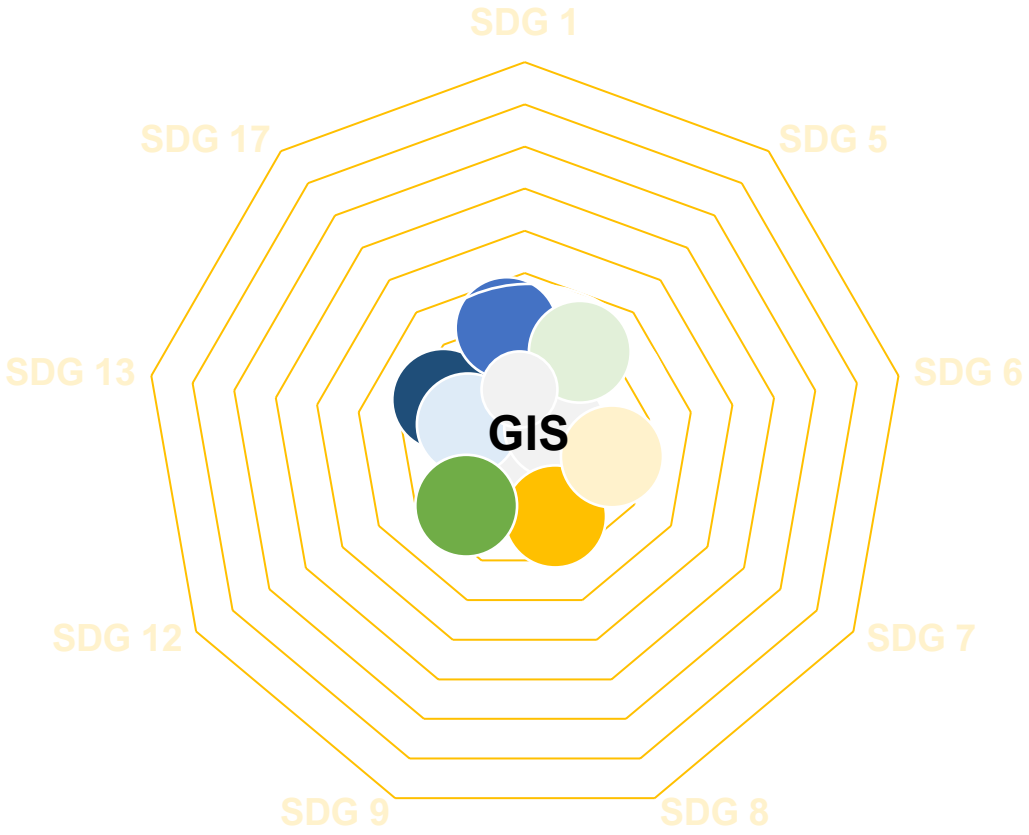
REPUBLIQUE DU CAMEROUN
Paix - Travail - Patrie

PORT AUTONOME DE KRIBI

REPUBLIC OF CAMEROON
Peace - Work - Fatherland

PORT AUTHORITY OF KRIBI



Kribi Port Eco-Sustain Project

Geographic Information System (GIS)

Plan

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I. Context

To ensure the sustainable development of the Kribi port industrial zone, relevant SDGs have been identified and will be monitored through the “Kribi Port Eco-Sustain Project”. The aim of the project is also to promote contributions to SDGs by all the port community actors.

The aforementioned project is entirely based on the existing Kribi port Geographic Information System, on which some supplementary modules are progressively being added to make the project fully functional.

II. Relevant GIS core functionalities

Following the addition of modules on the GIS for the Eco-sustain project, the core relevant functionalities obtained revolve around spatial planning, resource, infrastructure and environmental management.

