Concept Note

Improving the health resilience of communities vulnerable to climate change in Benin, focusing on the regions of Adjohoun, Bonou and Dangbo, as well as malaria, cardiovascular diseases and acute respiratory infections

Benin | FNEC

4 March 2020
Improving the health resilience of communities vulnerable to climate change in Benin, focusing on the regions of Adjohoun, Bonou and Dangbo, as well as malaria, cardiovascular diseases and acute respiratory infections

Country(ies):
Benin

National Designated Authority(ies) (NDA):
Ministry of Living Environment and Sustainable Development

Executing Entities:
Consortium GRAFED, Direction Nationale de la Santé Publique / Ministère de la Santé

Accredited Entity(ies) (AE):
Fonds National pour L'Environnement

Date of first submission/ version number:
3/4/2020 1  V.1

Date of current submission/ version number:
3/4/2020 1  V.1

Eligibility for SAP is determined by the review of the concept note and the ESS screening.
## A. Project / Programme Information (max. 1 page)

### A.1. Project or programme

- ☒ Project
- ☐ Programme

### A.2. Public or private sector

- ☒ Public sector
- ☐ Private sector

### A.3 RFP

- Not applicable

### A.4. Indicate the result areas for the project/programme

**Mitigation:** Reduced emissions from:
- ☐ Energy access and power generation: 0%
- ☐ Low emission transport: 0%
- ☐ Buildings, cities and industries and appliances: 0%
- ☐ Forestry and land use: 0%

**Adaptation:** Increased resilience of:
- ☒ Most vulnerable people and communities: 33.333%
- ☒ Health and well-being, and food and water security: 33.333%
- ☒ Infrastructure and built environment: 33.333%
- ☐ Ecosystem and ecosystem services: 0%

### A.5. Impact potential

- A.5.1. Estimated mitigation impact (tCO2eq over project lifespan)
- A.5.2. Estimated adaptation impact (number of direct beneficiaries)
  - 1,488,701.3 direct beneficiaries
- A.5.3. Estimated adaptation impact (number of indirect beneficiaries)
  - 1,488,701.3 indirect beneficiaries
- A.5.4. Estimated adaptation impact (% of total population)
  - 1.3% of the country’s total population

### A.6. Financing information

- A.6.1. Indicative GCF funding requested (max 10M)
  - Amount: 9,595,000  Currency: USD  Financial Instrument: Grants
- A.6.2. Indicative co-financing
- A.6.3. Indicative total project cost (GCF + co-finance)
  - Amount: 10,100,000  Currency: USD

### A.6. Estimated duration of project/programme:

- Disbursement period: 60
- Repayment period, if applicable: 60
- Programme lifespan: 60

### A.8. Is funding from the Project Preparation Facility needed?

- ☐ Yes
- ☒ No

### A.9. Is the Environmental and Social Safeguards Category C or I-3?

- ☒ Yes
- ☐ No

### A.10. Provide rationale for the ESS categorization (100 words)

The current project is an innovative project to sustainably manage certain recurrent diseases in the context of climate change. The main activities of this project include the strengthening of the early warning system, the technical platform, capacity building of human resources in the health sector and the inclusion of the health situation of vulnerable groups. These
activities do not imply significant environmental and social risks. The small amounts of waste that will be generated from health care activities will go directly into the existing biomedical waste disposal cycle. Therefore, these environmental risks are minimal and almost non-existent.

A.11. Has the CN been shared with the NDA?
☒ Yes ☐ No

A.12. Confidentiality
☐ Confidential ☒ Not confidential

A.13. Project/Programme rationale, objectives and approach of programme/project (max 100 words)
Climate change (CC) has a negative impact on the health of Benin's population. In the Adjohoun-Bonou-Dangbo health zone, CC, leading to the likely increase in the delay in rainfall, early end of the rainy seasons and rising temperatures, threatens the livelihoods of the population through an increase in climate-sensitive diseases. The proposed project aims to improve the resilience of vulnerable communities in this health zone to malaria, cardiovascular diseases and acute respiratory infections in a context of CC. The proposed strategy includes: establishing and deepening scientific evidence and knowledge of CC impacts on human health at national level, strengthening institutional and operational capacity of the health system in response to the health impacts of CC, and developing a national health early-warning system taking into account CC impacts to allow for an appropriate response and a better use of health services in the zone of intervention.

B. Project / Programme details

B.1. Context and Baseline (500 words)
The human health sector is one of the most vulnerable sectors to climate change (CC)[i]. In Benin, human health is vulnerable to at least three types of climate change impacts: rainfall and temperature variability, disasters and rising sea level[ii].

