value and long-term resilience dividends.

116. The regional modality of ECOVERSE also enhances cost-effectiveness by allowing for cross-country knowledge exchange, pooled technical expertise, and replication of successful models across shared ecological contexts in Chad and Togo. This approach reduces duplication, leverages regional economies of scale, and facilitates adaptive learning across similar climate-vulnerable settings.

117. In summary, the Adaptation Fund’s support is essential to enable proactive, inclusive, and transformative adaptation that would not otherwise be possible. The ECOVERSE project fills a critical financing and capacity gap and stands as a fully grant-dependent initiative that delivers equitable and sustainable adaptation outcomes. The table below illustrates the baseline (without funding) and transformative outcomes enabled through the ECOVERSE intervention.

Adaptation Area	Without Adaptation Fund Support (Baseline Scenario)	With Adaptation Fund Support (Proposed ECOVERSE Intervention)
Climate-resilient housing & urban infrastructure	Informal, flood-prone housing persists; high exposure to heat and displacement; no public investment in green infrastructure	Construction of passive-cooling ICEB housing, permeable roads, green corridors; reduced urban climate vulnerability
Water access and drought resilience	Chronic water scarcity, reliance on unsafe sources, particularly in dry seasons; inadequate public water systems	Rainwater harvesting, solar-powered purification units, and community water systems enable year-round access
Climate-smart agriculture & soil restoration	Continued land degradation, soil erosion, declining yields, food insecurity, especially among smallholders	Agroforestry, contour bunds, erosion control, and micro-irrigation restore 2,000+ ha of land and improve productivity
Access to adaptation finance	No access to formal finance for adaptation; women, youth, and informal actors excluded from national finance systems	Micro-grants, savings groups, and revolving funds empower vulnerable groups with adaptation capital
Ecosystem restoration and risk reduction	Deforestation and erosion continue unchecked; increased landslide and flood risk; degraded ecosystem services	Bioengineering, reforestation, and flood-buffer restoration across rural and peri-urban zones improve risk reduction
Knowledge and institutional capacity	Fragmented knowledge; no cross-country exchange; weak documentation of adaptation lessons	Knowledge hubs, policy briefs, peer exchanges, and training platforms improve learning and scaling
Inclusivity and gender equity	Women and marginalized groups excluded from planning and finance; increased social vulnerability	Gender-responsive budgeting, women-led initiatives, and equitable participation across all components

K. Project sustainability.

118. The ECOVERSE project has been deliberately designed to ensure the sustainability of its outcomes beyond the project’s implementation period, by combining institutional mainstreaming, local ownership, long-term financing, and nature-based resilience. Interventions are embedded within national and subnational development and climate policies, including National Adaptation Plans (NAPs), Nationally Determined Contributions (NDCs), local development plans, and sectoral strategies related to water, agriculture, housing, and disaster risk reduction. Close collaboration with line ministries, municipal authorities, and decentralized institutions ensures that the technical approaches and budgetary needs for ongoing support are well integrated into public systems. In both countries, the project will work through local governments and community institutions to promote policy alignment and transition project assets into public or community ownership.

119. Sustainability is further reinforced through a layered capacity-building strategy that empowers local actors with the knowledge and skills needed to operate, maintain, and replicate key project investments. Technical trainings will be provided to local masons, artisans, and engineers on the maintenance and climate-proofing

of infrastructure such as flood defenses, interlocking compressed earth brick (ICEB) housing, drainage channels, and water harvesting systems. Agricultural extension agents and cooperatives will receive training on soil restoration, agroforestry, and sustainable land use practices. Importantly, these trainings will be delivered with a strong gender and youth focus, ensuring equitable access to economic opportunities and long-term engagement in climate adaptation efforts.

