



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



EGYPT

GEIPP
GLOBAL ECO-INDUSTRIAL PARKS PROGRAMME



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
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Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Economic Affairs SECO



Linking SMEs to global value chains (case of leather) & GH2 ecosystem development as part of EIP

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Part I: Robbiki Leather City - Objectives

- A specialized and integrated industrial city in the leather manufacturing industry with SMEs and large businesses
- **MoTI relocated traditional tanneries in Old Cairo to the Robbiki IP to:**
 - Controlling environmental impacts and working conditions.
 - Enhance marketing and promotion assistance for factories through local and international exhibitions.
 - Promote **sustainable tanning processes**
 - Facilitating exports of their **products: footwear, bags, accessories and leather garments** to international markets especially in **Europe**.





Brief description

- 654.8 hectares
- SMEs: 188 tanneries - 99% of Robbiki
- 10,000 workers.
- **Phase I:** Tanning leather.
- **Phase II:** Intermediate industries.
- **Phase III:** Manufacture of leather end products.



The quality of the Egyptian Raw hides ranks the 7th in the world.

Total production of tanned leather: 200 Million square feet/yr.





PARK CHALLENGES

ENVIRONMENTAL

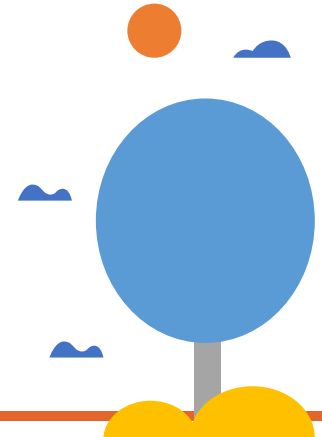
- **Reuse industrial waste water .**
- **Decrease Water consumption.**
- **Decrease Carbon Emission .**
- **Decrease Energy Consumption .**

SOCIAL

- **Rising Awareness of workers and tanneries.**
- **Social infrastructure**

ECONOMICAL

- **Use local resources**
- **Facilitate exporting products**



GEIPP activities: PARK LEVEL

- Assessment of EIP opportunities
- Capacity building workshops on Eco industrial park concept/ Industrial Symbiosis.
- Establishing Environmental and Energy management unit and identifying responsibilities
- Suggesting creating a database with all park services to be available for tanneries.
- An international expert has been hired by UNIDO to prepare a pre-feasibility study on new infrastructure for wastewater reuse by the tanneries.
- Pre-Feasibility study:
 - Plastic Tent for Leather Drying.
 - Salty effluent treatment and recycling.
 - Recycling WWTP sludge in cement kiln
- A study tour to Italy to expose tanneries to international best practices on environmental and organizational aspects.



Industry level: RECP/ IS opportunities for 40 tanneries

Monitoring & controlling the feed water entering the drums. / Installation of water flow meters on drums. / Water cleaning only in the drum area / Chromium separation of effluent / Reuse the relatively polluted water / Applying mechanical desalting.

**Water Saving
Waste Water
Treatment**

Installing safeguards
(fences) for workers
safety at the drums

Safety

Energy Saving

Installing capacitors/
power factor
correction panel.

Awareness

Workshop has been held to cover the methodology, benefits, and concrete examples of RECP interventions

Technical support to qualify tanneries for an environmentally sustainable certificate (LWG)

Leather Working Group is a non-profitable organization responsible for the world's leading environmental certification for the leather manufacturing industry and become an important document to facilitate the exporting process for European countries

- GEIPP identified some RECP, IS and EIP interventions to support tanneries to comply with the LWG standards for export which could improve companies' image and reputation. .
- Synergies/ Similarities between the EIP and LWG requirements:
 - Establishment of an environmental, health and safety management system.
 - Sharing the company information(process input ,production technology ,material and energy .
 - Monitoring /Controlling water and energy consumption





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Part II. GH2 ecosystem development as part of EIP