The projections under the three scenarios RCP 2.6, 4.5 and 8.5 carried out in the frame of the Third National Communication (Troisième Communication Nationale, TCN) indicate the probable increase in the delay of rainfall (observed since about twenty years), the earlier end of rainy seasons and increasing temperatures of 0.8 and 2.3 °C by the years 2030 and 2050, respectively[iii].

It is already certain that CC has consequences for the prevalence of a minimum of two types of diseases in Benin: vector-related diseases (malaria, fevers), and non-transmitted diseases, namely cardiovascular diseases (CVD) and acute respiratory infections (ARI) that are increasing due to the intense heat caused by the increase in ambient air temperature[iv].

A vulnerability assessment of Benin's health sector has confirmed the correlation between malaria transmission and climatic parameters such as humidity, temperature and rainfall in the three municipalities of the health zone Adjohoun-Bonou-Dangbo (ABD). In the municipality of Bonou, one of the proposed project intervention zones, for the increase of one unit of average temperature, the number of malaria cases in the group of children under the age of five increases by 4.6 percent. The analysis of future vulnerability has highlighted a probable increase of 2.5 percent in malaria cases with children under the age of five for increase of one unit in humidity in the municipality of Adjohoun.

Similarly, the level of malaria transmission could seriously increase by 2050 due to the strong positive correlation between Entomological Inoculation Rate (EIR), humidity, and average temperature in the three municipalities[v].

Studies carried out in four health zones[vi], including the project's intervention zone, showed an increase in the frequency of ARIs in the rainy season, correlated with the increase in rainfall and relative humidity. At the same time, a long dry season leads to higher rates of ARIs in these health
zones. In the case of CVDs, data for Benin is not sufficiently available. According to WHO, the risks of respiratory and cardiovascular diseases are increasing in case of intense heat and air pollution[vii].

For the scenarios RCP 2.6, RCP 4.5, RCP 8.5 it was shown that regardless of the scenario considered, the population's health vulnerability to the dominant pathologies in Benin, especially malaria and acute respiratory infections, is likely to increase by 2030 and 2050 in all health zones due to CC[viii].

To cope with these different diseases, several institutional and operational reforms have been initiated but without formally taking into account aspects related to CC. These include the division of the entire national territory into health zones and the establishment of an early warning system for an adequate response in the event of an epidemic. Despite this mechanism, there is a resurgence of climate-sensitive diseases that are not yet covered by the current measures in the health system.

Despite all information summarized above, it is important to note that scientific information and evidence on the relationship between CC and health continues to be very limited at the moment at national level in Benin.

The project is in line with strategic documents such as the Plan National de Développement (National Development Plan, PND), the Politique Nationale de la Santé (National Health Policy, PNS), the Plan National de Développement Sanitaire (National Health Development Plan, PNDS), the Programme d'Action National d'Adaptation (National Adaptation Programme for Action, NAPA), the Nationally Determined Contribution (NDC) and the TCN. In the NAPA, the NDC and the PNS, the Government of Benin has defined several key measures as priorities, including the protection of children under 5 and pregnant women against malaria in zones most vulnerable to CC, the strengthening of the health information and research system, the improvement of the quality of services and the functioning of the early warning system, and the implementation of reform strategies for improving the training of health workers.

It should be added that Benin's health system faces several types of challenges that are intensified by CC. The analysis of the situation of the health system resulting from the evaluation of the PNDS 2009-2018 and the work of the Technical Commission for Health Sector Reforms (CTRSS) revealed different types of strengths but also weaknesses and some major challenges of the national health system. This situational analysis made it possible to highlight the main constraints listed below.

Ø Lack of scientific data on the impacts of CC on health covering the whole national territory

Literature on the correlation between health and CC remains very limited at national level, as highlighted in the national policy documents PNS and PNDS. The various statistics provided come from partial studies carried out within the framework of few projects. This lack of scientific information does not allow yet for formulating or implementing bold, sector-wide measures to counter the phenomenon throughout the national territory. On a scientific level, there are very few researchers working on CC and health issues, among others due to limited methodological capacities.

Ø Weaknesses of the Health Early Warning System

The insufficiency of scientific data also represents one of the major weaknesses of the current Health Early Warning System and does not make it possible to inform the health system and the population early enough about the occurrence and development of climate-sensitive diseases. Current forecasting equipment is inadequate and obsolete. As a result, the equipment does not provide reliable data in time to inform the health system. The operational capacities of the actors responsible for the management of the Early Warning System are limited, especially with regards to CC, and need to be strengthened.