120. To secure the financial viability of interventions post-project, ECOVERSE integrates community-driven finance models, including the establishment of savings groups, revolving funds, and microgrant schemes. These mechanisms will serve as critical sources of capital for small-scale repairs, infrastructure maintenance, and climate-smart livelihood investments. The use of Local-Level Adaptation (LLA) platforms ensures that community priorities and feedback are embedded in resource allocation and planning processes, while also building the financial and governance capacities of grassroots institutions. These locally managed funds will particularly help maintain flood control structures, communal wells, and restored ecosystems, especially in areas where public budget allocations remain constrained.
121. Environmentally, the project promotes regenerative solutions that are inherently self-sustaining. These include reforestation, agroforestry corridors, vegetative slope stabilization, and restoration of riparian buffers all of which deliver lasting ecosystem services such as erosion control, microclimate regulation, and groundwater recharge. Unlike hard infrastructure alone, these nature-based solutions improve in value and functionality over time, providing a strong return on investment.
- Finally, the regional dimension of ECOVERSE will strengthen long-term sustainability by facilitating institutional learning, cross-country collaboration, and technical standardization. Knowledge platforms established under the project will support peer learning, training-of-trainers, and policy dialogues across national boundaries, creating durable capacities to scale, replicate, and sustain adaptation gains. By embedding adaptation in institutions, equipping communities with resources and skills, and restoring ecological systems, ECOVERSE creates a resilient foundation that will outlive the project's duration and provide long-term benefits for vulnerable populations in both Chad and Togo.

L. Environmental and social impacts and risks identified.

122. The ECOVERSE project has undergone an initial environmental and social risk screening in accordance with the Adaptation Fund's Environmental and Social Policy (ESP). This screening serves as a preliminary assessment and will be further developed during the full proposal development stage, including site-specific studies and in-depth consultations with affected communities and stakeholders.
123. While the project is expected to generate overwhelmingly positive environmental and social benefits—such as improved land use, ecosystem restoration, climate-resilient infrastructure, and gender-responsive development—some potential risks have been identified that will require further assessment and targeted mitigation. These include short-term disturbances during construction (e.g., vegetation clearing, soil disturbance, dust, and noise), possible exclusion of vulnerable groups (e.g., women, youth, persons with disabilities, Indigenous Peoples) from decision-making or access to benefits, conflicts over land tenure or resource access in areas targeted for reforestation, agroforestry, or water harvesting infrastructure, and risk of ecosystem disruption if species selection, construction techniques, or land management practices are not climate- and biodiversity-sensitive.
124. To ensure compliance with the ESP's 15 principles, the project will prepare a robust Environmental and Social Management Plan (ESMP), apply participatory land-use planning processes, and implement Free, Prior and Informed Consent (FPIC) protocols in relevant sites. This is particularly important in Togo, where some rural communities include Indigenous Peoples, and in Chad, where groups such as the Mboro Fulani and Toubou are traditionally nomadic. During full proposal development, further assessment will confirm the presence, seasonal movements, and potential involvement of Indigenous Peoples in project areas. Measures will also

include grievance redress mechanisms, contractor training on environmental codes of conduct, biodiversity safeguards, and regular safeguard compliance audits.

125. The table below provides an initial assessment of the environmental and social risks against the 15 principles of the Fund's policy. As the project activities will be further defined during the project preparation phase, a more detailed assessment, as mentioned above, of risks and impacts will be carried out and an ESMP will be developed in response.

