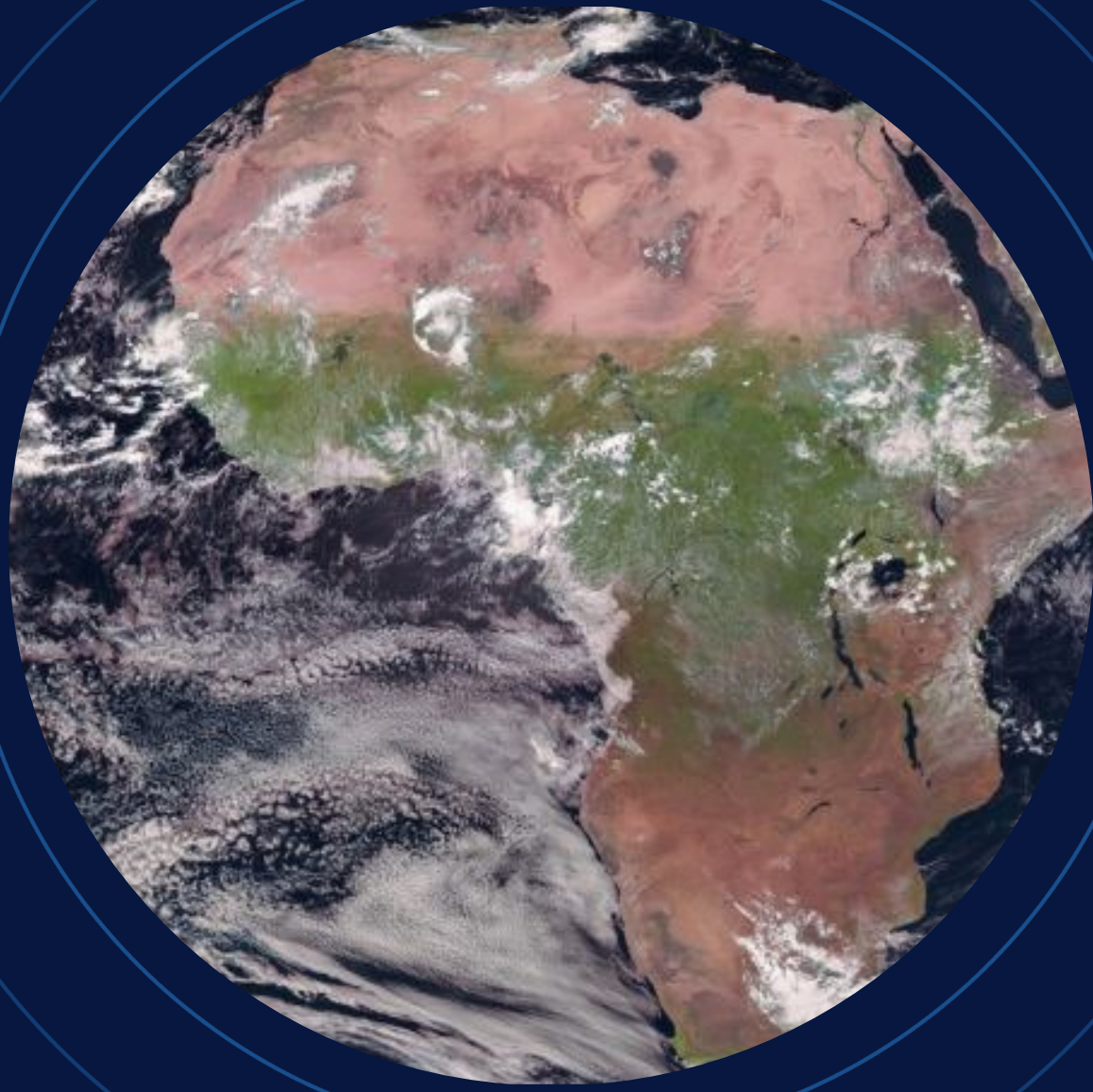
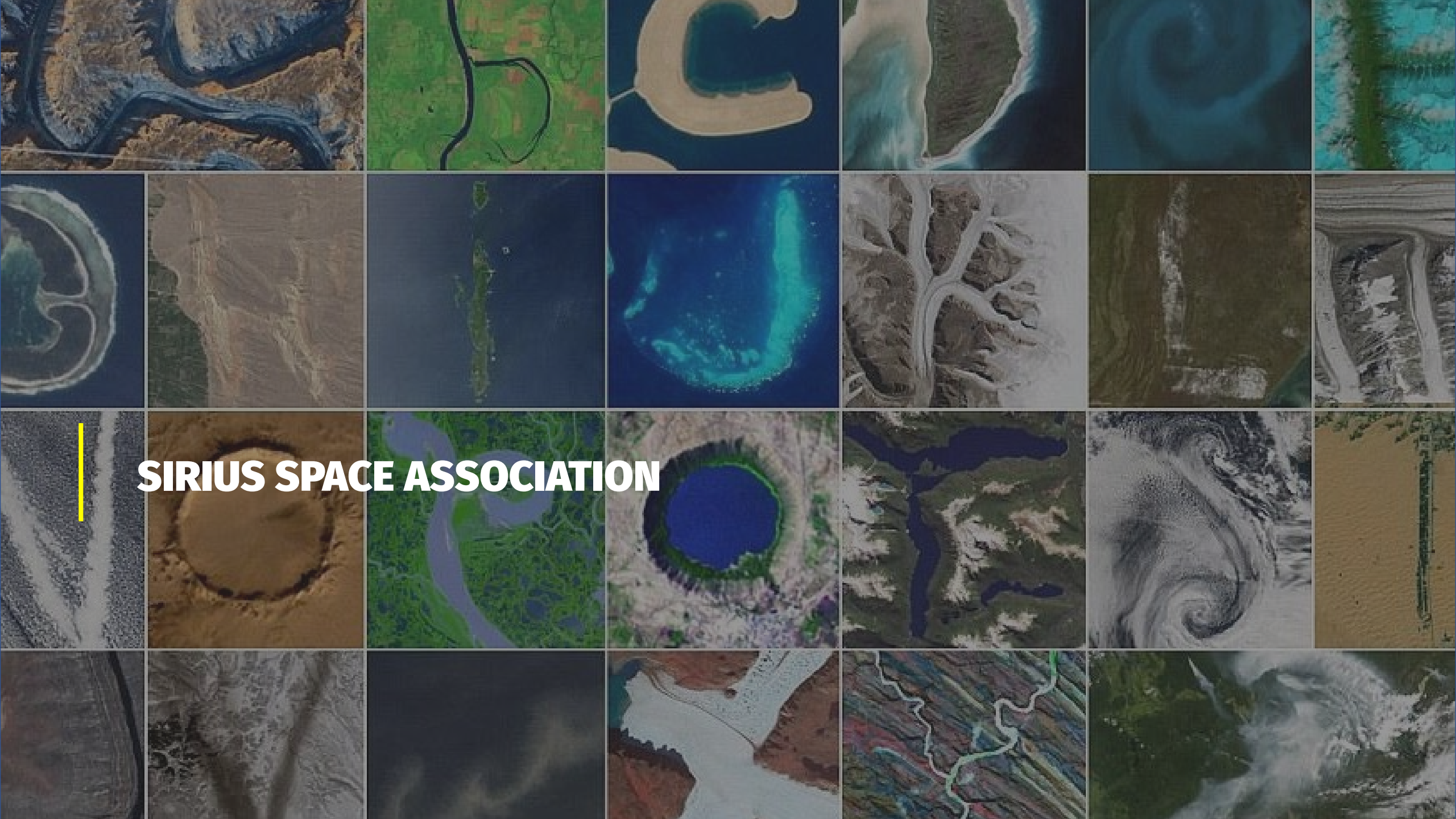
From Space Solutions to Digital Applications : Bridging Data Gaps in Benin