Ø Constraints related to the use of health services

The use of health services is low (34%). This weakness is even stronger when compared to the
relative level of satisfaction with first-level health infrastructure coverage, which is 80%. This low utilization of health services is due to, among others, the quality of care in some health centers and cultural reasons, including the use of traditional medicine and affordability. In addition, conventional sensitization activities have shown their limits. They have little influence on the use of health services since the majority of populations practice self-medication at home.

Ø Constraints related to human resources management

The current situation of human resources in the health sector in Benin is characterized more by its unequal geographical distribution in the country than by its qualitative and quantitative insufficiency. Regional disparities are illustrated by the national average of 1 doctor for 7,014 inhabitants (private and public sectors combined); only the two departments of the Atlantic and the Littoral have a ratio lower than 6,000 inhabitants per doctor (norms of the WHO)[ix]. In addition, there is a high concentration of health staff in urban centers while there is an insufficient number in the rural centers because of the reluctance of staff to work in rural areas and the lack of leeway of intermediate and peripheral government administration on the management of staff movement. The increase of climate-sensitive diseases is leading to a quantitative and qualitative increase in the need for health personnel, especially specialists of CC-related health issues.

Ø Constraints related to health infrastructures and equipment

There is a great disparity between Benin's departments in terms of coverage with health infrastructure. For example, the rate of coverage of the municipalities in the lower valley of Ouémé is only 56% while the national average is 88.3%[x]. Another shortfall is the large proportion of health-care facilities that do not meet the norms and standards for resilient equipment and the CC-adapted architectural program. The functionality of health-care facilities is reduced due to the fact that the little existing equipment is often unavailable due to significant delay in and high costs of maintenance. During disasters, some health centers are completely isolated due to interruptions in electricity, access to roads and other means of communication.

Ø Organizational and institutional gaps in the health system in relation to CC

The organizational and institutional system is weak in dealing with CC impacts on health. The legal and regulatory framework does not adequately address the exceptional health situations brought about by CC. The few actions planned in the planning documents (PNDS, PNS) to respond to climate-related health emergencies are often not implemented. The resources currently available do not make it possible to respond effectively to the health situations brought about by climate disasters. The weak organizational and institutional capacity of the health sector is most often reflected in the delay in implementing activities and the slowness in the procurement process. This situation is impaired by inadequate mechanisms for financing the demand for services and care.


[iv] Azonhè T (2015), Paramètres climatiques et infections respiratoires aigües dans la ville de
B.2. Project / Programme description (1000 words)

**Component 1: Conduct research on national level to deepen scientific knowledge and evidence of CC impacts on human health in Benin**

- Output 1.1: Evidence for and scientific knowledge on CC impacts on malaria, cardiovascular diseases, respiratory diseases and other relevant diseases in Benin is available
  - Activity 1.1.1: Conduct a comprehensive national study on the direct and indirect impacts of CC on relevant diseases, using methodologies and knowledge from Benin and other countries as benchmark.
  - Activity 1.1.2: Conduct a detailed assessment of risks and vulnerabilities of the national health system regarding CC.

- Output 1.2: Benin’s health sector applies strategic climate risk management and planning
  - Activity 1.2.1: Develop a CC Adaptation Strategy for the Health Sector.
  - Activity 1.2.2: Develop a CC-Health Action Plan 2050, including a detailed investment plan.
  - Activity 1.2.3: Accompany and inform the processes to adopt and enact the proposals elaborated under activities 1.2.1 - 1.2.2.

**Component 2: Strengthen the institutional and operational capacities to address health impacts of CC**

- Output 2.1: CC issues are mainstreamed into national health legislation and policy
  - Activity 2.1.1: Update legislation to integrate CC considerations into health legislation.
  - Activity 2.1.2: Update policies to improve the integration of CC in health policies and strategies.
  - Activity 2.1.3: Update construction standards to reflect CC-health considerations (buildings, water management).
  - Activity 2.1.4: Accompany and inform processes to adopt and enact proposals elaborated under activities 2.1.1 - 2.1.3.

- Output 2.2: Health centers personnel is trained and qualified to cope with CC-health impacts
  - Activity 2.2.1: Build capacities of health centers personnel in the prevention of and response to climate-sensitive diseases.
  - Activity 2.2.2: Improve diagnosis and treatment options in high-risk regions and periods through improved equipment.

