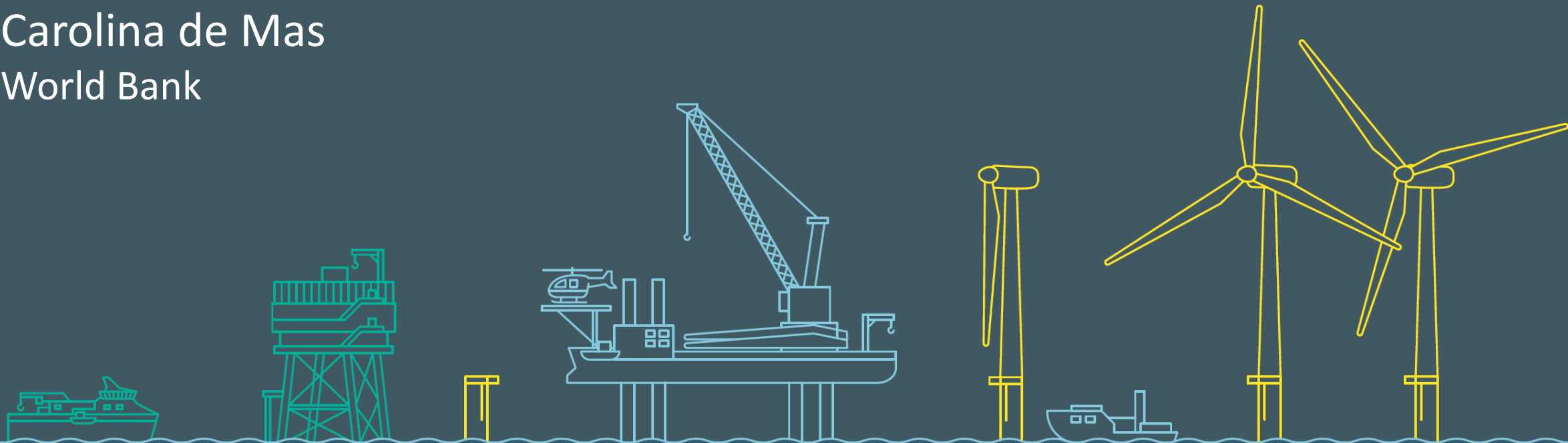




OFFSHORE WIND DEVELOPMENT PROGRAM

II Congreso Eólico Marino

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World Bank



WB Offshore Wind Development Program



About the Program:

- Established in April 2019
- Led by the Energy Sector Management Assistance Program (ESMAP) in partnership with the International Finance Corporation (IFC)
- Approximate ~\$US 12 million budget for Technical Assistance

Objective:

- Accelerate deployment of offshore wind in emerging markets and provide support to build pipeline of bankable projects

Countries Supported by WB since 2019

1. Algeria
2. Argentina
3. Azerbaijan
4. Barbados*
5. Brazil
6. Colombia
7. Costa Rica
8. Dominican Republic
9. Fiji
10. India
11. Indonesia
12. Morocco
13. Papua New Guinea
14. Panama

Green = Priority Country

15. Philippines
16. Poland*
17. Romania
18. South Africa
19. Sri Lanka
20. Tunisia
21. Turkey
22. Ukraine
23. Uruguay*
24. Vietnam

*IFC led support





Program's Global Activities

Credit: Vestas – Deutsche Bucht OWF

Knowledge generation, dissemination and exchange:

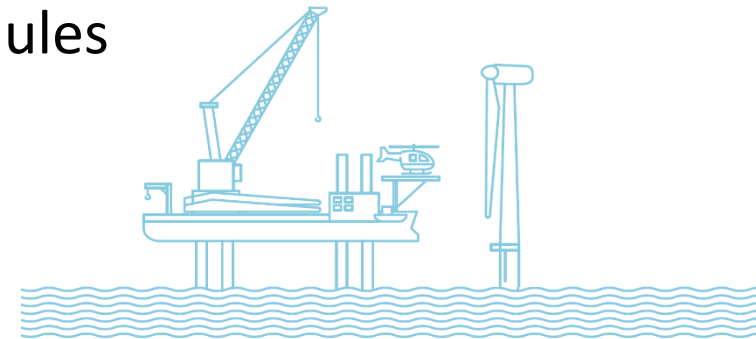
- Reports on good practice, lessons learned and opportunities for emerging markets
- Mapping to identify and quantify offshore wind development potential
- Events, workshops and training to inform, educate and gather country support (often in collaboration with GWEC)