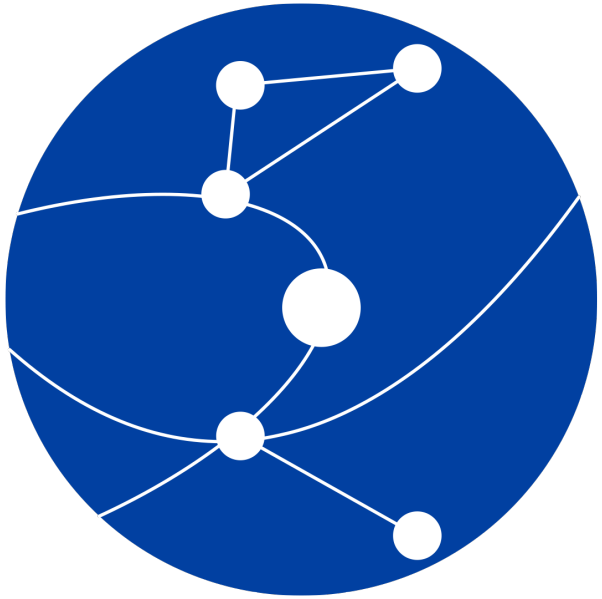


By Prudence AYIVI
President, Siirus Space Association

16th EUMETSAT USER FORUM IN



SIRIUS SPACE ASSOCIATION



SIRIUS SPACE ASSOCIATION

Sirius Astro-Club today “Sirius Space Association” is a Beninese association of young scientists, pioneering space science and astronomy in Benin, founded at the end of 2020. It aims to engage youth in STEM and develop science and technology through a passion for space and the application of space science to solve Benin's technological and socio-economic challenges.

Since 2021, the association has been organizing various activities to promote space science and STEM among youth in Benin, including :

- Observation sessions,
- Lectures and workshops,
- University training programs,
- Research projects and science competitions.

Where it started...

Where it is going !

OUR GOALS

Through its actions and vision, the association aims to :

- Promote STEM in general and space science and technology in particular, in order to contribute to the country's development and the achievement of the SDGs
- Develop scientific research and applications of space technologies
- Demonstrate interest in space science in Benin, in order to encourage the authorities to invest in space technology and inspire young people to take up the profession
- Offer young people the opportunity to train in space science.

NATIONAL SPACE STRATEGY PROPOSAL

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Benin is one of 38 out of 54 African countries without a satellite. Moreover, Benin is one of the few countries without a space policy, space agency or official space ambitions.

Since 2022, we have worked on a National Space Strategy proposal as an integrated and sustainable framework for space development.

This strategy focuses on the responsible use of space to put space technologies at the service of sustainable development, ensuring that the country benefits from advances in areas such as agriculture, climate monitoring and communication.

National Space Strategy Proposal

Benin's National Space Strategy Proposal is an ambitious initiative, inspired by the success of similar programs in other African countries, aimed at propelling the country towards sustainable development by harnessing the benefits of space science and technology.

The program focuses on five main areas :

Infrastructure

1st satellite, construction of a nanosatellite assembly laboratory, Astronomical Observatory

Education & Training

Training +100 space industry experts by 2035

Research & Applications

Developing space capabilities, applications and services for the benefit of all

International cooperation

Cooperation with advanced countries and organizations in the space sector

Organization & Management

Creation of a national space agency, with a space policy and a supervisory committee

National Space Strategy Proposal

The National Space Strategy Proposal is a comprehensive strategic roadmap covering all aspects essential for the sustainable development of space in Benin.

The space budget would represent 0.05% of the national budget, equivalent to 1.5 billion FCFA (2,43 millions USD), to finance these initiatives and ensure the sustainability of space activities.

By investing in this area, Benin could improve environmental management, optimize agriculture, develop telecommunications services and foster innovation and economic growth.