**Component 3: Establish a national early warning system for CC-related health risks**
Output 3.1: A national early warning system on climate-related diseases is functional
Activity 3.1.1: Assess the existing health early warning system.
Activity 3.1.2: Develop, approve and implement an early warning system that includes and responds to CC risks.
Activity 3.1.3: Establish and operate a national CC and health monitoring center (focus on monitoring/modelling/reporting). Activity 3.1.4: Build capacities of health experts in the new early warning system, including simulation exercises in the project area.

Component 4: Operationalize a CC-health strategy at the community level and ensure patients care
Output 4.1: Health centers in the project intervention zone are operational and frequently used by the population
Activity 4.1.1: Ensure electricity autonomy in health centers by setting up and operating PV units.
Activity 4.1.2: Improve the management and control of infectious risks at health centers in line with the CC-health strategy
Activity 4.1.3: Develop and implement information, education and communication (IEC) plans for vector, cardio and IRA diseases.
Output 4.2: Patient care in the project intervention area is ensured
Activity 4.2.1: Acquire and manage stockpiles of vaccines, drugs, reagents and consumables for climate-sensitive diseases.
Activity 4.2.2: Acquire appropriate vehicles to transport patients and relevant products during extreme weather events.
Activity 4.2.3: Establish a mechanism to ensure the permanence of the achievements of component 2.
Output 4.3: Measures and technologies to increase resilience to CC are implemented
Activity 4.3.1: Improve income-generating activities through the management and use of stagnant waters.
Activity 4.3.2: Create and improve community plantations to ensure adequate supply of traditional medicine.
Activity 4.3.3: Promote vented housing at health center and household levels.

Component 5: Project Management, Coordination, M&E
Output 5.1: Continuous, high quality project management & coordination is guaranteed. The M&E plan is implemented.
Activity 5.1.1: Implement continuous, high quality project management and project coordination.
Activity 5.1.2: Implement the project's monitoring and evaluation plan.
Similar activities for the prevention and control of vector-borne diseases such as malaria, and cardiovascular and respiratory diseases are implemented by other projects. However, these do not consider and operate in the CC-context:
- The proposed project is the first project of this kind that focuses on CC impacting key diseases in Benin.
- The information currently available on the impacts of CC on human health does not cover the whole national territory and remains superficial in some areas. Therefore, the available information will be deepened to allow to better take into account, at the institutional level, aspects of the influence of CC on the diseases identified for this project.
- The project will establish links to international best practices and similar work undertaken in other countries through the solicitation of international experts, the transfer of skills and the
identification and assessment of relevant information.

Since the root causes of climate sensitive diseases are similar in different contexts, the practices developed under this project are likely to be spread across the national territory and sub-regions with same or similar climatic conditions.

The institutional framework has the following components: the steering committee, the project management unit and executing entities.

**ü The Steering Committee (SC)**, decision-making body, will be made up of representatives of the following entities: GRAFED Consortium[1], FNEC, Ministère du Cadre de Vie et du Développement Durable (Ministry of Living Environment and Sustainable Development, MCVDD), National Designated Authority (NDA), Direction Nationale de la Santé Publique (National Directorate for Public Health, DNSP) of the Ministry of Health, Ministère des Finances (Ministry of Finance), Ministère du Plan et du Développement (Ministry of Plan and Development), Ministère des Travaux Publics (Ministry of Civil Engineering), Direction des Energies Nouvelles et Renouvelables (Directorate for New and Renewable Energies, DENR), Universities, beneficiary municipalities and Association Nationale des Communes du Bénin (National Association of Municipalities of Benin, ANCB).

**ü The Project Management Unit (PMU)** is composed of a multidisciplinary team led by a coordinator. It ensures the daily management of the project.

**ü Executing Entities** consist of the GRAFED Consortium and the Direction Nationale de la Santé Publique (DNSP, National Directorate for Public Health, DNSP) of the Ministry of Health.

All aspects of the project affecting the communities and access to the health service will be managed by the GRAFED Consortium. DNSP will be responsible for the legal and regulatory issues of climate change and health relations and will be in charge of improving the equipment of health-care centers, health human resources capacities and research processes.

FNEC, as Accredited Entity, will establish an agreement with the Executing Entities. FNEC will be responsible for supervising and monitoring the implementation of the project.

**Key risks and mitigation measures**

Ø **Risk related to a lack of expertise**

The innovative approach of this project may lead to a lack of the needed expertise during implementation. Also, implementing the project at community level may be time-consuming due to weak participation of the beneficiaries. Proposed mitigation measures include the use of regional and international expertise and information, as well as the IEC measures planned in the project implementation. Furthermore, the benefiting communities have been involved and will be more so as the project will be further developed.

