Support for green infrastructure

Isabelle Rojon, Maritime Transport Specialist

Conference on Unlocking Opportunities for Green Shipping in Africa, Accra
Wednesday, 15 February 2023
World Bank programmatic approach

- Zero-carbon bunker fuels
  April 2021
- Role of LNG
  April 2021
- Carbon revenues
  April 2022

World Bank is observer at the International Maritime Organization
1 Development opportunities – major opportunities for countries and ports in decarbonizing shipping

2 Regulatory framework – certainty is key to unlocking investments

3 Carbon revenues from international shipping – enabling an equitable energy transition
Realignment of the fuel market

Country with no or insignificant oil reserves, but large renewable energy resources
The potential for zero-carbon bunker fuel production

- Blue ammonia only
- First blue, then green
- Green ammonia only

Legend:
- High potential
- Promising potential
- Limited potential or insufficient data
Investment needs

Decarbonization by 2070

- produced with SMR + CSS: 85%
- produced with a mix of SMR + CSS and electrolysis: 88%
- produced with electrolysis: 89%

Decarbonization by 2050

- produced with SMR + CSS: 85.5%
- produced with a mix of SMR + CSS and electrolysis: 87.5%
- produced with electrolysis: 89%

Barriers include uncertainty regarding:
- future demand for and supply of clean fuels
- evolution of policy and regulatory environment.

Climate policy uncertainty is associated with significant decreases in investment.

Uncertainty is a fundamental barrier to increasing climate finance. Political leadership and policy interventions are central to addressing this uncertainty.

Where are we now?

**MID-TERM MEASURES**

- **CURRENTLY TABLED AT IMO**
  - Command and control measures
  - Performance standard, fuel emissions standard, etc.
  - Market-based measures
    - Cap-and-trade with free distribution of emissions allowances, or subsidies
    - Carbon levy or cap-and-trade with sale/auctioning of emissions allowances
  - Non-revenue raising
  - Revenue-raising

- **FINALIZED AND AGREED BY 2018–2023**
- **FINALIZED AND AGREED BY 2023–2030** (closer to 2025)
- **BEYOND 2030**

**Next steps**

- ‘Basket of measures’
  - e.g., MBM + emission/fuel standards
  - Assessed and selected for further development between spring 2022-spring 2023 (MEPC 76 workplan)

**Potential Revenues 2025-2050**

Total: $1 to $3.7 trillion
Annual: $40 to $60 billion
Seven options for carbon revenue use analyzed
Should carbon revenues only be spent on maritime transport?

- Likely to limit some countries’ ability to access revenues.
- Financing broader climate aims could help with equity & climate outcomes.

Which country groups could have access to carbon revenues?

- SIDS, LDCs and developing countries as primary recipients
- Developed countries as complementary recipients

What could a possible revenue distribution framework look like?

- Recipient
- Revenue use
- Financing terms
Possible revenue distribution framework

1. **Recipient lever**
   - **Share A**: Selected developing countries, including SIDS and LDCs
   - **Share B**: All developing countries
   - **Share C**: Developed countries

2. **Use lever**
   - Shipping’s decarbonization
   - Maritime transport infrastructure and capacity
   - Broader climate aims

3. Financing terms lever
   - Relaxed
   - Stringent
Key implications for policymakers and industry

Main findings: (1) Significant opportunities - (2) Policies needed - (3) Revenues as enablers

Development opportunities in shipping’s energy transition

Stringent policy at global level needed to drive the transition

Carbon revenues from shipping can enable an equitable transition
Thank you.

Contact
Isabelle Rojon, irojon@worldbank.org