Sustainable spatial planning	GIS geographical data and analysis enable sensitive areas to be mapped, and development areas to be planned, while considering all environmental and social factors.
Resource management	GIS provides spatial data which help in monitoring and managing resources such as water, land, biodiversity and ecosystems.
Environmental impact reduction	GIS helps potential environmental impacts of port activities to be modelled and analysed. This enables appropriate mitigation measures to be identified and implemented.
Infrastructure management	GIS facilitate operations optimization and effective monitoring regarding port's infrastructure, including industrial facilities, transport networks, logistics zones, etc.
Stakeholder integration	In the long run, the GIS will evaluate and show contributions to SDGs for all the tenants. It will share friendly environmental practices to stakeholders within the port community.

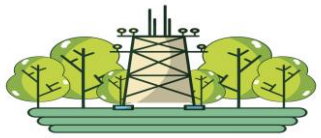
III. GIS tracked parameters

The GIS will monitor the key parameters shown below, to evaluate the environmental impacts of port activities and identify associated mitigation measures that could be implemented.

Waste generation

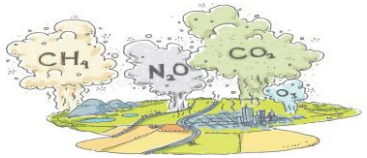
- The GIS will follow up the amount of waste generated by tenants and promote sustainable waste management practices.

Energy Consumption



- Tenants' energy consumption and associated efficiency measures will be followed up by the GIS.

Greenhouse gas emissions



- Tenants' GHG emissions will also be tracked by the GIS and associated measures implemented to mitigate negative effects.

Natural resources

- The GIS will also track the use of natural resources such as water, wood, etc., and encourage sustainable practices.

Impact on ecosystems

- Also, the Global impact of tenants' activities on the ecosystems will be followed up.

IV. GIS Visualization categories

The GIS visualizations have been grouped into 3 main categories: thematic maps, temporal comparisons, and spatial analysis. They help to communicate insights and patterns in the data and improve decision-making through the understanding of complex spatial relationships between variables.

Thematic maps

- Display key indicators (energy, waste, emission, etc) in map form to identify high-impact areas and opportunities for improvement.

Temporal comparisons

- Here, data is compared over time. It involves analyzing changes or trends in data over a specific period, which can be useful for making informed decisions.

Spatial analysis

- Identify spatial correlations between company performance and geographical characteristics to better understand interactions.

V. Project key promotion measures

A couple of strategies have been taken to promote the project and increase its visibility. The goal is to generate interest among the target audience, which can ultimately lead to increased engagement, participation, and support for the project. They revolve around recognition programmes, financial incentives and campaigns.

Recognition programmes

- High standard sustainable practice tenants receive awards during a ceremony called the “Best of PAK Awards”;
- The project aims to establish more recognition programmes for port community actors who demonstrate high standard sustainable practices.

Financial Incentives

- To further promote sustainable practices, we plan to offer financial incentives such as rent reductions or trade discounts, to businesses that contribute more to SDGs within the Kribi port community.