Environmental and Social Principle	Risk Level	No Further Assessment Required	Potential Impacts/Risks – Further Assessment & Management Required for Compliance
Compliance with the Law	Moderate		There is a risk of non-compliance with national environmental, land, labor, and water regulations, particularly where local government enforcement capacity is weak or legal frameworks are fragmented. For example, in Chad, land tenure arrangements vary significantly between customary and statutory systems, while in Togo, decentralized land management committees may interpret national law inconsistently. During full proposal development, a detailed legal gap analysis will be undertaken for each site, with specific compliance checklists developed. Mitigation will involve legal liaison mechanisms between project teams, local authorities, and national ministries to ensure uniform application of laws.
Access and Equity	Moderate		Without targeted outreach, communities in remote or socio-economically disadvantaged areas may have reduced access to project benefits such as training, infrastructure, or climate finance. In Chad, highly dispersed settlements in desert zones may be harder to reach; in Togo, rural villages without road access risk exclusion. The full proposal will map socio-economic access barriers and propose outreach and communication strategies, including mobile extension services and equitable beneficiary selection criteria.
Marginalized and Vulnerable Groups	Moderate		Women, youth, elderly persons, persons with disabilities, and minority ethnic groups may face structural barriers to participation in planning or accessing project benefits. This risk is heightened if meetings are held at times or locations that exclude these groups, or if decision-making structures are male-dominated. Further assessment will include a vulnerability analysis disaggregated by gender, age, and disability status, and mitigation will involve inclusive planning processes, quotas for participation, and tailored capacity-building approaches.
Human Rights	Low		If community participation mechanisms are not robust, there is a risk of undermining rights to free expression, association, and access to information. This could occur if local power structures suppress dissent or if technical language is not translated into local dialects. The full proposal stage will include participatory rural appraisals (PRAs) in local languages to ensure all groups can express concerns and shape project decisions.
Gender Equity and Women's Empowerment	Moderate		Prevailing gender norms may limit women's roles in decision-making, access to land, or participation in capacity-building. In Togo, customary land tenure often restricts women's ownership rights; in Chad, women's workload in water and fuel collection may limit time for project activities. Further assessment will conduct a gender analysis to identify barriers and opportunities. Mitigation will include FPIC processes that specifically engage women, gender-responsive training schedules, and safeguards against elite capture of benefits by male household heads.
Core Labour Rights	Moderate		The use of casual or seasonal labor for construction and planting may risk non-compliance with international labor standards, including fair wages, working hours, health and safety, and prohibition of child labor. In Chad, informal labor arrangements are common in rural works, while in Togo, local contractors may lack formal labor management systems. The full proposal will assess labor

			supply chains and propose contractor requirements, labor codes of conduct, and monitoring protocols.
Indigenous Peoples	Moderate		While Indigenous People are identified in Chad (Mboro Fulani and Toubou), they are primarily found in other areas of the country. Consultations confirmed that no Indigenous People groups are present in the project sites. As the Mboro Fulani are nomadic pastoralists, further assessment during the fully developed proposal will determine whether they have temporary camps in the project area. Based on available information and consultations conducted with local communities, no Indigenous Peoples, as defined under the Adaptation Fund Environmental and Social Policy, have been identified within the ECOVERSE project area in Zogbépimé, Togo. However, given seasonal mobility patterns and the potential for intersecting grazing routes, site-specific verification will be carried out. If any Indigenous Peoples are identified, FPIC protocols and culturally appropriate benefit-sharing measures will be implemented.
Involuntary Resettlement	Low		There is a negligible risk of physical displacement, but certain infrastructure (e.g., bunds, small-scale irrigation systems, water harvesting structures) could require land reallocation that temporarily restricts access to agricultural plots or grazing areas. During the full proposal, a land acquisition and use assessment will identify any such cases, with measures to avoid displacement or provide equitable compensation and livelihood restoration.
Protection of Natural Habitats	Moderate		Land preparation, vegetation clearance, or construction of bunds and water harvesting systems could temporarily disrupt local flora and fauna. This is particularly relevant in semi-arid habitats of Chad and riparian zones in Togo. The full proposal will include habitat sensitivity mapping and design measures to avoid high-biodiversity areas. Post-construction restoration will be incorporated into all work plans.
Conservation of Biological Diversity	Moderate		Agroforestry and climate-resilient cropping could unintentionally promote monocultures or introduce non-native species if species selection is not biodiversity-sensitive. In Chad, tree species for windbreaks may be selected for fast growth without considering ecological fit; in Togo, demand for marketable species may drive monocultures. The full proposal will include a biodiversity management plan, native species preference lists, and farmer training on mixed cropping systems.
Climate Change	Low		While the project is climate-positive overall, transport of materials and construction activities could produce minor GHG emissions. In hot regions, use of certain construction materials could also increase local heat absorption. The full proposal will propose low-emission logistics options, renewable energy for operations, and climate-smart materials.
Pollution Prevention and Resource Efficiency	Moderate		Construction and agricultural activities could generate solid waste, wastewater, agrochemical runoff, or sedimentation in waterways. Without proper design, cisterns and bunds could concentrate pollutants. The full proposal will identify pollution hotspots and propose waste management protocols, agroecological pest management, and sediment control measures.
Public Health	Moderate		Standing water from irrigation or water harvesting structures could increase the risk of water-borne and vector-borne diseases such as malaria and bilharzia. In both countries, construction works may also create dust that exacerbates respiratory issues. Health risk assessments and community health education programs will be incorporated into the full proposal, along with design features to prevent stagnant water accumulation.
Physical and Cultural Heritage	Low	✓	No known cultural heritage sites are located within project areas, but chance finds during excavation remain possible. The full proposal will incorporate chance finds procedures and worker training to prevent accidental damage.
Lands and Soil Conservation	Moderate		Bunding, contour farming, and land treatment measures may fail or cause erosion if poorly designed or maintained. In Chad's sandy soils, wind erosion risk is high; in Togo's slopes, water erosion can be severe. The full proposal

