



## ADAPTATION FUND

AFB/PPRC.21/29  
26 September 2017

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Adaptation Fund Board  
Project and Programme Review Committee  
Twenty-First Meeting  
Bonn, Germany, 10-11 October 2017

Agenda Item 7 b)

### **PROPOSAL FOR BURKINA FASO, MALI**

## Background

1. The Operational Policies and Guidelines (OPG) for Parties to Access Resources from the Adaptation Fund (the Fund), adopted by the Adaptation Fund Board (the Board), state in paragraph 45 that regular adaptation project and programme proposals, i.e. those that request funding exceeding US\$ 1 million, would undergo either a one-step, or a two-step approval process. In case of the one-step process, the proponent would directly submit a fully-developed project proposal. In the two-step process, the proponent would first submit a brief project concept, which would be reviewed by the Project and Programme Review Committee (PPRC) and would have to receive the endorsement of the Board. In the second step, the fully developed project/programme document would be reviewed by the PPRC, and would ultimately require the Board's approval.

2. The Templates approved by the Board (OPG, Annex 4) do not include a separate template for project and programme concepts but provide that these are to be submitted using the project and programme proposal template. The section on Adaptation Fund Project Review Criteria states:

*For regular projects using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project concept. In addition, the information provided in the 1st step approval process with respect to the review criteria for the regular project concept could be less detailed than the information in the request for approval template submitted at the 2nd step approval process. Furthermore, a final project document is required for regular projects for the 2nd step approval, in addition to the approval template.*

3. The first four criteria mentioned above are:

1. Country Eligibility,
2. Project Eligibility,
3. Resource Availability, and
4. Eligibility of NIE/MIE.

4. The fifth criterion, applied when reviewing a fully-developed project document, is:

5. Implementation Arrangements.

5. It is worth noting that since the twenty-second Board meeting, the Environmental and Social (E&S) Policy of the Fund was approved and consequently compliance with the Policy has been included in the review criteria both for concept documents and fully-developed project documents. The proposals template was revised as well, to include sections requesting demonstration of compliance of the project/programme with the E&S Policy.

6. In its seventeenth meeting, the Board decided (Decision B.17/7) to approve "Instructions for preparing a request for project or programme funding from the Adaptation Fund", contained in the Annex to document AFB/PPRC.8/4, which further outlines applicable review criteria for both concepts and fully-developed proposals. The latest version of this document was launched in conjunction with the revision of the Operational Policies and Guidelines in November 2013.

7. Based on the Board Decision B.9/2, the first call for project and programme proposals was issued and an invitation letter to eligible Parties to submit project and programme proposals to the Fund was sent out on April 8, 2010.
8. According to the Board Decision B.12/10, a project or programme proposal needs to be received by the secretariat no less than nine weeks before a Board meeting, in order to be considered by the Board in that meeting.
9. The following pre-concept for a regional project document titled “Adapted Building: Transformative Practices for Better Building in the Sahel” was submitted by the Sahara and Sahel Observatory (OSS), which is a Regional Implementing Entity of the Adaptation Fund.
10. This is the first submission of the proposal. It was received by the secretariat in time to be considered in the thirtieth Board meeting. The secretariat carried out a technical review of the project proposal, assigned it the diary number AFR/NIE/Food/2017/1, and completed a review sheet.
11. In accordance with a request to the secretariat made by the Board in its 10th meeting, the secretariat shared this review sheet with OSS, and offered it the opportunity of providing responses before the review sheet was sent to the PPRC.
12. The secretariat is submitting to the PPRC the summary and, pursuant to decision B.17/15, the final technical review of the project, both prepared by the secretariat, along with the final submission of the proposal in the following section. In accordance with decision B.25.15, the proposal is submitted with changes between the initial submission and the revised version highlighted.

## Project Summary

### Regional (Burkina Faso, Mali) – Adapted Building: Transformative Practices for Better Building in the Sahel

Implementing Entity: Sahara and Sahel Observatory Project/Programme

Execution Cost: USD 475,000

Total Project/Programme Cost: USD 4,030,000

Implementing Fee: USD 285,000

Financing Requested: USD 4,790,000

### Project Background and Context:

The proposed project's objective is to enable community and ecosystems resilience in Burkina Faso and Mali through large-scale dissemination of climate-adapted building solutions in policy and in practices. The project proposed that adapted human settlements to climate change provide better shelter for vulnerable populations, particularly in rural areas. The Nubian Vault approach is a tool for resilient socio-economic development and a solution that ensures a sustainable use of natural resources. Overall, the project aims to generate a transformation of policies and practices among public and private stakeholders in the Sahel to adopt and promote adapted building concepts and techniques.

