



COALITION ROADMAP

Sustainable Buildings and Construction in Africa

Co-pilots of the coalition: Global Alliance on Building and Construction (GABC)

This 2021/2022 Roadmap aims to boost dynamic action towards the next Climate Chance Summit – Africa where the new objectives and concrete examples will be presented to influence the revision of the Nationally Determined Contributions (NDCs) ahead of COP26 in November.

I – WHERE ARE WE NOW?

The Building and Construction Sector in Africa

Globally, emissions from the building sector increased by 1.5% in 2019 (10.08 GtCO₂) due to a growth demand in electricity from household appliances and air conditioning. Energy efficiency gains (~1%/year) do not offset this growth, and investment in energy efficiency could decrease by 10% in 2020.¹ There is a lot at stake in how buildings are designed and constructed going ahead, especially in Africa, where 80% of the buildings that will exist in 2050 are yet to be built.²

In 2018, the building sector in Africa accounted for 61% of final energy use and 32% of energy-related carbon dioxide (CO₂) emissions, not accounting for emissions from manufacturing building materials and products such as steel, cement and glass.³ At the same time, factors like reliability of energy infrastructure, which is critical to health, industrial development and economic growth, expanding access to clean cooking fuels, and improving quality of and access to housing also need to be considered.

Takeaways from the 2018 Workshop of the Coalition in Abidjan

At the Coalition's workshop in Abidjan in 2018, where the initial roadmap of the coalition was co-created with inputs from the coalition members, several points were raised under the following key areas:

- **Public policy and multilevel governance:** the need to integrate the issue of adaptation into discussions on housing and sustainable housing in Africa; the need for collaboration between policy-makers, urban planners, architects and other stakeholders all along the construction value chain; and the need to consider land tenure and land availability which are often based on customary

¹ [Climate Chance Observatory](#), 2020.

² [World Green Building Council](#), *n.d.*

³ [IEA](#), 2019.



law, were also identified.

- **Training and capacity building side:** the need to identify the types of architecture that are adapted to specific regions and disseminate this information, and integrate sustainability right from the design phase to include bio-sourced materials and passive energy efficiency were highlighted. There was also a consensus on the importance awareness-raising among national decision-makers, local authorities, citizens to change attitudes around buildings with locally-sourced materials, but also at all levels of the construction sector (architects and companies but also informal craftsmen, in rural as well as urban areas) so that they appropriate construction techniques. **Materials and technologies:** Imported, expensive and polluting materials, which do not suit local conditions need to be identified, and local and sustainable alternatives, like banco or raw earth need to be scientifically researched, promoted, and the use of these materials incentivized.

The 2019 Workshop of the Coalition in Accra, confirmed the stakes and opportunities identified in 2018, and reiterated the importance of the Buildings and Construction sector in Africa's sustainable and resilient future. As states by H el ene Sabathi e Akonor, from ADEME, at the 2019 workshop, energy-efficient and environmentally friendly buildings can also help in meeting different **Sustainable Development Goals**, namely:

- SDG 1. Reduce poverty by creating jobs in building construction,
- SDG 3. Good health and well-being: quality of the indoor environment,
- SDG 4. Quality education: improving our school buildings to make them comfortable,
- SDG 5. Clean water and sanitation: helping to store water,
- SDG 7. Affordable and clean energy,
- SDG 8. Decent economic growth: green jobs with recycling of building materials,
- SDG 11. Sustainable Cities: Green buildings are the fabric of sustainable communities,
- SDG 12. Responsible consumption and production: circular principles for the production of materials,
- SDG 13. Climate Action, through energy efficient and carbon neutral buildings
- SDG 15. Life on Earth: Green buildings improve biodiversity
- SDG 17. Partnerships to achieve objectives

Additionally, the Coalition's first Virtual Workshop in 2020, at the launch of the GABC's Regional Roadmap for Africa, also highlighted that the "new normal" post-COVID would ideally consist of sustainable and resilient cities, which are much more people-centred. Buildings should be adapted to be more energy efficient, and international climate finance could possibly be channelled into the building sector to finance the construction/renovation of energy efficient buildings. Cities and local governments in Africa stand to benefit greatly from joining global alliances and networks, and sharing a common vision and targets, and speaking a common language in terms of action to be taken.



II – WHERE DO WE WANT TO GO?

The 2021 objectives of the Sustainable Buildings and Construction Coalition can be divided into three groups as follows, progressively broadening the scope of action:

Potential for synergy in the coalition

-Objective 1: Developing tools that strengthen synergies between the various stakeholders, to cover the construction of new buildings as well as the maintenance and optimisation of the existing building stock

- Objective 2: Mobilising various actors including government representatives for national policy, local authorities for local implementation purposes, civil society actors, construction actors with adapted techniques, the entire supply chain (architects, companies, informal masons, engineers, craftsmen's cooperatives, etc.), housing cooperatives, banks, insurance companies, educational institutions (vocational training scheme), real estate developers, traditional and religious leaders, who are close to the people and have the capacity to mobilize.

Key issues and levers to action

-Objective 3: Overcoming the lack of information and data on local and bio-sourced materials and technologies, and sharing information on best practices and replicable models.