BENCUBE-1

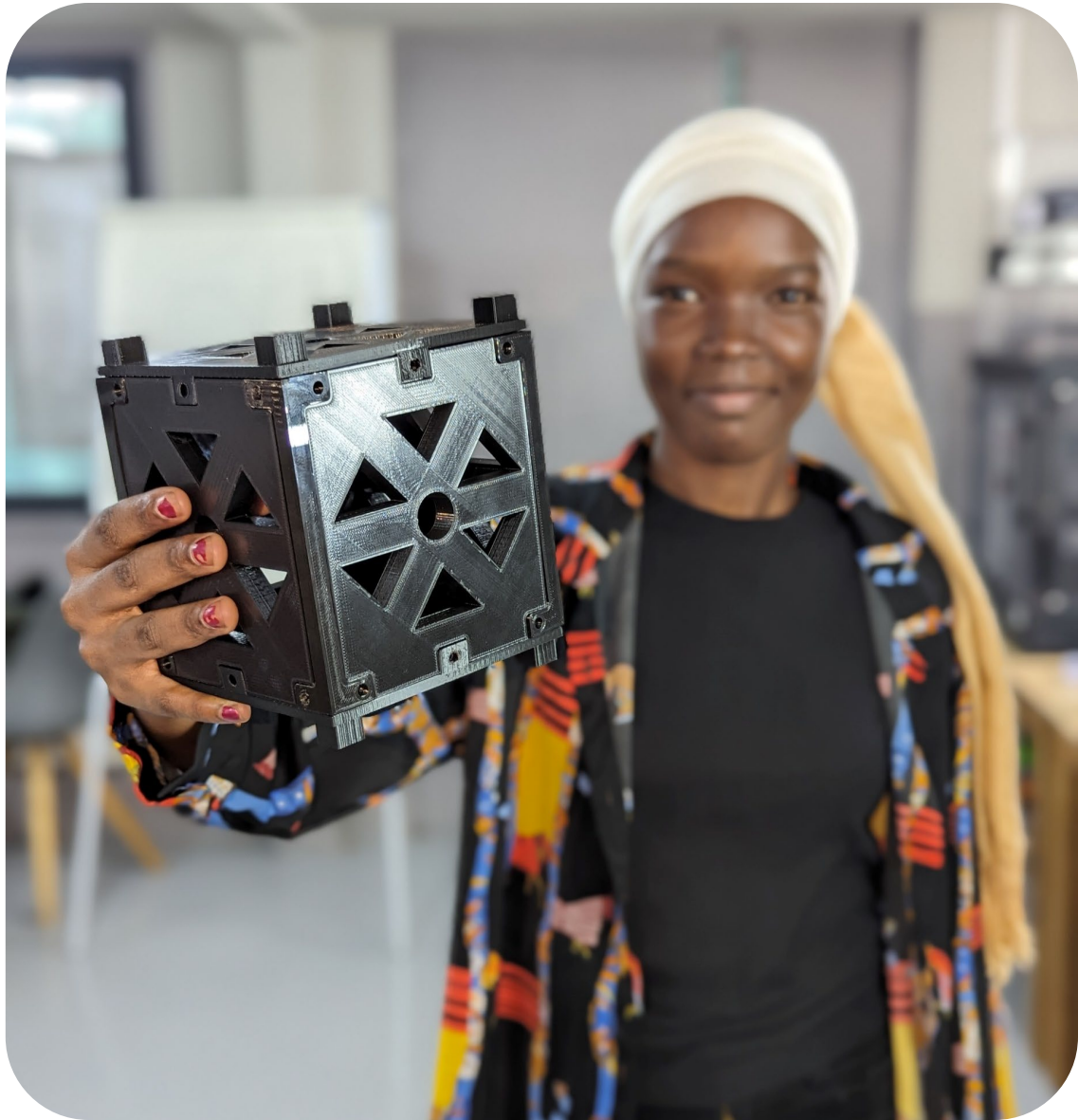
BENCUBE-1 : CubSat with HAB

BenCube-1 is a 1.3-kg experimental nano-satellite (CubeSat) equipped with cameras and various sensors, and propelled by a stratospheric helium balloon designed to reach an altitude of 35 km.

The Cubesat will collect data from this altitude for a variety of scientific and technological applications.

BenCube-1 is the first CubeSat project carried out in Benin, by home-grown students.

The long-term ambition behind this project is to build and deploy Benin's first satellite.