Component 1: Institutional inclusion of better building practices into national and regional policies (USD 500,000)

Under this Component, the proposal includes improved policies that promote sustainable and resilient human establishments through adapted building, and awareness raising to appropriate building needs and solutions among national policymakers.

Component 2: Implementation of adapted building programmes at the national and local level (USD 2,480,00)

Component 2 will implement plans for adapted building programs and increase availability of better building financial solutions for lower-income populations: microloans and financial incentives.

Component 3: Capacity building and awareness-raising for a better community appropriation of adapted building techniques (USD 1,050,000)

This component targets stakeholders, civil society and local population to raise awareness on the benefit of adapted building and their capacities are enhanced to disseminate and replicate adapted building strategies.



ADAPTATION FUND

## ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Pre-Concept for a Regional Project

Countries/Region: **Regional (Burkina Faso, Mali)**

Project Title: **Adapted Building: Transformative Practices for Better Building in the Sahel** Implementing Entity: **Sahara and Sahel Observatory**

Thematic focal area: **Food security**

Executing Entities: **The Nubian Vault Association, Ministry of the Environment, Green Economy and Climate Change of Burkina Faso, Agency for the Environment and Sustainable Development of Mali**

AF Project ID: **AFR/NIE/Food/2017/1**

IE

Project ID:

Requested Financing from Adaptation Fund (US Dollars): **4,790,000**

Reviewer and contact person: **Daouda Ndiaye**

Co-reviewer(s): **Katya Kuang-Idba**

IE Contact Person(s): **Nabil Ben Khatra**

Review Criteria	Questions	Comments on 23/8/17	Comments on 11/9/17
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol?	Yes. Burkina Faso and Mali are both Parties to the Kyoto Protocol.	
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	Yes. Burkina Faso and Mali are both LDCs in the Sahel region, which is particularly vulnerable to the adverse impacts of climate change.	

<p>Project Eligibility</p>	<p>1. Have the designated government authorities for the Adaptation Fund from each of the participating countries endorsed the project/programme?</p>	<p>Yes, however, Mali’s endorsement letter has been signed by a different official than the AF Designated Authority. <b>CAR</b></p>	<p>CAR: Addressed</p>
	<p>2. Has the pre-concept provided necessary information on the problem the proposed project/programme is aiming to solve, including both the regional and the country perspective?</p>	<p>Not sufficiently addressed. The proponent has not addressed or identified the specific impacts and risks of climate change that the project is intended to confront, nor does it include the perspectives in each of the recipient countries. Further, the proposal does not provide a fully developed overview of how current building and housing practices contribute to climate vulnerability.  <b>CR1:</b> Please expand on the rationale and justification for the project as an adaptation project, by defining the climate change impacts that the project addresses.  <b>CR2:</b> Please include further information on the local context of the countries, localities, and communities where the proposed project will be implemented.</p>	<p>CR1: Not addressed.</p> <p>CR2: Somewhat addressed, but linking the vulnerability of these regions to the project proposal should be clarified.</p>

