

# IS THE EUROPEAN UNION'S GREEN HYDROGEN STRATEGY IN AFRICA COHERENT WITH SUSTAINABLE DEVELOPMENT?

Rafael Cossent, co-authored with Timo Gerres

*Institute for Research in Technology, ICAI, Comillas Pontifical University, Madrid*

Workshop for the European Parliament's  
Committee on Development





## Context

- REPowerEU set a target to **import 10 Mt of green hydrogen annually by 2030**.
- To achieve this, the EU Strategy defines **strategic partnerships with African nations as a key action**.
- In November 2022, the **European Commission signed a Memorandum of Understanding (MoU)** for strategic renewable hydrogen partnerships **with Namibia and Egypt**.
- This Briefing **evaluates the alignment** with Policy Coherence for Development (PCD) **of these partnership agreements** from the perspective of **their SDG coherence**.
- **Recommendations** to ensure that cooperation **aligns more closely with PCD** principles by promoting just and inclusive sustainable development are provided

Context ii/iii

Is the European Union's green hydrogen strategy in Africa coherent with sustainable development?



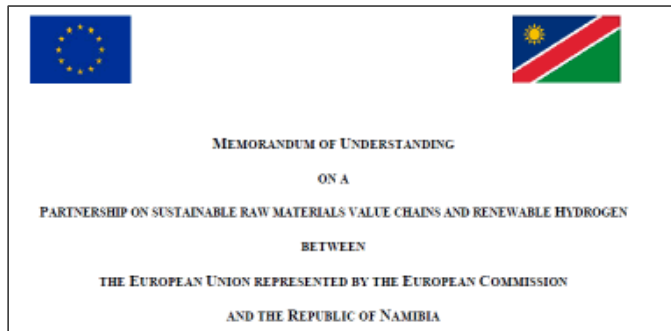
Source: J.D. Sachs, G. Lafortune, G. Fuller, and E. Drumm, 'Implementing the SDG Stimulus. Sustainable Development Report 2023: Sustainable Development Report 2023', Dublin University Press, 2023



- Significant cost and technology **uncertainties around hydrogen trade**:
  - Materialisation of EU demand – When and how much? Studies show demand below 20 Mt in 2030.
  - Low production costs may not be enough → potentially **significant H<sub>2</sub> transport cost** and the lack of **required infrastructure** can make other hydrogen providers less costly.
  - Future EU demand for ammonia-based fertilizers is expected to stagnate or decrease. Moreover, new projects for intra-EU ammonia shipping (e.g., H2Synes.RDAM project).
  - Renewable hydrogen **export-oriented deployment of renewable energy sources (RES)** may jeopardise domestic decarbonization.
  - Uncertainty on **compliance** with EU **regulation on rules for RFNBO production** (additional, correlation) and **emission reduction** threshold.



Namibia



- EU main objective → open H<sub>2</sub> economy for energy security
- Namibia → accelerated RES deployment for energy independence, economic diversification, and employment
- Risks concerning SDG compliance:

