



Bäaistel

30 Years Promoting  
Sustainable Development

# EX POST EVALUATION OF ADAPTATION FUND PROJECT "ENHANCING RESILIENCE OF COMMUNITIES TO THE ADVERSE EFFECTS OF CLIMATE CHANGE ON FOOD SECURITY IN MAURITANIA"

Inception Report

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**Prepared for**

Adaptation Fund

**15/01/2025**



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# ACRONYMS AND ABBREVIATIONS

<b>AF</b>	Adaptation Fund
<b>AF-TERG</b>	Technical Evaluation Reference Group of the Adaptation Fund
<b>CCPNCC</b>	Coordination Cell for the National Programme on Climate Change
<b>CSA</b>	Food Security Commissariat
<b>DRASEF</b>	Regional Directorate for Social Affairs, Children and Women
<b>DRCSA</b>	Regional Directorate for the Food Security Commission
<b>DRDR</b>	Regional Directorate for Rural Development
<b>DREDD</b>	Regional Delegation for Environment and Sustainable Development
<b>DRHA</b>	Regional Directorate for Water and Sanitation
<b>FAO</b>	Food and Agriculture Organization
<b>FFA</b>	Food for Assets
<b>FGD</b>	Focus Group Discussion
<b>GDI</b>	Gender Development Index
<b>GDP</b>	Growth Domestic Product
<b>GIZ</b>	German cooperation
<b>HDI</b>	Human Development Index
<b>IFAD</b>	International Fund for Agricultural Development
<b>IGA</b>	Income-generating activities
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>KII</b>	Key Informant Interview
<b>MEDD</b>	Ministry of Sustainable Development
<b>NGO</b>	Non-Governmental Organization
<b>ONM</b>	National Meteorological Office
<b>PARSACC</b>	Enhancing Resilience of Communities to the Adverse Effects of Climate Change on Food Security in Mauritania
<b>ProDoc</b>	Project Document / Project proposal
<b>PSC</b>	Project Steering Committee
<b>SAM</b>	Agro-meteorological services
<b>SCAPP</b>	Regional Strategies for Accelerated Growth and Shared Prosperity
<b>TAG</b>	Technical Advisory Group
<b>ToC</b>	Theory of Change
<b>ToR</b>	Terms of Reference
<b>UNDP</b>	United Nations Development Program
<b>VMC</b>	Village Management Committee
<b>WFP</b>	World Food Programme

# 1. PROJECT GENERAL INFORMATION

## 1.1. Project summary table

<b>Project name</b>	<b>Enhancing Resilience of Communities to the Adverse Effects of Climate Change on Food Security in Mauritania (PARSACC)</b>
<b>Project ID</b>	MTN/MIE/Food/2011/1/PD
<b>Location</b>	Mauritania (8 Wilayas in the South-Eastern and Western regions of Mauritania, namely Trarza, Brakna, Gorgol, Tagant, Assaba, Guidimakha, Hodh El Gharbi and Hodh El Chergui)
<b>Implementing agency</b>	UN World Food Programme
<b>Executing agency</b>	Ministry of Environment and Sustainable Development
<b>Focal area</b>	Food security
<b>Budget</b>	USD 7,803,605
<b>Approval date</b>	28/06/2012
<b>Dates</b>	08/2014 – 09/2019 – the project benefitted from a one-year extension.
<b>Date of MTR</b>	February 2017
<b>Date of final evaluation</b>	July 2019
<b>Objective</b>	To enhance the resilience of vulnerable communities to the effects of climate change on food security
<b>Components</b>	<p><b>Component 1:</b> Support technical services and the communities they serve to (a) better understand climate risks, their impact on livelihoods and food security; and (b) facilitate participatory decentralized adaptation planning.</p> <p><b>Component 2:</b> Design and implement concrete adaptation measures identified through community adaptation planning that aim to combat desertification and land degradation</p> <p><b>Component 3:</b> Design and implement concrete adaptation measures identified through community adaptation planning that aim to diversify and strengthen the livelihoods of the most vulnerable population</p>

## 1.2. Project management structure

The PARSACC project was implemented by the World Food Programme (WFP) and executed by the Government of Mauritania through its Ministry of Environment and Sustainable Development (MEDD) in collaboration with the Ministry of Rural Development and the Ministry of Social Affairs.

As such the management structure was to be as follows:

- The **WFP** had the overall responsibility of ensuring the achievement of project results. It was to support the MEDD and the project team, to coordinate the monitoring and evaluation (M&E) and knowledge management processes in collaboration with regional teams and to develop the M&E management plan and to monitor its implementation. WFP was to provide continuous financial oversight and was the entity accountable to the Adaptation Fund.
- The **Project Steering Committee (PSC)** was chaired by the Head of the MEDD's Coordination Cell for the National Programme on Climate Change (CCPNCC). It also comprised representatives from WFP as well as from three technical directorates: the Directorate for the Protection of Nature, the Directorate of Programs, Information and Environmental Monitoring and the Directorate for Pollution and Environmental Urgencies. The PSC was tasked with supervising the project team, approving annual work plans and budgets, reviewing and approving annual technical and financial reports, approving the composition of regional project teams, discussing and approving any suggestions brought to the PSC.
- A **Technical Advisory Group (TAG)** was also established to provide advice to the PSC. The TAG comprised relevant ministries, including the Ministry of Rural Development and the Food Security Commissariat (CSA), FAO, IFAD and UNDP, GiZ and other relevant bilateral partners, and civil society organizations. The TAG was to provide its technical expertise and experience to guide project decisions and foster successful project implementation.
- The **Project Team** worked under the supervision of the PSC and comprised an international project coordinator, assistants, consultants and implementations partners. The Project coordinator and his team were responsible for coordinating project implementation and providing continuous training and support to the CCPNCC. The tasks included preparing annual workplans and budgets, preparing the Terms of Reference for specific studies and consultancies, supervising the implementation of annual workplans, ensuring the quality of reports provided by regional project teams, preparing annual overall project reports, and overseeing budget execution.
- Finally, **Regional Project Teams** were established in each of the 8 targeted regions and were headed by their respective Regional Delegation for Environment and Sustainable Development (DREDD) representatives accompanied by representatives from the Regional Directorate for Rural Development (DRDR), Regional Directorate for Water and Sanitation (DRHA), Regional Directorate for the Food Security Commission (DRCSA), Regional Directorate for Social Affairs, Children and Women (DRASEF), representatives from civil society and implementing partners contracted for the implementation of activities in each region. Regional Project Teams were to be the main project interlocutor for local communities and were to monitor the implementation of activities and indicators as well as to liaise with the project coordinator to report on progress made.

### 1.3. Summary of project justification

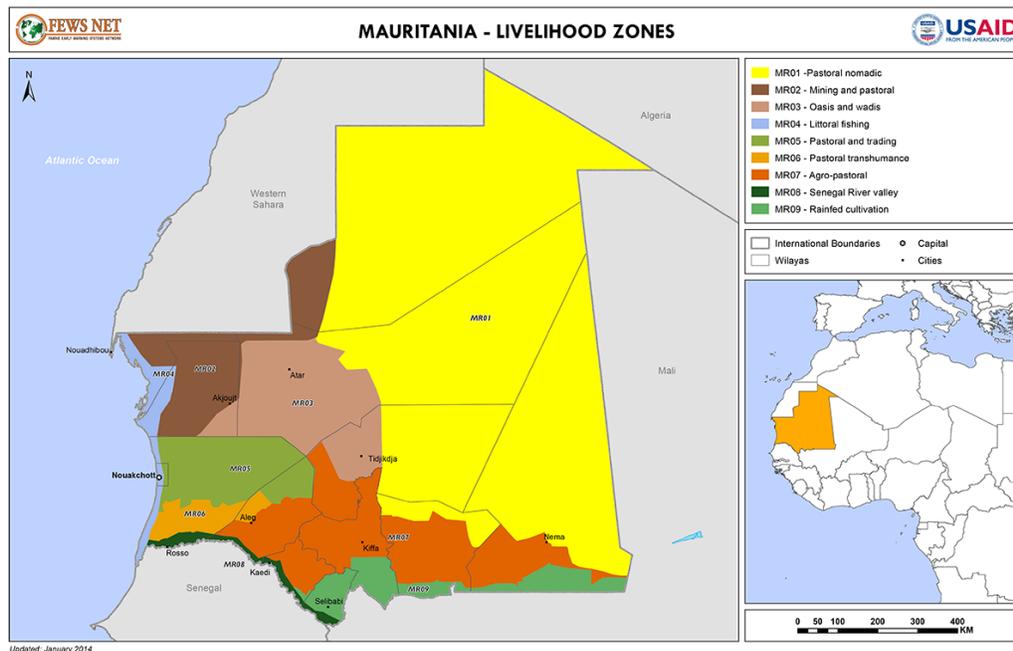
In the following section, Baastel's team reconstructed the project justification. This is based on extensive document review and the collection of information retrieved from the ProDoc and Mauritania's reports as signatories of the UNFCCC and the CBD such as its National Communications. In addition, this section drew from a variety of reports compiled by third-parties, which include the World Bank, FAO and GIZ. Climate data was recovered from the Climate Change Knowledge Portal.

Located on the coast of the West African Sahel, Mauritania's climate is arid. It is defined in the North by the Saharan desert, extreme dryness and strong winds. In the South, the climate is Sahelian with higher

amounts of precipitations. The south has a rainy season that runs from May to October.<sup>1</sup> It can deliver up to 200 mm of rain per month, but is highly dependent on the movements of the Intertropical convergence zone, and is thus highly variable.<sup>2</sup> Mauritania can be divided into four major agro-ecological zones: the Sahara (North), Agropastoral Sahel (South-East), the Senegal River Valley (South), and the Coast (West).<sup>3</sup> Mean annual temperatures range from 21°C to 30°C and annual precipitation from 20mm on the northern coast to 400mm in the south. Rains follow a unimodal precipitation pattern from June to October<sup>4</sup>.

About three quarters of Mauritania's territory is desert and only 0.4% of its land is considered arable.<sup>5</sup> As a result, the country has always been food deficient with production meeting only about 30% of its population's food requirements and 25% of the rural population being food insecure, especially in the south-east which is where this project operated. Despite the environmental limitations, almost half of Mauritania's population and 75% of the country's poor depend on agriculture and livestock as their primary source of livelihood,<sup>6</sup> relying on various types of pastoral and agro-pastoral practices (Figure 1). In addition, agriculture and livestock contribute to almost one third of Mauritania's GDP<sup>7</sup>. The agricultural sector produces mainly rice, milk, sorghum, goat milk, sheep milk, lamb/mutton, beef, camel meat, camel milk, and dates

Figure 1: Mauritania Livelihood Zones (2014)<sup>8</sup>



<sup>1</sup> World Bank (2024). Climate Change Knowledge Portal, Mauritania.

<sup>2</sup> PARSACC Project Document

<sup>3</sup> MEDD (2019). Fourth National Communication.

<sup>4</sup> GIZ (Undated). [Climate Risk Profile: Mauritania](#)

<sup>5</sup> World Bank (2021). [Arable land \(% of land area\) – Mauritania](#).

<sup>6</sup> ProDoc

<sup>7</sup> MEDD, 2018. 6<sup>th</sup> Report to the Convention on Biological Diversity

<sup>8</sup> FEWS NET (2014). Mauritania Livelihoods Map

These sectors are intrinsically vulnerable to climate change and as early as 2004, Mauritania's National Adaptation Programme of Action identified pastoralism and agriculture as the economy's most vulnerable sectors to climate change. For thousands of years, pastoralists and farmers in Mauritania have had to develop adaptation strategies to cope with the country's harsh conditions and variations in the weather, relying on a nomadic lifestyle to move to punctually more suitable areas and protecting water resources. However, with the acceleration of climate changes and sedentarization, these traditional coping strategies are no longer sufficient<sup>9</sup>.

Data on observed and projected climate change was instrumental in the justification of the PARSACC project. At the time the project was designed, temperatures had been rising rapidly since the 1950s and were projected to continue to increase by +1.3°C to +3.8°C by the 2060s and by +1.8°C to +6°C by the 2090s, and the rate of increase was projected to be higher in the dry season.<sup>10</sup> As temperature is a key factor in potential evapotranspiration, evapotranspiration is projected to increase in Mauritania thereby increasing the risk of drought<sup>11</sup>. Furthermore, data available when the project was designed predicted a decrease of precipitation by at least 20%, with different models showing a decrease ranging from -65 to +28%.<sup>12</sup> Mauritania has been affected by climate-related land degradation and desertification for some time now. Recurrent droughts in the 1970s and 1980s led to a drastic reduction in water resources, reaching -60% in some areas. These droughts contributed to pushing the drought line southward, shrinking the already limited arable land and sparking land-use conflicts between pastoralists and farmers, who are now forced to plant on marginal soils that are highly susceptible to erosion.<sup>1314</sup>.

As a result, domestic food production had been declining for the past forty years before the project began. The production index fell from 161 in 1969-1971 to 97 in 2005-2007 (compared to a base value of 100 in 1999-2001)<sup>15</sup>. This situation exacerbated poverty and reduced purchasing power for food. With poor rural households already spending 80% of their income on food, the impact of reduced food production was dire. At the time, acute malnutrition among children aged 6-59 months was 12.5% nationwide, and chronic malnutrition affected one-third of the population in some areas, including the southeast, where the project focused<sup>16</sup>.

Owing to its unfavourable climate, Mauritania has been a key recipient of international donor's assistance in Sub-Saharan Africa, especially in the field of agricultural and rural development with the aim of boosting the rural economy, improving agricultural productivity, promoting sustainable land management and improving food security. Nevertheless, such initiatives have failed to properly address resilience to climate change and the barriers to sustainable adaptation.

Through this project, the government of Mauritania hoped to topple several obstacles including:

1. A lack of information at all levels on understanding and managing climate risks;
2. Weak local and national capacities to devise climate change strategies and adaptation measures;

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<sup>9</sup> ProDoc

<sup>10</sup> ProDoc. Original source: UNDP Climate Change Country Profile Scenario unspecified.

<sup>11</sup> GIZ (Undated).

<sup>12</sup> ProDoc. Original source : Mauritania's Second National Communication

<sup>13</sup> GIZ (Undated).

<sup>14</sup> ProDoc

<sup>15</sup> FAO's agricultural production index shows the relative volume of the annual agricultural production compared to a base value of 100 in 1999-2001.

<sup>16</sup> ProDoc

3. Poverty and the lack of available resources to invest in soil and water preserving assets;
4. A lack of short-term alternative coping strategies;
5. Incoherent political strategies and a lack of project complementarity resulting from institutional fragmentation<sup>17</sup>.

## 1.4. Summary of project strategy

### 1.4.1. Project objectives and components.

The overall goal of this project was **to enhance the resilience of vulnerable communities to the effects of climate change on food security**. To achieve this goal, the project worked with government agencies to strengthen their capacity to support communities in designing and implementing appropriate and participatory local adaptation and natural resource management plans (Component 1), and with communities to encourage them to invest in resilience and adaptation to climate change (Components 2 and 3).

**Component 1:** *Support technical services and the communities they serve to (a) better understand climate risks, their impact on livelihoods and food security; and (b) facilitate participatory decentralized adaptation planning.*

The objective of the first component was to enhance the understanding and capacity of government and the communities to develop participatory and context-specific adaptation plans. Under Output 1.1, regional technical services of MEDD (known as DREDD) were to be trained on climate change adaptation. Approximately 200 technical staff at various levels were to be trained. The training curriculum included technical topics such as dune stabilization, irrigation techniques, seed selection and conservation, as well as general aspects of natural resource management and integration of village adaptation plans into regional planning. Beneficiaries were also to be trained in computer literacy. Output 1.2. aimed at strengthening the capacities of the National Office of Meteorology (ONM) and the Agro-Meteorological Service (SAM). Outputs 1.3. to 1.5. were to intervene at village-level to raise community awareness on climate change and adaptation measures and develop local adaptation plans in 100 villages clustered by landscape, ecosystem and livelihoods. Under Output 1.6. community radio stations were to be established to enable information sharing on early warning and adaptation management. Finally, Output 1.7. planned to establish a monitoring system to track climate events in project target areas and provide feedback on how to respond to them.

Components 2 and 3 were about implementing concrete adaptation activities on the basis of participatory planning conducted in Component 1. Implementation was to be done by community members themselves following a food-for-work or cash-for-work or -for-training training approach. Activities were to be exclusively carried out during the lean season.

**Component 2:** *Design and implementation of concrete adaptation measures identified through community adaptation planning that aim to combat desertification and land degradation.*

The objective of component 2 was to improve the long-term sustainability of the productive ecosystems needed to support climate-resilient and food secure livelihoods. Under this component, specific outputs

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<sup>17</sup> ProDoc

related to dune fixation, protection of vulnerable zones, fuel wood forest plantation and building of water retention structures were planned.

**Component 3:** *Design and implement concrete adaptation measures identified through community adaptation planning that aim to diversify and strengthen the livelihoods of the most vulnerable population*

The objective of Component 3 was to increase the resilience and food security of communities and households through livelihood diversification and sustainable use of natural resources. Income generating activities (IGA) were to be developed through the provision of training and investments in productive assets. IGAs identified were to include tree planting for revenue and food generation, livestock management, improved agricultural techniques and water use, plant and seed multiplication, poultry, apiculture, improved cooking stoves. Community cereal banks were also to be established.

The project's results framework is presented in Annex 4: Results framework.

### 1.4.2. Project intended impacts

The Project Document (ProDoc) does not specifically define the sought impacts from the project; however, it identifies nine outcomes that are expected to support the achievement of the project's goal:

- Outcome 1.1: Strengthened awareness, ownership and facilitation capacities of government services (DREDD)
- Outcome 1.2: Strengthened awareness, ownership, planning and management capacities at community level for local natural resource management and climate change adaptation
- Outcome 1.3. National ecologic monitoring system strengthened and tested
- Outcome 2.1. Advance of sand dune slowed down, halted or reversed
- Outcome 2.2. Increased vegetation cover in intervention zones
- Outcome 2.3. Decreased loss of water and soil through surface run-off
- Outcome 3.1. Increased number of sources of income for participating households
- Outcome 3.2. Increased income for participating households
- Outcome 3.3: Increased availability of and access to food for participating communities

As per Annex 5 of the ProDoc, the PARSACC project design was largely aligned with the Adaptation Fund Results Framework, and was expected to contribute to the following Adaptation Fund outcomes:

- Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level
- Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress
- Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas

According to the Final Evaluation Report, the implementation of project activities did indeed contribute to the AF's mission to strengthen adaptation to climate change and in particular to AF Outcomes 3,5 and 6. Detailed information on expected and actual contributions are presented in Annex 5: Project contribution to AF result framework

### 1.4.3. Reconstructed theory of change

For the purpose of this Ex Post Evaluation exercise, understanding the project's Theory of Change (ToC) will inform:

- The identification of the project outputs, outcomes, intermediate states and intended long-term adaptation impacts, as well as the causal pathways and assumptions necessary for the causal pathways to be true;
- The establishment of the expected duration of project activities to sustain project results after closure;
- The assessment of the need to continue specific activities and maintain specific assets/capacities post project to ensure continued project results after closure;
- The identification of stakeholders' roles in sustaining project results;
- The understanding of the anticipated conditions, risks, and factors that may support or hinder the continuity or consolidation of project outcomes.

This ToC contains the elements to derive the project's Theory of Sustainability, which refers to the logic according to which the project results were to be sustained.

The ProDoc did not outline the PARSACC's ToC. However, drawing from elements from the ProDoc, the Evaluation Team believes that the following reconstructed ToC (also presented in graph form in Figure 2) captures the projects logic appropriately.

The ProDoc identified several key pressures affecting the sustainable use of productive land and food security in the target intervention areas: (i) desert expansion as a result of climate change; (ii) recurrent extreme climate events (especially droughts, but also localized floods); and (iii) land-use conflicts (particularly between pastoralists and farmers) and unsustainable land use as a result of declining arable land suitability. All of this has had a critical impact on agricultural productivity, seriously threatening the food security of those who depend on agriculture as their main source of livelihood. Elements from the ProDoc also allowed the Evaluation Team to identify barriers that hinder progress towards addressing these pressures: (i) there is a lack of information at all levels regarding climate change and climate change adaptation which hampers stakeholders ability to understand and manage climate risks; (ii) stemming from this lack of knowledge, capacities are very limited at both local and national levels to design climate change adaptation strategies and measures; (iii) local communities are not involved in climate adaptation planning; (iv) poverty-stricken local communities are unable to invest in soil and water preserving assets which would help them adapt to climate events; (v) local communities heavily rely on agriculture as their main source of income and do not have suitable short-term alternative livelihoods thereby undermining their resilience to climate events.

The project sought to address these five barriers identified at the design stage through three main components divided into 9 outcomes and 19 outputs (see Annex 4: Results framework).

Component 1 aimed to enhance the understanding and capacity of government services and local communities with respect to climate change and climate adaptation to facilitate the management of climate risks in a participatory manner. Trainings and awareness raising activities provided to both government services and local community members were expected to build their capacity to engage in local adaptation planning processes, monitor climate risks and implement of adaptation measures.

Component 2 designed and implemented concrete adaptation measures to reverse land degradation and desertification and promote the sustainable management of natural resources thereby improving the

viability of productive ecosystems and supporting food security. These adaptation measures were drawn from the work conducted under component 1 and the development of local adaptation plan as a way of fostering the relevance of the proposed solutions to local needs and ownership of the project by all affected stakeholders.

Component 3 also was a very operational component of the project and supported the implementation of adaptation measures this time aimed at increasing the resilience and food security of the most vulnerable populations through livelihood diversification and sustainable use of natural resources. Akin to Component 2, Component 3 specific interventions were based on the results from the activities carried out in Component 1

During the design phase, it was identified that the project faced risks related to limited local capacity for climate change management, potential delays from external factors, and difficulties for communities in adopting the skills and cohesion needed to protect areas. Additional risks included the impact of natural disasters and of unsustainable practices, and the lack of complementary projects or qualified partners. The mitigation measures proposed to address these risks involved primarily the building of ownership and capacities within institutions, partners and beneficiaries. For communities, this included both providing financial incentives and encouraging investments with their own resources.

Flexibility in funding allocation and contingency plans would help address operational challenges.