	<p>3. Have the project/programme objectives, components and financing been clearly explained?</p>	<p>Not sufficiently. The objective does not convey that the project is one which finances concrete adaptation actions. Additionally, a number of the outputs are written as outcomes – particularly Outputs 1.1.1, 1.1.2, 2.1.1, 2.1.2, 2.1.3, 2.3.1, 2.3.2.</p> <p><b>CR3:</b> Please revisit all project outputs and ensure that they are specific, quantifiable and measurable against the project's objectives and outcomes.</p> <p><b>CR4:</b> Please consider editing the proposal in order to ensure coherence throughout the document between the components, outcomes, and objectives, in particular with reference to the Nubian Vault solution. <b>CR5:</b> Please describe the type of design that will be employed as part of the Nubian Vault solution.</p> <p><b>CR6:</b> Please define more clearly how project components will be adapted to the local context while harmonizing approaches across the 2 countries, given this is a regional project. For example, which what level of policymakers are expected to be engaged in Component 1.</p>	<p>CR3: Somewhat addressed, outputs were not quantifiable and measurable.</p> <p>CR4: Mostly addressed.</p> <p>CR5: Addressed, however more detail will be required at later stages.</p> <p>CR6: Somewhat addressed, the proposal makes some claims but does not substantiate them.</p>
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	<p>4. Has the project/programme been justified in terms of how:</p> <ul style="list-style-type: none"> <li>- it supports concrete adaptation actions?</li> <li>- it builds added value through the regional approach?</li> <li>- it promotes new and innovative solutions to climate change adaptation?</li> <li>- it is cost-effective?</li> <li>- it is consistent with applicable strategies and plans?</li> <li>- it incorporates learning and knowledge management?</li> <li>- it will be developed through a consultative process with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund?</li> <li>- it will take into account sustainability?</li> </ul>	<p>The Nubian Vault approach is innovative for the region, and combined with the learning, knowledge, and outreach &amp; awareness raising activities, present a potentially innovative approach to solving housing challenges in the region. The project also is in line with Burkina Faso's Nationally Determined Contribution, which identifies Nubian Vault as a strategy for building resilience in the housing and urban development sector; and Mali's Sustainable Development Framework, which emphasizes buildings and construction. However, the proposal requires clarification in other areas.</p> <p><b>CR7:</b> Please clarify how the project, including training, policies, and development aspects of the outcomes deliver concrete and lasting results on adaptation.</p> <p><b>CR8:</b> Please elaborate on the pilot projects' housing and building components, and to the extent possible, integrate the intended activities into the proposed project's three components.</p> <p><b>CR9:</b> Please clarify why Burkina Faso and Mali present conditions for largescale dissemination of adaptive housing systems.</p> <p><b>CR10:</b> Please include a justification for why this project is cost effective in comparison to viable alternatives.</p> <p><b>CR11:</b> Please provide additional clarification on how the project will</p>	<p>CR7: Not addressed. It is still not clear how the measures in the project are intended to deliver concrete and lasting results that address the impacts of climate change.</p> <p>CR8: Somewhat addressed, however the project should clarify its approach.</p> <p>CR9: Not addressed as this has not been justified.</p>
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		<p>integrate markets and income generation activities to ensure sustainability of the project.</p> <p>Some envisaged activities (1.2.3 pilots</p>	<p>CR10: Not addressed, while the type of housing may be cost-effective, the project's funds are going towards various activities that assume they will lead to greater use of the Nubian Vault approach.</p> <p>CR11: Not addressed or substantiated.</p>
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construction and 2 3 3 microcredit)

	5. Does the pre-concept briefly explain which organizations would be involved in the proposed regional project/programme at the regional and national/sub-national level, and how coordination would be arranged? Does it explain how national institutions, and when possible, national implementing entities (NIEs) would be involved as partners in the project?	Yes. Burkina Faso's Ministry of Environment, Green Economy and Climate Change and Mali's Agency for the Environment and Sustainable Development will be members of the project Steering Committee and will be directly involved in project implementation.	
Resource Availability	6. Is the requested project / programme funding within the funding windows of the pilot programme for regional projects/programmes?	Yes. However, please revise the requested Project Formulation Grant amount, as it cannot exceed US\$ 20,000 for pre-concepts. <b>CAR2</b>	CAR2: Addressed.
	7. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 20 per cent of the total project/programme budget?	Yes, both fees together total around 15%.	
Eligibility of IE	8. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	Yes.	

<b>Technical Summary</b>	<p>The <i>Adapted Building</i> project aims to transmit the appropriate tools to induce large-scale deployment of adaptive technical solutions, particularly the Nubian Vault solution, for more sustainable and resilient building practices. The project aims to increase the resilience of the building and housing sectors. The project addresses decreasing wood supply in areas affected by deforestation and desertification, by encouraging more sustainable and resilient building practices with alternative materials.</p> <p>The project is structured around two components: (1) Improving policy making at the institutional level for the inclusion of resilient and adapted housing principles; and (2) Transformation of the building sector value chain for</p>
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community resilience in housing. Activities include: awareness-raising and market development for beneficiary populations and local authorities, vocational training on building sites and in-class modules, capacity-building and skills strengthening, scaling of financial tools for accessibility of adaptive solutions to low-income rural populations.

While the project seems to be an important one for the region, the technical review finds that several elements of the project design would benefit from further elaboration to strengthen the adaptation rationale of the project, as well as a clearer description of why the chosen activities and approach address the vulnerability of the two countries and intended beneficiaries of the project.

The following clarification requests (CRs) and corrective action request (CAR) are made:

**CAR1:** Please provide the letter of endorsement from the Designated Authority for Mali.

**CR1:** Please expand on the rationale and justification for the project as an adaptation project, by defining the climate change impacts that the project addresses.

**CR2:** Please include further information on the local context of the countries, localities, and communities where the proposed project will be implemented.