Campaigns

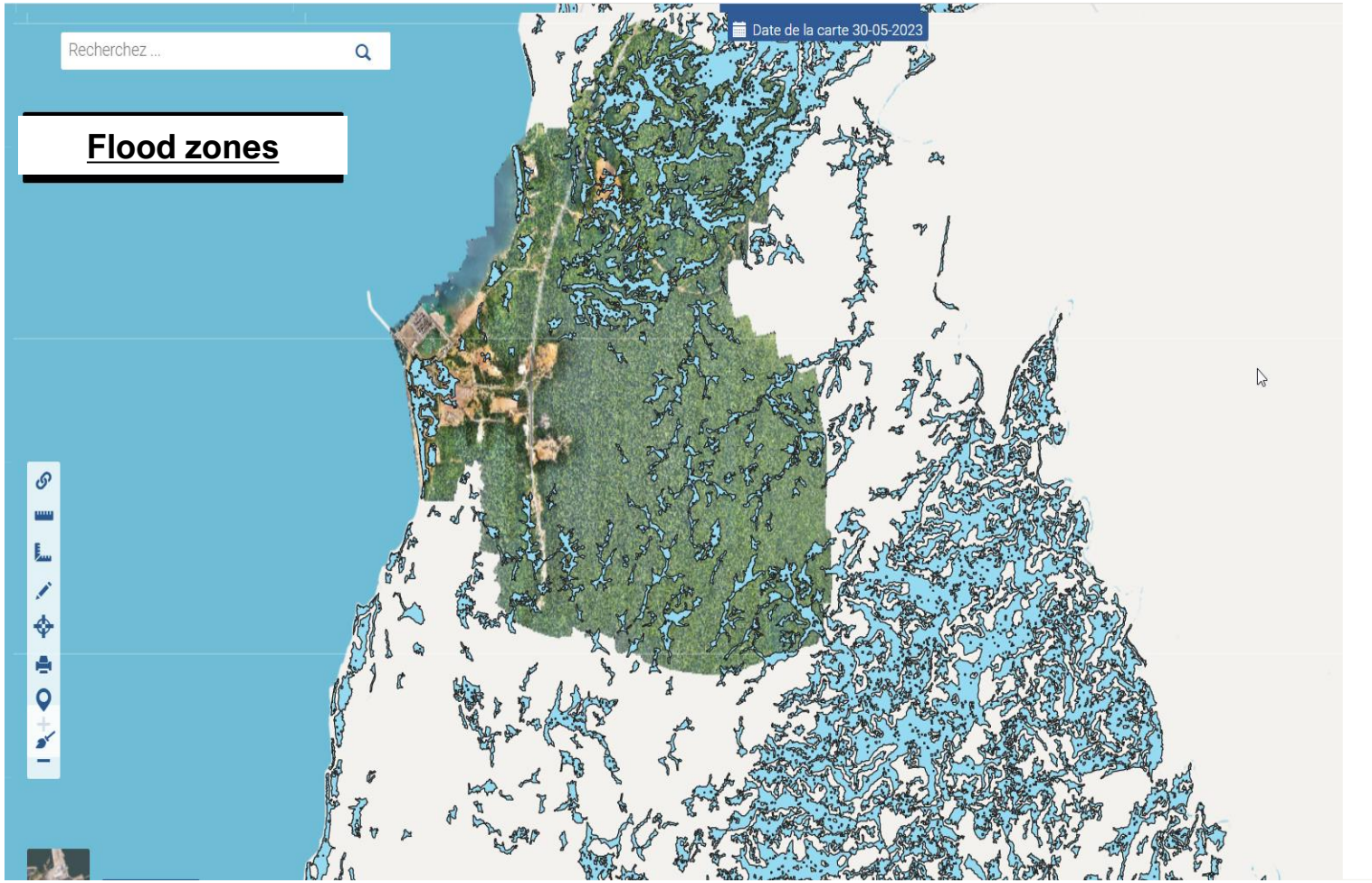
- Awareness-raising campaigns and training programmes are underway. The objective is to inform Kribi port community actors about the SDGs and good sustainability practices.

VI. Some data acquisition devices

Apart from sensors for specific applications, commonly used high-quality data acquisition devices for land and submarine surveys include the Wingtra One and Softbathy drones respectively.

	Wingtra One Drone	Softbathy Drone
Drone image in action within the Kribi port domain		
Characteristics	• One of the main devices used for land survey; • Data obtained consist of aerial images and topographical data; • Wingtra pilot, Wingtra Hub, and Pix4D represent the processing software.	• One of the main devices used for submarine survey; • Data obtained consist of Bathymetry data and 3D images; • Mission planner and Hask Suite represent the processing software.