At project design it was envisaged that the sustainability of the project outcomes would be ensured through the following:

- The direct involvement of existing community leadership structures within project processes;
- Strengthened technical services and enhanced regional planning;
- Direct involvement of the strengthened DREDD (which will be in charge of regional teams) in community mobilization and strengthening, ensuring adequate technical support to cluster and community-level planning, activity implementation and maintenance as well as the continued capacity to provide this support after project termination;
- Highly participatory processes leading to decisions at cluster and village level;
- No assets created that are not prioritized and not sustained by the beneficiaries;
- Sustainability of future monitoring and support is ensured by the active and central role of DREDD, which received support and learnt throughout the project to apply what will be required of it in the future;
- The sustainability of individual activity outputs results from their tangible benefits (through protection from damage and stabilised or increased income) to the communities and households responsible for their maintenance;
- All physical assets created under the project have been designed to be sufficiently simple and cheap to repair and replace by communities with their own knowledge, skills and resources;
- The financing for sustaining these assets has been secured in different, complementary ways:
  - the assets created allow communities to directly raise income (e.g. by selling fodder from protected zones, levying a contribution for picking fuel wood from community forests, etc.)
  - the benefits derived from these assets (e.g. dune fixation, fight against water erosion, etc.) is so tangible and significant that communities are able to raise the required resources for the protection and maintenance of these assets from their members either on an ad hoc basis or through a community maintenance scheme /fund;
  - the income that can be raised by households through the income generating activities under component 3 ensure a higher level of financial resources and a greater presence of manpower in the villages which can contribute to the maintenance of created assets.

- To some extent, spontaneous scaling-up can be expected where other (non-project) villages are exposed to the benefits derived from the project or where project villages by their own means increase the assets created under the project using their own resources and the know-how acquired through the project. It is not anticipated that scaling-up of project investments would be financed through mechanisms developed under the project. Such scaling-up will need to be encouraged by the government including through the strengthened decentralized technical services;
- It is expected that an important benefit of the proposed interventions will be social cohesion, which is hard to quantify yet indispensable for the sustainability of assets and the resilience of ecosystems and communities. While most of the proposed interventions promote cohesion, community participation in planning, the empowerment of village associations, and the establishment of community radios play particularly important roles.

The project's Reconstructed Theory of Change relies on a series of assumptions:

A1: DREDD and central technical services are willing and capable to absorb and apply training and capacity strengthening

A2: Communities are willing to join in village clusters and to follow participatory adaptation planning exercises.

A3: DREDD take active leadership of regional teams

A4: Qualified implementing partners are available to continuously support regional teams

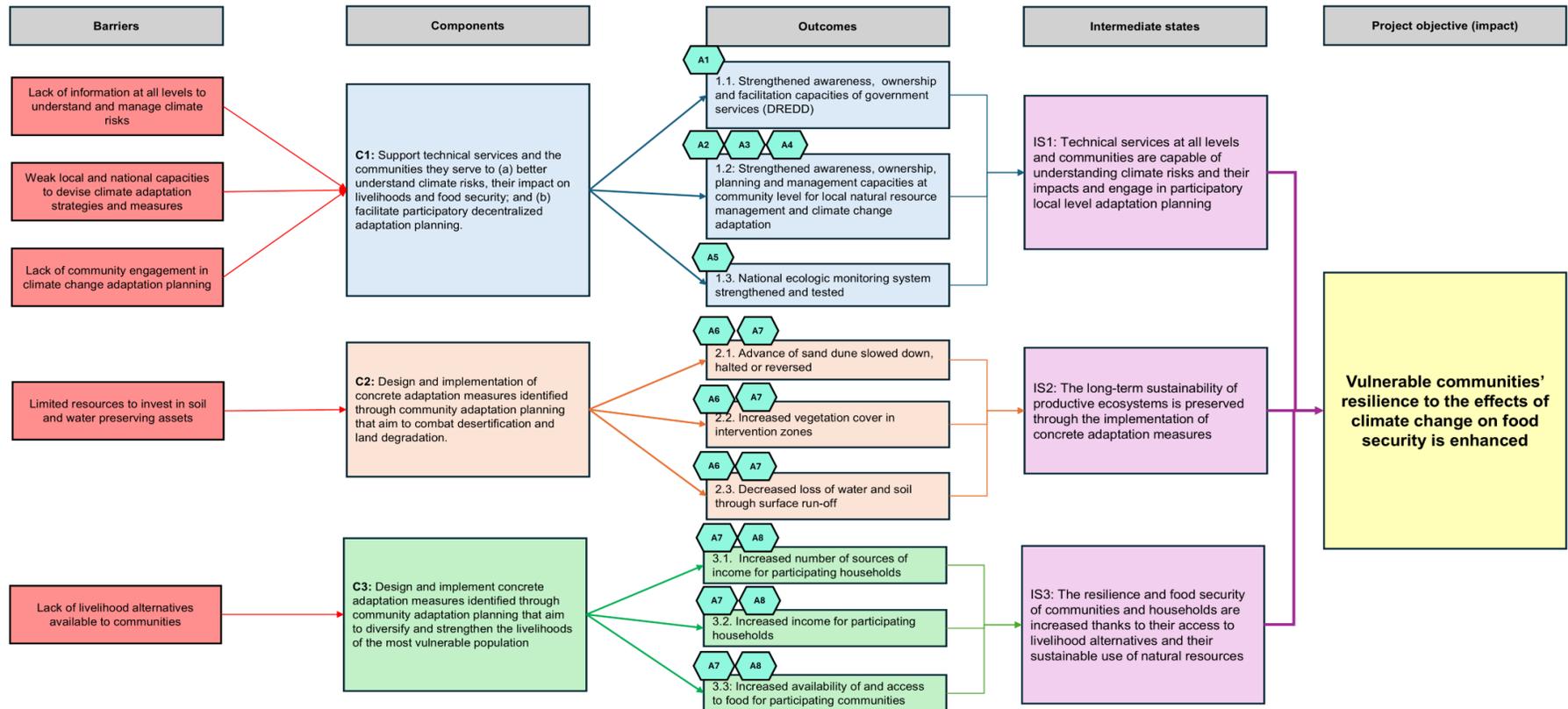
A5: PANE II is approved and its operational plan includes a relevant and realistic results framework and monitoring plan

A6: Communities / village clusters prioritise the fight against desertification, erosion and soil degradation in their adaptation plans.

A7: No major emergencies jeopardise the implementation of planned works

A8: No major emergencies jeopardise the implementation of planned works.

Figure 2. PARSACC Reconstructed ToC



Risks identified in the ProDoc:

- There is little local specialized management and technical capacity related to climate change, particularly in the entities that are responsible for the project.
- External factors may delay project implementation
- Communities find it difficult to take up the skills, learning and social cohesion necessary to secure protected areas
- Natural disasters, in particular drought
- Lack of adequately qualified partners
- People purchase greater amounts of livestock (beyond carrying capacity)
- Outsiders bring in additional livestock
- People cut down planted trees for fuel wood (other than community forests)
- Lack of complementary projects and inputs

#### 1.4.4. Project effectiveness and sustainability ratings

According to the Final Evaluation report, the effectiveness of the project was rated **satisfactory**. This rating was given based on:

- A high level of achievement of objectives and targets by component;
- The significant contribution of the project to strengthening the government's vision, policies/strategies for poverty alleviation, food security and the implementation of adaptation measures to the effects of climate change;

However, the Final Evaluation noted that the effectiveness and the performance of project activities differ quite significantly between villages. Villages were split into three categories, the first one with performance described as satisfactory, the second one whose results are described as average and the last one for which project performance were unsatisfactory with some activities even being abandoned. Project's effectiveness also varied depending on the activities, in particular, some of the income generating activities (IGAs) faced numerous difficulties.

Table 1 summarizes expected achievements per outcome vs. what was actually achieved by the project as per the Final Evaluation.

AF's Guidelines for final evaluations<sup>18</sup> defines sustainability as "the likelihood of the achieved outcomes continuing after funding from the Fund ends".

The final evaluation did not provide sustainability ratings. Although it did acknowledge several factors supporting project outcomes' sustainability, in its assessment of the project's sustainability the Final Evaluation concluded that "sustainability remains fragile"<sup>19</sup>. This conclusion stemmed from several factors:

- The poor performance of certain IGAs in certain target sites;
- The temporal gap between project activities and results for certain IGAs (e.g. tree planting);
- The lack of maturity in some of the governance structures established by the project that would require further support;
- The limited effectiveness of certain technical trainings;
- The low involvement of technical services concerned mainly with project interventions whom are yet necessary to ensure institutional succession;
- The government's lack of financial and material resources to take over the project activities;
- The population's dependence on PARSACC project.

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<sup>18</sup> AF, 2011. Guidelines for Project/Programme Final Evaluation

<sup>19</sup> WFP, 2019. PARSACC Final Project Evaluation Report

Table 1: Expected project achievements per outcome vs. actual achievements<sup>20</sup>

Outcome	Baseline	End of project target	Actual project achievements at Final Evaluation
<b>Outcome 1.1: Strengthened awareness, ownership and facilitation capacities of government services (DREDD)</b>	DREDD do not have capacity to provide any support to communities	DREDD have succeeded to provide information, guidance and facilitation support to 87 Villages	8 DREDD led, participated in the development and supervised the implementation of 85 climate change adaptation action plans in 85 villages in the project area.
<b>Outcome 1.2: Strengthened awareness, ownership, planning and management capacities at community level for local natural resource management and climate change adaptation</b>	There is only little joint discussion at community level, and not all groups are involved; no inter-village discussions take place	About 100 villages understand, own and manage their adaption plans and their natural resources	The sensitized communities about climate change impacts in the 87 villages have played an important role and have actively participated to all the steps of the process of elaboration of climate change adaptation action plans, including the identification and prioritization of adaptation options. Most of these adaptation action plans were reviewed and updated by the NGOs during project implementation with the participation of all targeted groups (man, women and young beneficiaries).
<b>Outcome 1.3: National ecologic monitoring system strengthened and tested</b>	No ecologic monitoring system exists	The new national ecologic monitoring system is known, used and maintained by DREED and in project village clusters.	The Final Evaluation reported that the Monitoring System of the PANE is already set up since 2014 by the MEDD with the support of GIZ and is online ( <a href="http://www.medd-sepane.mr/">http://www.medd-sepane.mr/</a> ).  DREDDs have already been trained in this system and regularly contribute to providing it with the necessary data, including those from the project's intervention areas.  The Baastel team however points to the fact that this achievement does not seem to be attributable to the PARSACC project.
<b>Outcome 2.1: Advance of sand dunes slowed down, halted or reversed</b>	No baseline available before implementation	Significant deceleration – and ideally reversal – of dune advance	With the process of mechanical and biological fixation of sand dunes covering 995 ha, the advance of the dunes has been slowed down at the treated sites. In many sites this advance was totally halted even reversed (Tichoutine site in Brakna and Ghouisbou Site in Assaba).
<b>Outcome 2.2: Increased vegetation cover in intervention zones</b>	No baseline available before implementation	Increase of the average density per hectare by at least 10% in the participating village clusters until the end of the project with clear prospect of further increases)	Twenty-five protected areas of 25 to 50 ha totalling 1,000 ha have been created. In 2017, 2018 and 2019, tree plantations and pastoral improvements were carried out, planting some 280,000 local plant species.  37 perimeters of firewood plantations have been established

<sup>20</sup> PARSACC Final Evaluation Report

			<p>on more than 460 ha.</p> <p>995 ha were mechanically and biologically fixed on 36 sites as part of the sand dune fixation activity.</p> <p>All these plantations were carried out with an average density of 400 plants per hectare, increasing the density of vegetation by more than 10% compared to the baseline situation.</p>
<b>Outcome 2.3: Decreased loss of water and soil through surface run-off</b>	There are only few – if any – water retention structures functioning in areas to be selected	Area where days of water availability has increased with at least 20%	440 ha of degraded lands have been restored, increasing sub-soil water availability and agriculture lands.
<b>Outcome 3.1: Increased number of sources of income for participating households</b>	Livelihood bases are hardly diversified	At least 25% of village cluster population have increased their livelihood bases with new sources of income	<p>So far, some new income-generating activities have been introduced in many project sites :</p> <p>High value crop production, in 52% of total project sites</p> <p>Poultry, in 55% of total project sites</p> <p>Beekeeping, in 9% of total project sites</p> <p>Fruit farming, in 21% of total project sites</p> <p>Manufacturing improved stoves, in more than 70% of project sites</p> <p>Butchers, in 26% of total project sites</p> <p>Bakeries, in 7% of total project sites</p> <p>Community shops, in 40% of total project sites</p> <p>Vegetable marketing unit, in 1% of total project sites</p> <p>Couscous production units, in 11% of total project sites</p> <p>Sewing units, in 2% of total project sites</p> <p>Fattening units for small ruminants, in 4% of total project sites</p> <p>Livestock feed stores, in 2% of total project sites</p> <p>Grain mills, in 16% of total project sites</p> <p>Dyeing units, in 5% of total project sites</p>
<b>Outcome 3.2: Increased income for participating households</b>	Participating households are among the poorest in the selected area	Participating households have increased their revenues by at least 40%	The evaluation carried out after the 2017 market gardening season showed that each cooperative recorded an average net profit of 305 000 MRO (866 USD).
<b>Outcome 3.3: Increased availability of and access to food for participating communities</b>	Participating households have the greatest food gap in the selected areas.	Participating households have decreased their food gap by at least 50%	The evaluation carried out after the 2017 market gardening season showed that each cooperative produced an average of 1400 kg, of which 350 kg were consumed locally or were preserved, resulting in a longer availability of food.

## 2. OBJECTIVE AND SCOPE OF THE EVALUATION

The AF defines Ex Post evaluation as an “evaluation to assess longer-term impact, sustainability, and learning taking place three to five years after closure of Fund-financed projects”<sup>21</sup>.

Aligned with this definition, the objective of this ex-post evaluation is to evaluate the sustainability and impact of the “Enhancing Resilience of Communities to the Adverse Effects of Climate Change on Food Security in Mauritania” project 5 years post-closure. Specifically, and as per the ToR, this evaluation will seek three purposes, namely to:

1. Assess changes in the project outcomes from the time of the final evaluation in 2019 to now (5 years since closure).
2. Identify conditions that contributed to sustaining the project's adaptation outcomes over time.
3. Analyze ways through which the sustained outcomes are contributing to the system's adaptive capacity and resilience.

These three objectives will guide the data collection which will be structured around them. The following table presents the key evaluation questions that will guide data collection. The evaluation matrix (Annex 1: Evaluation matrix provides more detailed information about data sources and methods to address each question.

Table 2. Evaluation questions

Scope	Evaluation questions
Sustainability of outcomes	<ol style="list-style-type: none"> <li>1. Have the project's outcomes been sustained since completion?</li> <li>2. How well have sustainability ratings (projected) been actual?</li> <li>3. Are the project's planned outcomes still desirable?</li> <li>4. Have any unintended (positive or negative) outcomes emerged?</li> </ol>
Factors influencing sustainability	<ol style="list-style-type: none"> <li>1. Have there been any changes in the conditions of the human or natural systems at the project site since project completion that have affected the sustainability of the project results?</li> <li>2. Were the project's sustainability plan and/or exit strategy and the final evaluation's recommendations for promoting the sustainability of the project's results effectively implemented? How has the implementation (or lack of implementation) of these strategies affected the sustainability of the project results?</li> <li>3. How have the following conditions for sustainability evolved since project completion? <ul style="list-style-type: none"> <li>• Stakeholders' ownership of project outcomes and interventions.</li> <li>• Stakeholders' capacities</li> <li>• Partnerships between stakeholders.</li> <li>• Availability of financial and tangible and intangible resources.</li> </ul> </li> </ol>

<sup>21</sup> AF, 2022. Evaluation Policy of the Adaptation Fund.

Pathways to system's resilience	<ol style="list-style-type: none"> <li>1. How do the sustained outcome characteristics contribute to the system's resilience? <ul style="list-style-type: none"> <li>• Have the sustained adaptation outcomes contributed to increasing the speed of (human) responsiveness to climate disturbances?</li> <li>• Have sustained adaptation outcomes contributed to the restoration of a sufficiently large landscape to restore/maintain ecosystem services?</li> <li>• Have sustained adaptation outcomes contributed to the construction of infrastructure of sufficient scale to protect beneficiaries from climate disturbance?</li> <li>• Have the sustained adaptation outcomes contributed to increasing the availability of resources, means or options, or created new ones to support resilience to climate risks?</li> <li>• Have the sustained adaptation outcomes widened/deepened the variety of actors working/interacting towards common goals?</li> <li>• To what extent have the sustained adaptation outcomes contributed to enhanced equity and inclusiveness?</li> <li>• How have the sustained adaptation outcomes contributed to increasing the system's agility to respond to uncertainty and emerging challenges and opportunities?</li> <li>• How have the sustained adaptation outcomes contributed to supporting communication, information access and partnership to respond or adapt to shocks and stressors?</li> </ul> </li> </ol>
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In order to answer these questions, the Evaluation Team will analyze data regarding the period spanning from September 2019, which is when the project came to an end, and September 2024, which corresponds to the beginning of the Ex-Post Evaluation process. The evaluation will analyze project sustainability and contribution to resilience in three intervention sites in different wilayas located in Mauritania and to be determined based on sampling criteria (see section 4.3.) and with the WFP and Adaptation Fund's validation.

## 3. FINDINGS BASED ON DESKWORK

This section introduces the sustainability framework for the Ex Post Evaluation of the PARSACC project. Section 3.1 assesses the likely sustainability of the project outcomes on the basis of a desk review (see Annex 6: List of project documents and M&E data available) and of key interviews (see Annex 3: List of interviewed stakeholders). Section 3.2 presents a preliminary analysis of the way in which project outcome sustainability may be contributing to the system's resilience. Finally, Section 3.3 briefly concludes on the interest and feasibility of covering all project outcomes during the evaluation.

### 3.1. Sustainability assessment

#### 3.1.1. Context analysis

The context analysis provides an overview of the main features of the human and natural systems in which the project operated, with a focus on the situation since the project ended in 2019 and now. Whenever relevant, differences with the situation as it was when the project was designed (primarily as presented in the ProDoc) are highlighted. This includes a summary of updated climate change projections, and how climate hazards interact with human and natural systems vulnerabilities and exposure, and influence food security. The map below provides the location of the villages where the project intervened.

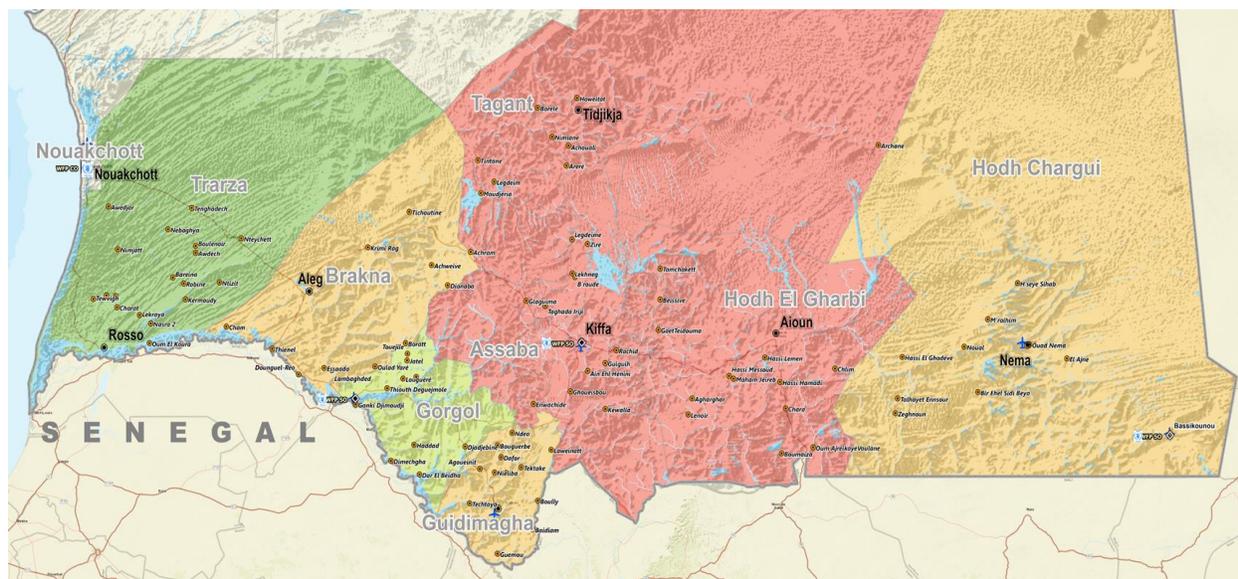


Figure 3: Map of project intervention sites (Source: PARSACC project website<sup>22</sup>)

#### General context

Agriculture is the sector which contributed the most to employment with an average of 28% across the eight targeted wilayas, followed by commerce (18%) and livestock (17,5%). This is consistent with Figure 1

<sup>22</sup> PARSACC website : [https://parsacc.volasite.com/resources/1\\_JPO/AF%20PARSACC%20RESULTS%20MAP.pdf](https://parsacc.volasite.com/resources/1_JPO/AF%20PARSACC%20RESULTS%20MAP.pdf)

(Section 1.3) which shows that the main livelihood types in the target wilayas are pastoral nomadic (mainly in Hodh el Chergui and Tagant) and agropastoral (mainly in Brakna, Gorgol, Assaba and Hodh el Gharbi. Guidimakha is characterized by rainfed agriculture, as is the South of Assaba, Hodh el Gharbi and Hodh el Chergui. Trarza's livelihoods involve primarily pastoralism and trading.

The eight wilayas where PARSACC intervened are, with the exception of Trarza, the wilayas with the lowest Human Development Index (HDI) in the country, all being below the national HDI (0.540 in 2022). Among the targeted wilayas, Hodh el Chergui had the lowest HDI (0.404) and Brakna the highest (0.514)<sup>23</sup>. Relevant social indicators include: the average vaccination cover is 37% compared to 38% at the national level, with the lowest rate in Hodh el Chergui (23%); the average under-5 mortality rate in the eight wilayas is 48.8/1000 largely driven by a 75/1000 ratio in Tagant; at an average of 65,6% the literacy rate was 10 percentage points below the national rate; 61,7% have access to drinking water, and 67,5% have access to electricity<sup>24,25</sup>.

In the eight targeted wilayas, the average poverty rate in 2019 was 37,2% with the highest rate being in Guidimakha and the lowest one in Hodh el Chergui<sup>26</sup>. Multidimensional poverty<sup>27</sup> is also dire in these wilayas. In Guidimakha, 90,2% of the population is considered to be multidimensionally poor, which is the highest rate in Mauritania. Once again, Trarza is the only wilaya targeted by the PARSACC project which fares higher than the national rate of 56,9%<sup>28</sup>. The distribution of the multidimensional poverty index is displayed in the map below (Figure 3) and shows that the targeted wilayas are among the poorest in the country.

