

# Phase 4: Deliverable 4.3

## Final action plan for mitigation and adaptation projects in Mbé

Formulate and develop an action plan including climate change mitigation and adaptation projects in Mbé.

CTCTN Reference Number: 2018000023

UNIDO RFP #: 7000003982

16<sup>th</sup> April 2021

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## 1 INTRODUCTION

Adapting to climate change is a relatively new topic for most cities and **increasing their resilience to climate change impacts is an urgent challenge**. The sub-Saharan region is particularly vulnerable to climate change impacts as it suffers from water scarcity and droughts and people and economy are highly dependent on climate sensitive sectors, such as agriculture, fishery, and forestry.

In this sense, the present **Action Plan** intends to help Mbé adapt to climate change by reducing its vulnerability to the effects of climate change and increasing its resilience and quality of life; as well as improving its adaptive capacities to create new opportunities to support the city's and the country's sustainable development.

In the municipality of Mbé several climate-related hazards have been identified as significant, such as floods, droughts, heat waves, bush fires and high winds, which **negatively impact social, economic and environmental structures**.

The plan aims to describe the actions needed to minimize the adverse effects of climate change in the municipality and follows the principles below:

- (i) To improve knowledge on the effects of climate change to inform public decisions on adaptation,
- (ii) To integrate adaptation in existing public policies in order to ensure overall coherence and reflect the cross-cutting nature of adaptation,
- (iii) To inform the population about the effects of climate change, adaptation and mitigation, so that everyone can take ownership of the issues and act,
- (iv) To consider interactions between activities, and
- (v) To assign responsibilities in terms of implementation and funding.

## 2 METHODOLOGY

This section aims to **provide a summary of all the previous activities and assessments** carried out in Mbé during the development of this project, such as the vulnerability matrix assessment and the several capacity building activities. All of these have been used for the definition of Mbé's Climate Action Plan.

### 2.1 VULNERABILITY MATRIX

To assess Mbé's climate change vulnerability, a **vulnerability matrix** for the diagnostic of climate change impacts was elaborated in earlier phases of the project. Table 1 and Table 2 below show the most significant hazards identified in the municipality.

*Table 1. Extreme climate risks*

HAZARDS	PROBABILITY	SEVERITY	LEVEL	RISK ZONES
DROUGHTS	OFTEN	MAJOR	EXTREME	ALL TERRITORY
FLOODS	OFTEN	MAJOR	EXTREME	ALL TERRITORY
BIOLOGY RISK	OFTTEN	MAJOR	EXTREME	ALL TERRITORY
BUSH FIRES	OFTEN	MAJOR	EXTREME	ALL TERRITORY

*Table 2. High climate risks*

HAZARDS	PROBABILITY	SEVERITY	LEVEL	RISK ZONES
HEAT WAVE	OFTEN	IMPORTANT	HIGH	ALL
VARIABLE RAIN	OFTEN	VERY IMPORTANT	HIGH	ALL TERRITORY
HIGH WINDS	OFTEN	VERY IMPORTANT	HIGH	ALL TERRITORY

The **agricultural** sector in Mbé is subject to extreme climatic events such as floods, bushfires, droughts, and some attacks of biological pests. The impacts of climate change on agriculture are very significant and include, among others: biological attack on food crops, in particular yams, corn, and cassava, which reduce their agricultural yield, flooding and rotting of seeds, causing several losses in the cultivation of yams and maize and a decrease in agricultural production.

Furthermore, climate hazards such as drought, floods, and some strong winds have an impact on all the equipment and installation of the **water distribution network**. Water scarcity impacts from

drought include reduced flow (by half) for certain water points in the dry season which causes a malfunction during the supply of the populations.

**Livestock** impacts include loss of weight, death from starvation and reduced quality meat.

In reference to population, most **flood victims** are people living in unsanitary conditions, followed by the unemployed, the elderly and children, low-income households, the disabled and finally the women and girls.

## 2.2 CAPACITY BUILDING

Entering dialogue with the local community can serve to analyse vulnerability at the local level and promote adaptive strategies in accordance with the social and biophysical situation in the region. Several **participatory process and capacity building activities** were carried out in previous phases of the project.

Firstly, after having identified the climate risks that affect the municipality and which are the most vulnerable sectors (section 2.1), a participatory phase was carried out to collect **local qualitative data** to complement and finalise the vulnerability assessment of the municipality. During this stage, the team of consultants met with representatives of the city of Mbé including various authorities, particularly at the level of the sub-prefecture, the town hall, the delegations of the districts of agriculture, livestock and fishing, health services, the forest manager, etc. The meetings took place in two stages. Firstly, a presentation of the context of the mission and the results of the vulnerability matrix were presented, namely:

- General information on climate change in Cameroon, in the region and in the community.
- Results of the vulnerability matrix for Mbé obtained in Output 2. Deliverable 2.1.
- Description of the pilot projects proposed in Mbé (Deliverable 2.2).

Then, in a second stage, there was an information exchange with the participants in order to collect their concerns, inputs and ideas to help define the climate change adaptation measures needed to be implemented in the municipality. In total, 8 participants took part in this stage of the project. The people interviewed were representatives of the social, economic, and demographic context of Mbé, from different backgrounds such as the following:

- Administrative and municipal authorities, consisting of the sub-prefect of the district of Mbé and the municipal executive of the locality.
- The administrative and technical staff of the municipality and the sectorial staff of the district of Mbé (managers of decentralized services, district delegates of agriculture, public health, etc.).
- Representatives of the local population (presidents of development and consultation committees of the municipality, heads of local civil society organizations).

In addition, following the same structure of the previous phase, **workshops for the population** were also held in the municipality. The overall objective of the participation workshops was to carry out a participatory risk mapping in the most vulnerable or at-risk neighborhoods and villages of the municipality. Five workshops were carried out in the different villages/neighborhoods that compose the municipality of Mbé. The specific objectives of each workshop were to:

- Identify relevant climatic hazards in the village/neighborhood.
- Evaluate risks and vulnerabilities in a participatory manner.
- Identify endogenous strategies and actions established in the municipality.

Several categories of stakeholders took part in these workshops, such as:

- The municipal executive of the municipality consisting of the mayor, the focal point and some municipal councilors.
- The technical services of the town hall: the head of the technical service, the municipal development framework.
- The sectors represented by the person in charge of civil protection of the sub-prefecture, the head of the forestry post, the Delegate of the District of Livestock, Fisheries and Animal Industries, the Delegate of the District of Agriculture and of Rural Development, the District Health Officer; District Delegate for Social Affairs, District Inspector for Basic Education and Secondary Education, Head of Agency ENEO.
- Traditional authorities made up of traditional leaders or their representatives.
- Climate relays: made up of young people who had been proposed by the town hall. The criteria for choosing these young people focused on their belonging to one of the vulnerable villages and respecting gender parity, 2 per village for a total of 26 in Mbé, who had already worked with the town hall, and had the ability to use an android phone which is a critical tool for data collection.
- I2D and Help Community team.