VII. Examples GIS visualizations: Flood zones monitoring

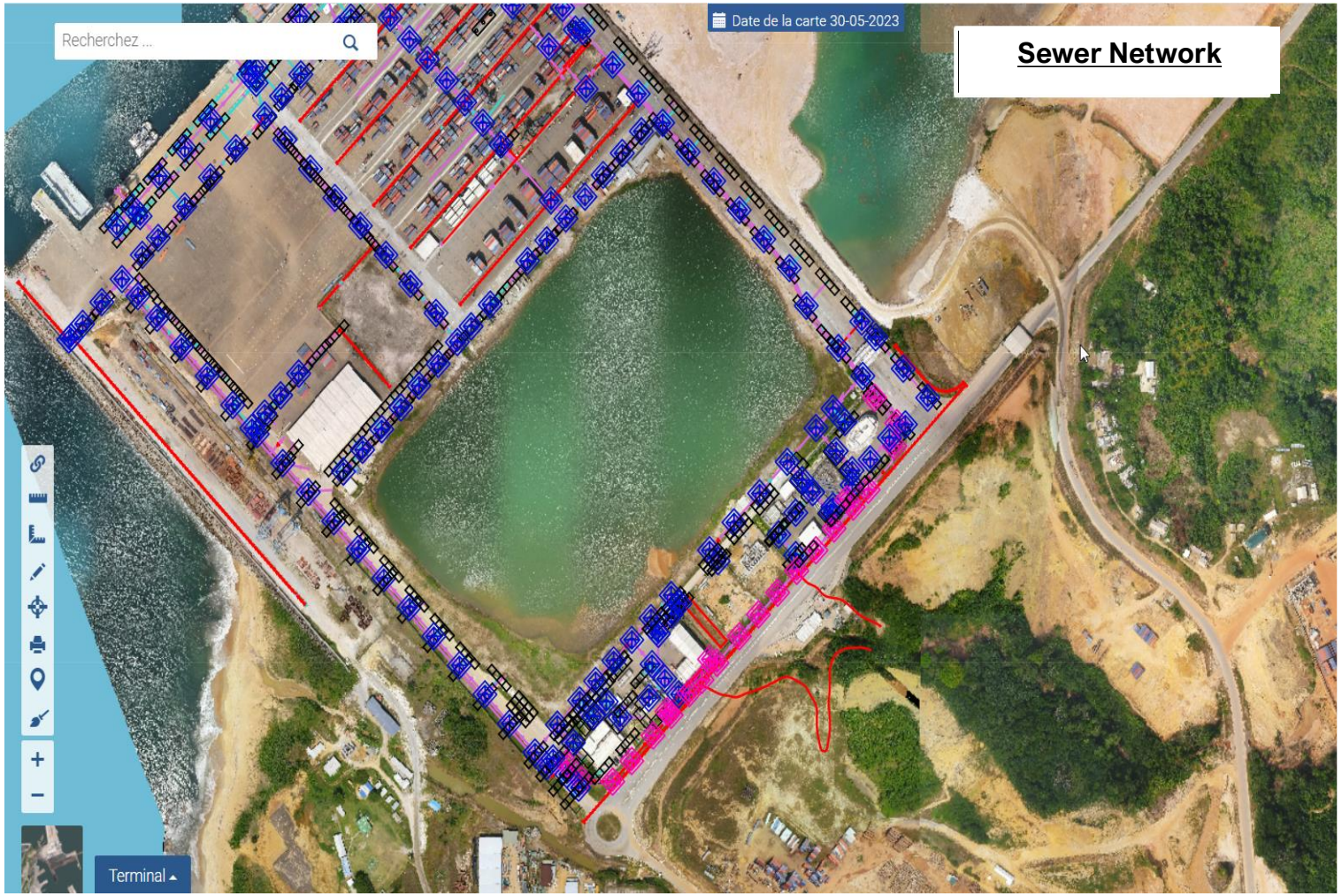


- Sensitive environmental areas mapping such as flood zones are monitored. The associated mitigation measures/actions are easily identified and implemented accordingly.
- Thanks to the mapping, interventions and operations will be considerately optimized.

VII. Examples GIS visualizations: Water and fire network monitoring

- Beside is part of the water and fire network of the Kribi port community.
- Visualizing networks optimizes operations and also promotes/ensures responsible consumption of resources.