**CR3:** Please revisit all project outputs and ensure that they are specific, quantifiable and measurable against the project's objectives and outcomes.

**CR4:** Please consider editing the proposal to ensure coherence throughout the document between the components, outcomes, and objectives, in particular regarding the Nubian Vault solution.

**CR5:** Please describe the type of design that will be employed as part of the Nubian Vault solution.

**CR6:** Please define more clearly how project components will be adapted to the local context while harmonizing approaches across the 2 countries, given this is a regional project. For example, which what level of policymakers are expected to be engaged in Component 1.

**CR7:** Please clarify how the project, including training, policies, and development aspects of the outcomes deliver concrete and lasting results on adaptation.

**CR8:** Please elaborate on the pilot projects' housing and building components, and to the extent possible, integrate the intended activities into the proposed project's three components.

**CR9:** Please clarify why Burkina Faso and Mali present conditions for large-scale dissemination of adaptive housing systems.

**CR10:** Please include a justification for why this project is cost effective in comparison to viable alternatives.

**CR11:** Please provide additional clarification on how the project will integrate markets and income generation activities to ensure sustainability of the project.

**CAR2:** Please revise the requested Project Formulation Grant amount, as it cannot exceed US\$ 20,000 for pre-concepts.

	<p>The revised proposal has resolved some of the clarification requests made in the initial technical review. However, the final project review finds that the proposal should strengthen the justification of the approach and rationale of the project as to how they will deliver concrete adaptation outcomes. The lack of baseline and situation analysis renders the project activities unsubstantiated in the context of the prevalent climate change impacts in the two countries.</p>
Date:	<b>11 September 2017</b>



# PRE-CONCEPT FOR A REGIONAL PROJECT/PROGRAMME

## PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Adapted Building: Transformative Practices for Better Building in the Sahel
Countries:	Burkina Faso, Mali
Thematic Focal Area <sup>1</sup> :	Food Security <i>Choose an item.</i>
Type of Implementing Entity:	Regional
Implementing Entity:	Sahara and Sahel Observatory
Executing Entities:	Nubian Vault Association, Ministry of Environment, Green Economy and Climate Change (Burkina Faso), Agency for the Environment and Sustainable Development (Mali)
Amount of Financing Requested:	4,790,000 (in U.S Dollars Equivalent)

### Project / Programme Background and Context:

In Sahelian Africa, access to adapted housing is difficult, and climate changes have increased the gravity of the issue: wood resources are imperilled by construction needs, inadequate materials render living conditions even more precarious, and buildings are nearly never considered in a sustainability and resilience perspective. This frailty of housing systems – **which include private housing, community buildings and production infrastructures** – imprisons populations in vicious circles of poverty and vulnerability to climate changes.

Housing issues affect all types of human establishments (HE) in the Sahel, but rural areas know specific challenges, many linked to climate change:

- The need to preserve depleted wood resources in an area undergoing fast deforestation and desertification (for economic production as well as community wellbeing and resilience): building practices must adapt to changes in available resources and offer improved energy efficiency.
- The need for adapted agricultural infrastructures, in particular food and products storage (food and income security): local productions are too often destroyed because of their storage in inadequate buildings incapable of providing shelter from increasing heat, wind and violent rains. Furthermore, adaptive systems must be embedded into the socio-economic models that prevail, including self-building practices,<sup>2</sup> informal artisanship, and local employment for youths.

There is today no integrated policy in either of the countries addressing the challenge, due mainly to lack of knowledge regarding the issue and alternative solutions. Individual initiatives, such as that of the Nubian Vault Association, have been developed, but need today the means and support for coordinated national and regional scaling, to match the scope of the issue.

<sup>1</sup> Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance. <sup>2</sup>

Self-building refers not exclusively to building one's own home, but to most informal economy practices, such as the work of experienced yet not formally certified artisans. It is the most prevalent system in Sahel, and Burkina Faso has set its promotion as an objective, recognizing its value for disseminating good practices and supporting economic growth (National Housing Construction Plan, Component 2).

Context: The project will take place in Burkina Faso and Mali, in 11 regions (Burkina: rural communities of Sabou, Koubri, Bama, Yako, Dédougou; Mali: areas of Segou, San, Banamba, Dioïla, Koutiala, Sikasso) to build country-wide deployment with regional interaction. All these localities face the same challenges regarding climate change and natural resources. Target populations are mainly rural communities in the Sahel, especially smallholder farmers with low incomes and strongly affected by climate change and its impact on ecosystems, which influences their income (agricultural production and storage) and living conditions (weak resilience to adverse weather). The agricultural sector employs between 75 and 85% of the population of these countries. 2.5 million people in Burkina Faso and 3 million people in Mali are subject to systemic food insecurity consistently exacerbated by climate change (USAID 2016).