Moreover, a **community awareness campaign** was conducted in Mbé within the participatory process. The awareness campaigns were carried out at two levels:

- At the municipal level: with the organization of workshops which brought together all the stakeholders and during the collection of field data.
- At the community level: sensitization began when data was collected on the risks and vulnerability to climate change in the villages concerned by the survey. Two approaches were used to reach the maximum number of target people: the organization of neighborhood or village forums with village chiefs and door to door to households. Whether at the municipal level or at the community level, this awareness focused on:
  - Popularization of information on the project.
  - Identification of climatic hazards.
  - The consequences linked to certain irresponsible behaviors in the face of the adversities of climate change; and
  - New behaviors to adopt in the event of observation of a hazard among citizens.

The results of the field surveys, workshops as well as the participatory mapping of risks and vulnerabilities made at the municipal level made it possible to design posters: a total of 150 posters were published for each major hazard identified within the municipality to aware the population. These posters contained the following information: the risk on which we wanted to communicate, the images on the identified risks, the best practice methods to be adopted as well as the adaptation and prevention methods related to this risk.

Finally, to ensure an integrated consideration for youth and women, a specific study was carried out analysing **mechanisms and tools to reduce imbalances in decision-making on climate issues on vulnerable groups such as women and youth**. As part of the various workshops that were organised in the municipality of Mbé, one of the first exercises was to convene all the women who could contribute to the activities of the workshop. This process was carried out through women's associations, development committees, elected representatives and sectorial staff working in the localities. They were considered particularly relevant groups since they provide training and

coordinate activities encouraging young girls and other women to realize their worth and to assume decision-making positions. Wherever possible, women's groups of six to ten people were formed at the forums stage in the municipalities. A facilitator was specifically responsible for raising awareness among these women.

### 3 ALIGNEMENT WITH NATIONAL INSTRUMENTS

This municipal climate action plan is aligned with **the NDC and with the National Plan for Adaptation to Climate Change in Cameroon** (PNACCC, 2015). In addition, this action plan supports the objectives of **Cameroon's National Development Strategy** (SND30, 2020), which is the second phase of the "Vision Plan for 2035 " issued by the Cameroonian government in 2009. The SND30 encompasses and designs the implementation of national sectoral policies and seeks to strengthen adaptation measures to manage the effects of climate change and environmental impacts to ensure sustainable and inclusive economic growth and social development, among other main objectives.

Since 2015, the Government of Cameroon has been implementing the Programme d'Aménagement du Territoire (PRODAT) drawn up by the Ministère de l'Economie, de la Planification et de l'Aménagement du Territoire (MINEPAT). The objective of this program is to promote the development of the local economy of the target municipalities through the construction and / or rehabilitation of socio-economic infrastructure and, to contribute to the integration of unemployed young people through the creation of sustainable jobs, in the northern part of Cameroon, marked by the severity of the climate and the insecurity generated by the terrorist attacks. To achieve this objective, the Programme National de Développement Participatif (PNDP) has developed, with the support of AFD, since November 2015, a Haute Intensité de Main d'Œuvre (HIMO) approach for the realization of the projects planned in the Plans Communaux de Développement (PCD) and registered in the PRODAT. In addition, there is public funding within the municipalities through the Public Investment Budget (BIP) which joins the PNDP and the Fonds Spécial d'Équipement et d'Intervention Intercommunale (FEICOM) projects and constitutes the Annual Investment Plan (PIA) implemented in the municipalities through the financing of short-term micro-projects.

From the national meeting that took place in November 2020 at HELP Community conference room in Yaoundé, it was resolved that the **municipalities should develop micro-projects for local development and get closer to the PNDP and the FEICOM to benefit more from funding from FFU and HIMO**, which strongly participate in solving problems at the local level in the Sudano-Sahelian area. This action is **consistent with strategic axis 4 of the PNACCC**, which is to integrate adaptation to climate change into national sectoral strategies and policies.

## 4 CLIMATE ACTION PLAN

**Mbé's Climate Action Plan** is the result of the work carried out in previous phases of the project. This includes the initial bibliographic study and consultation of relevant documents such as the PNACCC, the NDC of Cameroon and the Vision Plan for 2035, among others.

The Action Plan has also considered the results and conclusions of the several meetings, trainings and workshops carried out, as well as the gender dimension and youth, and other vulnerable groups.

Finally, several local stakeholders have been consulted, such as Help Community, I2D and ONACC, to get their validation and input on the goals, use and content of the Action Plan and specific actions. In this sense, actions were categorized in order of priority according to the local stakeholders.

**Mbé's Action Plan contains 12 actions, from several sectors such as agriculture, water, health, transport, environment and biodiversity, livestock and buildings.**

## 4.1 ACTION SHEET TEMPLATE

The next figure shows a **template** of the action sheet used for the Action Plan. Each action included in the plan is described according to this template, which is explained below.

### 1. ACTION NAME IN ENGLISH

#### 1. ACTION NAME IN FRENCH

<b>Vulnerability / Climate impact</b>	Climate change impact/s to which the adaptation action is associated, such as Heat waves (extreme heat); Extreme precipitation; Flood; Droughts and water shortages; Storms and winds; Landslides; Risk of fire...	
<b>Sector</b>	Vulnerable sector to which the action belongs to, such as water, buildings, energy, agriculture and forestry, livestock, environment and biodiversity, health, transport, education and tourism.	
<b>Description</b>	Describes the main goal of the action and the sub actions to be implemented in order to achieve it. This section will specify as much as possible the bodies involved in the implementation of the action and their role, as well as the expected results of the action.	
<b>Results</b>	Here the expected results and outcomes associated with the measure will be indicated	
<b>Costs</b>	<b>Investment cost</b> [USD]	<b>Operational cost</b> [USD]
	<b>Possible financing sources:</b> For some actions specific financing sources will be indicated here	
<b>Calendar</b>	Here it will be stated the time horizon (Short, medium, large term) for the implementation of the action	<b>Responsible</b> Here it will be stated which department, area or person in the city council will be responsible for carrying out and monitoring the progress of the action.
<b>Monitoring indicators</b>	All the actions are associated with one or more monitoring indicators, which will be quantifiable to be able to monitor the actions before, during and after their execution	

## 4.2 MBÉ'S CLIMATE ACTIONS SHEETS



### 1. Construction of boreholes / water supply with solar pumps and drinkers for animals

*1. Construction de forages/adductions d'eaux avec pompes solaires et abreuvoirs pour bêtes*