VII. Examples GIS visualization: Sewer network monitoring



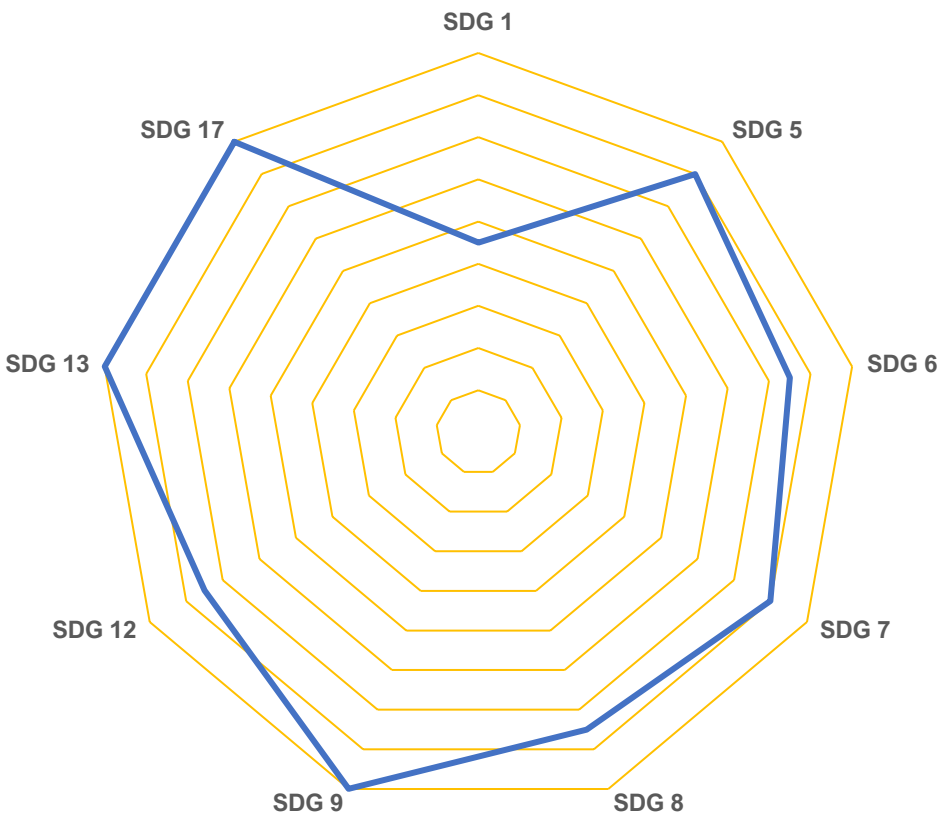
- The GIS will also monitor the sewer network on a regular basis.
- Mitigation actions will quickly be implemented to address any potential harmful environmental effect as result of a problem with the sewer network.
- This will also promote the responsible consumption of resources.

VIII. Example of an implemented recognition programme: Best of PAK Awards ceremony

At the end of each year, awards are given to actors who have demonstrated sustainable practices, at the ceremony called “Best of PAK Awards”.

Award given to a Kribi port community actor (leftmost position) by the General Manager of the Port Authority of Kribi (rightmost position) during the previous “Best of PAK Awards” edition.

IX. Project contribution to SDGs



Contribution intensity

Beside is the contribution intensity of relevant SDGs considered by the “Kribi Eco-Sustain project”. Those SDGs take into account :

- Disability individuals in the company work force (SDG 1);
- Gender equality within the work force (SDG 5);
- Clean water and energy (SDG 6 & 7);
- Decent work and economic growth (SDG 8);
- Industry, Innovation and infrastructure (SDG 9);
- Waste produced regarding responsible consumption and production (SDG 12);
- Actions taken to reduce impacts of activities on the environment (SDG 13);
- Partnerships to achieve goals (SDG 17).

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