**Project / Programme Objectives:**

The proposed project’s objective is to enable community and ecosystems resilience in Burkina Faso and Mali through large-scale dissemination of climate-adapted building solutions in policy and in practices. Adapted human settlements to climate change provide better shelter for vulnerable populations, particularly in rural areas. The Nubian Vault approach is a tool for resilient socioeconomic development and a solution that ensures a sustainable use of natural resources.

Overall objective: Generate a transformation of policies and practices among public and private stakeholders in the Sahel to adopt and promote adapted building concepts and techniques.

Component 1: Institutional inclusion of better building practices into national and regional policies.

Component 2: Implementation of adapted building programmes at the national and local level.

Component 3: Capacity building for community appropriation of adapted building.

**Project / Programme Components and Financing:**

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US\$)
1. Component 1: Institutional inclusion of the new adapted building strategies. national and regional policies	Outcome 1.1: Improved sustainable and resilient human establishments through adapted building	1.1.1: A regional adapted housing strategy is designed for Sahel-wide replication. Mali practices into national and regional policies promote and integrated into climate adaptation action plans of the specific areas	Burkina Faso	250,000 \$
	Outcome 1.2: Increased appropriate solutions	1.1.2: Mainstreaming of the new adapted building in national and regional policies 1.1.3: National resilient building needs are identified and developed that the national habitat	Burkina Faso	250,000 \$
Component 2: Implementation of	Outcome 2.1: Adaptive	2.1.1: Identification of the targeted sites and design of the “master plan”.	Burkina Faso	1.850,000 \$

adapted building buildings are 2.1.2: Development of the architectural plans of the Mali programmes at  
the implemented for identified buildings.  
national and local the benefit of 2.1.3: Buildings are constructed by qualified local level  
vulnerable artisans, with community participation.  
populations. 2.1.3: Information workshops are organized among  
local authorities  
2. 1.4: Construction needs, clients, builders are identified (supported or autonomous  
market) Outcome 2.2: 2.2.1: Establishment of micro-enterprise for building  
Burkina 630,000 \$  
Increased materials production Faso,

	availability of better building financial incentives for financial microloans and financial	2.2.2: Awareness actions and training for public and micro-financial institutions within targeted areas 2.2.3: Adaptive housing microcredit tools and solutions for financial incentives to better building practices are lower-income deployed among identified target populations populations: 2.2.4: Building for each unit in 2.3.3. of a private microloans and house, inducing direct practice transformation among end-user beneficiaries incentives	Mali	
and awareness-raising for a better trained and appropriation of building technique	3. Component 3: modules building method for stakeholders and actors are production process and techniques handle the building building beneficiaries (local population and masons) techniques 3.1.4: Training modules for other building stakeholders and entrepreneurial issues (local authorities, conventional building businesses, architects, etc.)	Outcome 3.1: 3.1.1: On-site and in-class technical training Capacity building The targeted to the NV adapted Burkina 750,000 \$ Faso, and conventional artisans community adapted	Mali	
	Outcome 3.2: The targeted stakeholders, civil society and local population informed and sensitized on the benefit of capacities are enhanced to disseminate and replicate adapted building strategies	3.2.1: Development of a sensitization and awareness strategy for population (farmers' organizations, women's groups, local NGOs) and local authorities (village, town and district councils) 3.2.2: Design and development of communication are tools 3.2.3: Implementation of awareness raising campaigns VN and their	Burkina Faso, Mali	300,000 \$
4. Project/Programme Execution cost	475,000 \$			
5. Total Project/Programme Cost	4,030,000			
6. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)	\$			285,000 \$
<b>Amount of Financing Requested</b>				<b>4,790,000 \$</b>
				\$

**Project Duration: (In years and months) 4 years (48 months)**



## PART II: PROJECT / PROGRAMME JUSTIFICATION

### COMPONENTS

The *Adapted Building* project presents 3 components: (1) Institutional inclusion of better building practices into national and regional policies, (2) Implementation of adapted building programmes at the national and local level and (3) Capacity building and awareness-raising for a better community appropriation of adapted building techniques.

The project components are structured as follows:

#### **Component 1**

**Outcome 1.1: Improved policies are developed that promote sustainable and resilient human establishments through adapted building**

1.1.1: A regional adapted housing strategy is designed for Sahel-wide replication.