Ø **Socio-cultural and economic risk**

Weak use of health-care facilities, especially for financial reasons, is also a risk for the achievement of project objectives. The level of community participation is also one of the conditions for success of project actions. Awareness-raising actions undertaken within the project as well as the delivery of these services by community members themselves mitigate this risk of low utilization of community-based health services. Traditional medicine elements will be integrated.

[1] The GRAFED Consortium is made up of four NGOs intervening in the domain of health, environment and CC. It is the initiator of this project which was selected after a competition of project ideas related to CC.
Outputs 1.1, 1.2, 2.1, 2.2 and 3.1 will indirectly benefit the entire population of Benin, i.e. 11.2 million people, of which the most vulnerable one-fifth to one-quarter of the population (children, pregnant women, sick people, the elderly) will benefit disproportionally much.

Outputs 4.1, 4.2 and 4.3 will directly benefit the population in the intervention area, i.e. 148,870 persons, of which the most vulnerable one-fifth to one-quarter of the population (children, pregnant women, sick people, the elderly) will benefit disproportionally much. Since too little is known at present about the impacts of CC on diseases in Benin (this situation is to be changed by implementing output 1.1), it is impossible to provide exact figures as to number of lives or live-years saved due to the project. With regard to the project activities carried out at local level, the population of the entire country will be indirect beneficiaries, since lessons learned can and will be used in other regions.

Activity 4.1.1. will result in tCO2e project life time emission reduction to be calculated as part of a dedicated project feasibility study which is to be elaborated following Concept Note endorsement and ahead of formulating the Funding Proposal.

Paradigm shift potential

- Outputs 1.1, 1.2 and 2.1 very directly and massively contribute to long term, lasting and irreversible change, with impacts beyond a one-off investment and allowing for replication and/or scaling up of project results.

- The project addresses a number of crucial binding constraints to change, including lack of comprehensive scientific information and data on CC impact on diseases, capacity shortcomings among heath care experts, legal & policy gaps, current inability to timely warn and protect the population, current inability to diagnose and treat patients (including medication and technology) and access of population to health-care facilities.

- By proposing a set of enabling outputs and activities at national level, combined with concrete activities to benefit the population and patients directly in a target intervention area, the project envisages long term change and creates the conditions for replication and/or scaling up of the project results. Lessons learned will be systematically captured.

- By implementing a comprehensive approach at local (project intervention area) level, including not only improved health care services and capacities, but also technology and infrastructure improvements directly benefiting the population, the project aspires to significantly increase the number of persons using the health care system, therefore enabling long-term sustainability, impact beyond a one-off investment and longer-term change.

Sustainable development potential

- The project contributes to the fight against poverty and helps implement the Poverty Reduction Strategy Paper (PRSP) by increasing the affordability of and access to and improving the quality of the health system, especially in rural areas.

- Long-term positive effects on human capacities through the systematic training of health experts, associated with gender co-benefits, since more than 50% of health workers are women[].

- Social benefits for women (they benefit disproportionally much from training and improved health services).

- Economic and social benefits due to decreased sick-time and less live-years lost due to climate-sensitive diseases.

- Improved, safer and cleaner electricity supply in health centers.

- Enhanced social inclusion of most vulnerable groups (elderly, sick, children, pregnant women, the poor).

Needs of the recipient
· The health sector in Benin, already underfunded and insufficiently developed, is likely to deteriorate further with the exacerbation of CC phenomena. Health impacts of CC needs to be better understood and capacities to diagnose and treat diseases urgently needs to be strengthened. Many patients cannot afford medication or even a visit to a doctor or health expert (which is especially true for the most vulnerable segments of society: children, pregnant women, sick people and the elderly). CC is expected to worsen all these negative trends and intensify the needs of the population, especially in rural areas and among the poor.

· The main barrier to accessing domestic public finance for such a project is scarcity of budgetary funds, especially in rural areas. Barriers to accessing private finance include that the majority of patients cannot afford healthcare priced at cost-covering or profitability levels. A key barrier to accessing international sources of finance (other than GCF) is that other international sources cannot offer finance at scale required to address the needs induced by CC.

Country ownership
· The proposed project is fully aligned with Benin's National Development Plan, the National Health Policy, the National Health Development Plan and the National Action Plan for Adaptation. Benin's NDC mentions explicitly the need to “train all stakeholders of the medical pyramid regarding climate change and its impacts on health”, and, to “develop an information and monitoring system on the impact of climate change on health”.

