



2021 Coalition Roadmap

Adaptation and Water in Africa

Coalition Eau, Eau Vive, OIF/IFDD, OFQJ, FWP, RECOJAC, RC&D, ICLEI Africa

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) planned for COP26 in November.

I – WHERE ARE WE NOW?

Adaptation and Water issues in Africa

The impacts of climate change on water resources in Africa are and will be multiple, and with strong contrasts across the continent, accentuating already existing water imbalances and highlighting deficits in infrastructure and equipment¹. The proportion of the African population that could face water stress is on the rise. Across the globe, 3.6 billion people² (nearly half the global population) are currently living in areas that go through water scarcity for one month each year. According to UNESCO, *“this population could increase to some 4.8–5.7 billion by 2050.”* making this problem more pressing than ever.

At the same time, the African continent's population is rapidly becoming more urban. By 2040, nearly 6 out of 10 Africans will live in cities, exacerbating the issue of urban water supply and management. According to a UNESCO report, the water sector will continue to grow in importance as global demand for water increases by about 1% per year.

According to a press release from the UNFCCC³, populations affected or threatened by the risk of flooding will continue to rise sharply in the coming years. Indeed, *« By 2050, the number of people at risk of floods will increase from its current level of 1.2 billion to 1.6 billion. In the early to mid-2010s, 1.9 billion people, or 27% of the global population, lived in potential severely water-scarce areas. In 2050, this number will increase to 2.7 to 3.2 billion people. »*

Diane Binder, who spoke at the coalition's first workshop in 2018 in Abidjan, on behalf of Suez, presented 3 major challenges to be addressed:

- 1) The permanent availability of water in sufficient quantity and quality (focus to be turned to alternative sources),
- 2) The distribution of this resource (reduce leakages, ensure the development of a fabric of local SMEs/start-ups)
- 3) Management of extremes (raising awareness/changing behaviour towards water).

¹ According to the World Water Council, The 6 most water-rich countries, located in West and Central Africa, hold 54% of the continent's total resources.

² UNESCO The United Nations World Water Development Report 2018”

³ UNFCCC press release 2020 <https://unfccc.int/news/transformational-action-needed-for-paris-agreement-targets-united-in-science-report>



Solutions for water resources, two examples from partner organisations:

Solutions exist and when they are implemented, they have significant impacts. To illustrate this point, let us note the example presented by UCLG-Africa during the 2018 workshop: in Casablanca, in 20 years, work on reducing water losses has made it possible to save this precious resource for the equivalent of a city of 1 million inhabitants.

More recently presented at the coalition's Virtual Workshop in September 2020, the IWRM (Integrated Water Resources Management) programme including the OmiDelta project with the Kingdom of the Netherlands and IWRM Nature-based Solutions (NbS) Ouémé with AESN has set the long-term objective (within 15 years) of reducing flooding in the lower and middle valley of Ouémé by 15%. This objective also has a short term target (by the end of the projects in June 2021) to reduce these floods by 3%. Thanks to actions set up within the framework of the programme such as awareness raising at community level, NbS to slow down runoff and increase infiltration, the organisation of the sand industry and the realisation of runoff water storage and conservation works, **both the 3% reduction objective and the 15% reduction objective in the long term will be reached.**

Climate Chance underlines the need to work at **several levels (the city and its hinterland, national, the catchment area) by widely involving all actors**. Local authorities lack competences in terms of resource management. For example, in Abidjan, most of the city accessing water via water tables, which are now falling alarmingly, with little response from those in charge of hydraulics. This is partly explained by the lack of dedicated training courses on the African continent despite some major initiatives (e.g. the Master's degree on water resources and environmental risks in African metropolises common to 5 African partner universities: University of Abomey Calavi, University Nangui Abrogoua, Institut National Polytechnique Houphouët Boigny, University Yaoundé I, University Ngaoundéré - cf. <http://www.marema.org/>).