According to UNHCR, as of October 2024, the Hodh el Chergui wilaya hosted over 240,000 Malian refugees, mainly made up of pastoralists travelling with their herds and exerting high pressure on the pastoral resources, local economies and basic social services<sup>29</sup>.

Gender-based violence is widespread in all eight wilayas. 68,6% of women between the ages of 15 and 49 have experienced genital mutilations, with a rate as high as 94% in Hodh el Gharbi.

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<sup>23</sup> <https://globaldatalab.org/shdi/table/shdi/MRT/?levels=1+4&years=2022&interpolation=0&extrapolation=0>

<sup>24</sup> ANSADE, 2022

<sup>25</sup> Office Nationale de la Statistique (ONS), Ministère de la Santé and ICF, 2022. Enquête Démographique et de Santé en Mauritanie 2019-2021 : Rapport de synthèse

<sup>26</sup> ANSADE, 2022

<sup>27</sup> Multidimensional poverty is a measure of poverty that goes beyond traditional income-based definitions to capture the multiple, interconnected deprivations individuals or households experience. It recognizes that poverty is not solely about a lack of income but also about limited access to essential services and opportunities that contribute to overall well-being. One widely used approach to measure multidimensional poverty is the Multidimensional Poverty Index (MPI), developed by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI).

The MPI identifies the proportion of people who are multidimensionally poor and calculates the intensity of their poverty by considering how many deprivations they face simultaneously.

<sup>28</sup> [https://ophi.org.uk/sites/default/files/2023-12/Mauritania\\_MPI\\_2022\\_Fact\\_sheet\\_2023.pdf](https://ophi.org.uk/sites/default/files/2023-12/Mauritania_MPI_2022_Fact_sheet_2023.pdf)

<sup>29</sup> FEWS NET, 2024

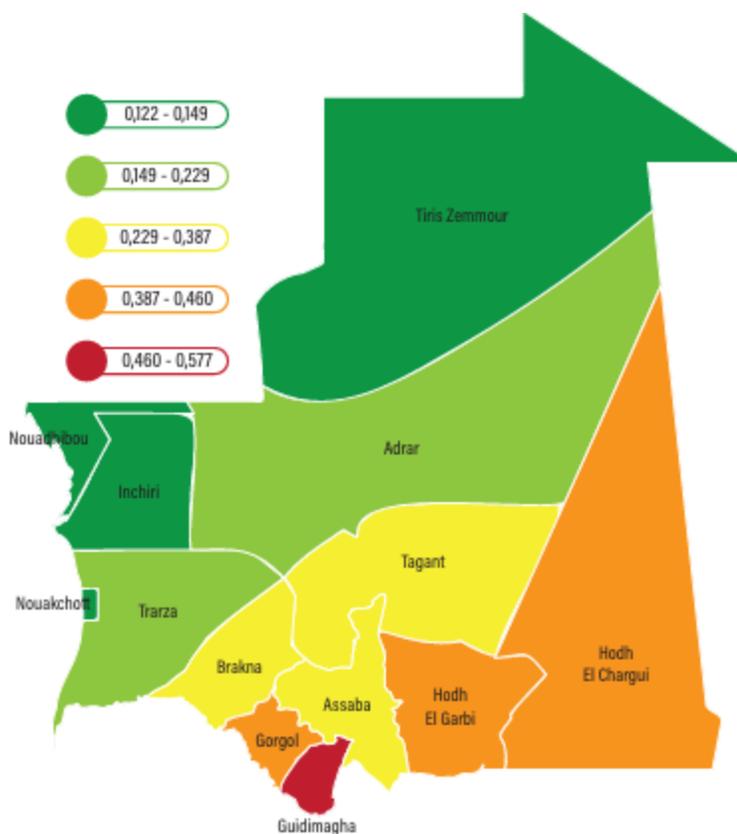


Figure 4: Multidimensional poverty index in Mauritania (Source: ANSADE, 2022)

### Climate change context

In the eight wilayas of intervention, climate change is expected to cause significant temperature increases, for the medium and long term, with temperatures reaching up to +2.25°C by 2090 on average in a business-as-usual scenario (SSP2-4.5) compared to 2014<sup>30</sup>. In line with the rise in temperatures, the annual number of very hot days (with daily maximum temperature above 35°C) has been steadily increasing and could reach 256.9 days in 2050 under an SSP2-4.5 scenario compared to an average of 230,9 in-2014<sup>31</sup>. Average temperature has already been increasing since the 1950s, and this increase has taken place at an ever-faster pace since the 1980s (Figure 5). On the other hand, long term precipitation trends indicate annual rainfall has been increasing(

<sup>30</sup> World Bank (2024) Climate Change Knowledge Portal - Mauritania

<sup>31</sup> World Bank (2024) Climate Change Knowledge Portal - Mauritania

Table 3).

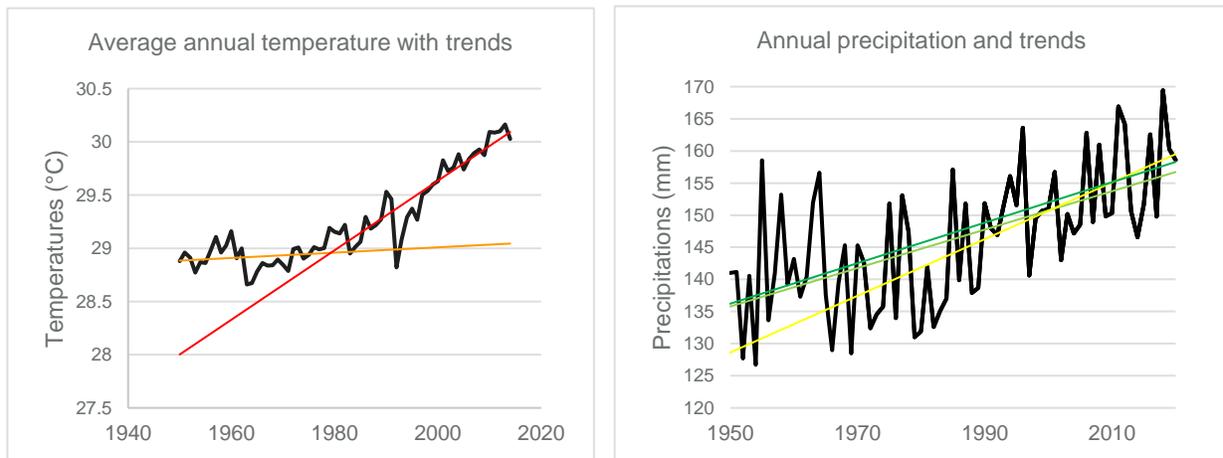


Figure 5. Average historical temperature and precipitation trends for the eight target wilayas<sup>32</sup>

However, this hides significant variability during the rainy season, which could see rainfall more concentrated around the months of September and October, whereas all other months could experience constant or decreased rainfall (Figure 6).

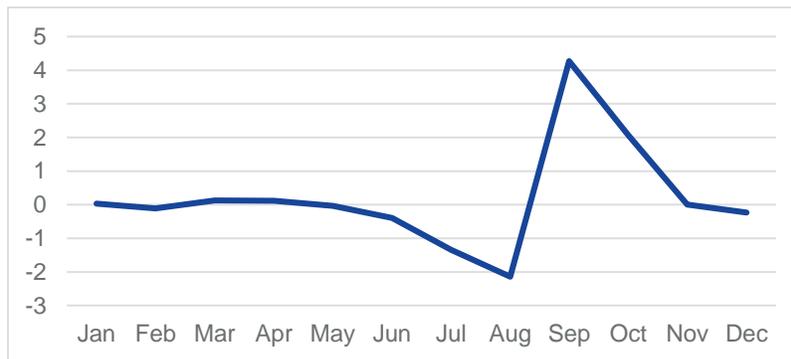


Figure 6. Projected precipitation anomaly for 2040-2059 under SSP2-4.5 (1995-2014)<sup>33</sup>

Current climate change projections for temperature are not significantly different from what was projected when the PARSACC project was designed. The projection for precipitation on the other hand has evolved from a drastic decrease in precipitation to a likely increase with uncertainty and variability (

<sup>32</sup> World Bank (2024) Climate Change Knowledge Portal - Mauritania

<sup>33</sup> World Bank (2024) Climate Change Knowledge Portal - Mauritania

Table 3. Climate change projections for Mauritania at project design and at ex post

Table 3. Climate change projections for Mauritania at project design and at ex post

	At project design	At ex post <sup>34</sup>
<b>Reference</b>	Baseline: 1980-99 <sup>35</sup> , scenario unspecified	SSP 2-4.5 Data presented is CMIP6 (IPCC AR6)
<b>Precipitation</b>	Decrease mean annual precipitation by at least 20% (-65 to +28%) by the 2090s	Increase in mean annual precipitation by 0.23mm (-2.65; +3.27) by 2050 relative to 1950-2014 Increase in mean annual precipitation by 0.01mm (-3.17; +3.68) by 2090 relative to 1950-2014
<b>Temperature</b>	Increase in mean annual temperature by 1.3 to 3.8°C by the 2060s and 1.8 to 6.0°C by the 2090s	Increase in mean annual temperature by 1.6°C (0.94; 2.33) by 2050 relative to 1995-2014 Increase in mean annual temperature by 2.6°C (1.67; 3.57) by 2090 relative to 1995-2014
<b>Hot days (&gt;30°C)</b>		+22.89 increase in number of hot days by 2050 compared to 2014 +42.6 increase in number of hot days by 2090 compared to 2014

These changes in climatic patterns are likely to translate into a reduced availability of water resources, an increase in the number and intensity of extremely hot days, and a shorter rainy season and consequently longer drought periods. Extreme rainfall events will cause localized floods.

The impacts of these changes will be compounded by local vulnerability factors, including high poverty rates, reliance on natural resources for livelihoods (including water, agriculture, livestock feed), and gender inequalities. The already arid temperatures and scarcity of water resources constitute important exposure factors. The national cropland area exposed to at least one drought per year is projected to increase from 6% in 2000 to 10% by 2080 under a RCP6.0 scenario<sup>36</sup>

Key impacts of climate change in Mauritania (especially southern Mauritania) include:

- Decreased access to water for consumption, hygiene and supporting livelihoods (incl. agriculture and livestock);
- Decrease in agricultural yields, as crops will be more prone to disease, pests and damage from drought. It is estimated that a temperature increase greater than 2°C will likely decrease millet and sorghum yields by 15-25 percent by 2080;<sup>37</sup>
- Adverse impacts on livestock, leading to decreased productivity;
- Adverse health impacts due to heat, drought, but also related to loss of livelihoods and food insecurity;
- Adverse impacts on infrastructure, with dune movements enabled by loss of vegetation cover;
- Population displacement towards areas with water, close to roads and into cities.<sup>38</sup>

<sup>34</sup> World Bank (2024) Climate Change Knowledge Portal - Mauritania

<sup>35</sup> PARSACC Prodoc. Original source: UNDP Climate Change Country Profile and OECD 2007 projections. Source is inaccurate and scenarios used are not specified.

<sup>36</sup> GIZ (Undated).

<sup>37</sup> USAID, 2017. [West Africa Sahel](#)

<sup>38</sup> MEDD (2019). Fourth National Communication.

During the project implementation period (2014-2019), Mauritians were affected by two droughts, a storm and flood. The 2017 drought likely affected over three quarters of the population. Since the end of the project, flooding and drought took place in 2020 (Table 4). Interviews conducted during the evaluation design did not indicate how specific project sites could have been affected by these or other climate-related hazards. One interviewee mentioned a significant drought in 2023 that would likely have affected most project sites. This will have to be validated during fieldwork.

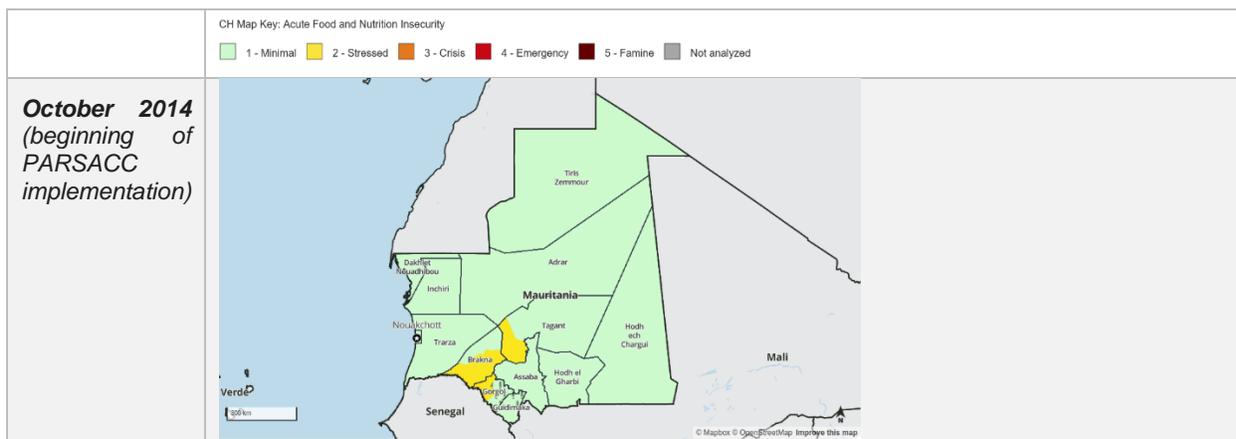
Table 4. Key natural hazards for 2017-2020 in number of people affected<sup>39</sup>

Year	Flood	Storm	Drought
2017		2040	3,893,774
2018			350,600
2019	33,600		
2020	19,982		609,180

### Food security context

PARSACC was structured around the concept of food security. Indeed, it is at the core of the World Food Programme’s mission, which intervenes in Mauritania both from a humanitarian and a development perspective. Its approach to climate change involves addressing resilience as well as the root causes of vulnerability to enable communities to better face climate shocks and strengthen national social protection systems.<sup>40</sup> With national production insufficient to cover consumption needs, households are vulnerable to global economic shocks. Despite being relatively diverse, agricultural production is vulnerable to prolonged drought, floods and bush fires, and thus highly vulnerable to climate change.<sup>41</sup> By extension, income and nutritional needs of half of the population are vulnerable to climate change.

Figure 7. Evolution of Mauritania Acute Food and Nutrition Insecurity<sup>42</sup>

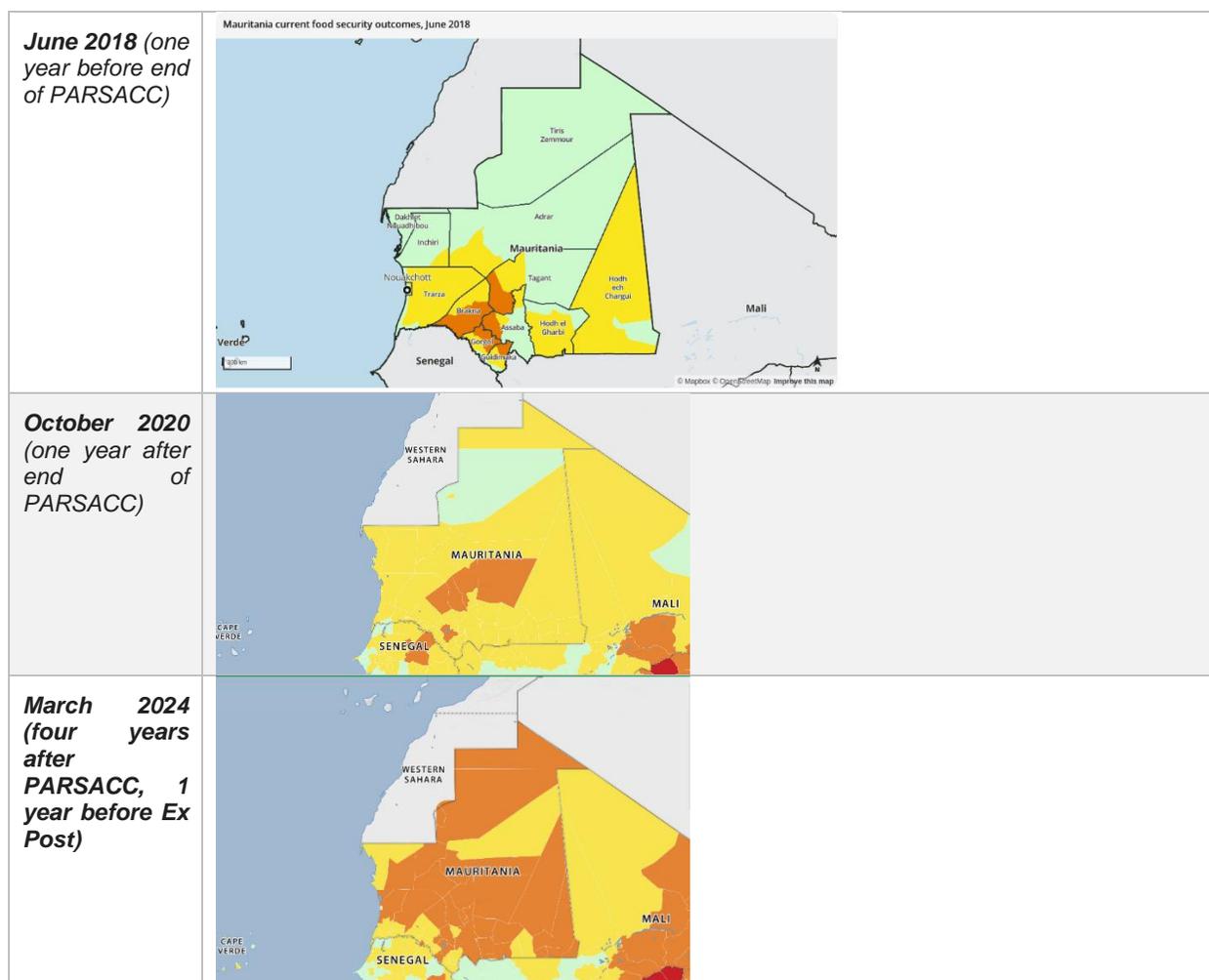


<sup>39</sup> World Bank (2024) Climate Change Knowledge Portal - Mauritania

<sup>40</sup> WFP (2024). Mauritania country strategic plan (2024-2028).

<sup>41</sup> FEWS.NET (2024). Mauritanie – Mise à jour du suivi à distance (Octobre 2024).

<sup>42</sup> FEWS.NET and Cadre Harmonisé. See <https://fews.net/about/integrated-phase-classification> for details on methodology and definitions of the acute food security scale



Source: FEWS NET

In the period since the PARSACC project implementation started, the food security situation in Mauritania does not appear to have improved significantly, and seems to have worsened (Figure 7). Relatively lower food insecurity for maps representing October would indicate a seasonal component to food insecurity. There is ample evidence of the important feedback loops between climate changes and food security challenges. Examples of ways in which climate change is affecting food security are mentioned in the September 2024 FEWS NET monitoring report:

- Late start of the rainy season is delaying the start of harvest, thus prolonging the lean season
- Localized rainfall breaks disrupted progress of the season
- Delayed pasture regeneration is affecting transhumance patterns and poses risks of conflicts between farmers and herders
- Increased reliance on imported (and more expensive) foods.

### 3.1.2. Sustainability Strategy

This section reviews and summarizes the project design and strategy to ensure its sustainability. It complements information provided in section 1.4 which provides a more general overview of the project

strategy and implementation, including a reconstructed ToC, adaptive management and risk management strategies.

As highlighted in the section 1.4.3 above, several elements of the initial project design were put in place explicitly to promote the sustainability of the project results. Emphasis was placed on the direct involvement of local communities to encourage ownership of the project results and outcomes, the development of stakeholders' capacities (at the local and the regional levels), the implementation of mechanisms to ensure beneficiary communities' continued access to financial resources and on the delivery of rapid and the delivery of direct tangible benefits to project beneficiaries (with immediate impact of their livelihoods) to ensure strong perceived relevance. Other elements considered included building on already existing capacities and structures, promoting appropriate technologies and practices (sufficiently simple and cheap to be maintained), and the promoting social cohesion throughout project activities.

The analysis of the project progress reports shows that some attention has also been paid to importance of partnerships among relevant stakeholders to ensure the achievement of project results and their sustainability. For example, recognising that climate change is a cross-cutting issue and that the key success factors for the elaboration and implementation of adaptation planning are linked to the close cooperation and participation of all sectoral institutions at the regional level, the capacity building provided by the project on integrating climate change adaptation into local development planning has involved not only DREDD but also decentralised technical services and NGOs at the regional level. The latest progress report of the project highlighted a relevant finding regarding the impact of partnerships on project results. Towards project closure, the project's influence on enhancing the resilience and adaptive capacity of beneficiaries was most apparent in villages where it was supported by other partners with complementary activities.

A project exit strategy was developed in parallel with an impact evaluation of the project and finalised in April 2019.<sup>43</sup> The project was closed in September 2019, leaving arguably only a few months for the project management unit to implement the strategy.

The exit strategy for the PARSACC project emphasized the need for a gradual and inclusive approach, focusing on nine key elements to ensure continuity and long-term benefits from the project outcomes for the target communities. The strategy highlighted the need **to continue improving existing structures, in particular local management committees**, through participatory institutional diagnostics to identify weaknesses and formulate action plans. Strengthening the capabilities of these committees would ensure they can manage infrastructures, income-generating activities (IGA), and organizational development effectively post-project.

**The strategy considered that a gradual phase-out** was central to avoiding disruption and ensuring project gains are preserved. This was meant to involve transitioning responsibility to local communities, enhancing their autonomy, and reducing dependency. **Clear communication about the exit timeline** to help manage stakeholder expectations, fosters ownership, and minimizes misunderstandings or resentment was also stressed. Active participation from community members, particularly women, was emphasized as they were expected to play key roles in sustaining activities.

**Capacity-building for management committees and fostering a multi-stakeholder approach** are also prioritized in the exit strategy. By enhancing the skills and expertise of local actors and engaging with

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<sup>43</sup>Selmane M. L. (2019). Évaluation d'impact des actions d'adaptation au changement climatique et preparation de la stratégie de sortie du projet PARSACC.

government institutions (in particular with the sectoral ministries (notably agriculture, livestock and water)), NGOs, and other stakeholders, the strategy seeks to create synergies that support sustainability.

One approach recommended in the exit strategy to strengthen economic sustainability was through the **consolidation of community savings and credit mechanisms**. These mechanisms would provide financial resources for maintaining infrastructures, diversifying economic activities, and fostering social support networks, particularly for women. This would help reduce reliance on external funding while empowering local communities to manage their own development.

Integrating project actions into **communal and regional development plans** was also recommended to strengthen sustainability by aligning interventions with local priorities, such as Communal Development Plans and Regional Strategies for Accelerated Growth and Shared Prosperity (SCAPPs). Regionalization efforts and the involvement of regional councils and communes provided opportunities for enhance ownership and institutionalization of project outcomes, fostering continuity and aligning goals with broader development objectives.