· Key stakeholders from the NGO consortium GRAFED drafted the present Concept Note in close cooperation with the Ministry of Health, the proposed DAE (FNEC) and the Direction Générale de l'Environnement et du Climat (DGEC) as a representative of the NDA office. The drafting process also benefitted from a regional exchange with project developers from Senegal and Burkina Faso enabled by GIZ and including researchers from universities in Benin.

Efficiency and effectiveness
The project applies and builds on the best practices in the sector: For all outputs and components, the project will use methodologies and knowledge from other countries as benchmark (these will be identified during feasibility and activity 1.1.1). For studies, teams composed of national experts and experienced international experts will be procured. Technology and medication will be procured internationally, ensuring best international practice at most economic price. In terms of infrastructure and works (e.g., water management to decrease malaria breeding, plantations and ventilation), good practice that have been proved to be effective will serve as benchmark


C. Indicative financing / Cost information (max. 2 pages)
C.1. Financing by components

<table>
<thead>
<tr>
<th>Component</th>
<th>Output</th>
<th>Indicative cost (USD)</th>
<th>GCF financing</th>
<th>Co-financing</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amount (USD)</td>
<td>Financial Instrument</td>
</tr>
<tr>
<td>Component 1: Conduct research on national level to deepen scientific knowledge and evidence of</td>
<td>650,000</td>
<td>617,500</td>
<td>Grant</td>
<td>Public</td>
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### CC impacts on human health in Benin

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Cost (USD)</th>
<th>Cost (USD)</th>
<th>Funding Type</th>
<th>Reporting Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component 2: Strengthen the institutional and operational capacities of the health system</td>
<td>1,643,000 1,560,850 Grant</td>
<td>Public 82,150 Grant</td>
<td>Ministry of Health and FNEC</td>
<td></td>
<td></td>
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<tr>
<td>Component 3: Establish a national early warning system for CC related health risks</td>
<td>3,450,000 3,277,50 Grant</td>
<td>Public 172,500 Grant</td>
<td>Ministry of Health and FNEC</td>
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<tr>
<td>Component 4: Operationalize a CC - health strategy at the community level and ensure patients care</td>
<td>3,650,000 3,467,50 Grant</td>
<td>Public 182,500 Grant</td>
<td>Ministry of Health and FNEC</td>
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<tr>
<td>Component 5: Project Management, Coordination, M&amp;E</td>
<td>707,000 671,650 Grant</td>
<td>Public 35,350 Grant</td>
<td>Ministry of Health and FNEC</td>
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</tbody>
</table>

**Indicative total cost (USD)**: 10,100,000 9,595,000 505,000

For private sector proposal, provide an overview (diagram) of the proposed financing structure.

### C.2. Justification of GCF Funding Request (300 words)

The analysis of economic performance in Benin reveals an average economic growth of 5.5% in 2018[i] against a population growth of 3.5% per year and a poverty rate of 40.2%. The country falls into the category of nations with low development, with a Human Development Index (HDI) of 0.515 in 2018, ranking Benin 163rd out of 189 countries [ii] with a growth rate of the GDP of 6%[iii]. The impact of CC on the agricultural sector (development base) is increasingly damaging the country’s economy, increasing poverty and consequently lowering the level of access to health care.

The level of funding of the health sector from 2009 to 2017 is far from meeting the requirements of the Abuja Declaration which recommends an allocation of at least 15% of the General Budget of the State, and is characterized by a permanent decline ranging from 9% in 2009 to 5.53% in 2017. An
analysis of the national health accounts reveals that households’ share of current health expenditure increased from 42% in 2012 to 52% in 2015 while the State contribution decreased from 24% in 2012 to 20% in 2015 and that of Technical and Financial Partners from 29% in 2012 to 20% in 2015.[iv] This shows the inadequacy of the financial resources devoted to the health sector and the need to use GCF funding to address the CC-related health challenges.

Since 1988, Benin has adopted the cost recovery system under the Bamako Initiative and the financing of the health sector. Thus, the tariffs practiced in public health-care centers are not suitable for the poor, especially in rural areas. This project aims to overcome this state of affairs by improving the equipment of health-care centers and increasing the accessibility of the poor to the health-care service in a CC context. Moreover, the current interventions used in the fight against malaria in Benin (long-lasting impregnated mosquito nets, intra-domiciliary spraying) showed their limits because these measures do not imply national planning that takes into account the negative impacts of CC on the health sector (no significant decrease in incidences). It is therefore important to shift to a more sustainable approach to improve the health of vulnerable populations. This improvement in the health conditions of the poor will increase productivity in the zone of intervention and participate in the improvement of the local economy.