R.ADM. Walid Youssef Morsi - Vice Chairman – South Region SCZone



Targeted Sectors & Industries



Logistics



Vocational & Maintenance Centers



Data Centers



Bunkering Conventional/Green

4

SERVICES

INDUSTRIES

17



Green Fuel



Electrolyzers



Wind Turbines



Solar PV



Petrochemicals



Water Desal. Membranes



Automotive



Rolling Stock



Electric Batteries



Car Tires



Casting & Foundry



Building Materials



Pharmaceutical



Active Pharma Ingredients



Medical Equipment



Textiles



Agribusiness

H₂ Production at SCZONE

H.E. President Abdel Fattah El-Sisi President of the Arab Republic of Egypt and H.E. Jonas Gahr Støre the Norwegian Prime Minister, inaugurated the first integrated green hydrogen plant in Africa during the Leaders Summit at COP27, located at SCZONE's Sokhna Industrial Area.





Green Fuel Industrial Cluster at SCZONE

In response to the rising global demand, and capitalizing on SCZONE's strategic location, we work on localizing the GREEN FUEL INDUSTRY at our Industrial Areas & Ports.

Hence, the SCZONE signed:

21 Active MOUs

- A.P.M.-Maersk
- Alcazar
- Energy China
- ACME
- Benchmark
- MEP
- Actis
- BP
- Ocior
- ACWA Power
- DAI
- TAQA/Voltaia

- Al-Fanar
- AMEA
- EDF
- FFI
- Globeleq
- Masdar
- ReNew
- Scatec
- Total

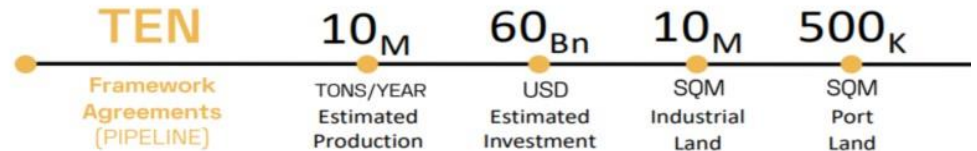
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FRAMEWORK AGREEMENTS
(SIGNED)