Non-state actors need to take ownership of the issue of adaptation and water. The climate strategy documents (National Adaptation Plans and Nationally Determined Contributions) do not allow companies - that do not really feel concerned - to "get on board" because they do not specifically identify the impact of climate risk on their own "value chain". National Adaptation Plans have several limitations, starting with the lack of "localisation" of the issues at stake and the weak inclusion of the private sector.

Access to funding for Adaptation and Water

According to data from Climate Funds Update⁴, the largest funds operating in Sub-Saharan Africa are the Green Climate Fund (\$1,326 million) followed by the Least Developed Countries Fund (\$783 million), the Clean Technology Fund (\$496 million) and the Adaptation Fund (\$264 million). It is important to note that approximately 43% of the allocated funds are dedicated to adaptation in the region, i.e. \$2,127 million. The other sectors receiving funds are mitigation (general) and REDD mitigation. In addition to this, the UN stated in its recent Report on progress made on SDG6 that *"Both commitments (+11%) and disbursements (+3%) of ODA to the water sector have increased in real terms during the 2015 to 2019 time period, including an additional US\$ 644 million to Sub-Saharan Africa."*⁵

⁴ Funds operating in Sub-Saharan Africa <https://climatefundsupdate.org/data-dashboard/regions/>

⁵ UN Water, "Summary Progress Update 2021: SDG 6 — water and sanitation for all" March 2021 <https://www.unwater.org/online-event-to-launch-the-un-water-sdg-6-summary-progress-update/>



The costs of adaptation could represent up to 6% of the African continent's GDP in a world at +4°C (1% in a world below +2°C). In addition to these limited volumes of funding, it is the modalities of access to funding that are limited for both state and non-state African actors.

There are several barriers in accessing finance for the adaptation and water sector. According to the OECD⁶, this may be due to the size of water projects, which are often considered too 'small' and specific. Projects also need to be able to show updated data to make funding applications more robust. Another major challenge in accessing finance for water sector projects is at the level of the resource itself, which is generally undervalued and not properly accounted for by investors who are themselves dependent on the resource.

Tools for financing Adaptation:

Luc Gnacadja and Louise Brown (AfDB) presented at the Abidjan Workshop in 2018, a tool being developed to enable greater involvement of the private sector in adaptation financing: « Adaptation Benefit Mechanism » (<https://www.afdb.org/fr/topics-and-sectors/initiatives-partnerships/adaptation-benefit-mechanism-abm/>), on the same principle as the Clean Development Mechanism (result-based finance). This pilot project, which officially started in 2019 and will run until 2023 and will be implemented thanks to partners such as UNCDF. There will be 10 to 12 pilot projects on the African continent. Tests will be carried out on small-scale projects that are replicable and adaptable and that require funds to continue the operationalisation of the project.

Following this preparatory phase, sufficient infrastructure, methodological work and awareness raising should be developed.

A pilot project is currently being carried out in Tanzania to support small farmers, with only 11% public funding and 51% funding raised from local commercial banks.

The Magic System Foundation presented an adaptation project based on a cryptocurrency, the "watercoin", initiated by a start-up company in Toulouse, enabling the local population to buy drinking water online. (<http://www.jeunefrique.com/544348/economie/le-watercoin-une-cryptomonnaie-pour-securiser-lacces-a-leau-en-afrique/>).

ICLEI Africa, the most recent co-pilot of the Coalition, shared the **TAP- transformative actions program** - a project pipeline and project preparation facility developed by ICLEI and partners - acts as an incubator that supports local and regional governments by catalysing capital flows for low-to-no emission and climate-resilient development. Through the TAP, local and regional governments receive support to develop climate project concepts into low-risk, high-feasibility, and high-impact sustainable infrastructure projects. Through this platform local climate actors, technical experts and financial institutions can be connected. Link to the program: <https://iclei.org/en/TAP.html>

Other financing tools dedicated to the water sector exist, such as the African Water Facility. (<https://www.africanwaterfacility.org/fr/a-propos-de-la-fae/>), an initiative led by the African Ministers' Council on Water to mobilise resources to finance water resources development activities in Africa. It is hosted and administered by the African Development Bank and provides grants ranging from €50,000 to €5,000,000, including to eligible non-state actors.

