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REPORT

The Geography of Green Iron and Green Steel: Opportunities for Europe and North Africa

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Context
On the 15th of January, the ECDPM (European Centre for Development and Management) organised a webinar titled *The geography of green iron and steel: Opportunities for Europe and North Africa.* The webinar delved into the dynamics of decarbonisation of the EU's iron and steel industry, and the opportunities it presents for collaboration with North African partners while also meeting their objectives of industrial development.
The webinar was introduced by **Alfonso Medinilla,** Head, Climate action and green transition, ECDPM; and moderated by **Poorva Karkare,** Policy officer, African economic integration, ECDPM. The discussion relied on the expertise of four speakers: **Soroush Basirat**, Energy finance analyst, IEEFA Australia ; **Zaffar Hussain**, Project lead PtX Africa, Agora Industry; **Richard Smith**, Policy adviser, Energy transition, E3G , and **Behnam Lot,** Policy adviser, Industrial decarbonisation, Bellona Europe.

Discussion

- **Green Iron and Green Steel, Economic challenges, Opportunities and the Political Economy**

Steel and iron are critical materials for the European Economy, supporting thousands of jobs and representing an important pillar of economic resilience. Recent political and environmental challenges have opened the door to numerous concerns about the future of these industries and their subsequent effect on Europe's prosperity and growth. **Overcapacity** from foreign competitors such as China, **high energy prices**, the underutilization of facilities and resources in Europe, and the implementation of **decarbonization mechanisms** such as the **CBAM** (Carbon Border Adjustment Mechanism), pose significant challenges that have undermined the feasibility of producing these ferrous metals. Europe's decarbonization efforts have shed light to North Africa's potential in the production of renewable energies and green steel, opening opportunities for green industrial partnerships between the two regions. However, obstacles in the areas of financing and perceived economic autonomy have not yet allowed the full capitalization of opportunities attached to these future collaborations.

- **Barriers to Green Iron and Steel production in North Africa**

Although countries like Morocco, Mauritania, Libya, and Egypt present significant potential in renewable energy production, these countries, along with others in the region, still face barriers in achieving a competitive advantage capable of untapping their full export capacity. Some significant constraints are:

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- **Financial Challenges and Demand Signals**

High Cost of Capital (WACC) increases the cost and prices of energy outputs. Although some countries like Morocco have been able to attract investors, countries such as Mauritania, who faces a WACC of 14%, still struggle to scale their operations. To tackle this, more investment and de-risking instruments are needed to boost investors' confidence. EU financial tools such as the **Global Gateway**, and the collaboration of **multilateral development institutions** like the **European Investment Bank** and the **African Development Bank** can help in de-risking these investments. To achieve this, ensuring transparent financial mechanisms is essential for uncovering and mobilizing financial resources. Some success stories include Morocco and Namibia, who have been successful in scaling up valuable renewable energy projects by leveraging international financial institutions to secure favourable financing terms and grants, reducing risk and making projects more attractive to investors.

Unclear demand signals for green hydrogen by the EU limit its production in North Africa, as investors and producers are hesitant to commit without a predictable market for the product. Long-term agreements and clear communication could stabilise revenue and reduce perceived risk.

- **Historical mistrust and concern for economic autonomy**

The EU's reluctance to invest in iron production outside the continent reflects the **political implications** that the metal has in the establishment of symmetrical interdependencies between Europe and Africa. At the same time, addressing **historical extractivism and dependency concerns** is essential for building cross-beneficial partnerships. Such worries can be solved by deploying equitable supply chains that are mutually integrated, ensuring that players from both regions can retain part of the value chain and achieve sustainable growth. African countries should prioritize local processing to generate and preserve added value, and subsequently create resilient employment and economic benefits. It is also important to support local regulatory developments to ensure improved efficiency and that benefits are felt domestically in the African continent.

- **Opportunities for European-North African partnerships**

Despite the challenges, there are numerous benefits related to the strengthening of energy partnerships between Europe and North Africa. As mentioned previously, many North African countries present enormous renewable energy potential and generating capacity. Big expansion potential exists in countries such as Libya, Algeria, and Egypt, thanks to the complementarity they possess of wind and solar energy sources. Untapped potential also exists in West Africa, where 40% of **Iron Ore** is suitable for **Reduced Iron Production (DRI)**. Such capabilities match with the EU's demand for renewable energy and its objectives for supply chain decarbonization. The comparative advantage potential offered by North Africa in the development of renewable energies and green iron, as well the geographical proximity of the region to Europe present opportunities for long-lasting cooperation and **beneficial interdependence**. In order to make future partnerships between the two continents possible, we need efficient frameworks such as the **Commission for the Mediterranean**. Given that such partnerships are not only economical, but also diplomatic in nature, it is important to establish transparent lines of communication and collaboration.

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