

# OFFSHORE WIND AND FLOATING SOLAR PV - SUPPORT & FINANCING IN SIDS

Mark Leybourne

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# WBG Offshore Wind Development Program

## Objective:

- Accelerate adoption of offshore wind in emerging markets
- Support to build pipeline of bankable projects

## Program components:

1. Global knowledge generation and exchange
2. Bank Executed: Country roadmaps and technical assistance
3. Recipient Executed: Feasibility, site surveys, auctions

## Current Work:

- **Global:** Env & Soc Framework, Concessional Finance study
- **Country:** Azerbaijan, Brazil, Colombia, Fiji, India, Philippines, Papua New Guinea, Saint Lucia, South Africa, Sri Lanka, Turkey, Vietnam, plus other initial engagements

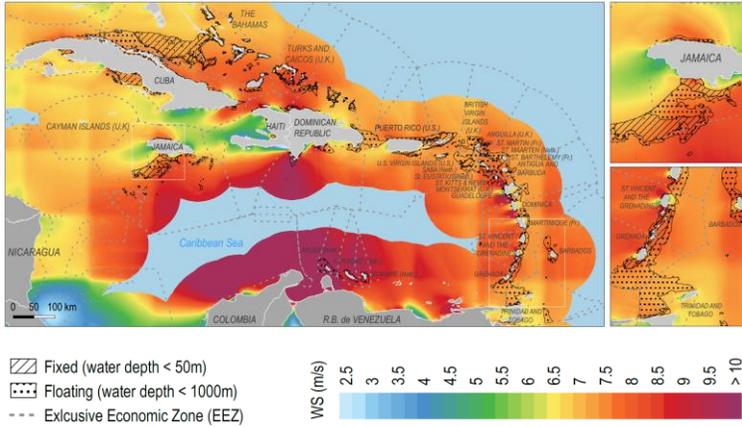


Credit: Vestas – Walney Extension OWF

# Opportunities and Challenges in SIDS

## Offshore Wind Technical Potential in the Caribbean Islands

Fixed: 238 GW || Floating: 513 GW || Total: 751 GW

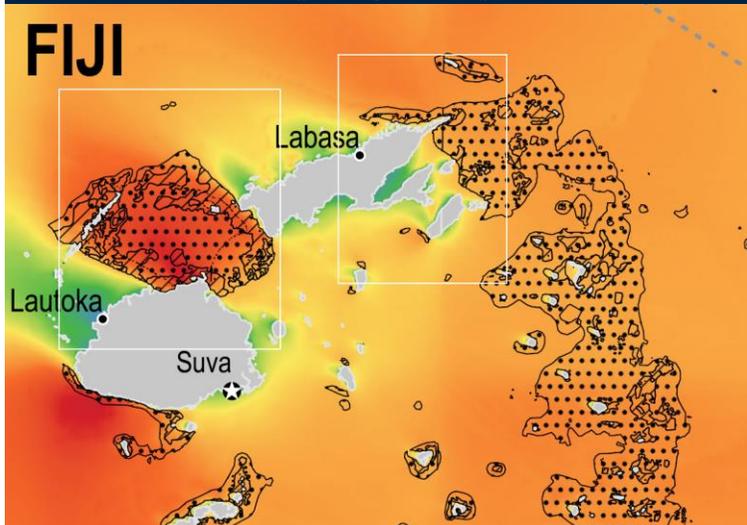


### OPPORTUNITIES

- High price of power
- Net-zero commitments
- Energy security needs – avoiding fuel imports and volatility
- Scarcity of available land for onshore generation
- Often good offshore wind resources and output potential
- Additional power could unlock new industry opportunities
- Good availability of concessional finance