<b>Vulnerability / Climate impact</b>	Droughts and water scarcity	
<b>Sector</b>	Water	
<b>Description</b>	<p>The municipality of Mbé has experienced an increase in its population in the last 10 years (25,000 to 50,000 people) due to the increase in births but also, due to the displaced by the war against Boko Haram. This demographic boom has had an impact on water resources because of the overuse of water points / boreholes. Normally, 1 borehole would be used by around 300 people, but in downtown Mbé the boreholes have been overused as the 7,000 inhabitants only have 3 functional boreholes.</p> <p>Therefore, it is necessary to construct additional drinking boreholes and it is important that these are constructed in a sustainable way, with solar pumping, to supply the greatest number of people and at the same time avoid the emission of greenhouse gases into the atmosphere. Furthermore, this action will help reduce at the same time the problem of diseases caused by the ingestion of contaminated water.</p> <p>The beneficiary villages and specific location sites where to construct the boreholes and install the solar pumps and drinking troughs will be selected considering technical studies carried out previously and in collaboration with the local authorities. Different criteria will be considered when deciding the final location, including population density, the presence of breeders and the water table.</p> <p>To design and implement the installation of the water supply network associated with the construction of a solar power plant and drinking troughs, the local authorities will recruit local labor. In this sense, part of the local labor recruited will consist of vulnerable groups such as youth and women, which will receive formation regarding the technical aspects of construction and maintenance of the boreholes and solar pumps.</p>	
<b>Results</b>	<p>6 drinking water supplies to 10 standpipes and 500 direct connections with solar pumping built in villages with high population and existing boreholes rehabilitated.</p> <p>Implementation of a capacity building process for youth and women to learn about water management, solar energy, and the importance to maintain and keep water clean and free of contaminants in order to avoid diseases.</p>	
<b>Costs</b>	<b>Investment cost</b>	<b>Operational cost</b>
	1,750,000 USD	750,000 USD
	<p><b>Possible financing sources:</b> BID, PNDP, FEICOM.</p> <p><i>See section 5. Financing opportunities for additional sources.</i></p>	
<b>Calendar</b>	<b>Responsible</b>	
2021 - 2022	Local government and Help Community	
<b>Monitoring indicators</b>	<ol style="list-style-type: none"> <li>1. Number of drinking water supply points / year</li> <li>2. Percentage of the population with access to drinking water / year</li> <li>3. Renewable energy produced by the solar pumps [kWh/year]</li> <li>4. Number of declared cases of water-borne diseases / year</li> <li>5. Number of women and youth employed as local labor</li> </ol>	



## 2. Implementation of a reforestation plan for vulnerable areas in the municipality of Mbé

### 2. Mise en place d'un plan de reboisement des zones vulnérables dans la commune de Mbé

<b>Vulnerability / Climate impact</b>	High winds and heat waves	
<b>Sector</b>	Environment and biodiversity	
<b>Description</b>	<p>Due to the war in the municipality many people were forced to move to different parts of the territory, and this caused severe deforestation problems because the population used forest resources to survive (wood for sale, as an energy source, as construction material and for the creation of yam crops which needs stakes to support the stems). Therefore, it is very important to reforest with tree species adapted to the heat and to the lack of water, but also to achieve an economic growth for the municipality in terms of natural resources.</p> <p>The local government will design and implement a reforestation plan in Mbé with external technical help as needed. The steps to implement this action are described below:</p> <ul style="list-style-type: none"> <li>• Identify the sites to be reforested, according to several criteria such as population density, the existence of the banks of intermittent watercourses, number / presence of schools, etc.</li> <li>• Determine the specific dimension of areas to be reforested and the number of plants needed.</li> <li>• Select the most suitable species according to their resistance to drought and heat and search for seeds, that can either be purchased or collected in the wild.</li> <li>• Create a central nursery where to take care of young trees / seedlings.</li> <li>• Prepare the land during the first year: clearing, cleaning and hole digging.</li> <li>• Place the plants on the ground and surround the plants with protective screens during the second year.</li> <li>• Establish village and student reforestation committees and perform activities of sensitization.</li> <li>• Train the local population to ensure the maintenance and monitoring of plants. These trainings will also be focused on empowering the most vulnerable groups such as youth and women. Therefore, to train male and female promoters and leaders with a gender perspective with equal opportunities to participate in community forestry development and to raise awareness among women and men about the problems of deforestation and rational management of natural resources.</li> <li>• The reforestation plan will include a monitoring plan (with timelines, specific monitoring actions to carry out, etc.) in order to ensure the correct implementation, evolution and sustainability of the reforestation. Each monitoring activity will also be associated to a specific person which will be the responsible for this monitoring.</li> </ul>	
<b>Results</b>	<p>Reforestation plan for vulnerable areas of Mbé including a monitoring plan.</p> <p>4 million trees planted in the most vulnerable areas.</p> <p>Training and sensitization activities for the community and empowerment of youth and women.</p>	
<b>Costs</b>	<p><b>Investment cost</b></p> <p>2,000,000 USD</p>	<p><b>Operational cost</b></p> <p>600,000 USD</p>

**Possible financing sources :** Ministère des Forêts et de la Faune (Fonds spécial de développement des forêts), AFD, PNDP, FEICOM.

*See section 5. Financing opportunities for additional sources.*

Calendar	Responsible
2021 - 2024	Local government

  

Monitoring indicators	
	1. Number of trees planted /month
	2. Area of reforested land (ha)
	3. Number of training / sensitization activities carried out / year



### 3. Design and implementation of a bushfire risk management plan in the municipality of Mbé

#### 3. Conception et mise en œuvre d'un plan de gestion du risque feux de brousse dans la commune de Mbé

<b>Vulnerability / Climate impact</b>	Bushfires	
<b>Sector</b>	Environment and biodiversity	
<b>Description</b>	<p>During the collection of data in the field, individual interviews with local agents and the input from the participatory sessions carried out in Mbé, it was noted that bush fires are one of the major risks in Mbé. These bush fires are mainly caused by farmers, who still practice slash-and-burn agriculture, and pastoralists who burn vegetation during the dry season to facilitate the regeneration of new grasses in the forest. The risk of bushfires is further increased by climate change and the increase in temperature and decrease of precipitation projected, which thus increases the vulnerability of Mbé and its population to bushfires.</p> <p>In this sense, and to increase the adaptive capacity of Mbé to bushfires, the local government will design and implement a bushfire risk management plan, with external technical help as needed. The steps to implement this action are described below:</p> <ul style="list-style-type: none"> <li>• Identification of areas sensitive to bushfires, especially considering those areas close to agricultural fields and considering the presence of herbaceous cover. A bushfire risk map will be created using this information as a useful tool to identify the areas most at risk and where management action is most needed.</li> <li>• Once these areas have been identified, local teams will be constituted to create discontinuities in the landscape and reduce the risk of bushfires.</li> <li>• In addition, landscape surveillance committees will be created and patrols in the landscape concerned will be organized to keep the areas at risk well under control and to be able to act faster in the case of a start of a bushfire.</li> <li>• Trainings will also be carried out to farmers and pastoralists in order to help them switch from the practices that increase the risk of bushfire to more sustainable and less risky agricultural and pastoralist practices.</li> </ul>	
<b>Results</b>	<p>Bush fire management plan designed and implemented (including bushfire risk map)</p> <p>Landscape surveillance committees and patrols put in place</p> <p>Trainings carried out to farmers and pastoralists</p> <p>Reduced damage caused by bush fires</p>	
<b>Costs</b>	<b>Investment cost</b>	<b>Operational cost</b>
	250,000 USD	75,000 USD
<p><b>Possible financing sources:</b> BID, PNDP, FEICOM.</p> <p><i>See section 5. Financing opportunities for additional sources.</i></p>		
<b>Calendar</b>	<b>Responsible</b>	
2021 - 2023	Local government	