will integrate soil stability studies, maintenance training, and erosion control measures into all land management interventions.

PART III: IMPLEMENTATION ARRANGEMENTS

Project alignment with the Results Framework of the Adaptation Fund

Project Objective(s) ³⁴	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
To strengthen climate resilience of vulnerable communities in Chad and Togo through nature-based infrastructure, agroecological practices, inclusive finance, and regional knowledge exchange.	Number of communities with improved infrastructure and adaptive capacity; Number of beneficiaries supported with adaptation solutions.	Outcome 4: Increased adaptive capacity within relevant development and natural resource sectors.	Percentage of targeted population aware of predicted adverse impacts of climate change and of appropriate responses.	<u>20,375,000</u>
Project Outcome(s)	Project Outcome Indicator(s)	Fund Output	Fund Output Indicator	Grant Amount (USD)
Outcome 1: Urban and rural infrastructure in targeted areas is climate-resilient.	Number of climate-resilient structures built or rehabilitated.	Output 4.1: Targeted population groups covered by adequate risk reduction systems.	Number of risk reduction and adaptation infrastructure measures installed.	7,131,250
Outcome 2: Agroecological production systems support food security and adaptation.	Hectares of land under climate-smart agriculture or restoration.	Output 5.1: Vulnerable households use improved agricultural practices.	Number of households using climate-resilient techniques.	5,705,000
Outcome 3: Inclusive finance improves adaptive capacity of vulnerable groups.	Number of adaptation loans or grants disbursed to vulnerable beneficiaries.	Output 6.2: Targeted population groups with sustained access to financial services.	Volume and number of loans/grants for adaptation disbursed.	2,445,000
Outcome 4: Knowledge exchange fosters regional learning and institutional resilience.	Number of cross-country exchanges and regional knowledge products developed.	Output 7.2: Institutions with increased capacity to minimize exposure to climate threats.	Number of institutions trained and number of knowledge platforms established.	3,056,250
Outcome 5: A regional knowledge and learning platform is established to support continuous adaptation learning and policy uptake.	Number of platform users, number of policy briefs or case studies shared across countries.	Output 7.3: Improved integration of climate-resilience strategies into regional and national development planning.	Number of cross-border policy dialogues and shared knowledge products that inform planning.	2,037,500

³⁴ The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government³⁵

<i>Porgo HOUNLY, Focal point of Adaptation Fund at the Environment, Fisheries and Sustainable Development Ministry of the Republic of Chad</i>	Date: July 6 th 2025
<i>Méry YAOU, Director of the Environmental Directorate at the Ministry of Environment and Forest Resources of the Republic of Togo</i>	Date: July 28 th 2025

⁶ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

B. Implementing Entity certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans of the Government of Chad and Togo and subject to the approval by the Adaptation Fund Board, commit to implementing the project in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project.