The project activities will not have environmental and social impacts but will help strengthen the natural capital of the area. They focus more on women, children, the elderly and the disabled, who are often the most vulnerable to CC impacts on health. The flagship actions of this project, which are the strengthening of the early warning system, the improvement of the equipment of health-care centers and the capacities of health-care human resources as well as the taking into account of the health situations of vulnerable groups, are all measures which are aligned with the priorities defined in the NDC, the PNDS and the NAPA.


C.3. Exit Strategy and Sustainability (300 words)

The concerns of all key stakeholders and partners in the health sector have been taken into account in the design and formulation of the project. Measures are also planned to ensure their participation in project implementation through community meetings, management committees, NGOs and the steering committee. The participation of the different stakeholders favors their ownership of the project and thus strengthens the sustainability of the project. The investments that will be made in capacity building of human resources will contribute to the qualitative improvement of the medical staff and will thus have a positive impact on the quality of health services. The equipment acquired for the project will be used for several years due to better maintenance provided by the management committees. They will thus contribute for a long time to the improvement of the health of the population. In addition, community and private sector participation in the implementation of activities will contribute to the ownership of project achievements by the population and ensure its sustainability.

Improving the use of health services through the care system for indigents will have a positive impact on the general state of health of the population, a factor that favors the increase in national production.

All individuals trained in various specialties, beyond improving their own skills, will be potential trainers, guaranteeing continuity in knowledge transmission and good professional practices. The new
The development of this concept note has been done in close collaboration between the Accredited Entity, the NDA, the Ministry of Health and NGOs.

In the frame of the development of the concept note, an information workshop for key stakeholders in the health sector (public, private and civil society) was organized in December 2018 to inform about the project development process. This was followed by a competition of ideas for the identification of CC adaptation projects based on a participative effort involving local communities. Following the selection process, an interactive process between the project leaders, the Accredited Entity, the NDA, the public entities in charge of CC and the community-based organizations have made it possible to refine the project ideas selected with the support of specialists. In this context, several consultation sessions were undertaken in the intervention zone (ABD) with: i) representatives of the municipalities, ii) health actors and (iii) representatives of local communities to gather their expectations on identified adaptation needs. The present concept note also benefited from two concept note development workshops facilitated by GIZ and conducted in February and May 2019 respectively in Benin and Senegal with the participation of all stakeholders.

This process made it possible to ensure the commitment of all key stakeholders that include: the Accredited Entity, the NDA, the Ministry of Health and the organizations of the civil society. The same participative method will be continued while writing the full Funding Proposal. In addition, consultations will be conducted at the village level - particularly with women - to ensure that the activities of the project are well aligned with the needs of local communities and contribute to the empowerment of vulnerable people through increased access to the health service.

In the frame of an approval workshop, the concept note has been validated by national and local stakeholders.

D. Annexes

☒ ESS screening check list (Annex 1)
☐ Map indicating the location of the project/programme (as applicable)
☐ Evaluation Report of previous project (as applicable)
Annex 1: Environmental and Social Screening Checklist

**Part A: Risk Factors**

Please indicate your answers to the questions below and provide an explanation on the response selected. In cases when the TBD response has been selected please explain briefly why you are not able to determine now and when in the project cycle the question will be addressed.

If the criteria is not applicable to the project you may write N/A in the justification box.

<table>
<thead>
<tr>
<th>Exclusion criteria</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activities involve associated facilities and require further due diligence of such associated facilities?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>No activity involve associated facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the activities involve trans-boundary impacts including those that would require further due diligence and notification to affected states?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>No activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the activities adversely affect working conditions and health and safety of workers or potentially employ vulnerable categories of workers including women and children?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>No activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the activities potentially generate hazardous waste and pollutants including pesticides and contaminate lands that would require further studies on management, minimization and control and compliance to the country and applicable international environmental quality standards?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>No activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the activities involve the construction, maintenance, and rehabilitation of critical infrastructure (like dams, water impoundments, coastal and river bank infrastructure) that would require further technical assessment and safety studies?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>No activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the activities potentially involve resettlement and dispossession, land acquisition, and economic displacement of persons and communities?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>No activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the activities be located in or in the vicinity of protected areas and areas of ecological significance including critical habitats, key biodiversity areas and internationally recognized conservation sites?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>No activity is located in an area of ecological importance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the activities affect indigenous peoples that would require further due diligence, free, prior and informed consent (FPIC) and documentation of development plans?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>No activity will not affect indigenous people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will the activities be located in areas that are considered to have archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values or contains features considered as critical cultural heritage?</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