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<b>Monitoring indicators</b>	<ol style="list-style-type: none"><li>1. Bushfire management plan designed and implemented (including bushfire risk map)</li><li>2. Percentage of bushfire risk area in regards total municipality area</li><li>3. Percentage of area surveilled in regard to total bushfire risk area</li><li>4. Number of farmers and pastoralists trained / year</li></ol>
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#### 4. Awareness, training and support to populations for the construction of ecological and sustainable houses adapted to extreme climatic conditions

*4. Sensibilisation, formation et appui des populations pour la construction de maisons écologiques et durables adaptées aux conditions climatiques extrêmes*

<b>Vulnerability / Climate impact</b>	All the identified risks (transversal)	
<b>Sector</b>	Buildings	
<b>Description</b>	<p>Climatic risks such as floods and high winds cause enormous damage to public buildings and especially to residential houses, which are built most of them with traditional materials such as mud, straw and wood. Nevertheless, traditional materials must always be considered as they represent a sustainable way of building adapted to the territory.</p> <p>In order to reduce the vulnerability of the buildings and the population in Mbé to these risks, the local government will implement several awareness, training and other support activities, which are described below:</p> <ul style="list-style-type: none"> <li>• Preparation of awareness posters on eco-citizen behavior to face extreme weather in schools, markets, health centers, places of worship, along the streets, etc.</li> <li>• Identify architects, preferably locals, who will support the population in the construction of the first ecological houses. If necessary, carry out trainings to these architects to ensure the correct use of ecological materials and design of eco-houses. These architects, together with the local government, will be responsible for the design and construction of the first 5 eco-houses in Mbé, as a pilot test that will help extend the construction of these ecological house to the rest of the city.</li> <li>• Sensitization and training of local populations on the advantages and the need to build ecological houses, especially to women and youth. In this sense, it will be highlighted the importance of choosing an architect who will identify the right type of ecological house to be built from the local material and which best withstands the extreme precipitations identified in the area, etc. In addition, sensitization will also be focused on rehabilitation of existent houses, as much as possible, according to sustainable construction standards that will help increase the resilience of the house against climatic impacts. It is important to involve the population in this process so they can give their input and/or raise any concerns, to ensure the success of this action.</li> </ul>	
<b>Results</b>	<p>All the population sensitized regarding extreme weather events and ecological building</p> <p>20 architects and engineers trained on new construction methods adapted to the traditional and sustainable housing</p> <p>5 pilot eco-houses built in the municipality</p>	
<b>Costs</b>	<b>Investment cost</b>	<b>Operational cost</b>
	3,500,000 USD	500,000 USD
<p><b>Possible financing sources:</b> BID, PNDP, FEICOM.</p> <p><i>See section 5. Financing opportunities for additional sources.</i></p>		
<b>Calendar</b>	<b>Responsible</b>	
2021 - 2023	Local government	

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**Monitoring  
indicators**

1. Number of eco-houses built /year
  2. Number of homes rehabilitated according to sustainable construction standards / year
  3. Number of declared cases of dwellings affected by the effects of climate change / year
  4. Number of architects identified
  5. Number of awareness posters distributed / year
  6. Number of participants at the trainings / workshops carried out to population / year
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## 5. Development of municipal roads and tracks and creation of valleys and ditches

### 5. Aménagement des routes et pistes communales et création de noues et fossés

<b>Vulnerability / Climate impact</b>	Floods						
<b>Sector</b>	Transport						
<b>Description</b>	<p>Some villages in the municipality of Mbé are inaccessible during the rainy season because of the floods, a risk that will increase due to climate change. These events cause great damage to the population, who is mainly agricultural, so the need to make drains and open new tracks to facilitate the operation and distribution of agricultural products becomes very high and important.</p> <p>In order to reduce the damage and negative impacts from flooding in Mbé, it is necessary to identify the number of roads and tracks to be developed or improved, for example, the roads and communal tracks of Doulek, Kathiao, Ouloum. In addition, flooding also affects the villages crossed by the Bénoué river, where several damages are caused when it overflows, so the need to make drains and open other tracks is very important.</p> <p>In order to do this, it is firstly proposed to develop a flooding risk map of Mbé, to identify the specific flood zones and areas that are at most risk and where action is most needed.</p> <p>Technical studies will be carried out to determine the number of bridges and culverts to be built along the routes, to determine the depth of valleys and ditches, and to assess the specific actions to implement regarding the rehabilitation and construction of new dikes in the villages crossed by the Bénoué, among others. Dredging and cleaning the ditches to facilitate the circulation of water will also be carried out to help reduce the risk of flooding.</p> <p>In addition, the implementation of nature-based solutions for sustainable drainage will also be considered and assessed: Sustainable Urban Drainage Systems (SUDS) aim to maintain or replicate the predevelopment water cycle (before urbanization) and include a set of measures/components that use natural features and processes to slow down and reduce the volume of surface water runoff in order to manage downstream flood risk. SUDS can also enhance water availability by capturing and storing rainwater and it can also improve water quality as they can reduce sediment and contaminants from runoff by allowing them to settle or through biological breakdown of pollutants. SUDS can include pervious or permeable pavements and surfaces, infiltration basins and trenches, swales, detention basins, among others.</p> <p>The final investment cost of this action will depend on the total number of kilometers of municipal roads to be rehabilitated and / or developed as well as the level of degradation of the runways.</p>						
<b>Results</b>	<p>Roads and communal tracks of Doulek, Kathiao and Ouloum rehabilitated and developed</p> <p>Presence of valleys and ditches in the heavily flooded villages crossed by the Bénoué; considerable reduction in flooding</p>						
<b>Costs</b>	<table border="0"> <thead> <tr> <th>Investment cost</th> <th>Operational cost</th> </tr> </thead> <tbody> <tr> <td>1,000,000 USD (<i>approximate cost regarding the creation of valleys and ditches in the heavily flooded villages crossed by the Bénoué</i>)</td> <td>250,000 USD (<i>approximate cost (regarding the creation of valleys and ditches in the heavily flooded villages crossed by the Bénoué)</i>)</td> </tr> <tr> <td>Final investment cost to be determined according to the level of degradation of the runways</td> <td>Final operational cost to be determined</td> </tr> </tbody> </table>	Investment cost	Operational cost	1,000,000 USD ( <i>approximate cost regarding the creation of valleys and ditches in the heavily flooded villages crossed by the Bénoué</i> )	250,000 USD ( <i>approximate cost (regarding the creation of valleys and ditches in the heavily flooded villages crossed by the Bénoué)</i> )	Final investment cost to be determined according to the level of degradation of the runways	Final operational cost to be determined
Investment cost	Operational cost						
1,000,000 USD ( <i>approximate cost regarding the creation of valleys and ditches in the heavily flooded villages crossed by the Bénoué</i> )	250,000 USD ( <i>approximate cost (regarding the creation of valleys and ditches in the heavily flooded villages crossed by the Bénoué)</i> )						
Final investment cost to be determined according to the level of degradation of the runways	Final operational cost to be determined						

**Possible financing sources:** BID, PNDP, FEICOM.

*See section 5. Financing opportunities for additional sources.*

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**Calendar**

2021 - 2024

**Responsible**

Local government

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**Monitoring indicators**

1. Kilometers of roads constructed / year
  2. Kilometers of rehabilitated roads / year
  3. Kilometers of ditches constructed / year
-