Designing an **effective support mechanism** was considered important for sustainability. Producer organizations can manage significant subsidies if provided with tailored support mechanisms informed by local needs and capacities and context-adapted tools. Flexible, demand-driven support to help communities build essential capacities, were still considered essential at project closure.

Lastly, the strategy included **the documentation and dissemination of best practices** to scale successful interventions and inspire similar initiatives elsewhere.

The final evaluation of the project submitted in September 2019 concluded that the conditions for the sustainability of the project outcome were not yet met at project closure. The evaluation stated that “...*given the insufficient degree of maturity currently attained by the innovative initiatives introduced by PARSACC, sustainability remains fragile.*” and that “*Close support of these promoted initiatives is absolutely necessary in response to the weak capacity at the community level to accompany the innovations introduced in the project.*” and finally that “*the permanent structures of the State (other Ministries) are weak and lack financial and material resources to take over the project*”.

All of the recommendations made in the project's exit strategy were explicitly reiterated in the recommendations of the final evaluation. In addition, the evaluation strongly recommended the development and implementation of a second phase of 'project consolidation' to consolidate and capitalise on the achievements of PARSACC. The evaluation also recommended that, in such a subsequent phase, the number of targeted regions and villages should be significantly reduced to increase impact and encourage greater engagement at the local level.

Discussions with key informants conducted during the inception phase of this ex-post evaluation revealed that, despite the consideration of sustainability in the project's various strategies, the implementation of these sustainability strategies may have varied considerably from one component to another and from one intervention site to another. It is interesting to note that despite some clear attempts to do so, and the availability of financial resources under the Adaptation Fund, a second phase of the project was never implemented because the partners involved could not agree on a common vision of the way forward for this follow-up project. However, some sites benefited from interventions that were directly inspired by the PARSACC approach, which may have contributed to the consolidation and sustainability of project outcomes. Section 3.1.3 below provides an overview of how the conditions for sustainability have evolved since project completion and an analysis of the likely sustainability of the different components of the project.

### 3.1.3. Conditions driving sustainability

Based on available documentation and interviews, this section provides a preliminary analysis of the factors that may have influenced the sustainability of each project outcome since the end of the project. This is analyzed according to four factors:

- **Ownership.** The extent to which individuals and organizations adopted and kept ownership of the project activities and results since the final evaluation, thus contributing to sustaining the adaptation benefits beyond project completion.
- **Capacities.** People, groups and/or organizations that obtained, improved or retained skills and knowledge that support adaptation benefits derived from the project. This may include improving the strength and effectiveness of governance structures, laws, and institutions at the local, regional, national, transnational, and international levels.
- **Partnerships.** Collaboration among and between different stakeholders (government, private sector, new donors, communities), incl. through resources and information exchange, that contributes to sustaining adaptation benefits
- **Resources/assets.** This may include:
  - i. Tangible resources or physical capital, such as infrastructure, properties, equipment, and inventory,
  - ii. Intangible resources, such as climate information and early warning systems, knowledge products, etc.
  - iii. Financial resources: such as implemented policies to help ensure sustained funding, funding sources available to support the continuation of interventions, development of new or supporting the expansion of financial market products, such as weather derivatives or catastrophe bonds, insurance for climate-related risks<sup>44</sup>

This preliminary analysis provides food for thought that will support subsequent stages of the analytical process, as these may serve as working hypotheses to be explored and validated. In the absence of outcome-disaggregated sustainability analysis in the Final Evaluation, this preliminary analysis provides an estimate of the expected timeframe for the sustainability of each outcome, namely short-term (1-2 years), medium-term (3-4 years) and long-term (5 years or more). This estimate is based on expert assessment resulting from the evaluators' understanding of the outcome resulting from desk review and interviews.

#### 3.1.3.1. Component 1

**Component 1:** Support technical services and the communities they serve to (a) better understand climate risks, their impact on livelihoods and food security and (b) facilitate participatory decentralized adaptation planning

**Outcome 1.1: Strengthened awareness, ownership and facilitation capacities of government services (DREDD)**

**Outcome delivered:** 8 DREDD led, participated in and supervised the implementation of 85 climate change adaptation action plans in 85 villages in the project area.

<sup>44</sup> AF-TERG (2024). Approach to Evaluating Adaptation Projects Ex Post : The Sustainability Framework for the Ex Post Evaluation of Adaptation Interventions (ExPost-EAI)

<p><b>Description:</b> DREDD's capacities have been strengthened through training. Work equipment and vehicles were provided. DREDDs were then responsible to raise awareness about climate change and monitor and guide project's implementation. Under this outcome, the project also set the groundwork for the establishment of an early warning system (EWS) at the community level by initiating a process to develop a partnership framework between producers of information and broadcasters. At the end of the project, the Coordination Unit of the National Program on Climate Change (CCPNCC), under the MEDD was formalizing this framework partnership agreement.<sup>45</sup></p>	
<p><b>Expected sustainability duration</b> (without <i>additional</i> interventions): Short to medium term</p>	
<p><b>Ownership</b></p>	<p>According to the project's impact assessment and exit strategy, sustainability was supported by the project's empowerment of regional institutions throughout the project, from the definition of activities to their implementation. However, key technical staff required to ensure continuity was insufficiently involved.<sup>46</sup></p> <p>Interviews indicate ownership was low within the Ministry (incl. DREDDs). There may have been a loss of interest in pursuing climate change adaptation activities and the development of an EWS associated with the end of project funding.</p>
<p><b>Capacities</b></p>	<p>Capacities have been strengthened at the local level in the 8 DREDDs for each of the project's targeted wilayas. This has taken place through training and involvement in supporting communities with their climate change adaptation plan (learning by doing), which is favorable to capacity retention.</p> <p>However, interviews indicate high turnover within the Ministry (incl. DREDDs). In the absence of subsequent projects, resources to retain trained personnel would be limited. New projects in some areas may have supported the maintenance of the capacities.</p>
<p><b>Partnerships</b></p>	<p>Local environmental NGOs were contracted by the project to support DREDDs in their work with communities (support to action plans and other activities, monitoring and reporting). This collaboration probably ended at the end of the project.</p> <p>The project "Development of an improved and innovative management system for sustainable livelihoods resilient to climate change in Mauritania" (DIMS) intervened with the DREDDs of four PARSACC wilayas (Guidimaka, Assaba, Hodh El Gharbi et Hodh El Chargui) to build their institutional capacity to implement ecosystem-based adaptation. It was implemented from 2017 to 2023 and could have contributed to sustain the capacities built in these DREDDs.<sup>47</sup></p> <p>There is no information on whether the partnerships developed as part of the work to establish an EWS was formalized after the end of the project and whether it was sustained.</p>
<p><b>Resources / assets</b></p>	<p>Physical assets obtained during the project like vehicles and computers have a short lifespan (a couple of years after project end).</p> <p>The salary "top up" from the project for conducting climate change adaptation activities ended with the project.</p> <p>The DIMS project likely brought additional resources for DREDDs to renew some of their equipment and possibly retain some personal.</p> <p>Communication of agropastoral information was low at Terminal Evaluation.</p>
<p><b>Likely sustainability at ex post</b></p>	<p>Based on the above assessment, outcome 1.1 may have been sustained where other projects continued supporting DREDDs with their capacity, such as in the wilayas where the DIMS project intervened. The outcome on EWS was not achieved by project's end.</p>

<sup>45</sup> PARSACC PPR 5 (Final) June 2020.

<sup>46</sup> Selmane M. L. (2019). Évaluation d'impact des actions d'adaptation au changement climatique et préparation de la stratégie de sortie du projet PARSACC.

<sup>47</sup> <https://www.thegef.org/projects-operations/projects/5580>

### Outcome 1.2: Strengthened awareness, ownership, planning and management capacities at community level for local natural resource management and climate change adaptation

**Outcome delivered:** The sensitized communities about climate change impacts of 85 villages have played an important role and have actively participated to all the steps of the process of elaboration of climate change adaptation action plans, including the identification and prioritization of adaptation options. Most of these adaptation action plans were reviewed and updated by the NGOs with the participation of all targeted groups (man, women and young beneficiaries).

**Description:** The project supported existing inter-village associations where they existed or created village management committees (VMC) to support the planning and implementation of project activities and longer-term sustainable management of natural resources. It delivered an awareness raising program through the DREDDs, NGOs and radio broadcasts, and supported the preparation of adaptation action plans.

**Expected sustainability duration** (without additional interventions): Medium to long-term

<b>Ownership</b>	<p>The Impact Assessment Report states that community engagement was a strong asset of the project.</p> <p>Among survey respondents to the Impact Assessment, 68.6% had participated to the needs assessment and the selection of the activities to be implemented in their community. The participation of women in project activities is perceived as “high” by 78.6% of respondents. Finally, 92.5% of respondents considered that they received sufficient information about PARSACC processes. The Impact Assessment Report notes that “the project has had a positive impact on social dynamics and organisation, helping to motivate local people” And that “some management committees are dynamic and take ownership of the project's achievements.”</p> <p>Interviewees concur with the assessment that the engagement of communities was a strong feature of the project and supports sustainability. Interviewees indicated some VMCs are still active today, but the extent of support provided by DREDDs in implementing adaptation action plans beyond the project lifetime is to be validated.</p>
<b>Capacities</b>	<p>Among survey respondents to the Impact Assessment, 49.6% had participated in the project's capacity-building activities (although the report does not specify if this includes specific training on livelihoods).</p> <p>The strengthening of organizational and management capacities of communities is considered an asset for the sustainability of this outcome in the Impact Assessment Report and the Final Evaluation . However, their capacities are described as variable in the Impact Assessment Report and as required further support to be consolidated, in the Terminal Evaluation. Both reports emphasize the need to strengthen VMC capacity as a priority for the project's exit strategy, and identify the lack of functionality of VMCs as hindering sustainability.</p> <p>Interviewees confirm that the capacities strengthened among local organizations were crucial in ensuring sustainability, and indicate that some of the VMCs created may still be operational today, especially in Guidimakha. Organizations that existed before the project, but received support, are likely to still be in place.</p> <p>The Impact Assessment Report notes that 71.7% of respondents stated that they had the capacity and means to carry out resource protection and management activities without the support of the project. Nearly 28% do not think they have these capacities and means. Some interviewees consider that VMCs would still have the capacity to coordinate activities. However, the sustainability of their role in planning for adaptation is unclear.</p> <p>An interviewee mentioned that the NGOs involved had grown and become empowered by the project, and that some of them went on to execute projects with international agencies (e.g. FAO)</p>
<b>Partnerships</b>	<p>See Outcome 1.1 for continuation of DREDD engagement</p> <p>According to interviewees, the engagement of some of the NGOs is likely to have continued with support from other projects/donors.</p>
<b>Resources / assets</b>	<p>The Impact Assessment Report notes that 71.7% of respondents (community members) stated that they had the capacity and means to carry out resource protection and management activities without the support of the project. Nearly 28% do not think they have these capacities and means. As mentioned above, carrying out specific activities could be sustainable (see assessment on Component 2 and 3), but it is unclear which resources and assets would be available to continue planning for adaptation and implementing adaptation action plans.</p>

<b>Likely sustainability at ex post</b>	The sustainability of this outcome is highly dependent on the capacities of organizations on each site. Where these organizations are structured, sustainability is likely, as they will have been able to sustain and transmit capacities acquired, and continued undertaking actions to sustainably manage their natural resources.
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<b>Outcome 1.3: National ecologic monitoring system strengthened and tested</b>	
<b>Outcome delivered:</b> DREDDs have already been trained in this system and regularly contribute to providing it with the necessary data, including those from the project's intervention areas.	
<b>Description:</b> <b>The Monitoring System for the Second National Environmental Action Plan (PANE II) had been set up in 2014 by the MEDD with GIZ support.</b> It aimed to provide monitoring data to the MEDD about ecological conditions (sand dune fixation areas, wood-fuel plantation areas and the protected grazing areas). <b>The project provided training on its use and developed monitoring guides. It also organized data collection missions with the DREDDs on project sites, to contribute to the national monitoring system.</b>	
<b>Expected sustainability duration</b> (without additional interventions): Short term	
<b>Ownership</b>	There is no information on this aspect.
<b>Capacities</b>	According to project progress reports, the training received by DREDDs was used to conduct monitoring reports during the project, which is favorable to consolidation of capacities.  Interviewees indicated there was a discontinuity with the system's operation at the national level. Lack of continuity of monitoring activities after the end of the project and staff turnover would likely lead to attrition of these capacities.
<b>Partnerships</b>	There is limited information on the institutional structure within which these activities were conducted, which was not within the project's scope. Leadership at the national level for the continued implementation of the monitoring system at the local level would be necessary, for local data collection to continue.,  Currently available information (see Capacities and Resources sections) indicate it is unlikely that this structure was sustained in the years right after the end of the project (within the expected sustainability duration of this outcome).  A new partnership with the World Bank to strengthen environmental monitoring was launched in 2024. <sup>48</sup>
<b>Resources / assets</b>	The key asset necessary for the sustainability of this outcome is an operational environmental monitoring system. This system, as it was set up at the time of the project, does not appear to have been maintained. The website where it was hosted ( <a href="http://www.medd-sepane.mr/">http://www.medd-sepane.mr/</a> ) is no longer operational and an interviewee mentioned some discontinuity in the system's operations, making it highly unlikely that any related outcomes have been sustained.  The continuation of activities beyond the project lifetime would have required additional budget. To date, there is no information that such additional budget was made available. The guides developed with project support for data collection are the key assets developed by the project that could have supported continued activities. There is no information from interviews as to their continued use and relevance. Considering the discontinuities and possible changes in the system, these guides may not be relevant to the current version of the system.
<b>Likely sustainability at ex post</b>	In the absence of continued operation of the monitoring system, it is not possible to continue generating related benefits. Capacities built will likely have been lost by now or would no longer be relevant to updated versions of the system.

<sup>48</sup> <http://environnement.gov.mr/fr/index.php/accueil/actualite/439-vers-une-gestion-efficace-du-systeme-d-information-environnemental-en-mauritanie>

### 3.1.3.2. Component 2

**Component 2:** Design and implementation of concrete adaptation measures identified through community adaptation planning that aim to combat desertification and land degradation.

<b>Outcome 2.1: Advance of sand dunes slowed down, halted or reversed</b>	
<b>Outcome delivered:</b> With the process of mechanical and biological fixation of sand dunes covering 995 ha, the advance of the dunes has been slowed down at the treated sites. In many sites this advance was totally halted even reversed (Tichoutine site in Brakna and Ghoueisbou Site in Assaba).	
<b>Description:</b> Dune stabilization was achieved through a combination of mechanical fixation that involved 707km of weaving, combined with biological fixation. It was implemented by communities through a food for assets (FFA) mechanism (cash incentives).	
<b>Expected sustainability duration</b> (without additional interventions): Medium to long term	
<b>Ownership</b>	<p>There is limited specific information on the extent of ownership of these efforts. Interviews and the Impact Assessment Report concur that community engagement was a strong asset of the project (as a whole). Engagement of communities from the selection/definition of activities to their execution is favorable to their sustainability.</p> <p>The FFA approach had the benefit of actively involving communities in dune fixation activities, which is favorable to ownership, especially if the fixation is successful. On the other hand, this involvement may remain transactional and end with the financial incentives.</p> <p>Ownership of the DREDDs is unknown.</p>
<b>Capacities</b>	<p>Community involvement in fixation activities built their technical capacity to undertake dune fixation activities. Approximately 60% of survey respondents in the Impact Assessment Report described their proficiency in wattle techniques, nursery and planting techniques and dune stabilization techniques as “good”. There was a good understanding of the usefulness of the techniques applied.<sup>49</sup></p> <p>The project developed a set of rules for managing the dune fixation sites, however there is no information on whether this was adopted by communities. The report on the development of these rules indicates that due to the lack of maturity of the vegetation planted, the rules are still preliminary.<sup>50</sup></p> <p>This is one of the outcomes where sustainability would have been influenced by the capacities of VMCs to sustainably manage the assets, although no specific information on whether these capacities were sustained was collected during interviews.</p> <p>The sustainability of the capacities of the DREDDs in this area is unknown.</p>
<b>Partnerships</b>	<p>The rules developed for managing fixation sites followed a “co-management model” that aims to empower different stakeholders in local actions. The VMC was expected to manage the sites and oversee the continuation of the fixation process, with technical support and monitoring from the DREDDs.</p> <p>According to an interviewee, some sites have benefitted from continued support through a WFP/MEDD project in the context of the Great Green Wall (GGW) initiative, through a Spanish government debt swap.<sup>51</sup></p>
<b>Resources / assets</b>	<p>The rules developed for managing fixation sites indicate that each village was expected to establish a self-funding mechanism to continue funding fixation activities.</p> <p>Depending on the level of advancement at each site, different maintenance activities are required to ensure the sustainability of the achievements (either increasing the height of the mechanical</p>

<sup>49</sup> MEDD (2018) [Rapport de mission pour l'élaboration des règles de gestion des zones de mise en défens, reboisements villageois et fixation des dunes](#)

<sup>50</sup> MEDD (2018) [Rapport de mission pour l'élaboration des règles de gestion des zones de mise en défens, reboisements villageois et fixation des dunes](#)

<sup>51</sup> WFP (2021). [Mauritania Annual Country Report 2021](#) and <https://www.angmv-mr.com/signature-convention-entre-medd-et-pam-2/>

	barriers, caring for vegetation or maintaining protective barriers). This may be undertaken by communities, but funding would be required for materials. Interviews did not ascertain whether this had been done in specific sites. Additional financial and technical resources may have contributed to sustainability in some sites (WFP/MEDD/GGW).
<b>Likely sustainability at ex post</b>	Variable from site to site depending on maturity of activities at the end of the project, level of community organization, and additional funding, among other factors.

## Outcome 2.2: Increased vegetation cover in intervention zones

### Outcome delivered:

- Twenty-five protected grazing areas of 25 to 50 ha totaling 1,000 ha have been created. In 2017, 2018 and 2019, tree plantations and pastoral improvements were carried out, planting some 280,000 local plant species.
- 37 perimeters of firewood plantations have been established on more than 460 ha.
- 995 ha were mechanically and biologically fixed on 36 sites as part of the sand dune fixation activity, increasing the vegetation cover in the targeted project communities.

All these plantations were carried out with an average density of 400 plants per hectare, increasing the density of vegetation by more than 10% compared to the baseline situation.<sup>52</sup>

**Description:** In 2017, 2018 and 2019, pastoral improvements were made in the 25 areas protected by planting local species to restore vegetation and improve the forage balance of these reserves, which will play an important role for these communities, especially during drought years when pastures are insufficient to cover livestock needs. Rules were developed and community representatives trained to enable the management committees of these areas to better ensure their sustainability.

460 ha of collective land ranging from 5 to 10 ha were planted in 37 villages for fuelwood production, with the purpose of providing communities with a space where they can extract their firewood needs, thus preserving existing natural resources already weakened by over-exploitation and overgrazing. Operating regulations have been elaborated and communities representatives have been trained to ensure the sustainable management and exploitation of these areas by the Village Management Committees.<sup>53</sup>

**Expected sustainability duration** (without additional interventions): Medium to long-term

<b>Ownership</b>	There is limited specific information on the extent of ownership of these efforts. Interviews and the Impact Assessment Report concur that community engagement was a strong asset of the project (as a whole). Engagement of communities from the selection/definition of activities to their execution is favorable to their sustainability.  The Impact Assessment Report notes that significant benefits resulted from the <i>protection activities</i> , which are likely to promote ownership. Indeed, 98% of respondents that benefitted from these activities consider them either “useful” or “very useful”, and 56% generated income from these areas. These areas also increase fodder availability and reduce the need for transhumance.  The Impact Assessment Report also indicates that 77% of respondents that benefitted from <i>tree plantation</i> considered that it had significantly contributed to protect their natural resources, habitat and living environment. However, the validity of this finding is limited by the fact that several plantations failed due to lack of water and others were not mature enough to generate such benefits.  The effects of the use of an FFA approach to implement these activities on ownership is uncertain (see Outcome 2.1 above).
<b>Capacities</b>	Technical capacities required to maintain <i>protected areas</i> are limited (fence maintenance), which is favorable to sustainability. Sustainable management of the areas to ensure sustainable consumption is more challenging. Rules have been elaborated to this end <sup>54</sup> with village

<sup>52</sup> APR 5 (April 2020)

<sup>53</sup> APR 5 (April 2020)

<sup>54</sup> MEDD (2018) [Rapport de mission pour l'élaboration des règles de gestion des zones de mise en défens, reboisements villageois et fixation des dunes](#)

	<p>management committees responsible for ensuring continued protection and fining of trespassers. The template agreement is quite general and there is no information about the extent to which it has been adopted and applied. The Impact Assessment Report includes a quote from one community where this system is operational. The capacity of village management committees is variable.</p> <p>Nonetheless, interviewees consider it likely that this outcome has been sustained, given the limited capacities required to maintain the assets.</p> <p>On the other hand, tree plantation requires ongoing technical support in the long-term (except in the case of natural regeneration). This support would not have been available after the end of the project.</p> <p>As for protected areas, rules were elaborated and management/enforcement placed under the responsibility of village management committees with various levels of capacities, with no information about their actual level of enforcement.</p>
<b>Partnerships</b>	<p>The main partnership necessary for the sustainability of protected areas is that of the village management committee. Regional authorities were expected to support communities in case of conflict with a trespasser.</p> <p>NGOs were involved in providing technical support to communities for tree planting activities. Their continued engagement at the end of the project is uncertain.</p> <p>There is no information about projects that would have continued to support these specific sites and activities.</p>
<b>Resources / assets</b>	<p>The Final Evaluation states that the result of many of the tree planting activities and protected grazing areas would be seen in the years following the end of the project. It also notes that the success rate of tree plantation was between 50 and 60%, of those remaining 50-60%.</p> <p>Resources required for the maintenance of protected areas are relatively limited (fence maintenance, security staff). Income generated by users is expected to cover these costs, along with any fines collected.</p> <p>Resources to sustain planted forests are significant due to the need to obtain technical support. The longer timeframe to start generating benefits (income, fuelwood) could have hindered the ability of the village management committees to collect funds to achieve and sustain results.</p>
<b>Likely sustainability at ex post</b>	<p>Sustainability of protected areas is likely in communities where village management committees have the capacity to collect fees and ensure security.</p> <p>While success of reforestation/plantation activities may have been limited, in project sites where restoration was successful by the end of the project, results may still be visible. On the other hand, several obstacles linked to the complexity and longer-term nature of plantation activities may have hindered the achievement of outcomes after the end of the project and their sustainability.</p>

### Outcome 2.3: Decreased loss of water and soil through surface run-off

**Outcome delivered:** 440 ha of degraded lands have been restored, increasing sub-soil water availability and agriculture lands.