Mr. Nabil BEN KHATRA – Executive Secretary of the Sahara and Sahel Observatory (OSS) as the Implementing Entity Coordinator



Date: August 8th, 2025

Tel. : (+216) 71 206 633

Email: nabil.benkhatra@oss.org.tn; boc@oss.org.tn

Project Contact Person: **Ms. Khaoula JAOUI**

Tel.: (+216) 71 206 633

Email: khaoula.jaoui@oss.org.tn

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans of the Government of Burundi and subject to the approval by the Adaptation Fund Board, commit to implementing the project in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project.

Annex 1: Endorsement letters



Republic of Chad
Prime Minister
Ministry of the Environment, Fisheries and Sustainable
Development
Secretary General
General Directorate of the Environment
Designated National Authority
N° 003 /RC/PM/MEFSD/SG/DGE/AND/2025



ADAPTATION FUND

Letter of Endorsement by Government of CHAD

The National Designated Authority

N'Djamena, August 6th 2025

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for "ECOVERSE Project: Enhancing Community Resilience to Climate Extremes Across Diverse African Landscapes in Chad and Togo"

In my capacity as designated authority for the Adaptation Fund in CHAD, I confirm that the above regional grant proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in CHAD.

Accordingly, I am pleased to endorse the above grant proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory (OSS) and executed by TRIPLE CAPITAL TCHAD and ASSOCIATION POUR LE DEVELOPPEMENT INTEGRE DURABLE ET EQUITABLE (ADIDE).

Sincerely,

Mr. Porgo Hounly
Focal Point Adaptation Fund
Ministry of the Environment, Fisheries
and Sustainable Development
N'Djamena, Chad
Tel: +235 66 10 10 27
Email: porgohounly@yahoo.fr

MINISTERE DE L'ENVIRONNEMENT
ET DES RESSOURCES FORESTIERES

SECRETARIAT GENERAL

DIRECTION DE L'ENVIRONNEMENT

Autorité Nationale Désignée du Fonds Vert Climat

N° 004 /DE/AND/FVC

REPUBLIQUE TOGOLAISE
Travail – Liberté – Patrie

Lomé, le 28 JUL 2025

Letter of Endorsement by Government of Togo



ADAPTATION FUND

To : The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: afbsec@adaptation-fund.org
Fax: 202 522 3240/5

Subject : Endorsement for ECOVERSE – Enhancing Community Resilience to Climate Extremes Across Diverse African Landscapes in Chad and Togo.

In my capacity as designated authority for the Adaptation Fund in Togo, I confirm that the above regional project proposal is in accordance with the government's priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change at national and/or regional levels.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by Sahara and Sahel Observatory (OSS) and executed by the non-governmental organization, Sustainable Solutions for Africa (SSA) collaborating with The Directorate of Environment of the Togo's Ministry of Environment and Forestry Resources (MERF); and Les Instituts de Formation en Alternance pour le Développement (IFAD) Togo.

Sincerely,

La directrice de l'environnement

Méry YAOU

Annex 2: Initial GAAP

[Access the initial gender assessment report for Chad here.](#)

[Access the full GAAP report for Togo here.](#)

Annex 3: Documentation of Consultations in Chad and Togo

The consultations in both countries adopted a participatory, inclusive and locally appropriate approach. Activities were carried out in the form of:

- Open community meetings in workshop format;
- Focus groups with women, young people, CSOs and local leaders;
- Individual and collective statements;
- Qualitative data collection on local needs and concrete suggestions.

Participants included administrative authorities, traditional leaders, civil society organisations, women and young people.