## 6. Awareness, grouping of breeders in a cooperative and support for the marketing of products at factory prices and the fight against contagious diseases and epizootics

*6. Sensibilisation, regroupement des éleveurs en coopérative et accompagnement pour la commercialisation des produits aux prix d'usine et à la lutte contre les maladies contagieuses et épizooties.*

<b>Vulnerability / Climate impact</b>	Droughts	
<b>Sector</b>	Livestock	
<b>Description</b>	<p>Livestock is the second economic activity after agriculture in the municipality of Mbé. The livestock sector in Mbé is currently experiencing a lot of difficulties, due to poor local organization, and as a result of climate change. Temperature is the most important bioclimatic factor for livestock: low temperatures decrease food requirements, improve youth survival and reduce energy costs. Heat waves cause the death of many animals and heat stress takes its toll on milk production, meat quality and reproduction of dairy cows. According to the breeders, the increase in temperatures has the effect of reducing the appetite of livestock and, consequently, his weight gain. An increase in water deficits due to drought forces producers to decrease the number of cattle they graze to preserve their land. In consequence, lack of water and reduced weight of the herd causes low quality production and the diseases associated with the cattle processes appear more frequently.</p> <p>Therefore, raising awareness and creating cooperatives would be very important for local breeders in Mbé, who are currently having serious problems in accessing products to treat livestock for disease control.</p> <p>In this sense, it is proposed to implement the following actions to help reduce the vulnerability of the sector, especially to cattle diseases:</p> <ul style="list-style-type: none"> <li>• Identification of breeders in each township by the local authorities.</li> <li>• Sensitization of these breeders identified on the advantages of operating in a cooperative.</li> <li>• Support breeders in the process of creating cooperatives to benefit from technical and financial support.</li> <li>• Raise awareness and inform cooperatives on the variation in prices set by the competent administration (Ministry of Commerce) and that the DD / MINEPIA of Diamaré will support the cooperatives in respecting the prophylactic schedules (small and large cattle) to fight against diseases contagious and epizootics.</li> </ul>	
<b>Results</b>	The breeders are sensitized, grouped into cooperatives, and sell their products at factory price. Also, contagious diseases and epizootics are reduced.	
<b>Costs</b>	<b>Investment cost</b>	<b>Operational cost</b>
	<i>To be determined</i>	<i>To be determined</i>
	<p><b>Possible financing sources:</b></p> <p><i>See section 5. Financing opportunities for additional sources.</i></p>	
<b>Calendar</b>	<b>Responsible</b>	
2021 - 2023	Local government	
<b>Monitoring indicators</b>	<ol style="list-style-type: none"> <li>1. Number of breeders sensitized / year</li> <li>2. Number of cooperatives created</li> </ol>	



## 7. Development of wells and permanent traditional water sources

### 7. Aménagements des puits et sources d'eau traditionnelles permanentes

<b>Vulnerability / Climate impact</b>	Droughts	
<b>Sector</b>	Water	
<b>Description</b>	<p>In Mbé it is difficult for most population to have adequate water facilities in their homes or villages, so sometimes the nearest safe water point is several kilometres away. This pushes them to drink unsafe water from unconditioned rivers and springs. In addition, due to climate change it is projected that droughts will increase in frequency and intensity, and therefore water availability and access is further compromised in Mbé.</p> <p>Therefore, it is very important to improve the existing water sources to make them drinkable, but also to build additional water sources and rehabilitate boreholes. In this sense, the local government will first carry out an inventory of wells and permanent traditional water sources. This inventory will include the counting of the total number of sources and also the assessment of the quality of the sources, where the quality of the water obtained will be analyzed and categorized as drinkable or not.</p> <p>Once this inventory and first assessment is done, the local government will design an action plan according to the needs identified and will start cleaning, rehabilitating and disinfecting the identified wells as necessary. In addition, the local government will assess the creation of additional sources of water, not identified already in action number 1 of this action plan (creation of boreholes).</p>	
<b>Results</b>	Living conditions of communities improved through greater access to drinking water and sanitation.	
<b>Costs</b>	<b>Investment cost</b>	<b>Operational cost</b>
	20,000 USD	25,000 USD
	<b>Possible financing sources:</b>	
	<i>See section 5. Financing opportunities for additional sources.</i>	
<b>Calendar</b>	<b>Responsible</b>	
2021 - 2022	Local government	
<b>Monitoring indicators</b>	<ol style="list-style-type: none"> <li>1. Number of improved water sources / year</li> <li>2. Percentage of population with access to sanitation services</li> <li>3. Water-borne diseases cases / year</li> <li>4. Cases of malaria reported / year</li> </ol>	



## 8. Sensitization of the population on respect for hygiene and sanitation rules and distribution of mosquito nets

*8. Sensibilisation de la population sur le respect des règles d'hygiène et d'assainissement et distribution de moustiquaires*

<b>Vulnerability / Climate impact</b>	Heat waves	
<b>Sector</b>	Health	
<b>Description</b>	<p>The municipality of Mbé is producing a lot of household waste and no management system has been put in place to current date. Furthermore, the lack of waste management leads to an increase in mosquito infestations, which is further exacerbated by climate change and, therefore, the risk that these insects act as a disease vector is increased. In order to reduce the vulnerability of Mbé to this risk, several actions will be implemented in Mbé, which are described below:</p> <ul style="list-style-type: none"> <li>• Identification of diseases linked to non-compliance with recurrent hygiene rules in the town of Mbé;</li> <li>• Identification of the people who will constitute the local awareness-raising committees that will work in collaboration with the DD / MINSANTE;</li> <li>• Organize a training workshop for the committees on sanitation methods and respect for hygiene rules by the population.</li> <li>• Organization of awareness-raising campaigns to raise awareness of diseases linked to non-compliance with the hygienic rules for the local population, by the committees in each township. These can be through distribution of posters and banners, through radio broadcasts, or public campaigns in markets, schools, places of worship, etc. The campaigns will be focused specially on most vulnerable groups such as women and youth.</li> <li>• In addition, the local government will identify and assess the size of households and organize campaigns to distribute impregnated mosquito nets and teach locals how to set them up and maintain.</li> </ul>	
<b>Results</b>	Population sensitized on respect for hygiene and sanitation rules; mosquito nets distributed, reduction in illnesses linked to non-compliance with hygiene standards	
<b>Costs</b>	<b>Investment cost</b>	<b>Operational cost</b>
	200,000 USD	25,000 USD
	<p><b>Possible financing sources:</b></p> <p><i>See section 5. Financing opportunities for additional sources.</i></p>	
<b>Calendar</b>	<b>Responsible</b>	
2021 - 2022	Local government	
<b>Monitoring indicators</b>	<ol style="list-style-type: none"> <li>1. Number of diseases related to hygiene</li> <li>2. Number of awareness-raising and training actions for local populations /year</li> <li>3. Number of distributed mosquito nets</li> </ol>	