**Description:** 18 water retention structures were built in 6 villages in Guidimakha and 4 villages in Gorgol. The structures which are water retention dikes, filter dams and stony cordons, were entirely built by local population without heavy machinery, with only local tools and supervising technicians offered by the project. These water retention structures have restored and reclaimed approximately 440 ha of lands in which have been cultivated by the beneficiary communities since 2018.

**Expected sustainability duration** (without additional interventions): Long term

**Ownership**

There is limited specific information on the extent of ownership of these efforts.

The effects of the use of an FFA approach to implement these activities on ownership is uncertain (see Outcome 2.1 above).

The Impact Assessment Report reports mixed perceptions on the benefits on these activities, with only 30% of beneficiaries considering that these efforts had greatly improved soils productivity, while 52% considered improvement as “medium”. These limited perceived benefits may have

	adversely influenced sustainability. The fact that these benefits are rapidly observable is however an advantage and may compel communities to maintain infrastructure.
<b>Capacities</b>	<p>These structures were built by the communities themselves, which, according to interviewees, gave them the capacity to maintain and rehabilitate them in the future. The techniques used are simple which facilitates the maintaining of capacities.</p> <p>Limited institutional capacity is required to maintain infrastructure. Unlike for other project assets, no management agreements were developed for water retention infrastructure. Yet, awareness and ownership of these assets would be required to ensure minimal maintenance of the assets.</p>
<b>Partnerships</b>	<p>The main partnership necessary for the sustainability of protected areas is that of the village management committee.</p> <p>There is no information about projects that would have continued to support these specific sites and activities.</p>
<b>Resources / assets</b>	Equipment and materials required to maintain infrastructure are limited and should be available locally (cord, rocks, etc.). Infrastructure does not deteriorate rapidly and could still be in place with minimal maintenance.
<b>Likely sustainability at ex post</b>	Despite perhaps limited ownership, the durable low low-tech nature of these interventions could have enabled this outcome to be sustained.

### 3.1.3.3. Component 3

**Component 3:** Design and implement concrete adaptation measures identified through community adaptation planning that aim to diversify and strengthen the livelihoods of the most vulnerable population.

The three outcomes under this component stem from the same set of activities and outputs. These involved:

- Tree planting in protected areas for revenue generation and food: 280,000 trees in 25 protected areas
- Training to technical staff and community leaders on livestock management, agricultural techniques and water utilization: 31,021 participants (63% women and 37% men) trained
- Training and equipment for plant/seed multiplication: support to 42 women's cooperatives to set up vegetable gardens, training on preserving and drying surplus.
- Training to technical staff and community leaders and equipment for poultry development: 16 semi-intensive and 40 traditional poultry farming units succeeded
- Training and equipment for apiculture: 5,517 participants involved in this activity (284 women and 233 men)
- Provision of fuel-efficient cookstoves: 20600 cookstoves built and distributed
- Training of community members (mostly youth) on building and maintaining fuel-efficient cookstoves: 179 young volunteers and artisans among 60 sites of the project in the 8 Wilayas were trained and participated in their distribution and maintenance.

#### Outcome 3.1: Increased number of sources of income for participating households

**Outcome delivered:** New income-generating activities (IGAs) have been introduced in many project sites, which resulted in increased livelihood bases for 46% of project beneficiaries.

##### Description:

New IGAs included:

- High value crop production, in 52% of total project sites
- Poultry, in 55% of total project sites
- Beekeeping, in 9% of total project sites
- Fruit farming, in 21% of total project sites
- Manufacturing improved stoves, in more than 70% of project sites
- Butchers, in 26% of total project sites

<ul style="list-style-type: none"> <li>• Bakeries, in 7% of total project sites</li> <li>• Community shops, in 40% of total project sites</li> <li>• Vegetable marketing unit, in 1% of total project sites</li> <li>• Couscous production units, in 11% of total project sites</li> <li>• Sewing units, in 2% of total project sites</li> <li>• Fattening units for small ruminants, in 4% of total project sites</li> <li>• Livestock feed stores, in 2% of total project sites</li> <li>• Grain mills, in 16% of total project sites</li> <li>• Dyeing units, in 5% of total project sites</li> </ul> <p>In addition, according to the Impact Assessment Report, 15% of respondents used income derived from IGAs to develop new IGAs.</p>	
<p><b>Expected sustainability duration</b> (without additional interventions): Medium to long term</p>	
<p><b>Ownership</b></p>	<p>Interviews and the Impact Assessment Report concur that community engagement was a strong asset of the project (as a whole). Engagement of communities from the selection/definition of activities to their execution is favorable to their sustainability.</p> <p>IGAs are directly owned and managed by communities, either individually or through associations or cooperatives.</p> <p>Training delivered to individuals or cooperatives, and especially to women, empowers them to undertake IGAs, which may generate a sense of ownership <i>if businesses are successful</i>. Both progress reports and interviewees observed re-investment in IGAs with own funds, which would support this assumption.</p>
<p><b>Capacities</b></p>	<p>Technical capacities for specific IGAs are likely to be maintained by direct beneficiaries as long as they are used. The Impact Assessment Report considers it as an asset for sustainability. In addition to technical capacities, managerial capacities are needed to sustain activities, and were also included in the training provided. Nonetheless, the Impact Assessment Report concludes that the duration and content of some of the training was not sufficient, which could hinder sustainability.</p> <p>One interviewee considered that the capacities built were likely to stay and be transmitted informally within communities, for successful IGAs.</p> <p>The involvement of existing cooperatives is favorable to sustaining both technical and managerial capacities.</p> <p>VMCs played a key role in IGAs, but the Impact Assessment Report expresses concern that their continuity would be threatened by the end of the project, which would destabilize many of the achievements (see Outcome 1.2). This is an area to be further explored, as the exit strategy involved further strengthening their capacities. Loss of capacities may be caused by outmigration and competing priorities (e.g. family care, transhumance obligations, etc.)</p>
<p><b>Partnerships</b></p>	<p>Technical support from local authorities was not leveraged during the project, which could have hindered sustainability (according to the Impact Assessment Report).</p> <p>The Impact Assessment Report notes that communities perceive a continued need for support. Other projects like the DIMS may have delivered similar support, but it may not have targeted the same beneficiaries.</p>
<p><b>Resources / assets</b></p>	<p>Reinvestment with own funds was already observed during project implementation, and interviews indicate it could have continued after its closure. Interviewees indicate some of the small businesses may have failed while others may have been sustained or may even have grown.</p> <p>Specific infrastructure supports IGAs (grain mills, boreholes and wells, community shops, market gardening or protected areas) and has to be maintained to continue operating. Access to equipment and technical skills to maintain infrastructure is essential. Capacity to maintain this infrastructure would only be available where IGAs are supported by dynamic and proactive associations (cooperatives or village management committees). The Impact Assessment Report notes that their levels of dynamism and proactivity are variable.</p> <p>While this is not explicitly stated anywhere, IGAs and IGA infrastructure should be planned to be protected or resilient to climate hazards (heat, drought, storms, flooding, dune movement).</p> <p>The Impact Assessment Report noted that water pumps were often insufficient to cover the irrigation needs of established gardens, limiting their potential sustainability and growth.</p>

<b>Likely sustainability at ex post</b>	As a whole, it is likely that many of the new IGAs have continued, in one way or another, with significant variations depending on the specific IGA and community. It is also possible that some small businesses have closed and have been relaunched or replicated within the same community or even elsewhere.
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### Outcome 3.2: Increased income for participating households

#### Outcome delivered:

**Description:** According to the Impact Assessment Survey:

- FFA cash has improved the living conditions of almost 88% of people who were involved.
- 70% of households involved in market gardening activities use their produce (market gardening) for both food and income purposes. 79% of them declared increased income and purchasing power from market gardening.
- 29.1% of survey respondents noted an increase in income thanks to IGAs, while 58% did not. 62.5% observed collective positive effects of IGAs on the economic situation of the whole community.
- 91% stated that the cost of water had fallen as a result of the project's new facilities

**Expected sustainability duration** (without additional interventions): Short to medium term

**Note: Most sustainability conditions are the same as for Outcome 3.1. Only those specific to this outcome are mentioned here.**

<b>Ownership</b>	
<b>Capacities</b>	
<b>Partnerships</b>	Income generation from IGAs requires access to markets. The need to assess alternative sources of income and existing markets was included in the exit strategy. Accessing markets may require the establishment of partnerships beyond each community.
<b>Resources / assets</b>	Income generation requires the generation of excess production. This may have been constrained by access to water resources, as water pumps were already described as insufficient. Inflation on price of inputs may also affect profitability, and thus the sustainability of the increased income. Climate hazards are a threat to market gardening and smallstock.
<b>Likely sustainability at ex post</b>	At small scale, increased income may have been sustained.

### Outcome 3.3: Increased availability of and access to food for participating communities

#### Outcome delivered:

#### Description:

People involved in FFA used their income primarily to purchase food.

74% of respondents involved in market gardening activities indicate that their production increased significantly. 70% use their produce for food and income purposes, and 98.5% agreed that vegetable production had improved household nutrition and food security. 99% think that market garden produce contributes to better nutrition for children and women.

For 98% of beneficiaries, poultry production contributes to improving household nutrition and food security.

**Expected sustainability duration** (without additional interventions): Medium term

**Note: Most sustainability conditions are the same as for Outcome 3.1. Only those specific to this outcome are mentioned here.**

<b>Ownership</b>	If successful, there are high incentives for continuation of food production for self consumption.
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<b>Capacities</b>	Even at small scale, production for self-consumption may be continued, and help sustain capacities. This is more likely to be the case for women who are less required to travel outside of the community. However, some activities may compete with daily responsibilities.
<b>Partnerships</b>	
<b>Resources / assets</b>	At small scale, it may be more difficult to acquire and maintain equipment, which may hinder the continuation of some activities. Small businesses that were created by the project to distribute food locally may still be operational, if they have been adequately managed, or that new businesses have replaced them.
<b>Likely sustainability at ex post</b>	Even if at small scale, it is likely that increased food availability may have been sustained.

### 3.2. Resilience analysis

The methodology proposed by the AF for the ex-post evaluation of adaptation interventions includes the analysis of the ways through which the projects' sustained outcomes are contributing to the system's resilience. According to the methodology, the pathways through which the sustainable adaptation outcomes contribute to the resilience of the system should be described in terms of the following characteristics:

- **Scale.** Impact on the temporal or spatial scale needed for human-natural systems to maintain or change their functions and structures in the face of climate disturbances.
- **Redundancy.** Impact on the availability of diverse resources, means, or options to support climate resilience.
- **Diversity & inclusion.** Impact on the variety of actors and inputs working/interacting towards common goals and the extent to which the project outcomes support equity and inclusiveness.
- **Flexibility.** Impact on the system's agility in responding to uncertainty, effectively tackling challenges and seizing opportunities that may arise from change.
- **Connectedness and feedback loops.** Impact on communication lines, access to information or partnerships to respond or adapt to shocks or stressors.

The methodology suggests that this analysis should be carried out once the sustained adaptation outcomes and their key drivers have been identified. The extent to which the sustained outcomes contribute to creating resilience in the system can only be fully assessed after the fieldwork. It is therefore premature to undertake this analysis at this stage of the evaluation. However, the tables below have been developed at this early stage to enable the identification of the potential contribution of the project's expected sustained outcomes to the various resilience characteristics of the system, with the aim of informing the data collection methodology during the fieldwork (including the identification of evaluation indicators, interview protocol questions and of required on-site observations) and during the overall analysis of the evaluation findings.

### Characteristic: Scale

How do the sustained project adaptation outcomes have an impact on the temporal or spatial scale needed for natural and/or human systems to maintain or change their functions and/or structures in the face of climate disturbances.

Proposed Evaluation indicators	Contribution of the project to this dimension at project closure	Likelihood of sustainability (based on the analysis presented in section 3.1.3 above)	Information gap to document during field work and/or data analysis to assess the sustained outcome contribution to the system's resilience
<p><b>Evidence that sustained adaptation outcomes contributed to increasing the speed of (human) responsiveness to expected and actual climate disturbances</b></p>	<p>Potential - through the implementation of an early warning system at the community level (outcome 1.1). Such a system can be expected to increase the speed of human responsiveness to climate disturbances. The system was not fully established at project closure. The project has set the groundwork for the establishment of an early warning system at the community level by establishing a partnership between the National Meteorological Office, the agro-meteorological services and Radio Mauritania. The process of formalization has been entrusted to the Coordination Unit of the National Program on Climate Change (CCPNCC), under the MEDD.</p>	<p>Unknown - There is no information on the sustainability of the work conducted under the project to establish an early warning system.</p>	<p>1. Is the EWS system operational? What information is being communicated, by whom, to whom, how and in what circumstances?</p> <p>2. If such a system is in place, what is its concrete impact on the local community's speed of response to expected and actual climate disturbances?</p>
<p><b>Evidence that sustained adaptation outcomes contributed to the restoration of a sufficiently large landscape to restore/maintain ecosystem services</b></p>	<p>Potential 1 – through the mechanical fixation of dunes to reduce, halt or reverse dune advances in participating communities (one of the objectives is to protect agricultural lands in the sites, threatened by sand</p>	<p>Variable from site to site depending on maturity of activities at the end of the project, level of community organization, and additional funding, among other factors.</p>	<p>1. Have the areas restored/protected by dune stabilisation, increased vegetation cover (fuel wood plantations and community conservation areas) and the construction of water retention</p>

	<p>encroachment) (outcome 2.1). With the process of mechanical and biological fixation of sand dunes covering 995 ha, the advance of the dunes has been slowed down at the treated sites. In many sites this advance was totally halted even reversed (Tichoutine site in Brakna and Ghoueisbou Site in Assaba).</p> <p>2- Through increasing the forest cover by the plantation of community fuel wood forests and support to protected areas (outcome 2.2). Twenty-five protected areas of 25 to 50 ha totalling 1,000 ha have been created. In 2017, 2018 and 2019, tree plantations and pastoral improvements were carried out, planting some 280,000 local plant species. 37 perimeters of firewood plantations have been established on more than 460 ha</p> <p>3- through construction of water retention structures to increased surface and sub-soil water availability (outcome 2.3). 440 ha of degraded lands have been restored, increasing sub-soil water availability and agriculture lands contributing to the restoration/sustainability of the productive ecosystems.</p>	<p>Sustainability of protected areas is likely in communities where village management committees have the capacity to collect fees and ensure security.</p> <p>In project sites where restoration was successful by the end of the project, results may still be visible. On the other hand, several obstacles linked to the complexity and longer-term nature of plantation activities may have hindered the achievement of outcomes after the end of the project and their sustainability.</p> <p>Despite perhaps limited ownership, the durable low-tech nature of these interventions could have enabled this outcome to be sustained.</p>	<p>structures maintained since project closure?</p> <p>2. What is the current impact of this landscape restoration/protection on local ecosystem services (particularly in relation to agricultural and agroforestry systems)?</p>
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<p><b>Evidence that sustained adaptation outcomes contributed to the construction of infrastructure of sufficient scale to protect beneficiaries from climate disturbance</b></p>	<p>Potential – through the mechanical fixation of dunes to reduce, halt or reverse dune advances in participating communities (the objective is to protect houses, hydraulic infrastructures and agricultural lands in the sites, threatened by sand encroachment) (outcome 2.1). With the process of mechanical and biological fixation of sand dunes covering 995 ha, the advance of the dunes has been slowed down at the treated sites. In many sites this advance was totally halted even reversed (Tichoutine site in Brakna and Ghoueisbou Site in Assaba).</p> <p>Potential – through the digging and rehabilitating wells, building water reservoirs</p>	<p>Variable from site to site depending on maturity of activities at the end of the project, level of community organization, and additional funding, among other factors.</p>	<p>Does dune stabilisation from the project site currently help to protect houses, water infrastructure and agricultural land or other relevant assets in the project areas?</p> <p>Does the water retention infrastructure built during the project protect the beneficiaries from climate disturbance? In what way?</p>
<p><b>Evidence that the sustained adaptation outcomes have an impact on the temporal or spatial scale needed for natural and/or human systems to maintain or change their functions and/or structures in the face of climate disturbances in other ways</b></p>	<p>No clear contribution of the project to this dimension.</p>	<p>N/A</p>	<p>Are there any sustained project outcomes that impact the temporal or spatial scale needed for natural and/or human systems to maintain or change their functions and/or structures in the face of climate disturbances (other than through increasing the speed of (human) responsiveness to expected and actual climate disturbances, the restoration of a sufficiently large landscape to restore/maintain ecosystem services, or the construction of infrastructure of sufficient scale to protect beneficiaries from climate disturbance)?</p>

### Characteristic: Redundancy

How do the sustained adaptation outcomes contribute to increasing the availability of resources, means or options, or created new ones to support resilience to climate risks?

Proposed Evaluation indicators	Contribution of the project to this dimension at project closure	Likelihood of sustainability (based on the analysis presented in section 3.1.3)	Information gap to document during field work and/or data analysis to assess the sustained outcome contribution to the system's resilience
<b>Evidence that the sustained adaptation outcomes contribute to availability of multiple livelihoods or sources of income, creates a financial surplus or additionality that can be used to respond to climatic events by the project beneficiaries</b>	Potential – through the diversification and strengthening of the livelihoods of the most vulnerable population (Component 3). An increase in food production for domestic consumption and income-generating activities have been introduced in the majority of the project sites. For example, at project closure, the vast majority of households (77.5%) reported using production from gardening activities for food and income purposes <sup>55</sup> .	As a whole, it is likely that many of the new IGAs or food production activities for consumption have continued, in one way or another, with significant variations depending on the specific IGA and community. It is also possible that some small businesses have closed and have been relaunched or replicated within the same community or even elsewhere.	<ol style="list-style-type: none"> <li>1. Has the diversification of livelihoods and income sources, financial surpluses or additionality (e.g. increased food production, water reserves, etc.) achieved by project beneficiaries at project completion been maintained to date?</li> <li>2. How have project beneficiaries used (or could use) the available range of livelihoods or income sources, financial surpluses or additionality to respond to climatic events (droughts, floods, etc.)?</li> </ol>
<b>Evidence that the sustained adaptation outcomes contribute to availability of multiple options (including duplicate systems or backup systems) to respond to climate disturbances</b>	No clear contribution of the project to this dimension.	N/A	<ol style="list-style-type: none"> <li>1. Are there any sustained project outcomes that contribute to the availability of duplicate or back-up systems to respond to climate disruption?</li> <li>2. Are there any sustained project outcomes that contribute to the availability of other types of options to respond to climate disruption?</li> </ol>

<sup>55</sup> Selmane, Mohamed Lemine. (2019) EVALUATION D'IMPACT DES ACTIONS D'ADAPTATION AU CHANGEMENT CLIMATIQUE ET PREPARATION DE LA STRATEGIE DE SORTIE DU PROJET. RAPPORT FINAL. Avril 2019

## Characteristic: Diversity & inclusion

How do the sustained adaptation outcomes widen/deepen the variety of actors and inputs working/interacting towards common goals.

Proposed Evaluation indicators	Contribution of the project to this dimension at project closure	Likelihood of sustainability (based on the analysis presented in section 3.1.3)	Information gap to document during field work and/or data analysis to assess the sustained outcome contribution to the system's resilience
<p><b>Evidence that the sustained adaptation outcomes contribute to increasing the engagement of marginalized groups in decision-making</b></p>	<p>Potential – through the active involvement of project beneficiaries that have played an important role and have actively participated to all the steps of the process of elaboration of climate change adaptation action plans, including the identification and prioritization of adaptation options. Most of these adaptation action plans were reviewed and updated by the NGOs with the participation of all targeted groups (man, women and young beneficiaries). (Outcome 1.2)</p>	<p>It is not clear how the involvement of the marginalised group in decision-making during the project implementation has been sustained beyond the project, except possibly within the Village Management Committee in some of the beneficiary communities.</p>	<p>1. Are the marginalised groups involved in decision-making during the project implementation (i.e. during the process of developing climate change adaptation action plans) still involved in further decision-making processes? Who is involved in what decision-making processes?</p>
<p><b>Evidence that the sustained adaptation outcomes contribute to increasing gender equity in leadership</b></p>	<p>Potential see above. Also, training to technical staff and community leaders on livestock management, agricultural techniques and water utilization were mostly provided to women.</p>	<p>The capacity built at community level is likely to be maintained, at least in part, and some adaptation options will continue to be implemented.</p>	<p>1. Does the participation of women in the development and implementation of adaptation actions at the community level and their participation in a range of training activities related to the implementation of adaptation options contribute to increasing gender equality in leadership at the community level?</p> <p>2. Are there other sustained project outcomes that contribute to increasing gender equity in leadership?</p>

<p><b>Evidence that the sustained adaptation outcomes contribute to equity and inclusiveness in other ways</b></p>	<p>Potential - through trainings that were delivered to individuals or cooperatives, and especially to women (outcome 3.1). 99% of respondent to the project impact assessment survey think that market garden produce contributes to better nutrition for children and women (outcome 3.3).</p>	<p>The capacity built at community level is likely to be maintained, at least in part, and some adaptation options will continue to be implemented with possible ongoing effect on food security.</p>	<ol style="list-style-type: none"> <li>1. Are the sustained outcomes in terms of increased, capacities, income for participating households or increased availability of and access to food for participating communities contributing to equity and inclusiveness? In what ways?</li> <li>2. Are there other sustained outcomes that contribute to equity and inclusiveness? In what ways?</li> </ol>
<p><b>Evidence that the sustained adaptation outcomes contribute to increasing access to different sources of scientific research and/or information, as well as to traditional/indigenous knowledge, to inform responses to shocks</b></p>	<p>Potential – through broadcasts by local radio stations and rural radio. Thousands of people, including outside the project intervention areas, are made aware of the challenges of climate change on food security and adaptation strategies, through weekly broadcasts by local radio stations and rural radio, prepared on the basis of PARSACC's good adaptation practices.</p>	<p>Unknown - There is no information on the sustainability of the broadcasts by local radio stations and rural radio regarding climate change, food security and good adaptation practices.</p>	<ol style="list-style-type: none"> <li>1. If (still) in existence, do the broadcasts by local radio stations and rural radio contribute to increasing access to different sources of scientific research and/or information, as well as to traditional/indigenous knowledge, to inform responses to shocks?</li> <li>2. Are there other sustained project outcomes (e.g.: EWS, increased capacity of NGO partners) that contribute to increasing access to different sources of scientific research and/or information, as well as to traditional/indigenous knowledge, to inform responses to shocks?</li> </ol>
<p><b>Evidence that the sustained adaptation outcomes contribute to the diversification of relevant practices (including farming methods)</b></p>	<p>Potential – Through the mastery of the techniques of wattle and daub, nurseries, planting and dune fixation (outcome 2.1-2.2) through the diversification and strengthening of the livelihoods of the most vulnerable population (outcome 3.1). the project promoted approaches based on the valuation of natural capital, environmental protection, the adoption of practices that improve soil fertility, reduce erosion and promote the</p>	<p>It is likely that the diversification and strengthening of livelihoods has been sustained in at least some of the project sites.</p>	<ol style="list-style-type: none"> <li>1. Was the use of diverse climate-resilient practices adopted through the project (e.g.: wattle and daub, nurseries, planting and dune fixation and the various new climate resilient livelihoods) sustained?</li> <li>2. Are new practices still being adopted independently by project beneficiaries? Which practices and why?</li> </ol>

	regeneration of natural resources by optimizing their use.		
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## Characteristic: Flexibility

How do the sustained adaptation outcomes contribute to increasing the system's agility to respond to uncertainty and emerging challenges and opportunities?