BENCUBE-1 : CubSat with HAB

1. Demonstrating the feasibility of a space mission in Benin
2. Acquiring and strengthening technical skills
3. Raising environmental awareness
4. STEM Education and Awareness
5. Promote technological innovation

While it's an ambitious project, it has not been implement yet due to lack of funding. You can contribute to this initiative by supporting the project.

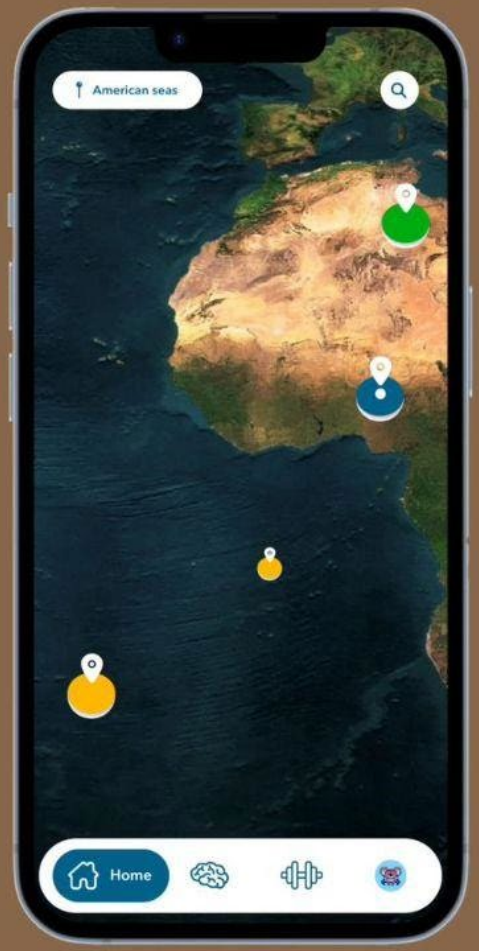
PROJECT AQUA EXPLORE

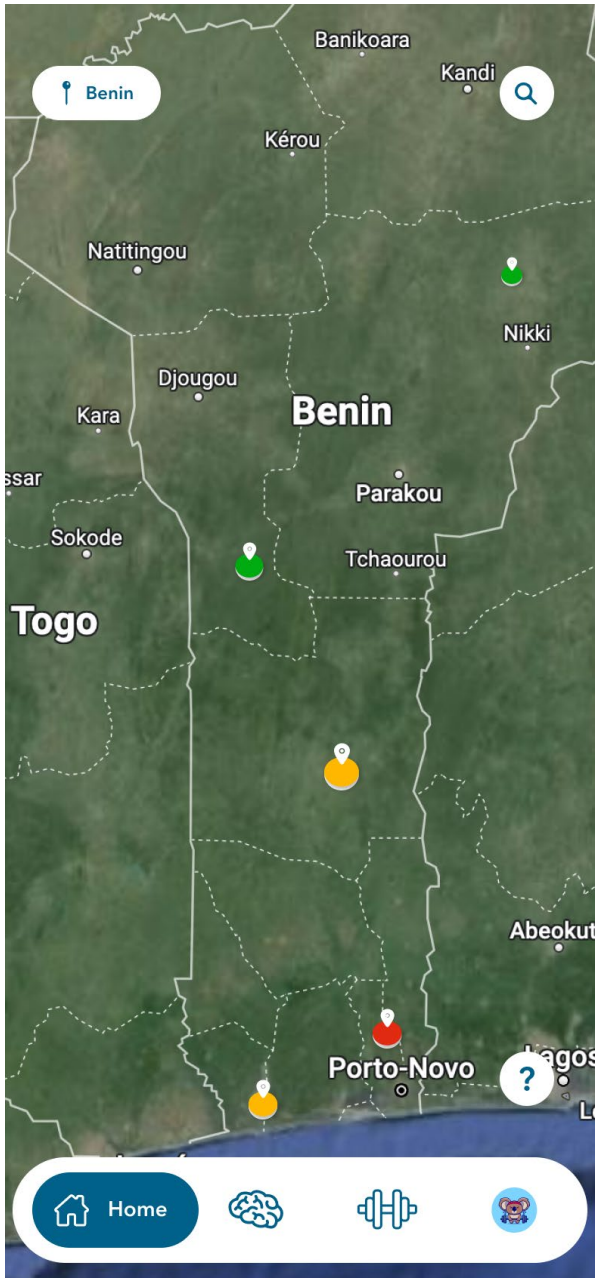