GREEN CLIMATE FUND | PAGE 13 OF 17
No activity will not located in area that are considered to have archaeological

### Part B: Specific environmental and social risks and impacts

<table>
<thead>
<tr>
<th>Assessment and Management of Environmental and Social Risks and Impacts</th>
<th>YES</th>
<th>NO</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the E&amp;S risk category of the project been provided in the concept note?</td>
<td>☒</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Has the rationale for the categorization of the project been provided in the relevant sections of the concept note?</td>
<td>☒</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Are there any additional environmental, health and safety requirements under the national laws and regulations and relevant international treaties and agreements?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

In the continuation of the process the necessary investigations will allow to have more elements of answer on the question

| Are the identification of risks and impacts based on recent or up-to-date information? | ☒ | ☐ | |

Documents used to identify risks and impacts are recent

<table>
<thead>
<tr>
<th>Labour and Working Conditions</th>
<th>YES</th>
<th>NO</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activities potentially have impacts on the working conditions, particularly the terms of employment, worker’s organization, non-discrimination, equal opportunity, child labour, and forced labour of direct, contracted and third-party workers?</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
</tbody>
</table>

The activities will have no impact on these cited elements

| Will the activities pose occupational health and safety risks to workers including supply chain workers? | ☐ | ☒ | |

No activity will not pose occupational health and safety risks to workers including supply chain workers

<table>
<thead>
<tr>
<th>Resource Efficiency and Pollution Prevention</th>
<th>YES</th>
<th>NO</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activities generate (1) emissions to air; (2) discharges to water; (3) activity-related greenhouse gas (GHG) emissions, (4) noise and vibration; and (5) wastes?</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
</tbody>
</table>

No activity will not generate emission to air, discharges to water, activity-related greenhouse gas (GHG) emission, noise and vibration; and wastes

| Will the activities utilize significant amount of natural resources including water and energy? | ☐ | ☒ | |

No natural resources, in particular water and energy, will be abused

| Will there be a need to develop detailed measures to reduce pollution and promote sustainable use of resources? | ☐ | ☒ | |

No detailed measures are not need

<table>
<thead>
<tr>
<th>Community Health, Safety, and Security</th>
<th>YES</th>
<th>NO</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the activities potentially generate risks and impacts to the health and safety of the affected</td>
<td>☐</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>communities?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Will there be a need for an emergency preparedness and response plan that also outlines how the affected communities will be assisted in times of emergency?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>It's not necessary</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Will there be risks posed by the security arrangements and potential conflicts at the project site to the workers and affected community?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>No risk</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Land Acquisition and Involuntary Resettlement</td>
<td>YES</td>
<td>NO</td>
<td>TBD</td>
</tr>
<tr>
<td>Will the activities likely involve land acquisition and/or physical or economic displacement?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>No acquisition</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Biodiversity Conservation and Sustainable Management of Living Natural Resources</td>
<td>YES</td>
<td>NO</td>
<td>TBD</td>
</tr>
<tr>
<td>Will the activities potentially introduce invasive alien species of flora and fauna affecting the biodiversity of the area?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>No introduction invasive species of flora and fauna affecting biodiversity</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Will the activities have potential impacts on or be dependent on ecosystem services including production of living natural resources (e.g., agriculture, animal husbandry, fisheries, forestry)?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>No impact on ecosystem</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Indigenous Peoples</td>
<td>YES</td>
<td>NO</td>
<td>TBD</td>
</tr>
<tr>
<td>Will the activities potentially have any indirect impacts on indigenous peoples, ethnic minorities, or vulnerable and marginalized groups?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>No impact</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Cultural Heritage</td>
<td>YES</td>
<td>NO</td>
<td>TBD</td>
</tr>
<tr>
<td>Will the activities restrict access to the cultural heritage sites and properties?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>No restrict access</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Will there be a need to prepare a chance-find procedure in case of the discovery of cultural heritage assets?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>If it's necessary</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Stakeholder engagement and grievance redress</td>
<td>Yes</td>
<td>NO</td>
<td>TBD</td>
</tr>
<tr>
<td>Will the activities include a continuing stakeholder engagement process and a grievance redress mechanism and integrated into the management/implementation plans?</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Activities previous to continue with the stakeholder engagement process</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Part C: Sign Off**
Sign-off: Specify the name and designation of the person responsible for the environmental and social screening and any other approvals as may be required in the accredited entity’s own management system.

BIAOU Mathieu, Vice-President of the Expert Committee in charge of Environmental, Social Monitoring and Gender Approach in FNEC