Proposed Evaluation indicators	Contribution of the project to this dimension at project closure	Likelihood of sustainability (based on the analysis presented in section 3.1.3)	Information gap to document during field work and/or data analysis to assess the sustained outcome contribution to the system's resilience
<b>Evidence that the sustained adaptation outcomes contribute to the availability of flexible people, groups and institutions supportive of new actions or approaches to manage climate disturbance and risk and seize opportunities</b>	The project could have contributed to this through the knowledge, capacity and experience gained by the different stakeholders (communities, NGOs, VCM, government representatives) during the project implementation.	N/A	Do the sustainable outcomes of the project (e.g.: capacities, experience gained through implementation of new practices) contribute to the flexibility of the stakeholders involved (communities, NGOs, VCM, government representatives) to support new actions or approaches to manage climate disturbance and risk and seize opportunities (in the context of the implementation of new project for examples)?
<b>Evidence that the sustained adaptation outcomes contribute to the ability to inform decisions with new information that becomes available to manage climate disturbance and risk and seize opportunities</b>	The project could have contributed to this through the knowledge, capacity and experience gained by the different stakeholders (communities, NGOs, VCM, government representatives) during the project implementation.	N/A	Do the sustainable outcomes of the project (e.g.: capacities, experience gained through implementation of new practices) contribute to the ability of the stakeholders involved (communities, NGOs, VCM, government representatives) to make decisions based on new information that becomes available (through different channels) to

			manage climate disturbance and risk and seize opportunities?
<b>Evidence that the sustained adaptation outcomes contribute to the ability to adopt new tools or inputs to manage climate disturbance and risk and seize opportunities</b>	The project could have contributed to this through the knowledge, capacity and experience gained by the different stakeholders (communities, NGOs, VCM, government representatives) during the project implementation.	<b>N/A</b>	Do the sustainable outcomes of the project (e.g.: capacities, experience gained through implementation of new practices) contribute to the ability of the stakeholders involved (communities, NGOs, VCM, government representatives) to adopt new tools or inputs to manage climate disturbance and risk and seize opportunities?

### Characteristic: Connectedness & feedback loops

How do the sustained adaptation outcomes contribute to supporting communication, information access and partnerships to respond or adapt to shocks and stressors?

<b>Proposed evaluation indicators</b>	<b>Contribution of the project to this dimension at project closure</b>	<b>Likelihood of sustainability (based on the analysis presented in section 3.1.3)</b>	<b>Information gap to document during field work and/or data analysis to assess the sustained outcome contribution to the system's resilience</b>
<b>Evidence that the sustained adaptation outcomes contribute to supporting communication lines/coordination mechanisms to respond or adapt to shocks and stressors</b>	<p>Potential - through the implementation of an early warning system at the community level (outcome 1.1). Such a system can be expected to support communication lines to respond or adapt to shocks and stressors.</p> <p>-through the village management committees set up with the support of PARSACC and which constitute new spaces for dialogue and discussion on project interventions and on local community issues.</p>	<p>Unknown - There is no information on the sustainability of the work conducted under the project to establish an early warning system.</p> <p>Unknown - There is no information on the sustainability of the village management committees.</p>	<ol style="list-style-type: none"> <li>1. If (still) in place, what is the concrete impact of the EWS in supporting lines of communication between stakeholders to respond or adapt to shocks and stressors?</li> <li>2. If (still) in existence, do the Village Management Committees act as a kind of coordination mechanism to respond or adapt to shocks and stressors at the community level?</li> <li>3. Are there other sustained project outcomes that contribute to supporting lines of communication/coordination mechanisms to respond or adapt to</li> </ol>

			shocks and stressors at community, regional or national level?
<b>Evidence that the sustained adaptation outcomes contribute to supporting access to information to respond or adapt to shocks and stressors</b>	Potential – through broadcasts by local radio stations and rural radio. Thousands of people, including outside the project intervention areas, are made aware of the challenges of climate change on food security and adaptation strategies, through weekly broadcasts by local radio stations and rural radio, prepared on the basis of PARSACC's good adaptation practices.	Unknown - There is no information on the sustainability of the broadcasts by local radio stations and rural radio regarding climate change, food security and good adaptation practices.	<p>1. If (still) in existence, do the broadcasts by local radio stations and rural radio contribute to supporting access to information to respond or adapt to shocks and stressors at community, regional or national level?</p> <p>2. Are there other sustained project outcomes that contribute to supporting access to information to respond or adapt to shocks and stressors at community, regional or national level?</p>
<b>Evidence that the sustained adaptation outcomes contribute to supporting partnerships to respond or adapt to shocks and stressors</b>	Potential – though the engagement of some NGOs with the communities throughout the project implementation (in particular in terms of capacity building and ongoing support).	The engagement of some of the NGOs is likely to have continued with support from other projects/donors.	<p>1. If still in place, do partnerships with NGOs contribute to responding or adapting to shocks and stressors at community, regional or national level?</p> <p>2. Are there other sustained project outcomes that contribute to supporting partnerships to respond or adapt to shocks and stressors?</p>

## 4. FIELD WORK DESIGN

Extensive fieldwork will be required to complement the deskwork analysis. This fieldwork will focus on a sample of three project sites/villages selected from the list of 85 sites where the project conducted its activities (see Section 4.3.1). Each project site will be visited twice as part of this evaluation. The first time will involve qualitative data collection, while the second will focus on quantitative data collection.

### 4.1. Key data sources

During the field work, data sources will primarily be persons and representatives from key organizations.

As informants (including partners):

- Environmental NGOs involved in delivering support both to DREDD and to communities
- National and regional radios, specifically for Outcome 1.2
- Village chiefs, and key village women representative
- Women's associations
- Project staff not interviewed during Design phase, MEDD, Ministry of Rural Development, Ministry of Social Affairs

As direct project beneficiaries:

- DREDD Directors and their technical staff
- Village management committees (VMC) and other associations overseeing/leading environmental work within communities, and key women representative within these committees / associations
- Cooperatives and associations directly involved in project activities
- Individual project beneficiaries (both men and women).

In addition, the quantitative portion of the field work will collect data from a representative sample of community members (see Section 4.3.2).

**Additional data:** While the team has already conducted an extensive desk review of available information, it will remain on the lookout for additional documentation that may help inform the evaluation questions. Indeed, such information may only be available locally, within DREDDs or partner NGOs.

### 4.2. Methods and tools

The field work will use different methods to explore continued adaptation benefits. These will include:

**Key informant interviews (KII):** Semi-structured interviews will be conducted with individual respondents from institutions, such as with DREDD directors. The use of a semi-structured questionnaire will ensure consistency in comparison of responses, while providing flexibility to dig into specific topics of relevance for each interviewee. Some interviews may also take the form of group interviews, e.g., with DREDD technicians.

**Focus group discussions (FGD):** FGDs will be prioritized for meetings with communities. Their approach will also be semi-structured, but given the larger number of participants (between 5-7 people), the number

of questions will be limited. In each project site, multiple FGDs will be organized, depending on the context. These will include different types of groups as relevant:

- Groups of participants having been engaged in similar activities during the project
- Groups of participants who are members of the same association or cooperative
- Groups of participants who are or were exposed to similar hazards

In each case, separate FGDs will be undertaken for women and for men (to the extent possible). Flip charts will be used to support discussions (e.g. make lists of observations, map out perceived threats...). Whenever possible, maps of the village will be requested and used to support and illustrate discussions. The specific number and type of FGDs per site as well as tailored protocols will be developed once the site selection is fully validated. Nonetheless, planning will allow for flexibility in identifying additional groups or even individuals to interview, in order to overcome some of the implicit selection bias.

Draft FGD questionnaires are included in Annex 9: Preliminary qualitative data collection tools

**Direct observation and transect walks:** During the qualitative field work, the evaluation team will visit the sites of key activities in each village. Project assets will be documented visually (pictures) and GPS location will be noted. Where relevant satellite images are available, these will serve to validate data on the state of project assets. Direct observation will be unstructured, but a checklist will ensure key aspects are covered in each site. In addition, transect walks will enable the evaluators to visit areas of the village that may not have been covered by the project, to obtain a more complete understanding of the context. These walks may be guided by community members to provide complementary information. These are also valuable opportunities to meet with community members that may not have initially been invited to meet the evaluation team. They enable more informal conversations to take place.

**Quantitative surveys:** The national evaluator will return to project villages for quantitative data collection, along with three enumerators (both men and women). Each enumerator will spend 10 days in each village. Based on the preselected villages, a representative number of surveys will be undertaken. Section 4.3.2 introduces the approach for identifying the sample size and its characteristics. The data collection tools will be drafted in the weeks prior to the qualitative data collection mission, but will be refined during the quantitative data collection mission to focus on specific data needs. Data will be collected on paper support and then transcribed into SPSS, to generate datasets.

Table 5 provides an overview of how each data collection method will be used to assess each outcome. The Evaluation Matrix (Annex 1: Evaluation matrix provides a breakdown of questions per stakeholder, while the draft interview/FGD protocols (Annex 9: Preliminary qualitative data collection tools) introduce main questions to be asked.

Table 5. Data collection methods per outcome assessed

Outcome	Analytical dimensions to consider	KII	FGD	Direct observation/ transect walks	Quantitative survey	Other comments /
<b>Outcome 1.1: Strengthened awareness, ownership and facilitation capacities of government services (DREDD)</b>	<ul style="list-style-type: none"> <li>Continued support of DREDDs to communities on adaptation planning</li> <li>Nature of capacities, resources and incentives to continue providing this support</li> <li>Progress on establishing an early warning system</li> </ul>	Ministries DREDD Directors DREDD Technical staff NGOs				
<b>Outcome 1.2: Strengthened awareness, ownership, planning and management capacities at community level for local natural resource management and climate change adaptation</b>	<ul style="list-style-type: none"> <li>Continued awareness about climate change adaptation and access to new information on the topic</li> <li>Existence of local organizations with capacity to implement adaptation or natural resource management actions</li> <li>Inclusiveness of decision-making mechanisms (gender, ethnic)</li> <li>Continued implementation of adaptation action plans, other adaptation activities, or natural resource protection and management activities</li> </ul>	Ministries DREDD Directors DREDD Technical staff NGOs Village chief	VMC Women's associations		X	
<b>Outcome 1.3: National ecologic monitoring system strengthened and tested</b>	<ul style="list-style-type: none"> <li>Continued operation of monitoring system</li> <li>Continued relevance and use of manuals for data collection at the local level</li> </ul>	MEDD DREDD				
<b>Outcome 2.1: Advance of sand dunes slowed down, halted or reversed</b>	<ul style="list-style-type: none"> <li>Presence of stabilized sand dunes and/or progress in stabilization since project end</li> <li>Maintenance measures for stabilized dunes</li> <li>Perception of risk levels from dunes</li> <li>Types of assets protected from dunes</li> <li>Existence of local capacities and plans to address new threats</li> </ul>	DREDD technical staff NGOs Village chief	Households in the area	X	X	Satellite images for visited site

Outcome	Analytical dimensions to consider	KII	FGD	Direct observation/ transect walks	Quantitative survey	Other comments /
<b>Outcome 2.2: Increased vegetation cover in intervention zones</b>	<ul style="list-style-type: none"> <li>Evolution of local ecosystems, including: <ul style="list-style-type: none"> <li>Continued availability of fodder in protected areas</li> <li>Evolution of plantation areas</li> <li>Evolution of agricultural and agroforestral ecosystems</li> </ul> </li> <li>Mechanisms to sustainably manage fodder</li> <li>Benefits derived from these areas (incl. use of fuelwood from these areas)</li> <li>Inclusiveness of mechanisms and equity in benefits (gender, but also ethnic)</li> </ul>	DREDD technical staff NGOs Village chief	VMC Households with livestock	X	X	Satellite images for visited site
<b>Outcome 2.3: Decreased loss of water and soil through surface run-off</b>	<ul style="list-style-type: none"> <li>Continued functionality of water retention infrastructure</li> </ul>			X		Satellite images for visited site
<b>Outcome 3.1: Increased number of sources of income for participating households</b>	<ul style="list-style-type: none"> <li>Continued existence of small businesses created (or of similar, new businesses)</li> <li>Continued production of food and other products supported</li> <li>Diversity of income sources</li> <li>Mechanisms in place to support these activities</li> <li>Inclusiveness of these activities and equity in benefits (gender, but also ethnic)</li> </ul>	DREDD technical staff NGOs Village chief Women's association	Beneficiaries by type of activity Cooperatives	X	X	Additional documentary data sources will be sought
<b>Outcome 3.2: Increased income for participating households</b>	<ul style="list-style-type: none"> <li>Sustained levels of income generation from small businesses and productive activities</li> <li>Factors that may have influenced income generation (e.g. capacity to generate surplus)</li> <li>Availability of surplus income to respond to climate events</li> </ul>	DREDD technical staff NGOs Village chief Women's associations	Beneficiaries by type of activity Cooperatives		X	Additional documentary data sources will be sought

Outcome	Analytical dimensions to consider	KII	FGD	Direct observation/ transect walks	Quantitative survey	Other comments /
<b>Outcome 3.3: Increased availability of and access to food for participating communities</b>	<ul style="list-style-type: none"> <li>• Diversity of sources of food</li> <li>• Diversity in types of food</li> <li>• Continuity in food availability</li> <li>• Volume of food available (in relation to needs)</li> <li>• Proportion of needs fulfilled by self-production</li> <li>• Proportion of needs purchased and capacity to purchase food</li> <li>• Availability of surplus food to respond to climate events</li> </ul>	DREDD technical staff NGOs Village chief Women's associations	Beneficiaries by type of activity Cooperatives	X	X	Additional documentary data sources will be sought

## 4.3. Sampling approach

### 4.3.1. Sampling of fieldwork sites

To select the three sites to be targeted as part of the evaluation, the evaluators combined purposive and random sampling methods. The data used for this sample came from the PARSACC Project Monitoring Tool, which provides information about activities and training for each of the 85 sites covered by the project.

A **preliminary sampling process** led to the development of a shortlist of 18 project sites in four Wilayas. These were selected by applying the following criteria:

- 1) **Safety:** Exclusion of sites located in “high risk areas” according to the United Nations Department of Safety and Security (UNDSS). High risk areas are those close to the borders of Mali, in the West and South-West of the country. This led to the exclusion of three Wilayas (due to the high risk involved for teams travelling to the field (Hodh el Chergui, Hodh et Gharbi, and Tagant).
- 2) **Number and diversity of assets supported.** The main activities were organized in categories and sub-categories (types of activities) and points allocated to each type of activity. The sample selected included a minimum number of activities per category, thus ensuring a rich learning opportunity. All villages selected had access to training and had established forms of management committees, two key factors in ensuring sustainability. Table 6 illustrates the categories, sub-categories and rating used.

Table 6. Rating system for selecting sites with a diverse number of assets supported

	Points	Min. Score	Justification
<b>Small businesses</b>		30	Preference for sites with diverse types of businesses supported by the project
Community shop	5		
Grain mill	5		
Livestock feeding (“Embouche”)	5		
Couscous shop	5		
Butcher’s shop	5		
<b>Local production</b>		20	Presence of at least one activity per site
Market gardening	5		
Aviculture: traditional Henhouse	5		
Aviculture: Semi-intensive henhouse	5		
Beekeeping	5		
Fruit growing	5		
<b>Activities to combat desertification and land degradation</b>		15	Presence of at least one activity per site. Selection of sites >10h (per activity)
Dune stabilization	5		
Area protection (for fodder)	5		
Plantation and nurseries	5		

<b>Access to training</b>	20	20	Selection of sites where training activities were undertaken
<b>Community management</b>	15	15	Existence of a village management committee or other mechanism for representation
<b>Total</b>		<b>100</b>	

- 3) **Accessibility:** Given the size of the country, the sites selected are located within 750 km from Nouakchott, to ensure data collection can take place efficiently.

This led to a selection of a shortlist of 22 project sites which is presented in Annex 7: Shortlist of sites selected

### Final sampling

The selection of specific sites to be visited from this shortlist was purposeful and considered the following criteria.

- a) Mandatory criteria:
  - i. Coverage of all project outcomes across the different sites, except for Outcome 1.3. See limitations (section 5.1 for the justification of this decision). While no single site covers all outcomes at the same time, the combination of sites should allow to cover all outcomes jointly.
  - ii. Only 1 site per wilaya, to ensure geographic diversity
- b) Preference criteria:
  - i. Sites that cover more outcomes were preferred, to ensure that outcome results can be tested in more than one site (except for Outcome 3.1).
  - ii. The median population of the sample should resemble the median population of the total of project sites, that is 1500 people.
  - iii. Sites where most vulnerable ethnic groups (Black Moors, Peuls) will be preferred to sites with less vulnerable ethnic groups (White Moors, Soninkés).
  - iv. Avoiding sites that have benefitted from other projects at the same time as PARSACC.
  - v. One of the sites should be in Assaba or Guidimakha, as these wilayas also benefitted from the DIMS project, to enable testing the sustainability factors for Outcome 1.1 in the presence and absence of continued capacity support (see section 5.1 for justification of this decision).

The selection of sites to visit is presented in Table 7. In addition to fulfilling mandatory criteria, this sample has a great coverage of project outcomes and targets most vulnerable populations, including a Peul village. Another WFP project has taken place in the same project site, but this may be after the project ended.

Table 7. Site selection

Wilaya	Moughataa	Commune	Village	Population	Ethnic group	Distance from Nouakchott (km)	Presence of other projects	Previously covered

<b>Brakna</b>	Maghtaa lahar	Dionaba	Dionaba	2700	Maures	370		No
<b>Trarza</b>	Mederdra	Mederdra	Moyasser 2	816	Maures	180	WFP	Final Evaluation
<b>Assaba</b>	Kankossa	Blajmil	Kewalla	900	Peuls	750		No

In addition, a short visit to Leweinatt (Guidimakha) will be organized to validate the sustainability of water retention infrastructure.

### 4.3.2. T Sampling for quantitative analysis

#### Sample size

To determine the sample size we will use the following formula:

$$N = \frac{t^2 * p(1-p)}{\theta^2}$$

With

1.  $N$  = sample size
2.  $t$  = 95% confidence level (standard value of 1.96)
3.  $p$  = prevalence or the level of the indicator relevant to the study. For the purposes of this study, we can use the food consumption score from the last FSMS<sup>56</sup> which is 80.6%.
4.  $\theta$  = 5% margin of error (standard value of 0.05).

The calculation based on these data gives us a sample of 236 households to survey. The sample size is expected to be maintained regardless of no-responses.

#### Sampling method

Once the sample size has been defined, we will proceed with proportional sampling by site, i.e. the size obtained will be distributed proportionally over the three sites that will be the subject of this study based on the proportion of beneficiaries for each project site. Given that detailed lists of beneficiaries are not available, these will be reconstructed during the qualitative data collection. This will include collecting phone numbers to help to track down beneficiaries.

#### Survey step (*Pas de sondage*)

To maintain the random nature of the survey (*all beneficiary households on the site will have the same chance of being selected*), we will use sampling steps to select the statistical units to be surveyed.

The step size (*pas*) is defined by the following formula:

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<sup>56</sup> FSMS : Food Security Monitoring System undertaken by the Food Security Commission (CSA) and WFP in October 2024

$$pas = \frac{M_i'}{n_i}$$

Where  $M_i'$  is the total number of households in site  $i$ ;  $n_i$  is the number of households to be surveyed in site  $i$ .

The procedure is as follows:

5. First, number all households in cluster  $i$  from 1 to  $M_i'$

$$pas = \frac{M_i'}{n_i}$$

6. Calculate the survey step:

7. Choose a number at random between 1 and  $M_i'$  (or choose to start with the village chief, for example (which has other advantages). This number is the number of the first household to be surveyed. The number of the next household to be surveyed is obtained by adding the step to the previous number each time. In case of non-response, the opportunity to provide responses at a more convenient time will be offers. If the no-response persists, a new respondent will be added to the list, based on the list of all project beneficiaries in each site. Progress in collecting responses will be monitored on a daily basis to replace non-respondents with new respondents.

## 4.1. Work planning and timeline

Table 8 provides an overview of the planned timeline for the implementation of the next steps of this evaluation. Phase 1 has been updated to reflect the actual implementation timeline to date. A meeting to discuss this Inception Report, site selection as well as overall evaluation design is to be scheduled in January.

Phase 2 will start as soon as the Inception Report is approved, and will involve the finalization of qualitative tools, and preparation of advanced drafts of quantitative tools to evaluate sustainability and resilience. Preliminary versions of KII and FGD protocols are available as Annex 9: Preliminary qualitative data collection tools

Table 8. Timeline for overall Ex Post Evaluation

Tasks	Sept-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25
<b>Phase 1: Development of Evaluation Design</b>									
Kick-off and training of evaluation team	Desk work								
Desk review	Desk work			Desk work					
KII with WFP Mauritania and national stakeholders			Meeting						
Draft Evaluation Design				Desk work					
Co-creation meeting					Meeting				
Final Evaluation Design					Desk work				
<b>Phase 2: Training, piloting and Field Work</b>									
Qualitative tools finalization					Desk work				
Qualitative data collection (TL mission)						Field work			
Interim co-creation meeting						Meeting			
Quantitative tool finalization, training and pre-testing						Desk work			
Quantitative data collection						Field work			
<b>Phase 3: Data coding, analysis and preparation of preliminary findings</b>									
Additional remote interviews							Desk work		
Data coding and analysis							Desk work		
Presentation of preliminary findings (with PPT support)							Meeting		
<b>Phase 4: Report Finalization and Presentation</b>									
Draft Evaluation Report								Desk work	
Review by AF-TERG and WFP								Meeting	
Final Evaluation Report									Desk work
Validation of Final Evaluation Report									Meeting
Summary and two-pager (French and Arabic)									Desk work
Final Report presentation									Meeting
<b>Legend</b>	Desk work	Meeting	Field work						

The month of February will be dedicated to data collection. Qualitative data collection will take place in the three selected communities. The Team Leader (Margarita Gonzales) will travel to Mauritania to undertake:

- KIs with Implementing Partners and other national stakeholders: These would cover a few institutional interviews that could not be completed during the design phase (some project staff) and additional interviews with key institutional partners in Nouakchott.
- Pre-test of qualitative tools and final adjustments
- Qualitative data collection in one village, two if logistically feasible.
- Coordination and planning with National Evaluator
- As feasible, introduction and debrief with WFP Mauritania team, as part of the co-creation process. If this cannot take place in person, an online meeting will be organized before the start of the quantitative data collection.