A. LOCATIONS AND SCHEDULE OF CONSULTATIONS IN CHAD

The workshops took place in Linia, Mandelia, and the central town hall of N'Djamena, with a particular focus on the 8th and 9th districts.

1. Central Town Hall of N'Djamena

The meeting was held on 11 July 2025 in the presence of municipal authorities. Interviews with the mayors of the 9th and 8th districts, neighbourhood representatives, women, young people and local NGOs took place a week earlier. Discussions focused on flood issues, resilient infrastructure construction and sustainable urban development.

2. Linia Sub-Prefecture

In Linia, the workshop took place on 19 July 2025. Participants emphasised the need to strengthen dykes, develop flood-resistant agricultural areas and support women's groups in climate-smart agricultural practices.

3. Mandelia sub-prefecture

The workshop in Mandelia took place on 20 July 2025. Discussions focused on restoring degraded ecosystems, creating local natural resource management mechanisms, establishing a financing mechanism, and supporting farmers in climate-smart agricultural practices.

[Access to list of participants and photos of consultations in Chad](#)

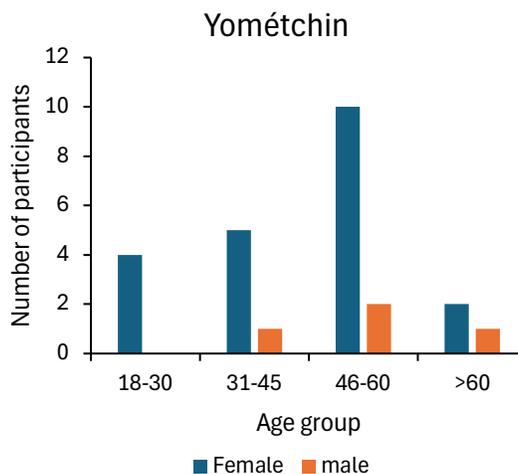
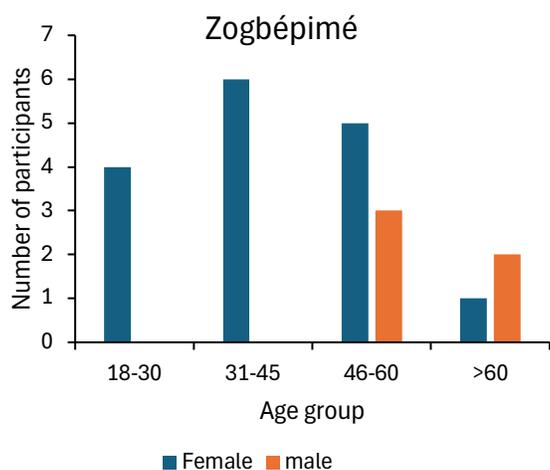
B. LOCATIONS AND SCHEDULE OF CONSULTATIONS IN TOGO