## 9. Sensitization of populations on the construction of wells protected and far from latrines

### 9. Sensibilisation des populations sur la construction de puits protégés et éloignés des latrines

<b>Vulnerability / Climate impact</b>	Floods				
<b>Sector</b>	Water				
<b>Description</b>	<p>Respect for hygiene and urban planning regulations are not yet anchored in the way of life of the populations of the municipality of Mbé and the wells constructed are near the latrines. This causes the contamination of water which causes water-borne diseases such as cholera. Therefore, it is very important to carry out awareness campaigns to teach good practice methods. The following steps are needed:</p> <ul style="list-style-type: none"> <li>• Preparation of awareness posters on the advantages of building wells protected and far from latrines. These posters will be distributed throughout schools, markets, health centers, places of worship, along the streets, etc.</li> <li>• Carry out campaigns to sensitize local populations on the advantages and the need to build wells protected and far from latrines. These can be through radio broadcasts, or public campaigns in markets, schools, places of worship, etc.</li> <li>• Suggest technicians who will support the populations in the construction of wells to construct them protected and far from latrines.</li> </ul>				
<b>Results</b>	Population sensitized on the construction of wells protected and far from latrines; reduction of illnesses due to the use of wastewater from wells constructed around latrines.				
<b>Costs</b>	<table border="1"> <thead> <tr> <th>Investment cost</th> <th>Operational cost</th> </tr> </thead> <tbody> <tr> <td>250,000 USD</td> <td>50,000 USD</td> </tr> </tbody> </table>	Investment cost	Operational cost	250,000 USD	50,000 USD
Investment cost	Operational cost				
250,000 USD	50,000 USD				
	<p><b>Possible financing sources:</b></p> <p><i>See section 5. Financing opportunities for additional sources.</i></p>				
<b>Calendar</b>	<b>Responsible</b>				
2022 - 2023	Local government				
<b>Monitoring indicators</b>	<ol style="list-style-type: none"> <li>1. Percentage of existing wells protected regarding total existing wells</li> <li>2. Percentage of new wells constructed protected and far from latrines regarding total new wells constructed</li> <li>3. Reduction in water-borne diseases (% / year)</li> <li>4. Number of awareness campaigns for local populations / year</li> </ol>				



## 10. Establishment of a local weather warning bulletin and production of agricultural calendars

### 10. Mise en place d'un bulletin d'alerte météorologique local et production de calendriers agricoles

<b>Vulnerability / Climate impact</b>	Floods and droughts	
<b>Sector</b>	Agriculture	
<b>Description</b>	<p>The increased variation of periods of precipitation in the municipality of Mbé caused by climate change has a great negative impact on agricultural production and thus on local farmers and breeders.</p> <p>To adapt to this hazard, it is highly important to draw up a weather warning bulletin and to produce an agricultural calendar that can be made available to the population to help them tackle in advance the more frequent and intense drought periods. To implement this action, the local government will carry out the following actions:</p> <ul style="list-style-type: none"> <li>• Firstly, it will identify existing weather stations near the town of Mbé that can be used for the weather warning bulletin.</li> <li>• As a link between the meteorological center, who will produce the warning bulletin and the agricultural calendar, and the farmers, the local government will create and establish a local meteorological warning committee. This committee will periodically provide farmers with climatic indicators and with information regarding its impacts on different crops, as well as on the management practices to be followed to prevent, mitigate and / or manage these climatic risks. Reports and communications addressed to farmers will be produced monthly, or more periodically if needed.</li> <li>• Sensitization of the local population, in addition to farmers, on how to use this agricultural calendar and the management actions to implement in drought periods and other climatic hazards.</li> </ul>	
<b>Results</b>	Meteorological warning bulletin set up and agricultural calendars produced; reduction of decreased yield risk as producers use agricultural calendar information	
<b>Costs</b>	<b>Investment cost</b>	<b>Operational cost</b>
	300,000 USD	50,000 USD
	<p><b>Possible financing sources:</b> Ministère de l'Environnement, de la Protection de la Nature et du Développement Durable (MINEPDED)</p> <p><i>See section 5. Financing opportunities for additional sources.</i></p>	
<b>Calendar</b>	<b>Responsible</b>	
2021 - 2023	Local government	
<b>Monitoring indicators</b>	<ol style="list-style-type: none"> <li>1. Commissioning of the climate observation, forecasting and warning system</li> <li>2. Number of reports or communications on future climate events and possible damages produced / month</li> </ol>	



## 11. Capacity building of wildlife and mining royalty management committees

### 11. Renforcement des capacités des comités de gestion de la redevance faunique et minière

<b>Vulnerability / Climate impact</b>	Droughts	
<b>Sector</b>	Environment and Biodiversity	
<b>Description</b>	<p>In theory, the wealth derived from natural resources should strengthen economic growth and empower governments to support the development of natural resources and to provide opportunities to support human development and create jobs in the sector. In practice, these natural resources often lead to more poverty at the local level, more inequalities, and violent conflicts. There is an opportunity for Mbé, and other municipalities in Cameroon, to value its natural resources (wildlife, mineral resources, etc.) and to support the socio-economic development for example through the launch of instruments that would allow the territory to take advantage of these resources.</p> <p>The municipality of Mbé has a wildlife natural reserve that could work as a space to attract tourism. In addition, all the villages crossed by the Bénoué have a good material resource for construction. All these sectors such as mining and wildlife can contribute to increase the municipality's own revenue by setting up fees (local tax) to do this work, such as the conservation of wildlife.</p> <p>Therefore, it is proposed that local government will create a specific committee responsible for the management and conservation of the wildlife in the reserve, who will also monitor the impacts of climate change in the wildlife and implement actions as needed. In addition, a mining royalty management committee will also be created.</p> <p>It will also be important to train agents in the management of these newly created fees within the municipality, so the local government will organize capacity building workshops in this sense.</p>	
<b>Results</b>	The management committees are equipped with the methods of collecting the wildlife and mining royalty.	
<b>Costs</b>	<b>Investment cost</b>	<b>Operational cost</b>
	300,000 USD	50,000 USD
	<p><b>Possible financing sources:</b></p> <p><i>See section 5. Financing opportunities for additional sources</i></p>	
<b>Calendar</b>	<b>Responsible</b>	
2022 - 2023	Local government	
<b>Monitoring indicators</b>	<ol style="list-style-type: none"> <li>1. Local fees and committees created</li> <li>2. Participants in the capacity building workshops / year</li> </ol>	



