



# Cooperation for the development of an African Greenhouse Gas observation system

## Background

The improvement of global climate science necessitates the reduction of uncertainty in greenhouse gas observations (GHG) in Africa. A combination of satellite products, ground-based stations, and data centers is needed to optimize emission measurements of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O over the African continent. The SEACRIFOG project is a comprehensive design study, developing a roadmap towards an African GHG observation system.

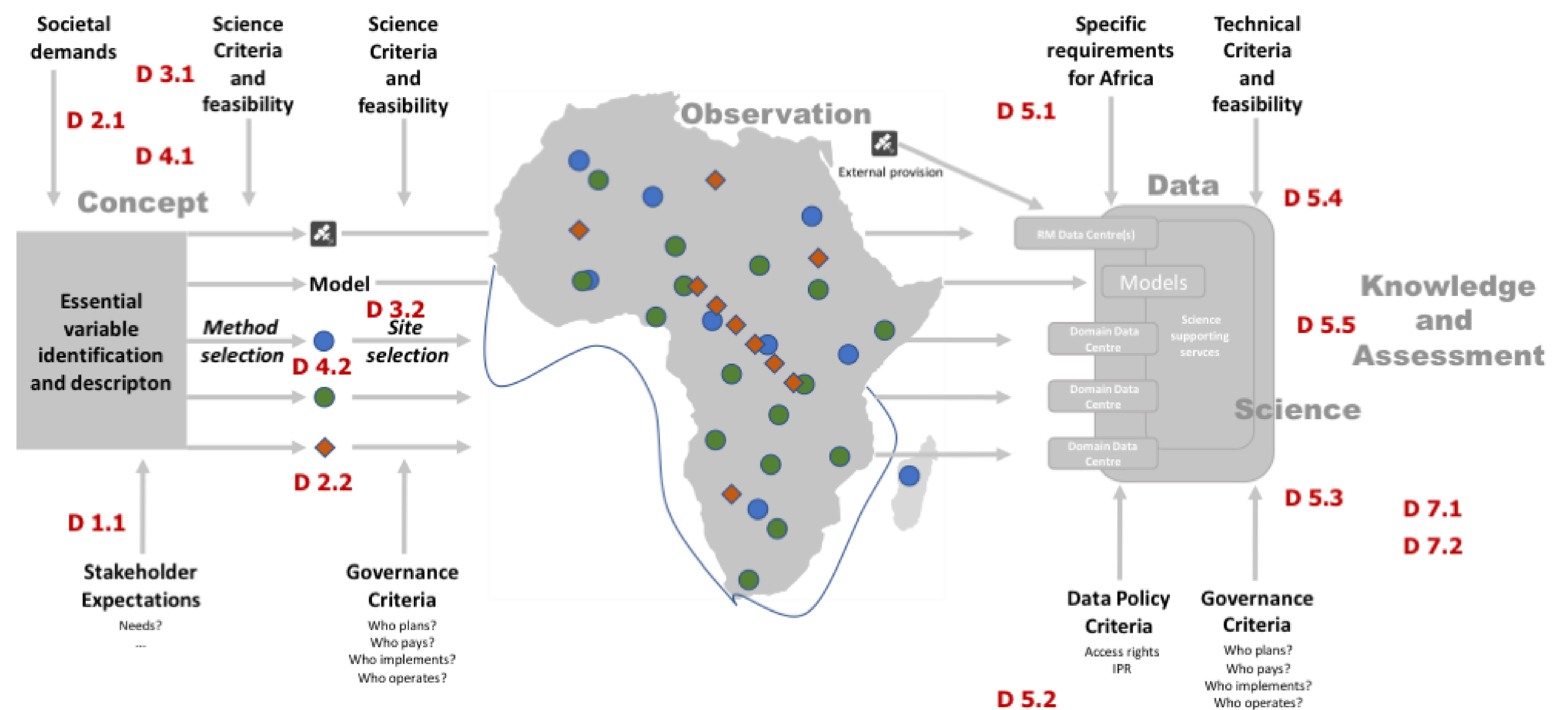


Figure 1: Taken from SEACRIFOG D5.4 - Report on the blueprint for an EU-Africa e-infrastructure

**Stakeholder expectations:** To assess the need for the African GHG observation system, 72 Stakeholders were asked to provide insight on the needs and gaps for GHG observation in Africa.

**Inventory tool:** An assessment was conducted of all variables needed for GHG observation, adapted on the needs of the African continent. Moreover, existing stations and accessible data products covering the variables were mapped. Access the collection here:

<https://seacrifog.saeon.ac.za/>

**Infrastructure:** The development of a GHG observation system needs a robust data infrastructure to store and provide data for science and the public in a user-friendly way.

**Cost Analysis:** A costing exercise was carried out for the proposed observation and data infrastructure and an estimated 500 M€ investment over 30 years was identified. A significant half of the budget is planned to support human and institutional capacity building to assure local personnel for African ownership.