Key Factors Study – September 2021



- **Objective:** to help government officials in developing countries answer the question “*what do we need to do to establish and grow a successful offshore wind market?*”
- Flagship knowledge report to provide lessons learnt and good practices but for a developing country setting
- Includes 39 case studies and 327 references to further reading material
- The report is accompanied by a series of online learning modules which present and discuss the essential key factors

[Download here](#)



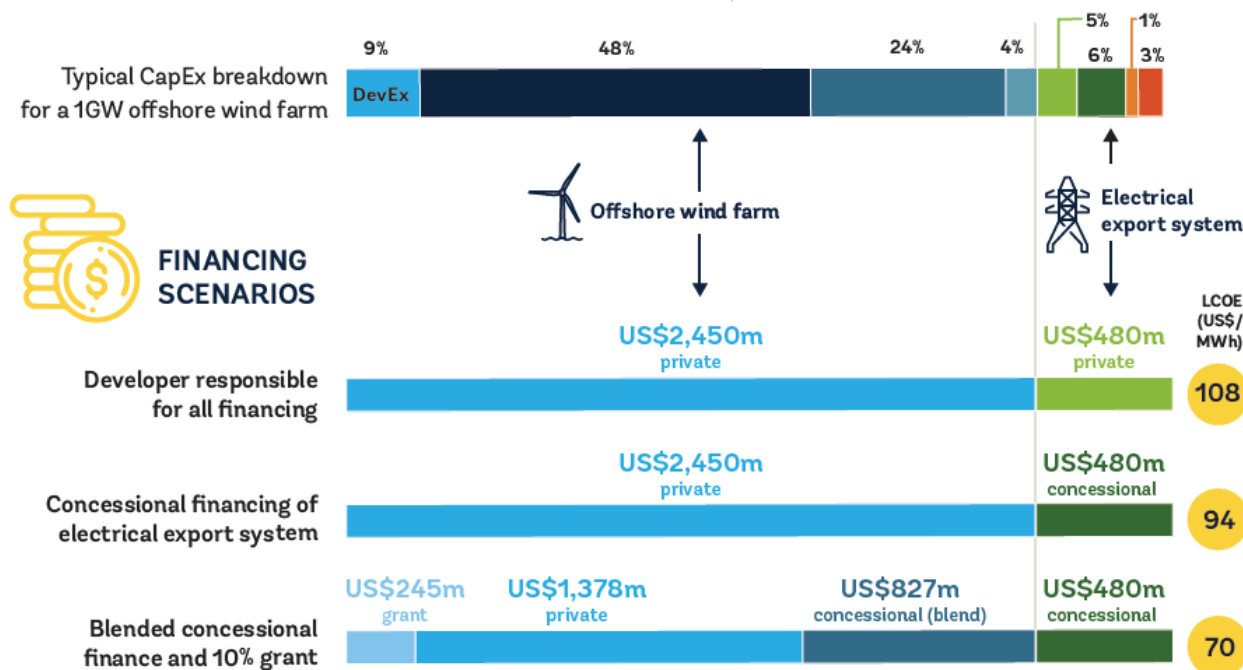
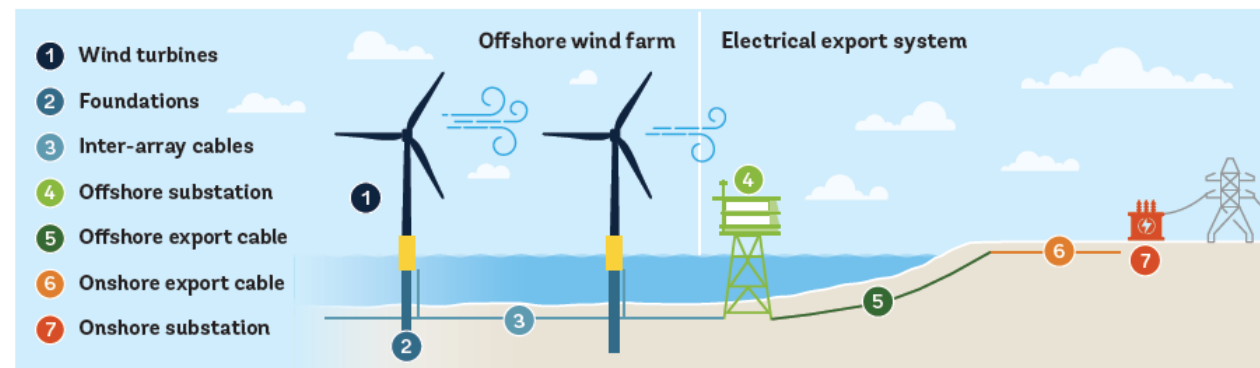
European Study Tour 2022