## 12. Construction of a drainage and evacuation system for precipitation water

### 12. Construction d'un système de drainage et d'évacuation des eaux de précipitations

<b>Vulnerability / Climate impact</b>	Floods				
<b>Sector</b>	Water				
<b>Description</b>	<p>Some villages in the municipality of Mbé are inaccessible during the rainy season because of the floods, which are projected to increase in frequency and intensity due to climate change. To tackle this problem, it is very important to set up a drainage system in all the large villages and in the city center to canalize the water which causes the destruction of roads and agricultural tracks.</p> <p>Firstly, the local government will identify the areas with high flooding rates that require the construction of new dikes or the rehabilitation of existing ones. Furthermore, the dredging and cleaning of the ditches will be necessary to facilitate the circulation of water and avoid flooding episodes.</p> <p>In addition, the implementation of nature-based solutions for sustainable drainage will also be considered and assessed: Sustainable Urban Drainage Systems (SUDS) aim to maintain or replicate the predevelopment water cycle (before urbanization) and include a set of measures/components that use natural features and processes to slow down and reduce the volume of surface water runoff in order to manage downstream flood risk. SUDS can also enhance water availability by capturing and storing rainwater and it can also improve water quality as they can reduce sediment and contaminants from runoff by allowing them to settle or through biological breakdown of pollutants. SUDS can include pervious or permeable pavements and surfaces, infiltration basins and trenches, swales, detention basins, among others.</p>				
<b>Results</b>	Drainage and evacuation system for precipitation water constructed and rehabilitated				
<b>Costs</b>	<table border="1"> <thead> <tr> <th>Investment cost</th> <th>Operational cost</th> </tr> </thead> <tbody> <tr> <td>1,750,000 USD</td> <td>250,000 USD</td> </tr> </tbody> </table>	Investment cost	Operational cost	1,750,000 USD	250,000 USD
Investment cost	Operational cost				
1,750,000 USD	250,000 USD				
	<p><b>Possible financing sources :</b> Ministère des Forêts et de la Faune (Fonds spécial de développement des forêts), AFD, FEICOM, PNDF</p> <p><i>See section 5. Financing opportunities for additional sources.</i></p>				
<b>Calendar</b>	<b>Responsible</b>				
2021 - 2024	Local government				
<b>Monitoring indicators</b>	<ol style="list-style-type: none"> <li>1. Decrease in flood rate depending on area (% per year)</li> <li>2. Meters of channels created / year</li> <li>3. Meters of rehabilitated dikes / year</li> </ol>				

### 4.3 ACTION PLAN SUMMARY

The following table provides a **summary of Mbé's action plan**, including the action title, climate change risk tackled, sector, time horizon and cost. The actions are shown in order of priority.

PRIORITY	ACTION TITLE	SECTOR	RISK	TIME HORIZON	COST (USD)
1	Construction of boreholes / water supplies with solar pumps and drinking troughs for animals	Water	Droughts	2021-2022	3,250,000
2	Implementation of a reforestation plan for vulnerable areas in the municipality of Mbé	Environment & Biodiversity	High winds	2021-2024	4,400,000
3	Design and implementation of a bushfire risk management plan in the municipality of Mbé	Environment & Biodiversity	Bushfires	2021-2023	475,000
4	Awareness, training and support to populations for the construction of ecological and sustainable houses adapted to extreme climatic conditions	Buildings	All risks	2021-2023	5,000,000
5	Development of municipal roads and tracks and creation of valleys and ditches	Transport	Floods	2021-2024	TBD
6	Awareness raising, grouping of breeders in a cooperative and support for the marketing of products at factory prices and the fight against contagious diseases and epizootics	Livestock	Droughts	2021-2023	TBD

7	Development of wells and permanent traditional water sources	Water	Droughts	2021-2022	250,000
8	Sensitization of the population on respect for hygiene and sanitation rules and distribution of mosquito nets	Health	Heat wave	2021-2022	250,000
9	Sensitization of populations on the construction of wells protected and far from latrines	Water	Floods	2022-2023	350,000
10	Establishment of a local weather warning bulletin and production of agricultural calendars	Agriculture	Extreme rain	2021-2023	450,000
11	Capacity building of wildlife and mining royalty management committees	Environment & Biodiversity	Droughts	2022-2023	400,000
12	Construction of a drainage and evacuation system for precipitation water	Water	Floods	2021-2024	2,750,000

## 5 FINANCING OPPORTUNITIES

This section intends to provide an overview of potential **financing approaches and sources** that can be used to implement the actions of Mbé's Action Plan and it focusses on financing mechanisms from the perspective of city governments.

The municipality can finance these actions **directly** (e.g., the municipality pays for the intervention, either through funds it already has or by obtaining loans and revenues to finance the project) or **indirectly** (e.g., the municipality provide incentives to other stakeholders, or stimulate private finance by other means).

- **Direct** types of instruments include:
  - Innovative use of public budgets, such as pooling funding from different government departments or making use of previously untapped sources such as the public health budget.
  - Grant funding and donations, including funds; grants from regional and national public bodies; philanthropic contributions; and crowdfunding.
  - Instruments generating revenue (including value-capture mechanisms), such as: revenues from land sales or leases; taxes (aimed at cost-recovery); user fees; developer contributions or charges; betterment levies; voluntary contributions from beneficiaries; sale of development rights and leases; funds linked to offsetting or compensation requirements; and other voluntary schemes that generate revenues.
  - 'Green finance' (or debt-based instruments): loans from public or private financial institutions; green bonds; and the Natural Capital Financing Facility (NCF).
- **Indirect** types of instruments include:
  - Market-based instruments: user charges; taxes (as incentives rather than a cost-recovery mechanism); subsidies; tax rebates; credit-trading systems; offsets for residual impacts on biodiversity/GI; and payments for ecosystem services (PES).
  - Developing 'Business Improvement Districts' (BID)
  - Setting up endowments
  - Creating Public-Private Partnerships
  - Revolving funds
  - Community asset transfers
  - Regulation and planning standards
  - Leveraging existing regulatory obligations

From the discussions that took place during the National Meeting held within the current project in November 2020, **additional financing instruments were highlighted as relevant for the implementation of the Action Plan**. On the one hand, the various reactions of the mayors and the participants on the financing mechanisms made it possible to understand that in the three municipalities the Programme National de Développement Participatif (PNDP) and the Fonds Spécial d'Équipement et d'Intervention Intercommunale (FEICOM) intervene. In addition, there is state funding within the municipalities through the Public Investment Budget (BIP) which joins the PNDP and FEICOM projects and constitutes the Annual Investment Plan (PIA) implemented in the municipalities through the financing of short-term micro-projects.

In addition, a wide range of possible donors of climate finance has been listed, covering various windows of the global climate finance architecture. The first window includes multilateral institutions, i.e., UNFCCC-related financial institutions like the Green Climate Fund and non-UNFCCC-related funds, as for example those established by multilateral development banks or UN programs.

## 5.1 MULTILATERAL CLIMATE FUNDS

Regarding multilateral climate funds, these are funds that are provided by multilateral institutions such as multilateral development banks, United Nations (UN) agencies, and the financial institutions that have been created within the framework of the United Nations Framework Convention (UNFCCC) itself.

### UNFCCC Climate Funds

UNFCCC climate funds are funds that have been established under a decision taken by the Conference of Parties (COP) to the UNFCCC. These funds are at the very center of the financial architecture of the Paris Agreement (PA). UNFCCC climate funds include the UN Adaptation Fund (AF), the Least Developed Country Fund (LDCF), the Special Climate Change Fund (SCCF), and the Green Climate Fund (GCF).

The **Adaptation Fund (AF)** was established at the 7th Conference of the Parties (COP7) held in Marrakesh, Morocco in 2001 and was created as a financial instrument under the UNFCCC and the Kyoto Protocol (KP) in 2016, with the entry into force of the Paris Agreement (PA), negotiations started on how to embed the AF into the new financial architecture of the PA.