Projet Aqua Explore

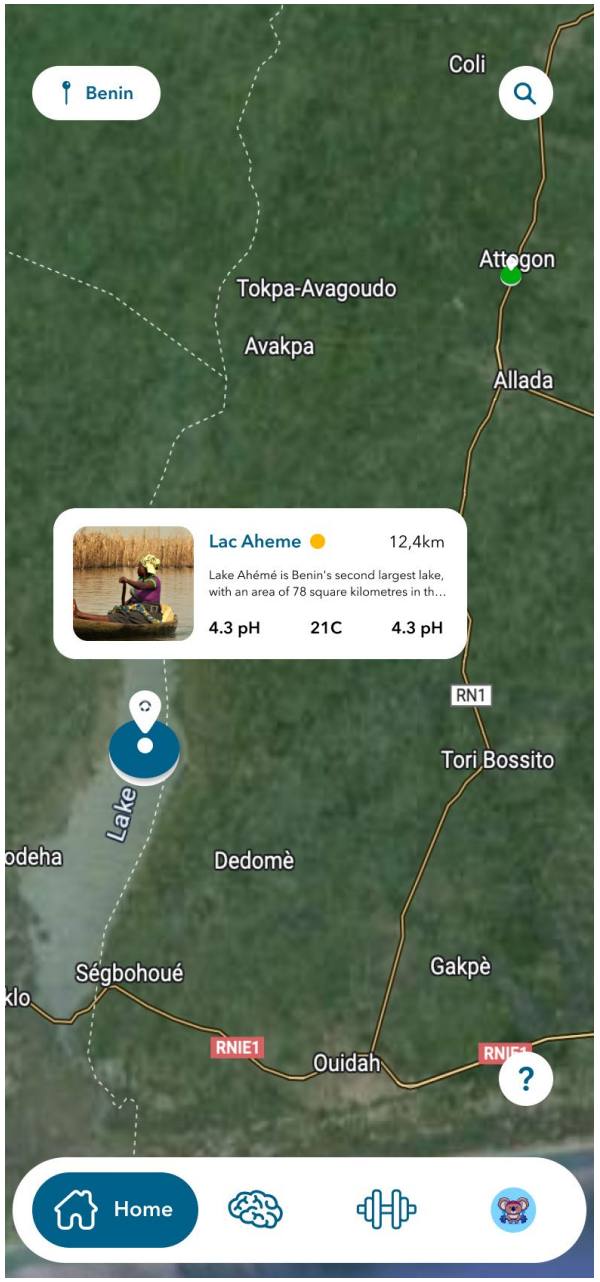
Aqua Explore is an application that uses satellite data to help monitor and manage the evolution of waterways and marine biology around the world, in both urban and remote areas.

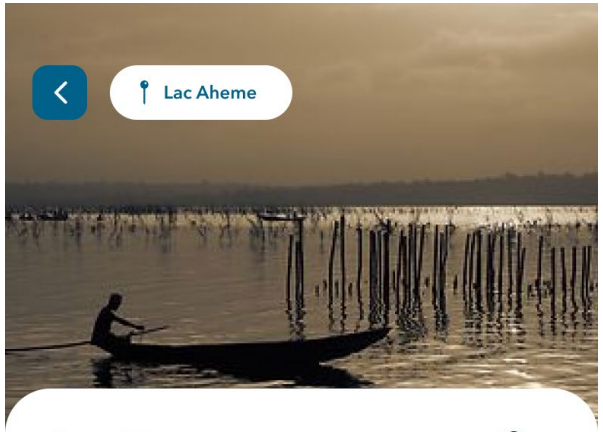
Developped by EcoSentinels team during NASA Space Apps Challenge Abomey-Calavi 2023. Ranked among the top 62 teams in the world as a Global Finalist Honorable Mentions among 58,000 participants and over 5,500 teams worldwide.

