# BUILDING A GLOBAL SUPPLY CHAIN OF GREEN HYDROGEN TO SUPPORT THE ENERGY TRANSITION TOWARDS A DECARBONIZED SOCIETY

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# **GREEN HYDROGEN: THE OPPORTUNITY OF A CLEAN FLEXIBLE ENERGY VECTOR**

- ✓ About 75% of global GHG emissions are generated by sectors outside of power.
- ✓ Deeper actions are needed to decarbonize across sectors.



 The rapid decline in renewable costs increases the potential for green hydrogen to be cost competitive with fossil sources in certain geographies and applications.





## **RELEVANCE OF GREEN HYDROGEN IN SIDS**

- Reduce dependence on diesel and decrease exposure to high price volatility of imported hydrocarbons.
- Improve access to a reliable fuel source in remote locations by building an adequate supply chain.
- Produce a clean fuel that can power fuel cells in electricity and transport applications, both terrestrial and maritime.
- Increase the flexibility of small isolated systems with unstable power grids and limited options for supplying firm power.
- Build resilient energy systems that are less exposed to adverse weather events.





## **GREEN HYDROGEN AND GREEN RECOVERY**

- ✓ Renewable energy employment worldwide reached 12 million in 2020, showing that sustainable energy can help achieve post COVID-19 green, resilient and inclusive recovery.
- Green hydrogen can create direct, indirect and induced jobs throughout the entire value chain.
- Estimates indicate that investments in electrolyzers and other green hydrogen infrastructure could create about 2 million jobs worldwide between 2030 and 2050.
- ✓ The World Bank acknowledges the potential for green hydrogen to generate high-quality jobs and achieve a just transition.



# MAIN TECHNICAL, ECONOMIC AND FINANCIAL CHALLENGES TO THE DEPLOYMENT OF GREEN HYDROGEN IN SIDS AND DEVELOPING COUNTRIES



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### THE ROLE OF THE PUBLIC SECTOR IN SCALING-UP GREEN HYDROGEN



# WORLD BANK SUPPORT TO ADVANCE GREEN HYDROGEN UPTAKE

### **Global Knowledge**

- Green hydrogen reports.
- Practical on-line tools.
- Development of systems of guarantees of origin.
- Technology-focused workshops and regional knowledge exchange events.

### **Technical Assistance**

- Informing country strategies and roadmaps for green hydrogen uptake.
- Policies, regulations and standards.
- Building capacity to design and operate hydrogen projects.

### Financing

- Concessional loans for large production facilities
- Concessional loans for green hydrogen funds to accelerate production and use
- Mobilization of climate funds and other concessional resources

- The WB is <u>already supporting 12 countries</u> with technical assistance to better understand the role that green hydrogen can play
- ✓ Starting to conceptualize the **first investment operations** in countries with excellent RE resources



# **THANK YOU**

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