**SDP:** The SEACRIFOG Dialogue Platform assures discourses for action by actors. This could ensure inclusive long-term collaboration through a program and innovation management cycle, with priorities on participatory agenda setting, investment strategies, valorization of results, societal innovation and systems review.

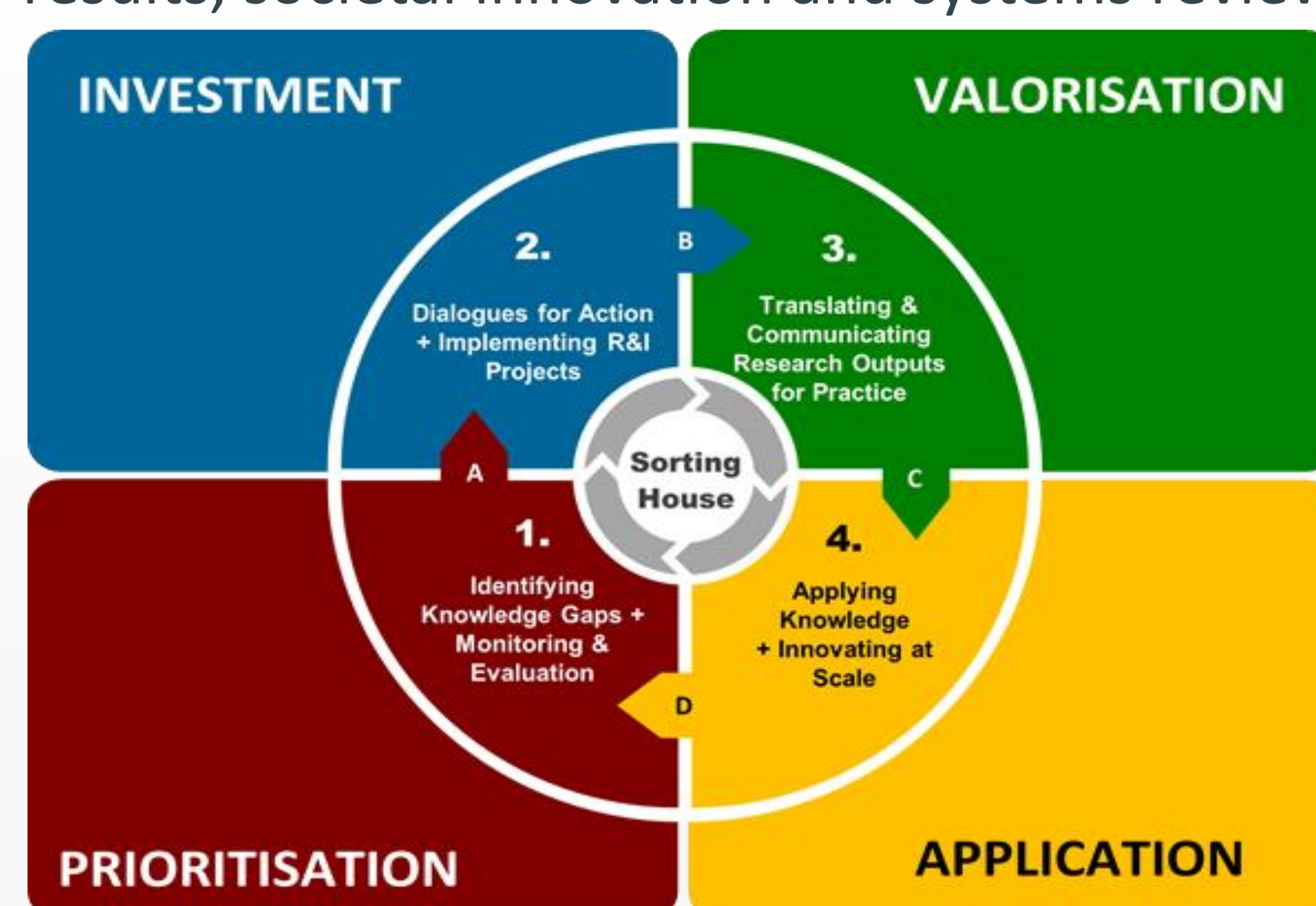


Figure2: The PIMC was first applied in the context of AU-EU agricultural cooperation project, LEAPAGRI.

**African – European Cooperation:** The overall project is a tangible example of successful EU-African cooperation, building a strong network of partners and stakeholders on both continents. The first steps for the development of an GHG observation system are done, but strong collaboration is needed to attain future goals.

## Impact:

- ✓ The SEACRIFOG inventory tool serves as an open database to access and find data on GHG's and related in Africa
- ✓ The project lays the foundation for the design of a comprehensive GHG observation system – which will pave the way for high quality jobs in Africa
- ✓ The envisioned GHG observation system is an effective tool for evidence-based policies related to GHG's and Climate
- ✓ The project is a first step to create EU-African cooperation on GHG monitoring and mitigation

Webpage : <https://www.seacrifog.eu/>

Twitter: @SEACRIFOG

E-mail: [veronika.jorch@thuenen.de](mailto:veronika.jorch@thuenen.de)