1.1.2: Mainstreaming of the new adapted building in the national habitat strategies.

1.1.3: National resilient building needs are identified and integrated into climate adaptation action plans of the specific areas

**Outcome 1.2: Increased awareness to appropriate building needs and solutions among national policymakers**

1.2.1: Advocacy and awareness raising action plan and tools on the proposed adapted building are developed for the benefit of policy makers.

1.2.2: Sensitization of policy makers and stakeholders on the added value and the techniques of the proposed adapted building

1.2.3: Knowledge exchange platform for regional use is designed to share best practices in adapted building techniques. **Component 2:**

**Outcome 2.1: Adaptive buildings are implemented for the benefit of vulnerable populations.** 2.1.1:

Identification of the targeted sites and design of the “master plan”.

2.1.2: Development of the architectural plans of the identified buildings.

**Outcome 2.2: Increased availability of better building financial solutions for lower-income populations: microloans and financial incentives**

2.2.1: Establishment of micro-enterprise for building materials production

2.2.2: Awareness actions and training for public and micro-financial institutions within targeted areas 2.2.3:

Adaptive housing microcredit tools and financial incentives to better building practices are deployed among identified target populations

2.2.4: Building for each unit in 2.3.3. of a private house, inducing direct practice transformation among end-user beneficiaries **Component 3:**

**Outcome 3.1: The targeted stakeholders and actors are trained and handle the building technique**

3.1.1: On-site and in-class technical training modules to the NV adapted building method for local youths and conventional artisans

3.1.2: Training-of-trainers on building material production process and techniques

3.1.3: Organization of training session for the final beneficiaries (local population and masons) 3.1.4:

Training modules for other building stakeholders and entrepreneurial issues (local authorities, conventional building businesses, architects, etc.)

**Outcome 3.2: The targeted stakeholders, civil society and local population are informed and sensitized on the benefit of VN and their capacities are enhanced to disseminate and replicate adapted building strategies**

3.2.1: Development of a sensitization and awareness strategy for population (farmers' organizations, women's groups, local NGOs) and local authorities (village, town and district councils)

3.2.2: Design and development of communication tools

## INNOVATION

At the core of the project is the Nubian Vault building alternative, an ancestral construction technique revived, simplified and standardized by AVN for dissemination among Base of Pyramid populations in the Sahel region, mainly rural populations living with under \$2 PPP/day.

The Nubian Vault is an all-earth construction technique, designed on a simple modular model: each element is a room of 3.25m wide and any length, with a vaulted ceiling and terraced roof. Elements can be combined to create large buildings (largest today is 470 m<sup>2</sup>) adapted for various uses. NVs exist today as private homes, schools, offices, produce storage houses, hotels, health centres, etc. NVs are simple to build and the technique can be learned by anyone without technical or educational background within the target populations.

The Nubian Vault answers a number of challenges these populations face today, climate adaptation being prevalent among these, with two main factors:

- Increase in temperature extremes & violent weather episodes (rain, winds, etc.) that significantly diminish already precarious living conditions and productivity settings (food and produce storage, health services, education, commercial production, etc.).
- Disappearance of wood and straw, used for traditional architecture, today commonly replaced by cement blocks and metal sheets, despite their inadequacy.

The introduction of the NV solution is an innovative answer to climate challenges in the Sahel, empowering communities to tackle the climate challenges they face using near vernacular knowhows and locally embedded systems. Rewarded by the World Habitat Award (UN-Habitat, BSHF), its value has already been demonstrated through practice: local dissemination projects have led to 2,500 buildings constructed, and 700 active masons and apprentices across the Sahel.

## RESILIENCE, SUSTAINABILITY AND CO-BENEFITS

**The main impact of the project is the increase communities' resilience** in rural areas of the Sahel: climate-adapted buildings signify better living conditions for all, in particular vulnerable BoP populations. This includes private housing, but also community buildings and workplaces, with associated benefits: **increased productivity in agricultural and commercial activities, food security (storage), increased income and savings on building renovation and materials replacement, improved health care and education services.**<sup>2</sup> Another set of co-benefits rests in the compatibility of the NV building technique with local apprenticeship systems, enabling rural youths to **learn and practice an income-generating trade** in local circuits, curbing rural exodus. **Environmental impacts:** Deforestation and desertification in both countries make alternatives to tree cutting for construction imperative. The NV solution preserves resources that contribute to communities' wellbeing and economic growth (Shea, Gum Arabic or other productive trees).