15_M
TONS/YEAR
Estimated Production

85_{Bn}
USD
Estimated Investment

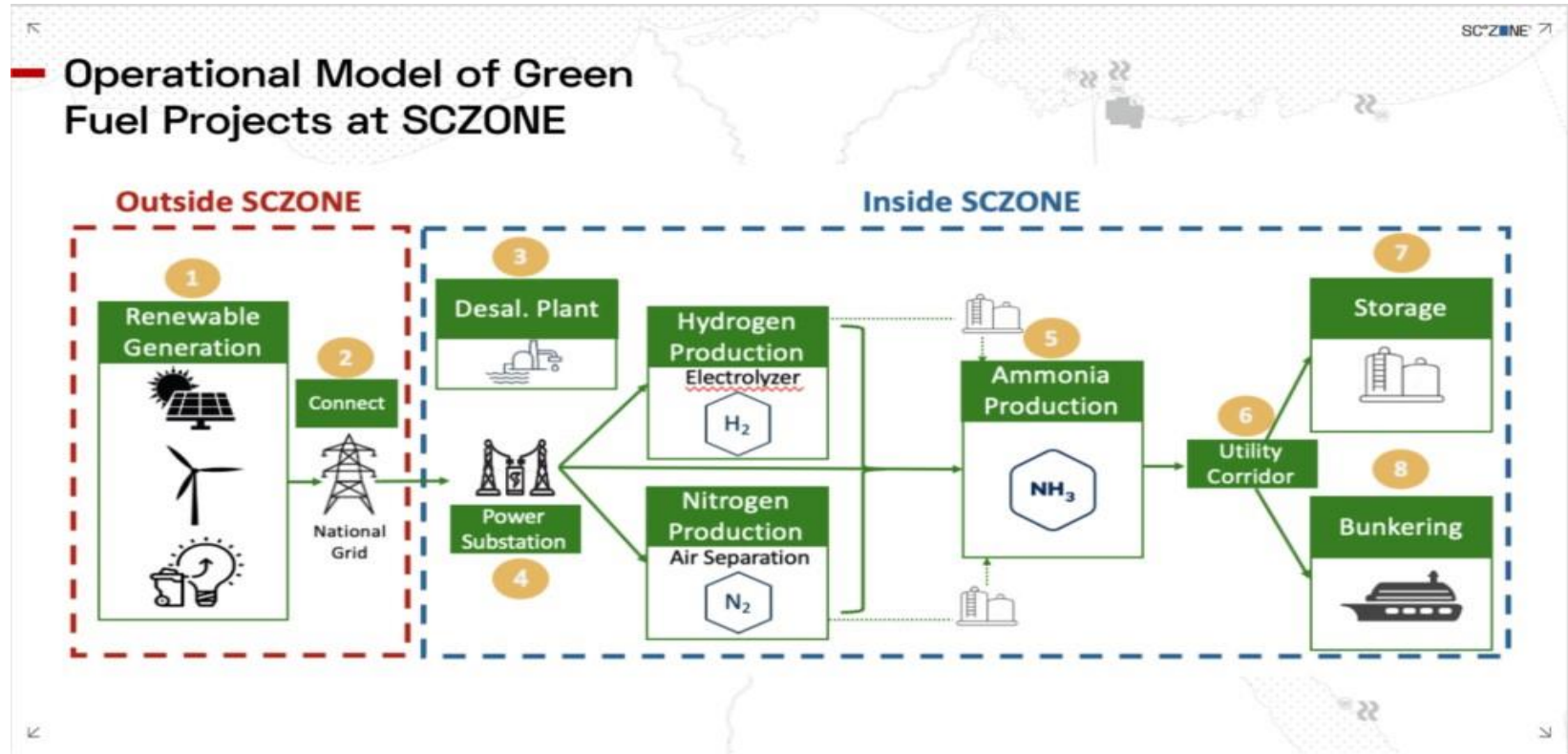
32_M
SQM
Industrial Land

700_K
SQM
Port Land

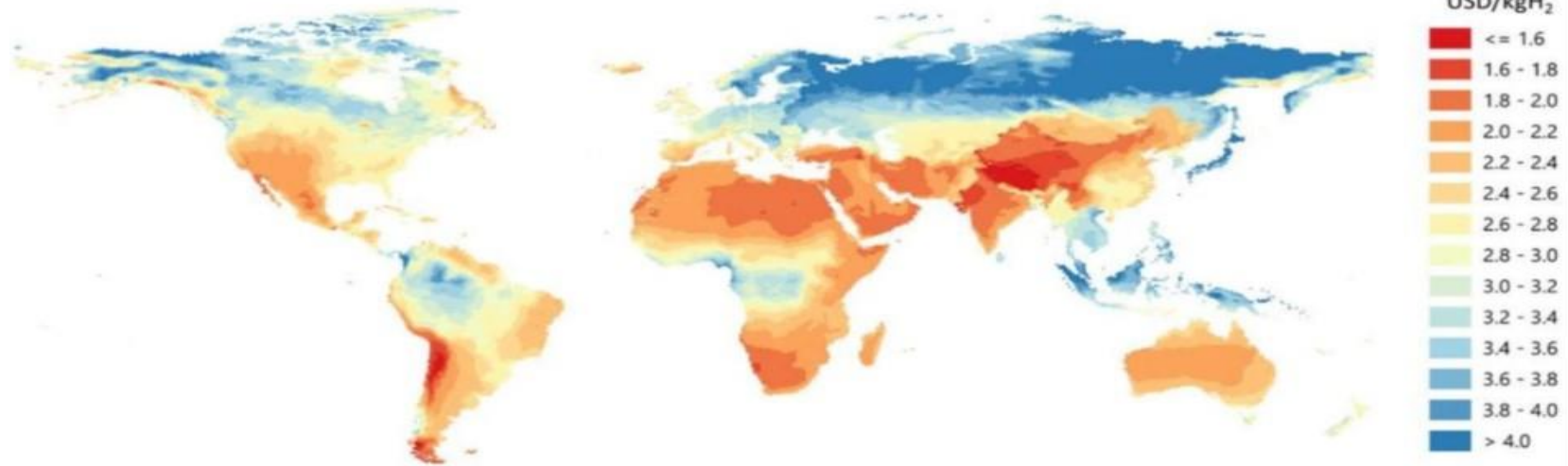


Green H₂ Cluster at East Port Said





Hydrogen Costs from Hybrid Solar PV & Onshore Wind Systems in the Long Term



Source: International Energy Agency

Investment opportunities in green fuel projects at SCZONE

- Green Hydrogen Production
- E-Methanol Production
- Green Ammonia Production

Main Stream

- Electrolyzers
- Solar PV
- Wind Turbines & Blades
- Water Desalination Membranes
- Maintenance & Vocational Training Centers

Feeding Industries

Infrastructure

- Power Sub-stations
- Utility Corridor
- Water Desalination Plant
- Liquid Bulk Terminal Operation

Green Bunkering

- Sokhna Port
- East PortSaid Port

GEIPP Egypt - Development of GH2 ecosystem

Objectives

- Support the implementation of EIP standards in the allocated GH2 production area for achieving sustainability.
- Development of a roadmap for GH2 ecosystem compatible with EIP principles.
- Recommendations for mitigating negative environmental and social impacts of GH2 ecosystem:



Climate change, pollution, resource depletion, operational and community health & safety issues, and impacts on nearby communities.





GEIPP activities - GH2 ecosystem

(1) Training on GH2 Best Practices