The deficit in water research is still present. The subject of water is poorly considered and funded by the continent's national governments, and there is a lack of scientific popularisation among

⁶ OECD "Financing water Investing in sustainable growth" 2018



non-state actors (local authorities in particular, whereas water is generally part of their remit). Several initiatives exist but suffer from a lack of communication.

II – WHERE DO WE WANT TO GO?

Nature-based Solutions (NbS) for Adaptation and Water

With the aim of creating more links between the Climate Agenda and the Biodiversity Agenda, Climate Chance wishes to seize the opportunity to highlight some nature-based solutions for adaptation and water and integrate them into the coalition's vision for the coming months. Let us therefore recall that « *Nature-based solutions (NBS) are inspired and supported by nature and use, or mimic, natural processes to contribute to the improved management of water.*»⁷ (UNESCO). In the context of adaptation and water, we are appending particularly innovative and replicable good practices from the sector integrating NbS on the African continent and will give project leaders the opportunity to present their work during the Virtual Workshop in February 2021.

2021 Objectives

The coalition's vision for 2021-2022 must be based on the activation of synergies, with the following 4 objectives:

- **Objective #1:** contribute to improving access to finance for adaptation and water projects
- **Objective #2:** contribute to the strengthening of local authorities and to mobilising territories by raising citizens' awareness, with messages adapted to the realities of the local areas concerning water resources.
- **Objective #3:** to improve the coordination of actions and the structuring of local planning actions. Enable the coordination and optimisation of synergies to see the emergence of local sectors.
- **Objective #4:** To give means to the world of African research on water resources and climate and to popularise the studies produced for local decision-making.

Several major international events are to be considered as they will constitute major milestones and opportunities for sharing progress and exchanging inspiring practices on the continent:

- The COP15 Biodiversity in May 2021
- The third Climate Chance Summit in the second half of 2021
- COP26 in November 2021
- The IUCN Nature Congress in September 2021
- The 9th World Water Forum in Dakar in 2022

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.

⁷ UNESCO, « Nature-based Solutions for Water » 2018



- **Action 1: Disseminating information**

General information on the Adaptation and Water sectors

Since 2018, a mailing list Adaptation.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 more than 500 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

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 a 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.

- **Action 2: Creating a network of actors and spotting Nature-based Solutions led by non-state actors**

We propose that coalition members continuously map interesting actors, best practices, high impact, scalable and replicable projects in the Adaptation and Water 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.

With "Adaptation and Resilience" and "Nature" featured as campaigns in the next COP26 in November 2021, we would like to identify more examples of Nature-based Solutions for Adaptation and Water to promote projects improving social well-being, food security and enhancing biodiversity conservation. 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](#).



3 projects presented during the Coalition's Virtual Workshop on March 4th 2021:

1) Up2Green Reforestation's "Des Mangroves et Des Hommes " programme in partnership with the Oceanium de Dakar, a Senegalese association for the protection of natural resources. Presented by Margot Ahr, Programmes Coordinator for Africa, India, and France.



The chronology of the programme:

- 2011: partnership with Up2green Reforestation for mangrove reforestation
- 2018: Partnership with Up2green for a pilot project on the preservation of Casamance rice and the launch of a beekeeping programme in the mangrove swamp.
- 2021: development of a beekeeping sector

The beneficiaries:

- Many Diolas villages in Lower Casamance
- 63 Diolas rice farmers
- Group of 5 women for the beekeeping project

The objectives:

- Reforestation of the mangrove
- Protecting coastlines
- Restoring fishing resources (oysters, fish, shrimps ...)
- To create economic activities favourable to the preservation of the mangrove swamp
- Preventing soil salinisation and thus protecting rice paddies cultivated near the mangrove swamps
- Preserving biodiversity
- Storing atmospheric carbon

Replicability:

- Priority and access to funding for the preservation of wetlands, including mangroves for climate change adaptation
- Objective: federate a multi-stakeholder network to protect and reforest the mangrove swamp.
- Mangrove: a relatively simple and easily replicable technique for planting Rhizophora.
- Caution: mobilising local communities is crucial for the success of the project.