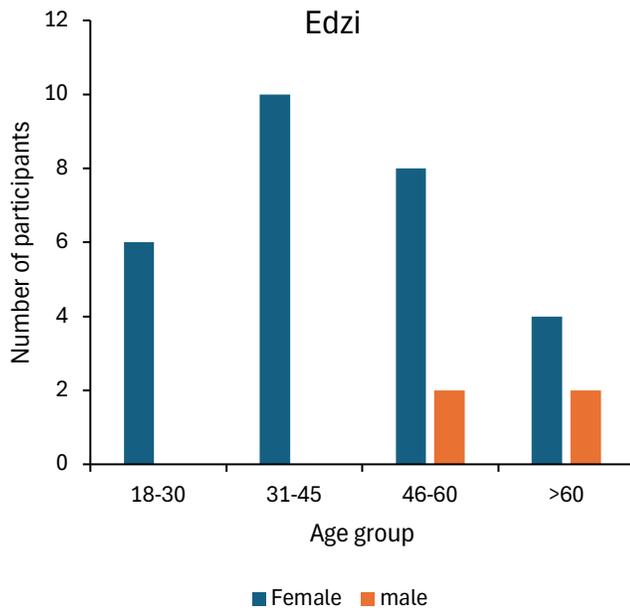
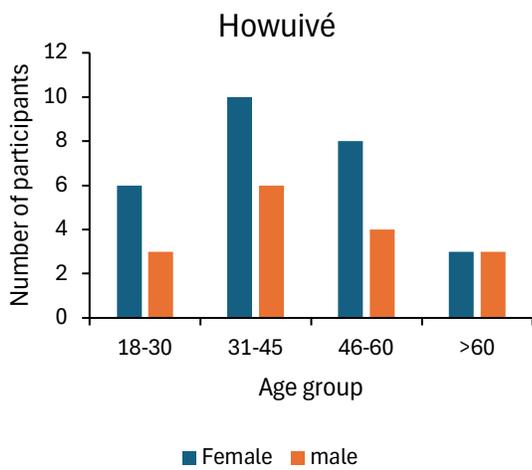
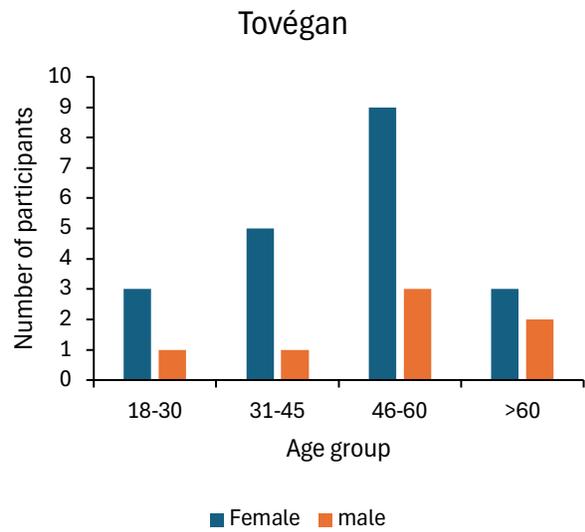
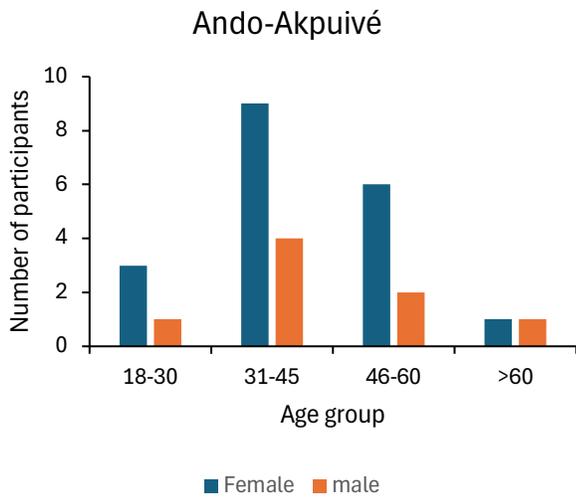
The consultations were held on July 24 and 25, 2025 and brought together 180 participants across seven villages. The villages consulted were: Zogbépimé, Howuivé, Yoméchin, Tovégan, Ando-Akpuivé, Kévé, and Edzi.

Number of People Interviewed in Each Village

Village	Number of Participants	Climate Relevance Summary
Zogbépimé	21	High exposure to bushfires, water conflict, and youth migration
Yoméitchin	25	Droughts, land degradation, high demand for green infrastructure
Ando-Akpuivé	27	Recurrent floods, degraded roads, forest pressure
Tovégan	27	Soil erosion, deforestation, land conflict, extreme weather
Howuivé	43	Most affected by floods and drought, urgent infrastructure needs
Edzi	32	Flood-damaged food sites, social exclusion, and water stress
Total	175	—

Below is the distribution of the participants in the consultations in Togo by gender and age.





[Access to list of participants and photos of consultations in Togo](#)