-Objective 4: Promoting capacity building at every level of intervention in buildings and construction, and also in project management, implementation and reporting, to improve access to international financing

-Objective 5: Promoting access to financing adapted to sustainable buildings, particularly smaller funds adapted to local actors, and incentivising local and bio-sourced materials.

Beyond a Coalitions Roadmap: Country-specific roadmaps and contributing to NDCs

-Objective 6: Drafting and implementing country-specific roadmaps, drawing from the GABC Regional Roadmap for Africa, possibly starting with Senegal.



-Objective 7: Contributing to the Nationally Determined Contributions of various African countries through concrete actions from the building and constructions sector that can contribute to GHG mitigations

III – HOW DO WE GET THERE?

It is necessary to be realistic about the capacity of actors to mobilise in collective dynamics, without a dedicated facilitator 100% of his time. The Climate Chance Association cannot provide a full-time human resource and relies on the **actors involved in the coalition**. As such, it is proposed to target only **two or three actions** to be included in the 2021-2022 Roadmap in order to be realistic and to be able to measure progress.

- **Action 1: Creating a network of actors**

We propose that coalition members continuously map interesting actors, best practices, high impact, scalable and replicable projects in the Buildings and Construction sector. Climate Chance could promote these initiatives through its [Cartography for Action](#), the [Climate Library](#), publications in the [Observatory's Synthesis Reports](#) or social media posts on Climate Chance's pages. These projects will also be promoted through our Portal of Action, and more broadly, they will be able to inspire the community of non-state actors that are part of the coalition. To share a project, [simply fill in this form](#).

- **Action 2: Disseminating information**

Information related to Buildings and Construction in Africa

Since 2018, a mailing list batiment-constructions.Af@climate-chance.org has been set up to promote exchanges between coalition actors. This mailing list allows members to share all relevant information on the sector: funding opportunities, calls for projects, training opportunities, interesting events, etc. Today, it counts around 300 members and is mainly run by the Climate Chance team.

Coalition members are strongly encouraged to share any information that could be useful to other members.

Information related to funding opportunities for Buildings and Construction projects

As mentioned in previous Workshops, coalition members feel the need to improve **their access to funding-related information**. Indeed, in order to try to respond to this major issue, Climate Chance is preparing in 2021, a preparatory study on an Accessible Climate Finance Portal for non-state actors. This Portal will be designed to continuously disseminate current financing opportunities for non-state actors in the African region. To make this Portal as efficient and useful as possible, Climate Chance is open to any suggestions from coalition members on the desired criteria of this Portal (types of funds, duration etc) and would also like to know more about the obstacles often encountered by non-state actors in their search for funding.



CLIMATE CHANCE

- **Action 3: Actively seeking funding and partners to launch a country-roadmap in Senegal**

On the basis of the GABC Roadmap, Climate Chance is seeking local technical and financial partners to eventually develop a Senegalese roadmap, which could provide a vision for the buildings and construction sector in the country, and could possibly be replicated in other countries later on.

3 Examples of on-the-ground projects

La Voûte Nubienne

La Voûte Nubienne makes use of an ancestral African technique that has long been used in the Sahelian areas. This technique uses only local materials, the main one being soil. The process is simplified and standardized: in terms of building width, the length is modular. The houses are more comfortable in terms of thermal, acoustic and sanitary comfort, but also resistant to violent climatic episodes. This labour-intensive technique requires few machines, only sun-dried earth brick moulds.

The core target of the project is rural areas, and very poor households. It is still possible to build in urban areas, since it is a very modular technique for building multi-storey buildings or collective buildings. The aim is to create a market dynamic by training a profession in this technique, and to create a demand by raising awareness among the populations and project owners.





CLIMATE CHANGE

Elementerre



Elementerre manufactures ecological building materials in Senegal, by training workers and then implementing the use of these in constructions ranging from individual villas to apartment buildings, as well as school facilities and health structures. The aim is to develop and democratise the eco-construction sector in Africa by marketing "ready-to-use" ecological building materials, such as raw earth bricks, typha insulating panels, typha cinder blocks, etc. In parallel, Elementerre also trains workers on how to use these materials. The initiative therefore consists in creating units for the production and sale of these ecological materials in Africa.

TyCCAO

Presented at the 2019 workshop the coalition in Accra, TyCCAO (Typha Combustible Construction Afrique de l'Ouest) is a project that promotes the use of Typha, an invasive plant that is found in plenty, to be used as a combustible and material in the construction of buildings as an insulating material. This acts as a sustainable building material while also curbing the uncontrolled growth of typha and related problems. The project is being phased in 5 pilot countries in Africa.

The use of typha in construction represents an opportunity to replace materials of fossil origin (oil derivatives or materials from quarries), whose production industry is highly carbon-intensive (cement production is responsible for 5 to 10% of global CO₂ emissions). The use of typha-based materials in the new construction and renovation markets also contributes to improving the energy efficiency of buildings (the thermal conductivity of the material gives it good thermal insulation properties), but also to the comfort of the inhabitants (in particular in relation to the good hygrothermal and phase-shifting capacities of the material).⁴



⁴ [TyCCAO](#), n.d.