The **Least Developed Countries Fund (LDCF)** was established at the 7th Conference of the Parties (COP 7) held in Marrakesh, Morocco in 2001. It became operational in 2002. The LDCF was established to address the adaptation needs of the Least Developed Countries (LDCs) which are vulnerable to climate change. As a priority, the LDCF supports LDCs in identifying the urgent and immediate adaptation needs that have been compiled in National Adaptation Programs of Action (NAPAs) and its implementation.

The **Special Climate Change Fund (SCCF)** was established under the UNFCCC in 2001, to complement the LDCF. The World Bank Global Environment Facility (GEF) operates the SCCF. The SCCF is based on voluntary contributions from donor countries. As of 2017, the SCCF had a portfolio of almost USD 350 million, supporting 77 projects in 77 countries.

The mandate of the **Green Climate Fund (GCF)** reads as follows, “In the context of sustainable development, the Fund will promote the paradigm shift towards low-emission and climate-resilient development pathways by providing support to developing countries to limit or reduce their greenhouse gas emissions and to adapt to the impacts of climate change, taking into account the needs of those developing countries particularly vulnerable to the adverse effects of climate change.”

### Non-UNFCCC Financial Institutions

The **United Nations Program on Reducing Emissions from Deforestation and Forest Degradation (UN REDD Program)** is a collaborative program of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Program (UNDP) and the United Nations Environment Program (UNEP) created in response to the UNFCCC decision on the Bali Action Plan and REDD at COP13 in 2008. UN REDD aims to reduce emissions from deforestation and to enhance carbon sinks from forests while contributing to sustainable development at the national level. The UN REDD Program supports nationally led REDD+20 processes and promotes the informed and meaningful involvement of all stakeholders, including indigenous peoples and other communities who depend on the forest, in national and international REDD+ implementation.

The **Global Partnership for Social Accountability (GPSA)** was created in 2012 and aimed to support civil society participation, transparency and accountability in public policy making. The GPSA further seeks to create enabling environments for broad stakeholder participation and provides strategic and financial support to civil society organizations (CSOs) and to governments for social

accountability initiatives. The decision-making body of the GPSA is its Steering Group, consisting of ten members who represent the World Bank, recipient and donor countries, and CSOs.

The **Global Environment Facility (GEF)** was established at the 1992 Rio Earth Summit to tackle environmental problems. Today, 183 countries are GEF members (called partner countries). International institutions, civil society organizations, and the private sector partner with the GEF to address global environmental problems while supporting national sustainable development initiatives.

The **Climate Investment Funds (CIF)** is a multidonor fund, set up by the World Bank in 2008. The International Bank for Reconstruction and Development (IBRD) of the World Bank Group serves as the trustee of the CIF.

The **Climate Change Fund (CCF)** is a special fund established by the ADB in 2008. The CCF aims to support low-carbon and climate resilient development in ADB developing member countries. The CIF provides grants to investments, loans, and technical assistance. Funding decisions are made by a Climate Change Steering Committee.

The **African Development Bank (AfDB)** was established in 1964 as the Multilateral Development Bank for Africa. The AfDB aims to foster sustainable economic development and social progress. The AfDB has 81 shareholders, including 54 African regional and 27 non-regional member countries. The bank is headquartered in Abidjan, Ivory Coast and the Board of Governors is the highest decision-making body.

The **African Climate Change Fund (ACCF)** was set up as a multi-donor trust fund in 2014 to strengthen African countries to access climate finance, and to support innovative pilot projects on how to become more climate resilient, and on how to design and implement ambitious climate action plans, including Nationally Determined Contributions (NDCs).

The **Adaptation Benefit Mechanism (ABM)** is a new initiative of the AfDB. By March 2018, the ABM was still in a start-up phase. It is designed as a non-market mechanism, aimed at setting price signals that serve as incentives to drive equity and technology into projects that make households, communities and economies more climate resilient. Funding in this initial phase has been provided by the Climate Investment Fund (CIF).

The **African Water Facility (AWF)** was established in 2004, on the initiative of the African Ministers Council on Water (AMCOW), which aims to assist African countries to mobilise and apply resources for the water and sanitation sectors in order to implement the Africa Water Vision (2025). It is managed by the AfDB and has been resourced by the AfDB, Algeria, Australia, Austria, Canada, Denmark, European Union, France, Norway, Senegal, Spain, Sweden, the UK and the Bill and Melinda Gates Foundation. The Fund currently has approximately € 130 million. In March 2018, the fund was not receiving any new applications until further notice, due to the high volume of submissions.

The **Green Bond Program** is a relatively new program aimed at facilitating the achievement of the AfDB's green growth priority programs by financing eligible climate change projects.

The **Sustainable Energy Fund for Africa (SEFA)** is a multi-donor trust fund administered by the AfDB and resourced by Denmark and the US with a total pledge of USD 60 million. It aims to promote renewable energy and energy efficiency.

## 5.2 BILATERAL CLIMATE FINANCE

A second important funding window is bilateral climate finance with various budget lines from bilateral donors, mainly from developed countries including for instance the United Kingdom (UK), Germany and Japan.

**GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Cooperation)**, headquartered in Bonn and Eschborn, the GIZ mainly implements the technical cooperation projects of the Federal Ministry for Economic Cooperation and Development (BMZ), it is mainly a commissioning party, although it also works with the private sector and other organizations on a public benefit basis. GIZ aims to follow the paradigm of sustainable development and climate change is central to the work of GIZ.

**Japan International Cooperation Agency (JICA)** is a governmental agency that coordinates ODA for Japan. JICA is one of the largest bilateral development organizations, headquartered in Tokyo with 97 overseas offices and projects in more than 150 countries, and annual resources of approximately USD 8.5 billion. JICA provides ODA in the form of technical cooperation, concessional loans, grants, and contributions to multilateral organizations.

The **UK's International Climate Fund (ICF)** was set up to drive urgent action against climate change in developing countries. Originally, the government sourced the ICF with £ 3.87 billion for the years 2011 - 2016. In a replenishment round, the government pledged another £ 5.8 billion for the years 2016 - 2021. ICF is co-funded, co-managed and co-administered by three governmental departments, namely, Department for Business, Energy, and Industrial Strategy, Department for International Development, and Department for Environment, Food and Rural Affairs.

**Canada Fund for African Climate Resilience** targets climate change related projects in Africa. Primary focus is projects related to food security and climate-smart development.

While this is a non-exhaustive list of possible sources and opportunities for financing Mbé's climate actions, it is intended to **provide an overview of potential financing options for the municipality to materialize its climate action plan.**

## 6 LIST OF ACRONYMS / ABBREVIATIONS

**AFD** - Agence Française de Développement

**BID** - Biodiversity Information for Development

**FEICOM** - Fonds Spécial d'Équipement et d'Intervention Intercommunale

**MINEE** - Ministry of Water Resources and Energy

**MINEPAT** - Ministry of Economy, Planning and Regional Development

**MINEPDED** - Ministry of Environment, Nature Protection and Sustainable Development

**PNDP** - National Participatory Development Program

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