- International experience and Best Environmental Practices for green H2 parks development,
- H2 current and future market,
- Possible applications and economics (both at the level of the manufacturing companies and infrastructure).





(2) Recommendations to control potential Risks in GH2 ecosystem

Planing fortechnical services

- Utilities, monitoring, enforcing compliance, internal road networks, drainage and sewerage.
- Industrial, environmental and social infrastructures.

Development of Guidelines

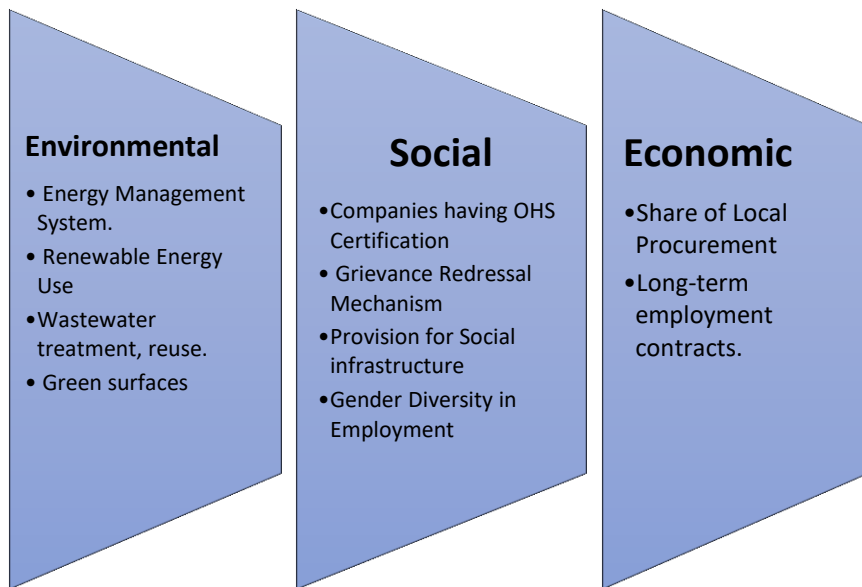
- Integrated waste management plan for waste prevention.
- (e.g. waste from electrolytes, fuel cells).

Risk Assessmentand Management

- Potential risks and hazard installations, storage, operations, transport..
- Safe handling of hazardous material.
- Operational and community health and safety measures.

(3) Development of Performance Indicators for GH2 park

- A list of economic, social and environmental KPIs indicated in the EIP framework.



(4) Development of a roadmap for GH2 ecosystem development

- To cover the sustainability issues, recommendations & measures and KPIs to assist in achieving sustainability.
- Set the minimum requirement for the ecosystem as per the EIP Framework
- To align with SDGs, Egypt Vision 2030, National Climate Change Strategy to 2050.





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