Kumasi

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Kumasi is the second largest and fastest growing city of Ghana (5.47% per year) and serves as an economic hub for the entire region. It receives an influx of migrants from various parts of Ghana and West Africa, resulting in rapid urbanisation and the development of informal settlements. This area suffers from floods, especially flash floods that cause settlement flooding, particularly affecting marginalised groups.

As part of the ALBATROSS project, a novel digital tool—the Citizen Science Toolkit—has been developed for use across all seven project hubs. It is designed to support community-based environmental monitoring and climate adaptation, with each hub tailoring its use to local priorities. In Kumasi, the toolkit is planned to be piloted to address specific urban challenges related to flooding, wetland degradation, and green space loss.

In collaboration with the Ghana Meteorological Agency (GMet), the National Disaster Management Organisation (NADMO), the Ghana Hydrological Authority (HYDRO), and the Land Use and Spatial Planning Authority of Oforikrom Municipal Assembly (OfKMA) and Kumasi Metropolitan Assembly (KMA), the Kumasi Hub plans to use the toolkit to support the protection of existing nature-based solutions, such as urban wetlands and riparian buffer zones.

The toolkit will enable citizens to report blocked drains, as well as encroachment and illegal or unapproved use of wetlands, with geotagged alerts. Similarly, illicit tree felling or destruction of green areas can also be reported by communities. Verified alerts will guide authorities in taking timely action and support site-specific decision-making.

The intervention by ALBATROSS also includes training for both planning authorities and citizens on the toolkit functionalities and application. This will also increase climate literacy and stakeholder participation in planning decisions.

Stakeholder engagement in the hub

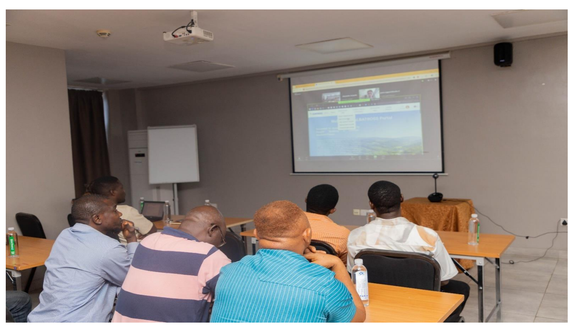
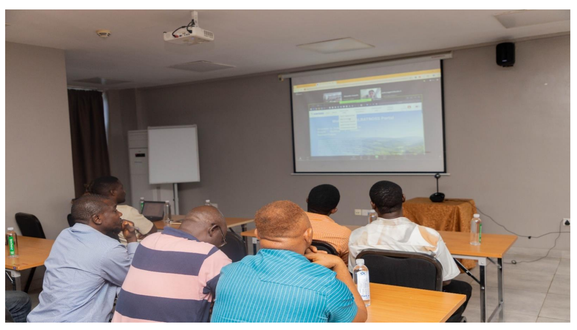
Stakeholder engagement in the Kumasi Hub under the ALBATROSS Project focused on the co-design and co-development of climate services and tools for flood resilience and Nature-based Solutions.

Engagements brought together key institutions including GMet, Hydrological Authority, NADMO, KMA Planning unit, Physical Development department and research partners to collaboratively develop impact-based flood forecasting systems and a citizen science toolkit.

Activities included technical discussions, stakeholder consultations, evaluation of climate service tools, and integration of climate, socio-economic, and indigenous knowledge. Agreed interventions focused on strengthening early warning systems, improving impact-based flood forecasting, enhancing citizen reporting platforms, and supporting data-driven decision-making.

Key needs identified include accessible and user-friendly climate information, real-time data systems, stronger inter-agency coordination, capacity building, integration of local knowledge, and improved policy enforcement to enhance flood resilience in Kumasi.



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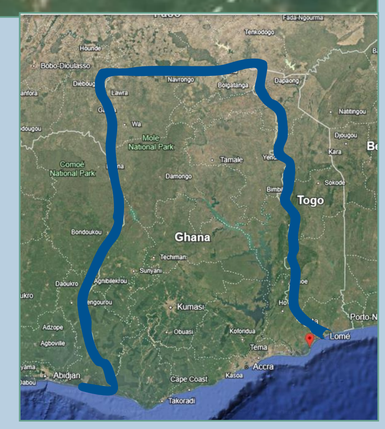
Geographic area:
Southern Ghana, Western Africa

Regional climate:
Tropical wet-dry or Savanna (Aw)

Main meteorological hazards

Urban flood



Work done towards the achievement of expected benefits

- Engaged key stakeholders (GMet, NADMO, HYDRO, Planning & Physical Development unit of KMA and OfKMA and partners) to co-develop and strengthen climate services for flood resilience and Nature-based Solutions (NbS) planning.

- Generated climate risk information including drought susceptibility maps, Urban Heat Island (UHI) expansion analysis, and ongoing flood risk modelling to support evidence-based decision-making.

- Evaluated a citizen science toolkit for reporting wetland encroachment, blocked drains, and green space loss, improving climate information use, coordination, and NbS monitoring.

Expected benefits:

- Reduced flood risk through the protection of urban wetlands and riparian buffer zones, enhancing natural water retention and supporting urban food security in areas used for vegetable farming.

- Increased climate literacy, stronger stakeholder engagement and stewardship of urban NbS, and enhanced local capacity and inter-agency coordination for climate-resilient city landscape planning.

Policy Briefs for Ghana

ALBATROSS has developed a set of policy briefs, synthesising findings from a multi-level policy analysis of more than 250 national and sub-national policy documents, as well as regional and transboundary frameworks, across five Sub-Saharan African countries: Ghana, Kenya, Madagascar, South Africa, and Tanzania.

The analysis assessed the level of integration of Sustainable Development Goals (SDGs), Nature-based Solutions (NbS), Climate Services, Gender and Social Inclusion, and Indigenous and Local Knowledge (IKLK) into environmental and climate frameworks.

Outputs from the activity in the hub

Final submission of Deliverable D2.4: *"Analysis of Climate Response to Current and Projected Socio-Economic Scenarios"* to the European Commission (EC) portal.

Hub coordinator and main implementer of interventions:
Kwame Nkrumah University of Science and Technology, Kumasi

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