- 1) The "Pave Project" led by the Conservation Alliance International - Ghana. Presented by Paa Kofi Osei-Owusu, Head of Climate Change and Water management.



The Pave irrigation technology (implemented within the Pave project) is an irrigation system that captures excess flood water from agricultural land, filters it, and injects the excess water underground during rainy and flood periods. The stored water is extracted during the dry season for agriculture. One unit can irrigate up to 5 acres of land.

The construction of the Pave technology undergoes six major steps:

- 1) Stakeholder Engagements
- 2) Site Selection & Site assessment (surface, subsurface and agronomic conditions)
- 3) Soil sampling (for agronomic purposes)
- 4) Installation (Resistivity survey, drilling, test pumping)
- 5) Construction of filtration system
- 6) Usage for cropping activities

Location and actors' involvement:

- The Pave project implemented Pave irrigation technology in **8 communities in northern Ghana** (8 communities were contracted for the project) with 322 farmers directly involved in the pilot phase.
- Strong involvement of local artisans and farmers throughout the process
- The project is funded by US AID.

Qualitative results :

- Beneficiary farmers had some additional crops to sustain them for the dry season- bra, okro watermelons, cucumber, and butternut squash
- Each beneficiary farmer had food crops worth GHS 150- representing about 7.5% increase in incomes
- Decreased interest to migrate to southern Ghana by a number of women farmers, and thus reduced exposure to gender-based violence.
- Decreased farming activities within riparian buffers
- Increased communal bonding, interest for dry season veggies farming and knowledge of the relevance of integrated pest management due to the increased incidence of pests.

Replicability and scaling plan :

- The project will be scaled up in all 8 communities
- This session's model will be based on profit (not grant) business models
- The project team has partnered with Pattern Food Limited for marketing purposes
- We have secured partnerships with some hotels and restaurants in Tamale
- Irrigated area will be expanded in each of the beneficiary communities



The “Urban Natural Assets for Africa” (UNA) programme led by ICLEI Africa and implemented by Cities Biodiversity Center. Presented by Tarryn Quayle, Professional Officer for Integrated Urban Water Management.



URBAN NATURAL ASSETS FOR AFRICA
Rivers for life

Objectives:

- This cutting edge project is designed to support the daily challenges that local governments in Africa experience around protecting and revitalising their urban natural assets, in particular their river systems. It aims to integrate nature-based solutions into land use planning for increased resilience.
- **Mainstream** biodiversity and nature-based solutions into land use planning and decision-making processes
- **Increase** awareness of ecosystem services through capacity building
- **Mobilise** project activities through alignment with international policies and processes (such as the Convention on Biological Diversity's Aichi Biodiversity Targets and the Sustainable Development Goals)
- **Improve** co-ordination between key stakeholders to work together towards integrating biodiversity into land use planning
- **Connect** local communities with nature to encourage appreciation, cultural activation and enhance human well-being
- **Implement** community-based projects along urban river systems to improve river restoration and revitalisation, and improve human well-being and livelihood creation
- *This project is funded by Swedish International Development Cooperation Agency (Sida), through SwedBio at the Stockholm Resilience Centre.*

Results:

- Built capacity of over 2000 African stakeholders, complimented through providing appropriate natural asset information to decision makers to harness nature for resilience
- Developed a series of tools, handbooks, guidance notes and impact stories which focus [on the processes undertaken to mainstream nature in practice at the local level](#)
- Links to [CitiesWithNature](#) Initiative that aims to support cities to mainstream nature at the local level, supporting them in their journeys and providing a resource centre