- 10 day study tour with 55 people (25 delegates, 10 WB, 8 IFC)
- Netherlands (with RVO), Germany (for Wind Energy Hamburg), and Denmark (with DEA)
- Visits included; SIF foundations, Haliade test turbine, DOB offshore training, Esbjerg port, H&S training, Siemens green hydrogen demo, Brande wind turbine test centre, Anholt offshore wind farm
- Representatives attended from 15 countries:
 1. Azerbaijan
 2. Barbados
 3. Brazil
 4. Costa Rica
 5. Dominican Republic
 6. India
 7. Morocco
 8. Philippines
 9. Romania
 10. South Africa
 11. Sri Lanka
 12. Tunisia
 13. Turkiye
 14. Uruguay
 15. Vietnam



Role of Concessional Financing Study - 2023

- First offshore wind projects in any new market are more expensive
- Needs to be 'affordable' for a developing economy
- Concessional finance could substantially reduce the cost of energy for the first offshore wind projects
- Helps to reduce the costs for subsequent projects in that market
- Reducing need for public support as the market matures
- [Published in September 2023](#)



Program's Country Activities

Credit: Vestas – Deutsche Bucht OWF

Country Specific Work

Exploratory country studies and planning work





- Roadmaps
- Policy, Legal & Regulatory Studies
- Grid Integration Analyses
- Port & Infrastructure Assessment
- Etc.



Preparation of investment plans

Examples of Technical Assistance for Countries

Some examples of our impact:

-  **Azerbaijan:** Roadmap drove developer interest, with more than 10 GW of MOUs
-  **India:** Program has helped develop the country's first seabed leasing competition targeting 4 GW
-  **Philippines:** Roadmap initiated industry, moving from zero interest to +50 GW today
-  **Turkiye:** Roadmap advised government on establishing a target of 5GW by 2035

World Bank lending and guarantees – Transmission and port infrastructure financing and de-risking facility, e.g. India

IFC project financing – building on long experience of financing onshore generation projects and infrastructure

MIGA political risk insurance

Colombia

Roadmap launched by President in May 2022

- **Excellent resources:** +50GW potential, up to 70% net capacity factor
- **Drivers:** Energy security, sustainability, affordability, economics

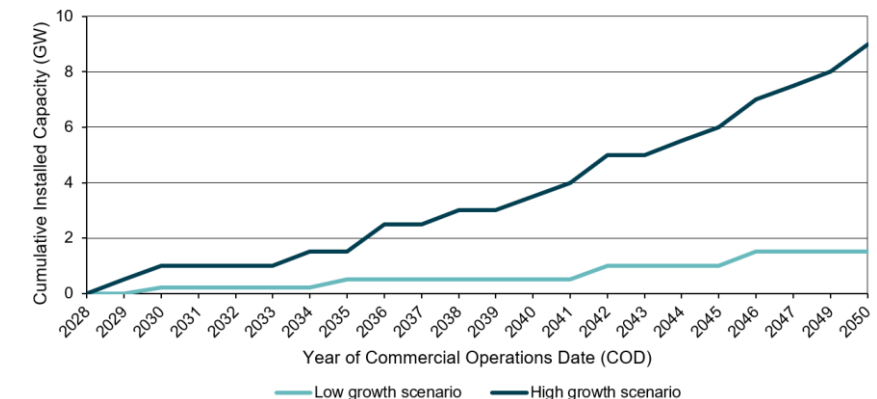
Resolution on offshore wind published in Aug 2022 - WB ran workshops with Ministry officials.

Capacity building sessions with Government agencies along 2023.

First seabed tender to be launched in December 2023 – now under public consultation.