Table 9 presents a preliminary version of a mission calendar. A key constraint in the timeline is the beginning of the month of Ramadan on March 1<sup>st</sup>, which would significantly complicate field work. This version enables data collection to be completed by February 28.

In addition to the Team Leader for one village, qualitative data collection will involve the National Evaluator (Malal Ba) as well as a female assistant/analyst. This female analyst will act as an interpreter for the Team Leader during her mission, and conduct qualitative data collection in the third community, ensuring that women can be interviewed directly by women. A representative from WFP Mauritania who has been involved in project implementation has been invited to join the qualitative fieldwork to provide context and facilitate introductions.

At the end of the qualitative data collection mission, the draft quantitative data collection tools will be reviewed and adjusted to increase their relevance and accuracy, including:

- To address specific data gaps
- To validate key findings
- To assess the extent / scale of specific outcomes within the community

Enumerators and a project coordinator from the National Evaluator's firm (Beta Plus) will travel test the tools and then undertake quantitative data collection.

Table 9. Tentative mission timeline for the month of February 2025

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				6 <i>Travel to Mauritania (Margarita)</i>	7 Arrival to Mauritania (Margarita)  Institutional visits / interviews (morning only)	8 Field test day and tool adjustment (qualitative tools) in Nimjat (Trarza)
9 Travel to Community 1 & qualitative data collection	10 Qualitative data collection (Community 1)	11 Qualitative data collection (Community 1)	12 Travel to Community 2 and qualitative data collection (Malal and colleague)  Travel back to Nouakchott (Margarita)  Interviews in Nouakchott (Margarita)	13 Qualitative data collection (Community 2)  Interviews in Nouakchott (Margarita)  Debrief meeting with WFP (Margarita)	14 Qualitative data collection (Community 2)  Travel to Community 3 (Malal and colleague)  Travel back to Canada (Margarita)	15 Qualitative data collection (Community 3) (Malal and colleague)  Detour by water retention site
16 Qualitative data collection (Community 3) (Malal and colleague)  Travel back to Nouakchott	17 Debrief and adjustment to quantitative data collection tools	18 Pre-test of quantitative data collection tools (test community)	19 Travel to Communities and quantitative data collection	20 Quantitative data collection	21 Quantitative data collection	22 Quantitative data collection
23 Quantitative data collection	24 Quantitative data collection	25 Quantitative data collection	26 Quantitative data collection	27 Quantitative data collection	28 Quantitative data collection  Travel back to Nouakchott	1

## 5. DATA ANALYSIS STRATEGY

Data analysis will be undertaken as **Phase 3** of the evaluation.

It will entail carefully cleaning and coding qualitative and quantitative data using Excel for qualitative data and SPSS for quantitative data. This stage will be guided by the evaluation matrix to ensure all questions are systematically addressed. The hypotheses formulated based on this deskwork about the sustainability of adaptation outcomes and the resilience analysis will be tested across qualitative and quantitative data. The analytical process will entail triangulation and formulation of findings against the analysis components, using both inductive and deductive logic and combining quantitative and qualitative data. If needed, 1-2 additional interviews could be conducted at this stage to complete the assessment.

At that stage, the evaluation team will develop a **PowerPoint Presentation** outlining preliminary findings coming out from this early analysis and that will help answer the evaluation questions. As suggested in the Ex Post Toolkit, a tabular format may be used to link intended adaptation outcomes, sustained outputs and sustained outcomes. This will be presented during a meeting with AF-TERG and WFP Mauritania for discussion.

Phase 4 will then include Report finalization and presentation.

The team will finalize its analysis and prepare a **Draft Evaluation Report** following an agreed structured based on the one proposed in the Ex Post Toolkit. The report will ensure evidence lines are clearly presented, along with conclusions, recommendations and lessons. The report will propose sustainability ratings disaggregated by outcome and by project site, as well as an overall resilience rating.

This draft report will be submitted for review to AF-TERG and to WFP Mauritania, who will submit a consolidated list of comments. Based on these comments the Baastel team will generate a **Final Evaluation Report** (in Word and PDF formats) along with an audit trail. A virtual **presentation of the final report** involving all relevant stakeholders will then be organized.

Once the report is approved, a **10-15-page summary** and a **two-page briefer** will be prepared. Their validated versions will be **translated into French and Arabic** for dissemination back to communities, regional and national stakeholders.

### 5.1. Limitations

**Limited number of project sites** that will be covered by this evaluation, which is not representative with regards to the total number of sites covered by PARSACC. This limitation is acknowledged, and mitigated by the fact that the sampling process was both rigorous and focused on learning (diversity of outputs, diversity of sites), in line with the purpose of this evaluation. Furthermore, this limitation is also compensated by the in-depth analysis planned (both qualitative and quantitative, and by the fact that all project outcomes will be covered.

**Lack of adequate reference/baseline information from the end of the project:** Indeed, there is no disaggregated information on outcome achievement and the Final Evaluation did not include sustainability ratings. Neither WFP nor the MEDD were able to provide detailed information on successful and less successful project sites to include in the sample. This is a limitation in terms of the Ex Post methodology which relies on comparing current information with these results, as the sample selection does not consider

whether outcomes had been achieved in the sites that were selected. Nonetheless, the evaluation team possesses relatively detailed information on specific activities at the site level, which (1) allowed focusing sample selection on sites with most activities and (2) will guide the reconstruction of what had been achieved in each project site at the end of the project.

**Presence of other projects at site level:** While the evaluation team wanted to test the effects of subsequent (post-PARSACC) projects supporting the continuation of activities in PARSACC project sites, the team found only site-specific data for the DIMS project. Information provided by WFP indicates other projects have taken place concurrently or subsequently with PARSACC, but this information is incomplete. DIMS has several common features with PARSACC, including a focus on community-based climate change adaptation, and support to the same type of activities (DREDD capacity-building, restoration, IGAs). Interviews and the DIMS mid-term review confirmed that lessons from PARSACC had been incorporated in DIMS.<sup>57</sup> However, only one PARSACC site was also covered by the DIMS project. Therefore, including this criteria would have unnecessarily skewed the sample. The presence of a few other projects was confirmed for some projects sites from the shortlist, but with limited information on the nature of activities at the site level. It was therefore not used as a criteria for final sampling. On the other hand, many projects have taken place in Southern Mauritania, and it is therefore likely that in most sites selected the evaluation team will encounter the presence of subsequent projects.

**Ethnic representativeness:** The sustainability of adaptation outcomes is influenced by a large number of factors. This includes ethnicity, and all related idiosyncrasies, as well as other factors pertaining to inter-ethnic relations, tensions and discrimination. The evaluation team acknowledges the learning opportunity in considering these factors in this evaluation. However, it was found that most of the communities involved in PARSACC belonged to the same group (Moors, especially Black Moors), while Peuls and Soninkés represent only a handful of communities. Given the small size of the sample of project sites, including a criteria ensuring representation for all three groups (1 site each) would have largely overrepresented them. For this reason, this was not included as a mandatory sampling criteria, but as a preference criteria.

**Water retention activities** (Outcome 1.3) were only conducted in a total of 10 sites out of 85, which presented a significant constraint in terms of selecting a sample of sites that cover all outcomes. Furthermore, the three sites from the shortlist that covered this outcome were less preferable in light of ethnicity, outcome coverage or population preference criteria. Selecting one of these sites as key sites for data collection would have weakened analysis for all other outcomes. Therefore, water retention activities will only be covered through a specific and convenient detour to one of the sites during the qualitative data collection. The purpose of this detour will be to check on the state of infrastructure at Ex Post. Furthermore, while there are three types of water retention activities (earth dikes, filtrating dikes and rock cordons), all but one site undertook only one type of activity. The site of Leweinatt, which was selected for this detour, constructed both rock cordons and filtrating dikes.

## 5.2. Risks

Table 10 summarizes key risks and mitigation strategies for the next stages of the evaluation.

Table 10. Risks and mitigation strategies

Nature of risk	Likelihood	Mitigation strategies
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<sup>57</sup> <https://www.thegef.org/projects-operations/projects/5580>

<p>Limited access to and engagement of key national PARSACC stakeholders. This includes:</p> <ul style="list-style-type: none"> <li>• WFP Mauritania staff</li> <li>• Staff from key ministries</li> </ul>	Low	<p>While this is likely to happen, most key interviews have been conducted during the design phase and a few more could still be undertaken. However, these are not essential, as likely inputs would be high level in relation to the specific project outcomes.</p> <p>The evaluation team has already been in contact with WFP Mauritania, and one of their staff has been invited to join on the fieldwork.</p>
<p>Limited access to and engagement with DREDD</p>	Medium	<p>The risk is rated as medium, as their inputs are only essential for assessing one outcome – although they are useful for several outcomes.</p> <p>Mission planning will call upon people familiar with DREDD staff to reach out and engage with them (WFP Mauritania and as needed MEDD representatives)</p>
<p>Personnel rotation within DREDD, NGOs and other institutional stakeholders at the local/regional level since the end of the project limits their familiarity with the project itself</p>	High	<p>This is very likely to have happened, especially at the DREDD level. While it may limit some type of information (direct knowledge about project achievements), this will enable validating the sustainability of capacity-building.</p> <p>Furthermore, most local stakeholders will still be able to comment on the presence and usefulness of adaptation assets, their relevance and their contribution to the system's resilience. The semi-structured approach of KII questionnaires will enable adapting to what each respondent is familiar with.</p>
<p>Limited access to and engagement with key stakeholders within communities, especially minorities or marginalized groups</p>	Medium	<p>Support from WFP Mauritania in planning the mission will help ensure the right message is conveyed about the nature of this work to facilitate engagement.</p> <p>Possible cultural and communication barriers would be mitigated by the national evaluator, the assistant, and possibly with the presence of a familiar face from WFP Mauritania</p> <p>Still, some segments of the population that migrate seasonally for work or transhumance may not be present locally. When this is identified, alternative interviewees familiar with their context will be identified (e.g. elders who do not travel anymore).</p> <p>Evaluation methods include transect walks that allow for a more complete overview of villages, that will help identify stakeholders that ma</p>
<p>Communities do not remember well what the project did and the outcomes achieved</p>	High	<p>This is very likely to happen, as the project closed several years ago, and other projects may have taken place after. The Evaluation Team will arrive prepared to each site with the list of assets, and its first task will be to validate this list. Discussions will then help people think back to when such and such assets were built. Furthermore, it will identify (possibly through discussion with WFP staff) key words or references that will trigger people's memory of the project.</p>
<p>Fieldwork does not take place at the same time as the Terminal Evaluation, which may generate inconsistencies</p>	High	<p>While this is likely to happen, the Final Evaluation did not include site-disaggregated data, neither did it comment on specific assets. This timeline discrepancy is therefore unlikely to generate inconsistencies</p>

### 5.3. Gender analysis integration

The project specifically targeted women as participants, so it is highly relevant to evaluate how gender equality was addressed in line with the project's objectives. The evaluation will provide insights into whether the interventions have effectively addressed possible structural inequalities faced by women at the community level, and whether these benefits have been sustained over time.

To ensure a comprehensive gender analysis, the data collected will be disaggregated by gender as much as possible. This will apply not only to data collected through quantitative surveys, but also to data collected through qualitative methods such as semi-structured interviews and focus groups. In addition, special attention will be paid to the inclusion of women in the list of stakeholders (including female leadership figures) to be interviewed, and special arrangements will be made to ensure that each female interviewee feels as comfortable as possible to discuss the sustainable outcomes of the project, particularly through the participation of female interviewers and enumerators.

The analysis will include a thorough assessment of the sustainable outcomes of the project by gender, exploring how women and men have benefited differently from the project. This will include identifying gender-specific barriers or enablers that have influenced the sustainability of outcomes, such as differences in access to resources, knowledge, know-how, decision-making power or support systems.

# ANNEXES

## Annex 1: Evaluation matrix



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## Annex 2: Stakeholder analysis

Several organizations and groups have been involved or affected by the PARSACC project. They are presented in the table below, which is based on the Mid-Term Review, the Final Evaluation report, the Completion Report, as well as the ProDoc..

Organization	Type	Role in sustaining outcomes	Capacity, commitment and structure to sustain results
WFP	International organization	Resources through subsequent projects	Continued presence in-country and involvement in food security and resilience
MEDD	Government	Resources	The project is in line with country's environmental and sustainable development strategy. Project strengthened capacities (operational, monitoring, human capital and technical, strategic planning) of MEDD and regional delegations. Awareness raised
Ministry of Rural Development	Government	Resources	Project is aligned with National Livestock Development Plan 2018-2025 and National Programme for development of the agricultural sector. Awareness raised
Ministry of Social Affairs	Government	Resources	Partnership developed during the project with respect to gender considerations, especially to make use of its tools and influence policy. Awareness raised
DREDD	Government	Capacity, resources	At design phase capacities of DREDD had been overestimated. Project strengthened capacities (operational, monitoring, human capital and technical, strategic planning) of MEDD and regional delegations. Awareness raised
Regional Directorate for Rural Development (DRDR)	Government	Capacity	Awareness raised
Regional Directorate for Water and Sanitation (DRHA)	Government	Capacity	Awareness raised
Regional Directorate for the Food Security Commission (DRCSA)	Government	Capacity	Awareness raised
Regional Directorate for Social Affairs, Children and Women (DRASEF)	Government	Capacity	Awareness raised
Food Security Committee (CSA)	Government	Partnership	
National Meteorological Office	Government	Partnership, resources	
Agro-meteorological services (SAM)		Partnership, resources	
Village management committees	CBO	Partnership, ownership	Uneven levels of functionality at final evaluation stage
Cooperatives	CBO	Capacity, ownership, resources	Project built their know-how. Awareness raised
Villagers	Local communities	Capacity, ownership, resources, partnerships	Project built their know-how. Awareness raised

<b>NGOs</b>	Civil society	Capacity	Were instrumental in enhancing project implementation after MTR
<b>National and Regional radios</b>	Civil society	Partnership, resources	Dissemination not widespread enough
<b>Journalists</b>	Civil society	Capacity, resources	

### Annex 3: List of interviewed stakeholders

Organization	Name	Role in project
(former) WFP	Ghazi Gader	Central Project Team - Project coordinator
MEDD	Sidi Mohammed Wavi	Central Project Team – National Project Director
WFP Mauritania	Mohammed Jiddou	Programme Officer
WFP Mauritania	Issa Oumarouissa	Head of Assessment and Monitoring
WFP Mauritania	Tourad Saleck	Senior Program Assistant
WFP Mauritania	Maribeth Black	Head of Programme
WFP Mauritania	Patrick Teixeira	Assistant Country Representative

## Annex 4: Results framework

Logframe	Indicator	Baseline	Target
<b>Objective 1:</b> Enhanced understanding, skills and means of decentralized government and communities for leading and facilitating participatory adaptation planning	Number of community adaptation plans prepared through participative local planning supported with information and facilitation by DREDD	No adaptation plans exist in intervention zones	20 clusters of villages have established adaptation plans in a participatory manner
<b>Outcome 1.1:</b> Strengthened awareness, ownership and facilitation capacities of government services (DREDD)	DREDD have played an active and supportive role in the mobilization, organization and implementation of inter-village adaption planning processes	DREDD do not have capacity to provide any support to communities	DREDD have succeeded to provide information, guidance and facilitation support to 20 village clusters
<b>Output 1.1:</b> Technical services strengthened to access and analyze climate change information, food security, livelihoods and vulnerability information, and to monitor local development, and mobilize and support communities.	DREDD have been trained, have communicated with department and local level, have visited communities, have facilitated village cluster establishment and discussions	DREDD do not visit communities and do not provide information, support, guidance or facilitate processes	DREDDs have regular contact and trustful relationship with village clusters and communities that value their support
<b>Output 1.2:</b> Strengthening of Government's threat, risk and vulnerability analysis capabilities by expanding current Vulnerability and Analysis methodologies to overlay climate threats and monitoring changes in landscapes using GIS technologies.	Preparation and communication to regional level of up-to-date and reliable information and analysis of climate change information and of government priorities	DREDD hardly receive any guidance, information and analysis from central level	Regular communications between central level and DREDD provide up-to date information and guidance, adapted to the capacity at regional level
<b>Outcome 1.2:</b> Strengthened awareness, ownership, planning and management capacities at community level for local natural resource management and climate change adaptation	Communities and their relevant sub-groups (e.g. women, livelihood groups, etc.) have actively participated in the preparation of the inter-village adaptation plans prepared and see their interests adequately reflected.	There is only little joint discussion at community level, and not all groups are involved; no inter-village discussions take place	About 100 villages in 20 village clusters understand, own and manage their adaption plans and their natural resources

<b>Output 1.3:</b> 20 inter-village associations established and supported.	Inter-village associations exist and are active in on form or the other in each of 20 targeted clusters	In some clusters, some form of cooperation structure may exist, on which the project can build.	20 inter-village associations with a role in managing natural resources and adaptation plans recognized by population and DREDD
<b>Output 1.4:</b> Communities trained in climate change threats and adaptation measures, which reduce vulnerability, in particular related to food insecurity.	Number of people (gender-disaggregated) and communities trained	Communities are aware of degrading natural resources, but rarely of context, causes and adaptation options	Communities have the capacity to analyse and understand their situation, and adaptation options
<b>Output 1.5:</b> 100 villages, being clustered according to landscape, ecosystem and livelihoods, have prepared adaptation plans that are integrated into local development planning. Identification of adaptation technology requirements such as integrated livestock water and cropping systems.	20 village cluster adaptation plans developed in a participatory way and officially recognised by DREDD Specific studies on adaptation technology requirements are available at the relevant levels	Communities and village associations do not prepare comprehensive adaptation plans A number of <i>ad hoc</i> studies exist within several projects, but are not systematically made available	Adaptation plans include analysis, discussion of options, decision on priorities and analysis of implications (costs, maintenance) Studies on technology for 3-4 “standard” adaptation assets are available to all partners and stakeholders
<b>Output 1.6:</b> Communities share success stories and lessons learned, including through the establishment of 4 community radio stations focused specifically on sharing information on early warning and adaptation management.	Community radios are on air, involving communities in programming and feed-back	To be established during project year 1 as part of CR feasibility study	Four CR are on air, have strong volunteer involvement and a sustainability strategy
<b>Outcome 1.3:</b> National ecologic monitoring system strengthened and tested	Participating communities and government services have provided quality, timely and reliable ecologic monitoring reports aligned with the national monitoring system	No ecologic monitoring system exists – this will be established as part of PANE II operationalization.	The new national ecologic monitoring system is known, used and maintained by DREED and in project village clusters
<b>Output 1.7:</b> Monitoring system in place (establishment, training, production of data and reports) to track climate events and ecologic development in project intervention zones.	Number of people trained at regional and village cluster level; amount and quality of data provided by village clusters / regional teams	There is no systematic collection, consolidation and analysis of data on nationally agreed-upon indicators	Participating DREDD and village clusters provide data on agreed-upon indicators; and receive, understand and use reports.
<b>Objective 2</b> Design and implement concrete adaptation measures identified	Number of implemented community adaptation plan action aiming to combat	No comprehensive community (cluster) adaptation plans exist in	20 comprehensive adaptation plans have been implemented with respect to combat

through community adaptation planning that aim to combat desertification, soil erosion and land degradation	desertification, soil erosion and land degradation	the intervention zones to be selected.	desertification, soil erosion and land degradation.
<b>Outcome 2.1 :</b> Advance of sand dunes slowed down, halted or reversed	Reduced, halted or reversed dune advance in participating communities	To be established during project year 1	Significant deceleration – and ideally reversal – of dune advance
<b>Output 2.1:</b> 1,500-2,000 ha of dunes fixated.	Plants – and other measures – have stopped advance of dunes	Sand dune fixation does take place as part of several projects, but hardly in the zones to be selected.	Communities have fixated dunes and have a clear plan for maintaining / reinforcing fixation
<b>Outcome 2.2:</b> Increased vegetation cover in intervention zones	Increased Vegetation Cover Index in participating communities	ICV is not used systematically (mainly in ProGRN). Baseline to be established as part of adaptation plan preparation	Increase of ICV by at least 10% in participating village clusters until end of project, and clear prospect for further increase
<b>Output 2.2: Augmentation</b> 1,000-1,500 ha of vulnerable zones protected.	Area of land protected from against uncontrolled grazing and bush fires	There will only be sporadic protected areas in selected village clusters	1,000 – 1,500 ha of land protected and encompassed by sustainable management plan
<b>Output 2.3:</b> 1,000-1,500 ha of community fuel wood forests planted.	Area of land planted and controlled for fuel wood production; volume of produced fuel wood	There is hardly any controlled fuel wood plantation in areas to be selected	Participating communities cover at least 50% of their fuel wood requirements from controlled wood production
<b>Outcome 2.3:</b> Decreased loss of water and soil through surface run-off	Increased surface and underground water availability	There are only few – if any – water retention structures functioning in areas to be selected	Area where days of water availability has increased with at least 20% has grown by at least 20%
<b>Output 2.4:</b> Water retention structures built covering approx. 500 ha.	Number, kind, surface size and volume (where applicable) of water retention structures	To be established as part of adaptation plan preparation	Communities construct and maintain retention assets according to plan
<b>Objective 3</b> Design and implement concrete adaptation measures identified through community adaptation planning that aim to diversify and strengthen the livelihoods of the most vulnerable population	Number and type of implemented community adaptation plan action aiming to diversify and strengthen the livelihoods of the most vulnerable population	No adaptation plans are in place, livelihood bases are hardly diversified in areas to be selected	Communities have implemented adaptation plan action and continue to gain sustainable income from new sources
<b>Outcome 3.1:</b> Increased number of sources of income for participating households	Number and type of sources of income for participating households before and after the project	Livelihood bases are hardly diversified in areas to be selected – specific baselines to be established as part of adaptation plan preparation	At least 20 % of village cluster population have widened their livelihood bases with new sources of income
<b>Outcome 3.2:</b> Increased income for participating households	Level of income for participating households before and after the project	Participating households are among the poorest in the selected areas.	Participating households have increased their revenues by at least 40%