The project includes **concrete adaptation actions** to be conducted, including housing and building components created within existing green growth projects (Burkina's Eco-Villages and Mali's PGRNCC project) and community-led construction, leading to several thousands of houses built.

**Sustainability is integrated** into the project design: the market creation approach ensures impacts beyond the end-term of the project, through income-generating activities for the beneficiaries. Housing is a long-lasting investment and introducing adaptive practices benefits several generations.

The housing market is perennial by nature; currently the NV market growth is measured at approximately +30%/year (average over last 12 yrs), offering increasingly strong economic opportunities for local craftsmen. Around 1,000 apprentices, masons, entrepreneurs will be trained in this project, spearheading a booming economic green sector. Appropriation of the NV method by local CSOs leads to communities' ability to replicate better building practices in all autonomy.

## CONSULTATION & COMMUNITY PARTICIPATION

Consultations will be organized to ensure coherence of the project's aims with beneficiary communities' needs (these include farmers', women's and masons' coops). AVN's 17 years of experience disseminating the NV concept within 800 towns and villages of the Sahel ensures

<sup>2</sup> In schools in particular, teachers testify that pupils have better academic results in Nubian Vault buildings

relevance of the project. Communities participate to the project via construction projects (provision of materials and workforce) and dissemination of the NV concept (relay-persons, CSOs, clients).

## REGIONAL VALUE

The project serves as a **momentum initiator** for the entire Sahel region, which knows the same challenges regarding climate adaptation needs, housing inadequacy and lack of integrated approaches in policy-making. **Burkina Faso and Mali present today the best conditions for large-scale dissemination of adaptive housing systems**: first generations of trained NV masons and artisans in addition to the political will in order to develop a large-scale approach to its appropriation, both nationally and in regional collaboration. The participation of the Min. of Environment of Burkina Faso and the AEDD of Mali ensure the integration, *at governmental level*, of adapted housing policies into adaptation strategies. Cross-border cooperation will be ensured through regular steering committee meetings. The NV solution has been introduced in 4 other countries of the region, Senegal, Benin, Ghana and Mauritania. Other LDCs (Sudan, Chad) have expressed their interest in developing similar national and regional strategies for adaptation of building and HE sectors. Regional impact is furthermore called for by the international community's support to Sahelian integration ('Alliance for the Sahel', EU Trust Fund for the Sahel, etc.), aiming at sustainable development and security.

## COHERENCE WITH NATIONAL POLICIES AND STANDARDS

The project is coherent with national development, climate adaptation and housing strategies in both countries. Burkina Faso has inscribed the Nubian Vault in its NDC to strengthen a vulnerable housing and urban development sector.<sup>3</sup> Mali has set a similar emphasis on adaptation of building methods in its Sustainable Development Framework: promotion of local materials, energy efficiency and the NV solution.<sup>4</sup> Mali's NAPA identifies the promotion of income-generating activities as a key basis for adaptation, associated to a "technology package to train people on simple adaptation" actions, which matches exactly the proposed project's *modus operandi*. **Operational implementation of these ambitions is yet to be fully developed in both these countries, and is the purpose of the present project**. This proposal can be tied to specific initiatives as well: in particular, it will support the integration of housing components into Burkina Faso's Eco-Village project and Mali's National Resource Protection project (PGRNCC), which are today still lacking despite the stated ambition to create sustainable HEs. The project also aims to help develop integrated standards in areas closely connected to housing, which today fail to support adaptive practices: building standards, energy efficiency, sustainable land management, self-building, etc.

## COST EFFECTIVENESS

Housing is a considerable investment in all contexts, its long-lasting nature and heavy environmental impact justify careful consideration of sustainability issues at conception. In rural settings and for individual homes, the NV solution can be up to 50% cheaper than conventional building techniques, through the participation of the population in the building process (providing materials and unskilled workforce). For community and urban buildings, this ratio is diminished due to technical necessities, but the durability and low-maintenance of the finished structure make it a better longterm investment, with the addition of adaptive co-benefits. Furthermore, the promotion of local materials and workforce creates endogenous economic growth. This project supports improved policies in this field for more efficiency in national and regional building/housing initiatives.

## LEARNING AND KNOWLEDGE MANAGEMENT

The proposed project is one of knowledge, information and skills transmission to a variety of stakeholders, from national public institutions to local smallholder communities. Technical and methodological capitalization is necessary for its short and long-term effectiveness. It is ensured by AVN and the Steering committee, in open source for replication to other Sahelian countries.