Next steps by the program:

- Assessment of Commercial mechanisms for power offtake
- Environmental sensitivity mapping to inform the siting of lease areas in the Colombian Caribbean
- Assessment of Port upgrade requirements



Brazil

Going-global report (2019) highlighted the resource potential. **Caused a surge in project applications** on the IBAMA portal (now +200GW).

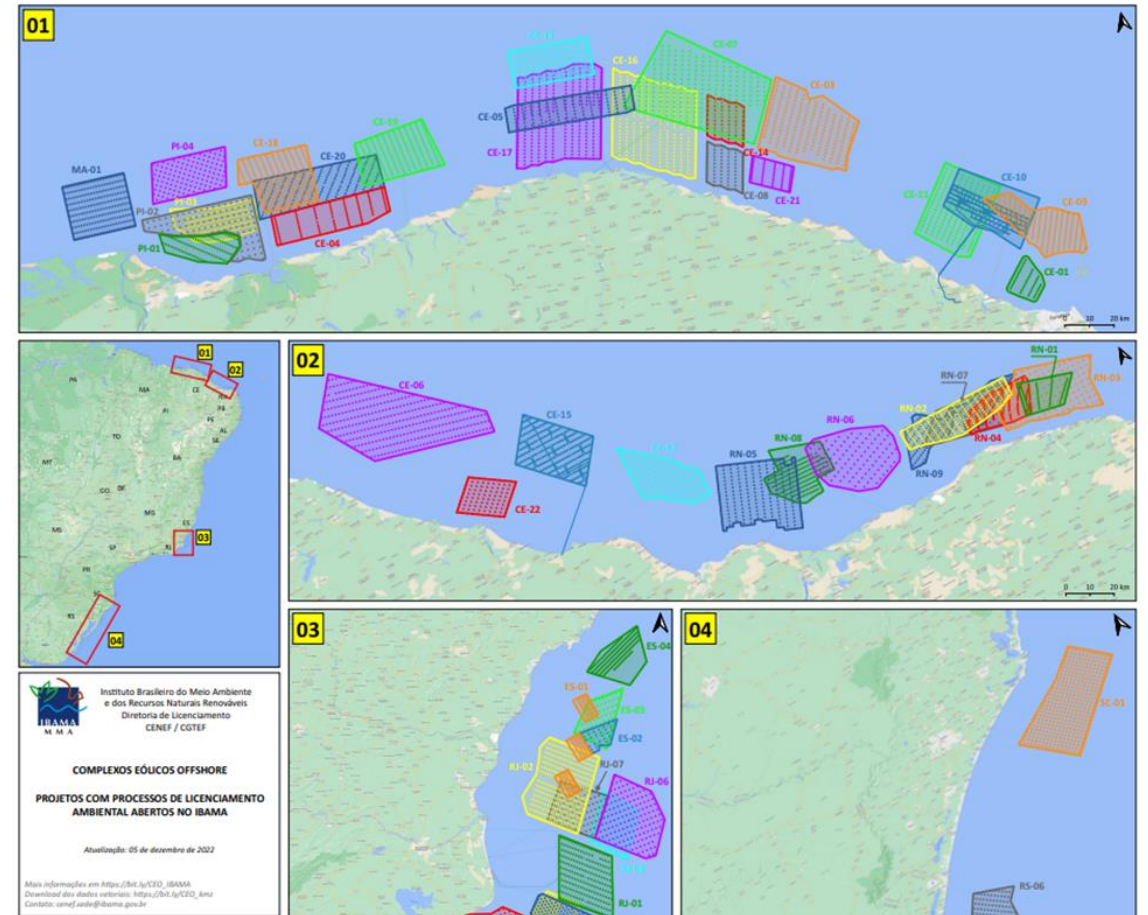
Offshore wind Decree and Ordinance, both published in 2022 - series of technical workshops throughout 2022 on tender design principles to inform these.

Capacity building workshops with Governmental agencies along 2023.

Offshore Wind Bill discussed in Parliament, aim at approval by end of 2023.

Next steps by the program:

- Study on **‘Scenarios for Offshore Wind’** (contract with DNV) will support on power integration, regulatory development, green hydrogen, spatial mapping, and ports. Intended to inform policy and setting a government vision.





Thank You!

CAROLINA DE MAS