- Waterways exploration
- Real time Update
- Education Content
- Easy to Use
- Citizen Science App
- Education Content









Lac Aheme

South Benin Republic

10 Days ago

4.3 21°C 10 NTU

Species

See more


Corails


Mammales


Fishes


Turtles

About

Lake Ahémé is Benin's second largest lake, with an area of 78 square kilometres in the dry season which expands to 100 square kilometres in the rainy season. The lake is 24 kilometres long and has an average width of 3.6 kilometres.

Gallery

Lac Ahame

South Benin Republic

Corails

Not in danger

Vous devez certainement avoir un bijou en corail qui traîne quelque part chez vous. Un pendentif offert par votre mère ou un collier déniché lors d'une vente privée, et que vous portez de temps à autres pour apporter cette touche de couleur, et ce cachet méditerranéen à vos tenues. Effectivement, le corail rouge est très demandé aussi bien en joaillerie, mais aussi dans la confection de robes de soirée ou la sculpture.

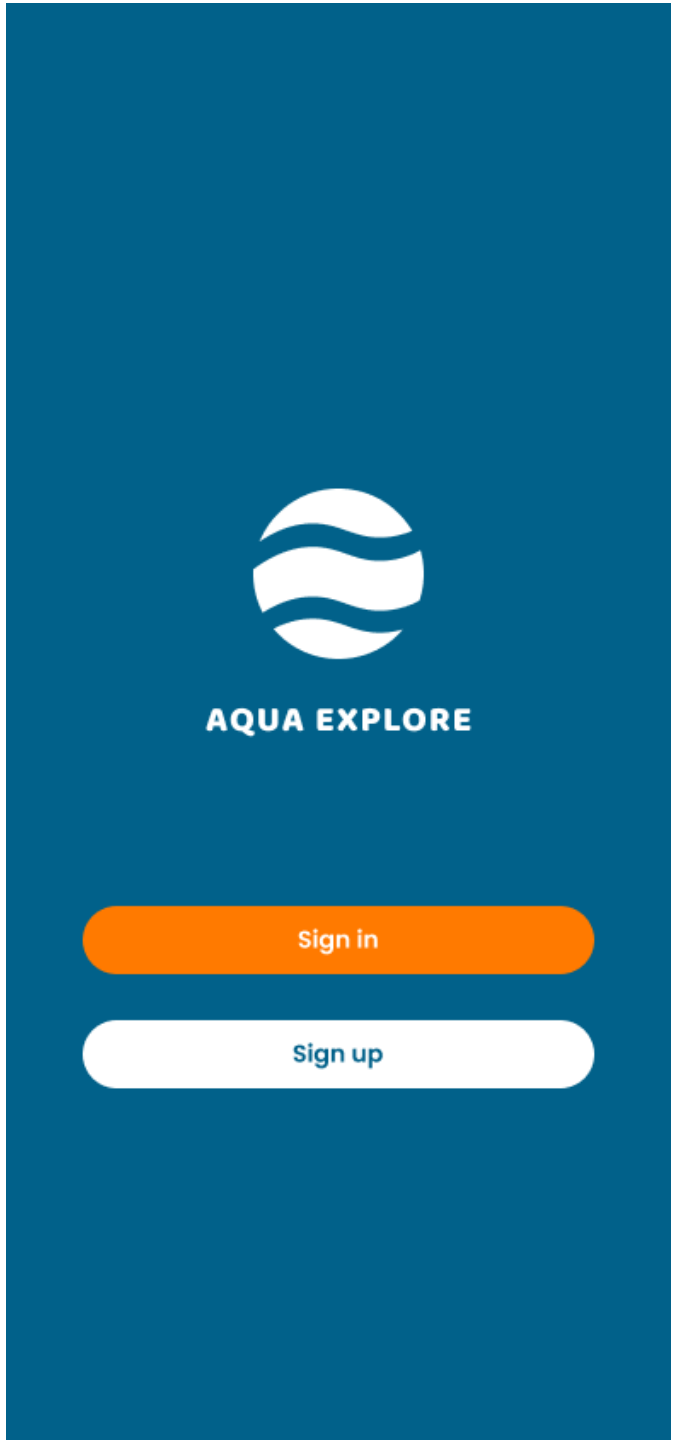
Projet Aqua Explore

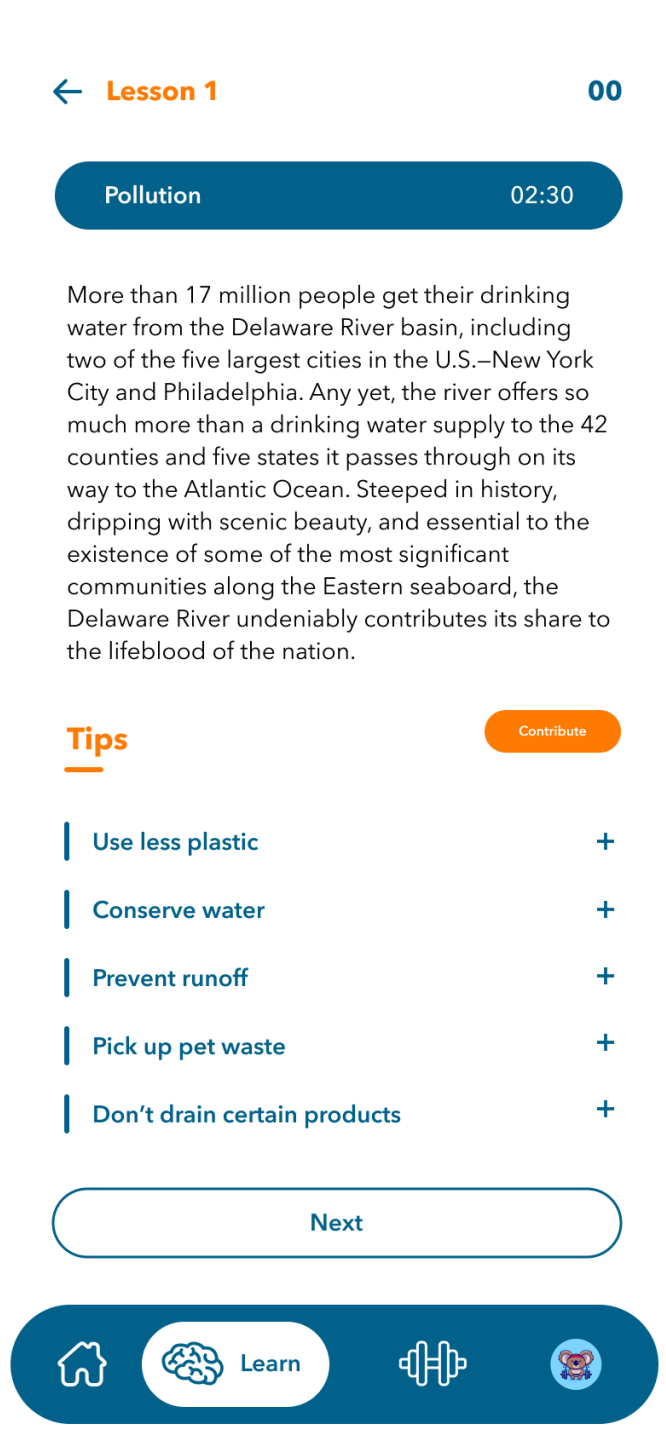
Expanded User Contributions
Encourage wider content contribution from regular users like waterways image, species...

Community hub
News feed for project updates, announcements from research partners, discussion forums, or the ability to form groups based on location or interests

Machine Learning for Water Quality
Integration of machine learning models to predict water quality parameters based on user observations, historical data, and external data sources.

Admin Dashboard
This would provide tools for managing user accounts, moderating content, curating educational lessons, analyzing app usage data.





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