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<sup>3</sup> Priority n°9, with stated targets of 20,000 individual homes and 2,000 community buildings (see esp. pp. 3, 33, 44)

<sup>4</sup> *Cadre Stratégique pour la Relance Economique et le Développement Durable 2016-2018*, Objective 26, page 100

## PART III: IMPLEMENTATION ARRANGEMENTS

The management and implementation arrangements of the project are as follows:

- The Sahara and Sahel Observatory (OSS), Regional Implementing Entity, is in charge of the overall supervision of the project and the connection between project partners and the Adaptation Fund. It is also part of the project Steering Committee.
- The Nubian Vault Association (AVN) serves as regional coordinator for the project, in charge of ensuring effective design and implementation of activities, coordinating partners' engagement and all financial, monitoring and reporting aspects to the Adaptation Fund. It leads the project Steering Committee. It is also Executing Entity, contributing its knowledge and experience in dissemination of adaptive housing practices in the Sahel.
- National entities (Burkina Faso: Ministry of Environment, Green Economy and Climate Change, Mali: Agency for the Environment and Sustainable Development) participate in the implementation of the project, and are also direct beneficiaries of component 1.



A project Steering Committee is to be set, composed of each abovementioned institutions, in order to monitor the effective implementation of the project, and contribute to capitalization and experience-sharing activities. It will meet on a regular basis in either Burkina Faso or Mali.

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

### A. Record of endorsement on behalf of the government<sup>6</sup>

<i>Ambroise KAFANDO, Director General of Cooperation, Ministry of Economy, Finance and Development, Burkina Faso</i>	Date: July 21 <sup>st</sup> , 2017
<i>Boureïma CAMARA, Director General, Environment and Sustainable Development Agency, Mali</i>	Date: July 28 <sup>th</sup> , 2017

### B. Implementing Entity certification

<p>I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (NAPAs) and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project in compliance with the Environmental and Social Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project.</p>	
<p>Implementing Entity Coordinator  <b>Mr. Khatim KHERRAZ</b>                  Executive Secretary SAHARA AND SAHEL OBSERVATORY (OSS)</p> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;"> <p>Signature:</p>  </div> <div style="text-align: center;">  </div> </div>	
Date: (Month, Day, Year)  <b>August 4<sup>th</sup>, 2017</b>	Tel. and email  (+216) 71 206 633 <a href="mailto:boc@oss.org.tn">boc@oss.org.tn</a>
Project Contact Person: <b>Mr. Nabil BEN KHATRA</b>	
Tel. and email: (+216) 71 206 633 <a href="mailto:nabil.benkhatra@oss.org.tn">nabil.benkhatra@oss.org.tn</a>	

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

MINISTERE DE L'ENVIRONNEMENT,  
DE L'ASSAINISSEMENT ET DU  
DEVELOPPEMENT DURABLE

Agence de l'Environnement et du  
Développement Durable (AEDD)



N° 1291 /MEADD/AEDD-FVC

REPUBLIQUE DU MALI  
*Un Peuple - Un But - Une Foi*

Bamako, le 28 JUIL 2017

*The Director General of the Environment  
and Sustainable Development Agency*

To

The Adaptation Fund Board  
c/o Adaptation Fund Board Secretariat  
Email : [Secretariat@Adaptation-Fund.org](mailto:Secretariat@Adaptation-Fund.org)  
Fax: 202 522 3240/5

**Subject : Endorsement for the project “Adapted Building: Transformative Practices for Better Building in the Sahel”.**

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

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the Sahara and Sahel Observatory and executed by the Nubian Vault Association, the Ministry of the Environment, Green Economy and Climate Change of Burkina Faso, and the Agency for the Environment and Sustainable Development of Mali.



The Director general

**Boureïma CAMARA**  
Chevalier de l'Ordre National



**BURKINA FASO**  
Unité - Progrès - Justice

Ouagadougou, le

21 JUL 2017

### Letter of Endorsement by Government

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

Subject: Endorsement for the project "Adapted Building: Transformative Practices for Better Building in the Sahel"

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

Accordingly, I am pleased to endorse the above project/programme proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by the Sahara and Sahel Observatory and executed by the Nubian Vault Association, the Ministry of the Environment, Green Economy and Climate Change of Burkina Faso, and the Agency for the Environment and Sustainable Development of Mali.

Sincerely,

**Monsieur Ambroise KAFANDO**  
Fund National Designated Authority  
Director General of Cooperation  
Of Minister of Economy, Finance and Development  
03 BP7063 Ouagadougou 03-Tél: (226)25 33 30 16  
Fax: (226) 25 31 54 09  
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