## Offshore Wind Technical Potential in Fiji

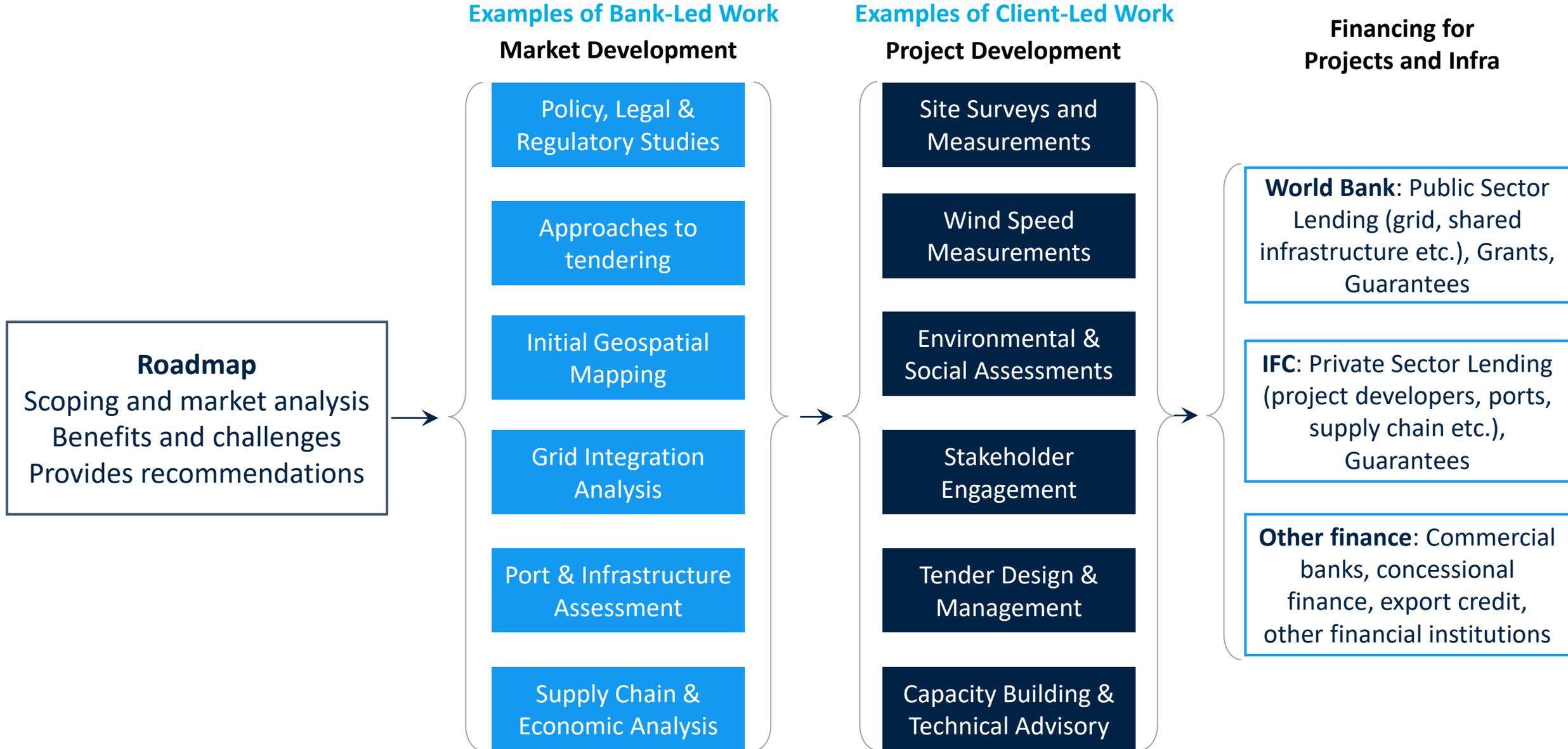
Fixed: 33 GW || Floating: 160 GW || Total: 193 GW



### CHALLENGES

- Projects are most likely to be <100MW
- Can be perceived as small scale:
  - Difficult to attract project developers and operators
  - Potentially unattractive opportunities for suppliers and services
  - Few local supply and job opportunities
- But also perceived as large scale:
  - Permitting & tendering – Capability of local government agencies
  - Environmental & social – potential for relatively high, negative impacts
  - Grid connection – network strength and stability limits options
  - Large PPA agreement – challenge for offtaker and guarantees

# Typical Country Activities Supported by WBG



# Near-shore Floating Solar PV

- Limited space for onshore solar deployment so need to consider marine environment (e.g. first near-shore pilots/projects in Maldives, Philippines, Seychelles, Singapore, UAE, etc.)
- WB is supporting Maldives in its near-shore FPV ambitions through Accelerating Renewable Energy Integration and Sustainable Energy (ARISE) Project
  - Preliminary technical assessment of the sites proposed for the tender of 10 MW, including collection of environmental and social data to be included in the tender package
  - Support to grid integration of solar, incl through battery storage
- WB/ESMAP is planning a publication on near-shore marine FPV to raise awareness about issues related to its deployment
  - Technical aspects (higher wind and waves, salinity, anchoring, etc.)
  - Environmental aspects (deployment in natural environment, unlike for standard FPV typically deployed in man-made reservoirs)
  - Social aspects (competition for marine space with navigation, fishing, recreation, etc.)





**Thank You!**

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**MARK LEYBOURNE**  
SENIOR ENERGY SPECIALIST, ESMAP, WORLD BANK