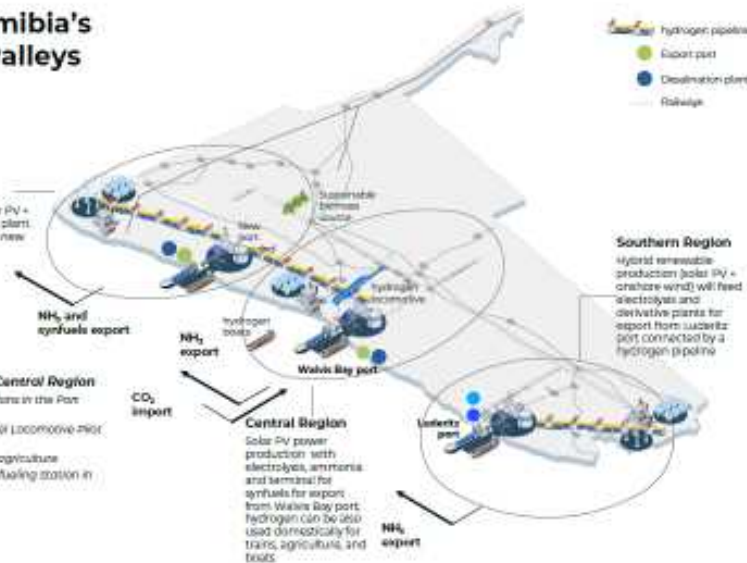
- **SDG 7:** RES deployment helps, but lack of detail on affordability and accessibility (infrastructure)
- **SDG 8:** lack of viability can hamper Namibia's financial stability (SDG Namibia One 24 % interest in Hyphen project)
- **SDG 6:** water desalination for H<sub>2</sub> production, but potential conflict with water consumption needed for construction
- **SDG 15/16:** criticism over Hyphen project award lacking transparency. Construction within Tsau Iikhaeb National Park

Vision for Namibia's three green valleys

Illustrative

Northern Region

Hybrid renewable production (solar PV + onshore wind) will feed electrolysis plant, and ammonia production near the new port facility



Confirmed pilot projects in Central Region

- Project 1: Green Hydrogen Applications in the Port Environment
- Project 2: Hydrogen-Driven Diesel Locomotive pilot Project Proposal for Namibia
- Project 3: Clean Green Hydrogen – agriculture
- Project 4: Hydrogen pilot plant / refueling station in WONDERS Bay

20/09/2023

- Strategic Partnership Roadmap (expected by May 2023) not published yet

## BRIEFING

# SDG Coherence

Is the European Union's green hydrogen strategy in Africa coherent with sustainable development?



MEMORANDUM OF UNDERSTANDING  
ON A STRATEGIC PARTNERSHIP ON RENEWABLE HYDROGEN  
BETWEEN  
THE EUROPEAN UNION AND  
THE ARAB REPUBLIC OF EGYPT

## Egypt

- The EU's main objective → open hydrogen markets & energy security
- Egypt → economic opportunities + diversification and decarbonisation of energy supply
- Plans to become a renewable hydrogen exporter by 2030, being today a major oil and gas producer. New green ammonia production projects announced. Partially funded under the “golden license” scheme
- Risks concerning SDG compliance:
  - **SDG7:** RES deployment devoted to H<sub>2</sub> exports under “golden license” might delay national decarbonization + access to EU funding might increase the availability of national funds for conventional technologies → **risk of fossil fuels lock-in.**
  - **SDG 11/13:** Fossil lock-in would **delay the transition in transport** and **threaten the achievement of sustainable cities, communities and climate action.**
  - **SDG 14/15:** Risk due to projects located in the Suez Canal Economic Zone, close to crucial biodiversity areas.
  - **SDG 16:** The golden license scheme may hamper local communities' rights, considering the lack of transparency of existing projects. MoU's governance plan includes only industry and governmental stakeholders, with no room for civil society.

## Recommendations    Is the European Union's green hydrogen strategy in Africa coherent with sustainable development?

---

The European Parliament may use recommendations to encourage the European Commission to focus more on sustainable development in existing partnership agreements (via the agreed governance structure) and future ones:

- **Long-term commitments and bilateral offtake agreements** are key to avoiding stranded assets.
- Project **co-financing** by EU institutions **to ensure compliance** with EU sustainability standards and public procurement criteria. Regulatory alignment, as mentioned in MoUs, is a long-term process.
- Set **mechanisms to ensure** that renewable capacity is **not used only for exports**.
- **Inclusive governance framework** that includes civil society/NGOs to not harm local communities or biodiversity.
- Define **measurable targets** for assessing the **broader impact on SDG performance**.
- Coordinated **alignment of sustainable development partnerships**, e.g., linking partnerships to compliance on specific sustainable development fields.