<b>Outcome 3.3:</b> Increased availability of and access to food for participating communities	Food gap (number of weeks/months) for participating households before and after the project	Participating households have the greatest food gap in the selected areas.	Participating households have decreased their food gap by at least 50%
<b>Output 3.1:</b> Approx. 300,000 trees for revenue generation and food planted in protected areas.	Number of trees planted and growing in protected areas; amount of food and revenue gained from these	Baseline to be established as part of adaptation plan preparation	Planted trees already are – or have at least a clear prospect of – providing substantial amounts of food and income
<b>Output 3.2:</b> 4,000 technical staff and community leaders trained in livestock management, agricultural techniques and water utilization	Number of people (gender disaggregated) trained	Hardly any training is available in areas to be selected; extension staff requires training, too	Extension staff and cluster population are aware of and apply appropriate techniques
<b>Output 3.3:</b> 5,000 technical staff and community leaders trained and equipped for plant/seed multiplication.	Number of people (gender disaggregated) trained	Hardly any training is available in areas to be selected; extension staff requires training, too	Extension staff and cluster population are aware of and apply appropriate techniques
<b>Output 3.4:</b> 4,000 technical staff and community leaders trained and equipped for poultry development.	Number of people (gender disaggregated) trained	Hardly any training is available in areas to be selected; extension staff requires training, too	Extension staff and cluster population are aware of and apply appropriate techniques
<b>Output 3.5:</b> 1,600 technical staff and community leaders trained and equipped for apiculture.	Number of people (gender disaggregated) trained	Hardly any training is available in areas to be selected; extension staff requires training, too	Extension staff and cluster population are aware of and apply appropriate techniques
<b>Output 3.6:</b> Approx. 20 community cereal banks established.	Number of functioning village cereal bank associations; volume of cereals and money in bank.	No village-owned cereal banks exist in areas to be selected – to be confirmed during adaptation planning	Participating communities own their VCB, membership, money and food held by associations is stable
<b>Output 3.7:</b> 30,000 fuel efficient stoves provided.	Number of fuel efficient stoves built by participating communities; share of reduced consumption of fuel wood	Fuel-efficient stoves are hardly know and available in areas to be selected – to be confirmed during adaptation planning	Communities know, understand and use fuel efficient stoves; fuel-wood consumption by participating households reduced by at least 40%
<b>Output 3.8:</b> 2,000 community members (mostly youth) trained to build and maintain fuel-efficient stoves.	Number of people (gender-disaggregated) trained	No training is available in areas to be selected; extension staff requires training, too.	In all participating communities a group of people regularly builds and repairs fuel-efficient stoves;

## Annex 5: Project contribution to AF result framework

Table 11. Planned project contribution to AF result framework at design stage

Project component 1 Objective	Project component 1 Objective indicator	Adaptation Fund outcome	Fund outcome indicator
Enhanced understanding, skills and means of decentralized government and communities for leading and facilitating participatory adaptation planning	Number of community adaptation plans prepared through participative local planning supported with information and facilitation by decentralized government (DREDD)	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1 Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses
Project component 1 Outcomes	Project component 1 Outcome indicators	Fund output	Fund output indicator
Outcome 1.1: Strengthened awareness, ownership and facilitation capacities of government services (DREDD)	DREDD have played an active and supportive role in the mobilization, organization and implementation of inter-village adaption planning processes	Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1 No. and type of risk reduction actions or strategies introduced at local level
Outcome 1.2: Strengthened awareness, ownership, planning and management capacities at community level for local natural resource management and climate change adaptation	Communities and their relevant subgroups (e.g. women, livelihood groups, etc.) have actively participated in the preparation of the inter-village adaptation plans prepared and see their interests adequately reflected		
Outcome 1.3: National ecologic monitoring system strengthened and tested	Participating communities and government services have provided quality, timely and reliable ecologic monitoring reports aligned with the national monitoring system		
Project Component 2 Objective	Project component 2 Objective indicator	Fund outcome	Fund outcome indicator
Design and implement concrete adaptation measures identified through community adaptation planning that aim to combat desertification soil erosion and land degradation	Number of implemented community adaptation plan action aiming to combat desertification soil erosion and land degradation	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural assets maintained or improved under climate change and variability induced stress

Project component 2 Outcomes	Project component 2 Outcome indicators	Fund output	Fund output indicator
Outcome 2.1: Advance of sand dunes slowed down or halted	Reduced, halted or reversed dune advance in participating communities	Output 5: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	5.1. No. and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type of assets)
Outcome 2.2: Increased vegetation cover in intervention zones	Increased Vegetation Cover Index in participating communities		
Outcome 2.3: Decreased loss of water and soil through surface run-off	Increased surface and sub-soil water availability		
Project Component 3 Objective	Project component 3 Objective indicator	Fund outcome	Fund outcome indicator
Design and implement concrete adaptation measures identified through community adaptation planning that aim to diversify and strengthen the livelihoods of the most vulnerable population	Number and type of implemented community adaptation plan action aiming to diversify and strengthen the livelihoods of the most vulnerable population	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	6.1 Percentage of households and communities having more secure (increased) access to livelihood assets
			6.2. Percentage of targeted population with sustained climate-resilient livelihoods
Project component 3 Outcomes	Project component 3 Outcome indicators	Fund output	Fund output indicator
Outcome 3.1: Increased number of sources of income for participating households	Number and type of sources of income for participating households before and after the project	Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	6.1.1.No. and type of adaptation assets (physical as well as knowledge) created in support of individual- or community livelihood strategies
Outcome 3.2: Increased income for participating households	Level of income for participating households before and after the project		
Outcome 3.3: Increased availability of and access to food for participating communities	Food gap (number of weeks/months) for participating households before and after the project		

Table 12. Actual project contribution to AF results framework according to the final evaluation

Fund outcome	Adaptation Fund outcome indicator	PARSACC Achievements
Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1 Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	<p><b>Through Component 1:</b></p> <ul style="list-style-type: none"> <li>10% of the target population was sensitized on the challenges of climate change on food security and adaptation and risk reduction strategies</li> <li>A community EWS was drafted to support communities in adapting better and reducing risks</li> <li>Thousands of people outside of direct project beneficiaries were made aware of the challenges of climate change on food security and adaptation and risk reduction strategies thanks to broadcasts on local radio stations.</li> </ul>
Fund output	Fund output indicator	PARSACC Achievements
Output 3: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1.1 No. and type of risk reduction actions or strategies introduced at local level	Through <b>Component 1</b> , 87 villages prepared climate change adaptation action plans
Fund outcome	Fund outcome indicator	PARSACC Achievements
Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural assets maintained or improved under climate change and variability induced stress	Through Component 2, PARSACC supported the long-term sustainability of the productive ecosystems : 87 adaptation action plans were designed and implemented at village-level. Actions included concrete adaptation measures aimed at halting/reversing desertification, soil erosion and land degradation, as well as preserving natural resources and improving the supply of ecosystem services.
Fund output	Fund output indicator	PARSACC Achievements
Output 5: Vulnerable physical, natural, and social assets strengthened in response to climate change impacts, including variability	5.1. No. and type of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type of assets)	<p>Through Component 2:</p> <ul style="list-style-type: none"> <li>955 ha of fixed dunes</li> <li>460 ha of planted forests</li> <li>1000 ha of protected and improved pastoral reserves</li> <li>440 ha of land restored through Water and Soil Conservation techniques increasing water availability in soils</li> <li>20600 improved stoves built and distributed leading to 40% reduction in household wood consumption</li> </ul>
Fund outcome	Fund outcome indicator	PARSACC Achievements

Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas

6.1 Percentage of households and communities having more secure (increased) access to livelihood assets

6.2. Percentage of targeted population with sustained climate-resilient livelihoods

- *Indicator not reported*

Fund output	Fund output indicator	PARSACC Achievements
Output 6: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	<p>6.1.1.No. and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies</p> <p>6.2.1. Type of income sources for households generated under climate change scenario</p>	<p>Through component 3, PARSACC contributed to diversifying livelihood alternatives:</p> <ul style="list-style-type: none"> <li>• 41 vegetable cooperatives promoted in 41 villages benefitting 8728 households, particularly women</li> <li>• 16 semi-intensive poultry cooperatives and 40 traditional poultry cooperatives supported benefitting 560 households</li> <li>• 9330 fruit plants plated benefitting 3973 households in 20 villages</li> <li>• 179 artisans trained and equipped to produce improved stoves</li> <li>• 97 IGAs promoted in 55 villages benefitting 5806 households</li> </ul>

## Annex 6: List of project documents and M&E data available

### From PARSACC website:

- Community adaptation planning approach to CC
- Review of project achievements
- Summary map of project achievements
- Project document
- Sheet - Access to water
- Sheet - Income Generating Activities
- Sheet - Beekeeping
- Sheet - Fruit arboriculture
- Sheet - Poultry farming
- Sheet - Water and soil conservation
- Sheet - Fixing sand dunes
- Sheet - Improved stoves
- Sheet - Market gardening
- Sheet - Pastoral reserves
- Training Manual for Veterinary Auxiliaries
- Report on the establishment of a community early warning system
- Methodological note for prioritizing project intervention areas
- ACC training report - Kaédi March 9-12, 2015
- ACC Training Report - Kiffa April 6-9
- ACC training report at central level - Nouakchott July 7-9, 2015
- Report of the training of Veterinary Auxiliaries
- NGO training report, Kaédi and Kiffa (June 8-12, 2015)
- Initial workshop report
- Report of the CES / DRS work evaluation study
- Report on the technical and financial study of the pilot program to promote poultry farming
- Report of the technical-financial study of the pilot program for the promotion of beekeeping
- Report of the technical and financial study of the pilot program for the promotion of fruit trees

### From Adaptation Fund website:

- Annual project performance report N ° 1
- Annual performance report of project N ° 2
- Annual project performance report N ° 3
- Annual project performance report N ° 4
- Annual project performance report N ° 5

- Mid-term evaluation report
- Quarterly Project reports (14)
- Management and operational rules of pastoral reserves, village reforestation and sand dune fixation

Shared by WFP and former project team:

- Final Evaluation Report and annexes
- Completion report
- Selmane M. L. (2019). Évaluation d'impact des actions d'adaptation au changement climatique et preparation de la stratégie de sortie du projet PARSACC. (Impact Assessment Report)
- PARSACC Monitoring database

## Annex 7: Shortlist of sites selected

Wilaya	Moughataa	Commune	Village	Population	Ethnic group	Distance from Nouakchott (km)	Presence of other projects	Covered during Impact Assessment	Covered during Terminal Evaluation
Trarza	R'kiz	Tekane	Oum El ghoura	5200	Moors	270	PRODEFI+ (PCVASGEF-PATAM/ BAD)	Yes	Yes
Trarza	R'kiz	Tekane	Nasra 2	1500	Moors	270			
Trarza	Mederdra	Tiguent	Nimjat	3500	White Moors	130			
Trarza	Mederdra	Mederdra	Charatt	1200	Moors	180			
Trarza	Mederdra	Mederdra	Moyasser 2	816	Moors	180	PAM		Yes
Brakna	Aleg	Cheggar	Kremi Rag	1500	Moors	350	PRAPS-PROGRES+ AMCC		Yes
Brakna	Bababé	Elvarea	Essaada	700	Moors	370			
Brakna	Maghtaa lahjar	Dionaba	Dionaba	2700	Moors	370			
Brakna	Bababé	Haire Mbare	Dounguel Réo	460	Peuls	380			
Brakna	Mbagne	Debaye Hejaj	Oualad yaré	2080	Moors	370			
Gorgol	Maghama	Maghama	Dar El Beidha	350	Moors	650			
Gorgol	Kaédi	Tifoundé Civé	Dimechgha	500	Moors	600			
Gorgol	M'bout	Djadjibine Gandega	Djadjibine	3500	Soninkés	730			
Gorgol	Mounguel	Azgueilem	Azgueilem	1968	Moors	500			
Assaba	Kiffa	Kouroudjel	Goueisbou	2031	White Moors	700	PRAPS-PERZI	Yes	Yes
Assaba	Kankossa	Blajmil	Kewalla	900	Peuls	750			

Wilaya	Moughataa	Commune	Village	Population	Ethnic group	Distance from Nouakchott (km)	Presence of other projects	Covered during Impact Assessment	Covered during Terminal Evaluation
<b>Assaba</b>	Boumdeid	Hsey tine	B'roude	504	Moors	870			
<b>Assaba</b>	Guérou	Kamour	Glaguima	306	Moors	580			
<b>Assaba</b>	Kiffa	El melgua	Guiguih	270	Moors	650	PAM		
<b>Guidimakha</b>	Ould yengé	Dafort	Dafort	10000	Soninkés	590	DIMS		
<b>Guidimakha</b>	Selibaby	Tachott	N'yelibia	1500	Mixed	500	RIMFIL + GRDR	Yes	
<b>Guidimakha</b>	Selibaby	Ajar	Aguweinitt	7000	Soninkés	640			

## Annex 8: Profiles of selected sites

Table 13. Overview of sites profile

General characteristics					Outcomes covered						
Waliya	Localité	Pop.	Ethnic group	Other project	1.2 Training	2.1 Dune stabilization	2.2 Protected areas	2.2 Firewood & fruit plantations	2.3 Water retention	3. IGA Small business	3. Local food production
<b>Brakna</b>	Dionaba	2700	Maures		Yes	Yes	Yes	Yes		Yes	Yes
<b>Trarza</b>	Moyasser 2	816	Maures	PAM	Yes	Yes	Yes			Yes	Yes
<b>Assaba</b>	Kewalla	900	Peuls		Yes			Yes		Yes	Yes

The detailed profile and list of activities undertaken for each of these sites can be found in the file below.



Profile%20of%20selected%20sites%20feb2

## Annex 9: Preliminary qualitative data collection tools

The questions below provide an overview of the content of the interviews that will take place during the evaluation field mission and the household survey. They are elaborated to cover all aspects of the AF Ex Post Evaluation of Adaptation Interventions methodology. However, they are not intended to be administered directly to project stakeholders. Based on this list of questions, specific interview protocols will be developed for each type of project stakeholder. These protocols will reflect the specific outcomes with which the interviewees are likely to be familiar and the language will be adapted to ensure optimal communication between interviewer and interviewee.

### Introductory questions

8. Have you been involved with the PARSACC project implemented between 2014 and 2019? In what capacity?

### Maintenance of the project outcomes at the time of the ex-post

9. To your knowledge, have the outcomes achieved by the project at the time of its closure been maintained to date (select and name the outcome(s) relevant to the different stakeholders interviewed)? Who do they benefit most?
10. To the best of your knowledge, have any of the expected outcomes of the project, which had not been achieved at the time of project closure, been subsequently achieved and maintained to date (select and identify the outcome(s) relevant to the different stakeholders interviewed - focusing on outcomes that are likely to have been achieved after project closure, such as the EWS)?
11. To what extent are the various outcomes achieved by the project, but not maintained to date, still desirable/relevant to the project stakeholders today (select and name the outcome(s) relevant to the different stakeholders interviewed)?
12. (If some outcomes are identified as no longer relevant) Why is one or more of the expected and/or achieved outcomes of the project no longer relevant in the current context? Is this linked to a change in the context of the physical/environmental or human system?
13. To your knowledge, are there any unintended outcomes (positive or negative) that have arisen since the end of the project and that continue to this day? How did the project contribute to these outcomes?

### Conditions contributing to sustaining the project's adaptation outcomes over time - changes in the conditions of the human or natural systems

14. What have been the main changes in human systems since the end of the project (social, economic and political conditions and dynamics) that have influenced the sustainability of the project outcomes (select and name the outcome(s) relevant to the different stakeholders interviewed)?
15. To what extent have changes in climate stresses or shocks since the end of the project influenced the sustainability of the project outcomes (select and name the outcome(s) relevant to the different stakeholders interviewed)?
16. To what extent have other changes in natural systems (other than those related to climate stresses or shocks) that have occurred since the end of the project (environmental/natural conditions, dynamics and interactions, including between living species, natural resources and their impacts on human systems) directly or indirectly affected the sustainability of the project outcomes (select and name the outcome(s) relevant to the different stakeholders interviewed)?

### Conditions contributing to sustaining the project's adaptation outcomes over time - ownership, capacities, resources and partnerships

17. Do you feel a sense of ownership or responsibility for the sustained outcomes of this project until now (select and name the outcome(s) relevant to the different stakeholders interviewed)? If yes, could you share how you see your role contributing to its success?
18. From your perspective, what skills and knowledge (your own or those of others) are contributing to the sustainability of the outcomes of the project so far (select and name the outcome(s) relevant to the different stakeholders interviewed)? Did the project contribute to the development of these skills and knowledge?
19. From your perspective, what collaboration among and between different stakeholders (government, NGO, private sector, new donors, communities, etc.) are contributing to the sustainability of the outcomes of the project so far (select and name the outcome(s) relevant to the different stakeholders interviewed)? Did the project contribute to the development of these partnerships?
20. From your perspective, what financial or other types of resources (from IGA, from new projects, government, etc.) are contributing to the sustainability of the outcomes of the project so far (select and name the outcome(s) relevant to the different stakeholders interviewed)? Did the project contribute to the availability of these resources?
21. From your perspective, what other factors are contributing to the sustainability of the outcomes of the project so far (select and name the outcome(s) relevant to the different stakeholders interviewed)? Did the project contribute to these factors?
22. Do you consider that there are any gender or group-specific barriers or enablers that have influenced the sustainability of results for one gender or group over the other, such as differences in access to resources, knowledge, know-how, decision-making power or support systems?

### Sustained outcomes contribution to system resilience

#### Spatial and temporal scale

23. Is the EWS system still operational? What information is being communicated, by whom, to whom, how and in what circumstances?
24. If such a system is still in place, what is its concrete impact on the local community's speed of response to expected and actual climate disturbances?
25. Have the areas restored/protected by dune stabilisation, increased forest cover (fuel wood plantations and community conservation areas) and the construction of water retention structures maintained since project closure?
26. What is the current impact of this landscape restoration/protection on local ecosystem services (particularly in relation to agricultural and agroforestry systems)?
27. Does dune stabilisation from the project site currently help to protect houses, water infrastructure and agricultural land or other relevant assets in the project areas?
28. Does the water supply infrastructure built during the project protects the beneficiaries from climate disturbance? In what way?
29. Are there any sustained project outcomes that impact the temporal or spatial scale needed for natural and/or human systems to maintain or change their functions and/or structures in the face of climate disturbances (other than through increasing the speed of (human) responsiveness to expected and actual climate disturbances, the restoration of a sufficiently large landscape to restore/maintain ecosystem services, or the construction of infrastructure of sufficient scale to protect beneficiaries from climate disturbance)?

### Redundancy

30. Has the diversification of livelihoods and income sources, financial surpluses or additionality (e.g. increased food production, water reserves, etc.) achieved by project beneficiaries at project completion been maintained to date?
31. How have project beneficiaries used (or could use) the available range of livelihoods or income sources, financial surpluses or additionality to respond to climatic events (droughts, floods, etc.)?
32. Are there any sustained project outcomes that contribute to the availability of duplicate or back-up systems to respond to climate disruption?
33. Are there any sustained project outcomes that contribute to the availability of other types of options to respond to climate disruption?

### Diversity and inclusion

34. Are the marginalised groups involved in decision-making during the project implementation (i.e. during the process of developing climate change adaptation action plans) still involved in further decision-making processes? Who is involved in what decision-making processes?
35. Does the participation of women in the development and implementation of adaptation actions at the community level and their participation in a range of training activities related to the implementation of adaptation options contribute to increasing gender equality in leadership at the community level?
36. Are there other sustained project outcomes that contribute to increasing gender equity in leadership?
37. Are the sustained outcomes in terms of increased capacities, income for participating households or increased availability of and access to food for participating communities contributing to equity and inclusiveness? In what ways?
38. Are there other sustained outcomes that contribute to equity and inclusiveness? In what ways?
39. If (still) in existence, do the broadcasts by local radio stations and rural radio contribute to increasing access to different sources of scientific research and/or information, as well as to traditional/indigenous knowledge, to inform responses to shocks?
40. Are there other sustained project outcomes (e.g.: EWS, increased capacity of NGO partners) that contribute to increasing access to different sources of scientific research and/or information, as well as to traditional/indigenous knowledge, to inform responses to shocks?
41. Was the use of diverse climate-resilient practices adopted through the project (e.g.: wattle and daub, nurseries, planting and dune fixation and the various new climate resilient livelihoods) sustained?
42. Are new practices still being adopted independently by project beneficiaries? Which practices and why?

### Flexibility

43. Do the sustainable outcomes of the project (e.g.: capacities, experience gained through implementation of new practices) contribute to the flexibility of the stakeholders involved (communities, NGOs, VCM, government representatives) to support new actions or approaches to manage climate disturbance and risk and seize opportunities (in the context of the implementation of a new project for example)?
44. Do the sustainable outcomes of the project (e.g.: capacities, experience gained through implementation of new practices) contribute to the ability of the stakeholders involved (communities, NGOs, VCM, government representatives) to make decisions based on new information that becomes available (through different channels) to manage climate disturbance and risk and seize opportunities?
45. Do the sustainable outcomes of the project (e.g.: capacities, experience gained through implementation of new practices) contribute to the ability of the stakeholders involved (communities, NGOs, VCM,

government representatives) to adopt new tools or inputs to manage climate disturbance and risk and seize opportunities?

### **Connectedness & feedback loops**

46. If (still) in place, what is the concrete impact of the EWS in supporting lines of communication between stakeholders to respond or adapt to shocks and stressors?
47. If (still) in existence, do the Village Management Committees act as a kind of coordination mechanism to respond or adapt to shocks and stressors at the community level?
48. Are there other sustained project outcomes that contribute to supporting lines of communication/coordination mechanisms to respond or adapt to shocks and stressors at community, regional or national level?
49. If (still) in existence, do the broadcasts by local radio stations and rural radio contribute to supporting access to information to respond or adapt to shocks and stressors at community, regional or national level?
50. Are there other sustained project outcomes that contribute to supporting access to information to respond or adapt to shocks and stressors at community, regional or national level?
51. If still in place, do partnerships with NGOs contribute to responding or adapting to shocks and stressors at community, regional or national level?
52. Are there other sustained project outcomes that contribute to supporting partnerships to respond or adapt to shocks and stressors?



# Baastel

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