

ACTION AND COLLABORATION

Decarbonisation Pathways for the Global Maritime Industry

Presented by:

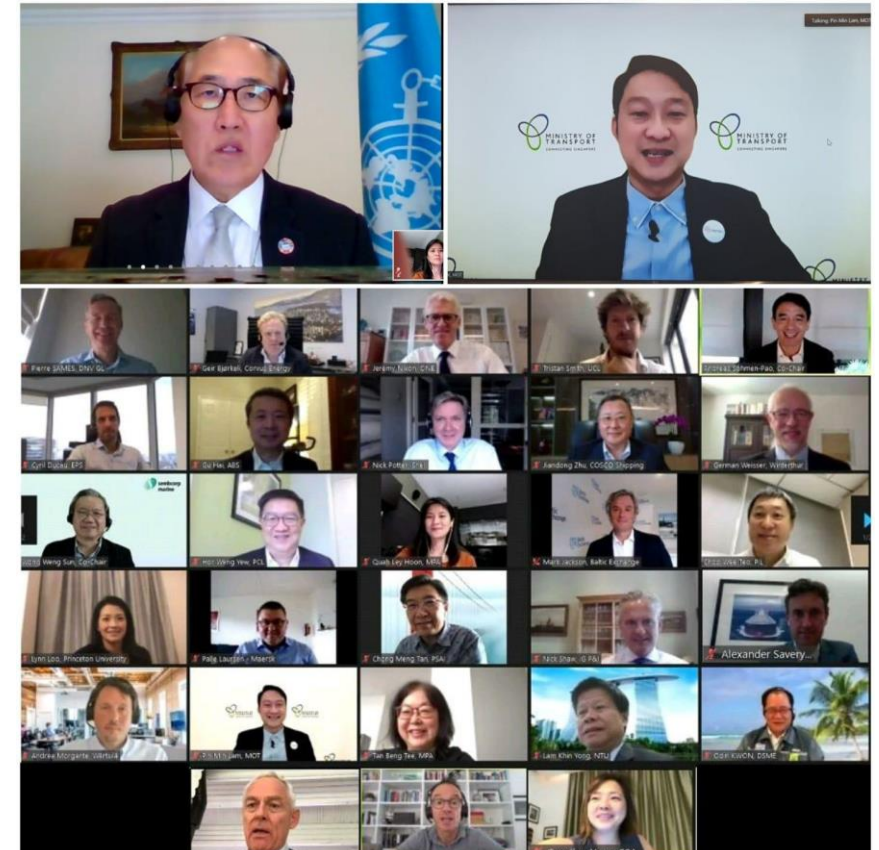
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Chairman of the International Advisory Panel on Maritime Decarbonisation

Chairman of the Singapore Maritime Foundation

Overview of the International Advisory Panel (IAP)

- ▶ The IAP was formed to support the International Maritime Organization (IMO)'s vision to reduce total annual greenhouse gas emissions from international shipping by at least 50% by 2050.
- ▶ Decarbonisation is a field that requires collaboration between multiple stakeholders through the value chain. Reflecting this, the IAP comprises 30 individuals from various sectors across the industry.
- ▶ The IAP's mandate was to focus on concrete actions and collaborative initiatives, enabling Singapore to play a role in the industry's decarbonization efforts.



IAP's vision

- ▶ The IAP's vision is for Maritime Singapore to support decarbonisation of the industry to meet or exceed the IMO goals for 2030 and 2050 by:
 - Shaping Greenhouse Gas (GHG) measures to ensure that actions have a real and lasting positive impact
 - Setting standards for operational, technical and safety factors
 - Piloting innovations in the technical, operational and digital sphere
 - Building selective infrastructure to support these innovations
 - Deploying incentives at national, regional or global level, combined with private capital initiatives, to implement solutions for vessel efficiency and new fuels
 - Connecting global stakeholders to share knowledge and implement actions

IAP's vision – Objectives & Pathways

► The IAP's four strategic objectives and nine pathways towards maritime decarbonisation:



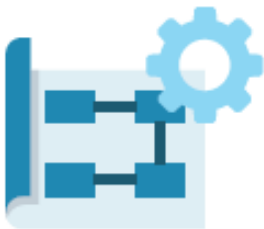
HARMONISE Standards

1. Shape common metrics for carbon accounting
2. Set standards for new technologies and solutions



FINANCE Projects

5. Develop green financing mechanisms
6. Develop mechanisms that could support carbon pricing
7. Act as custodian for and deploy R&D funds and grants



IMPLEMENT New Solutions

3. Pilot trials and deploy solutions
4. Build flexible ship capabilities and relevant infrastructure



COLLABORATE with Partners

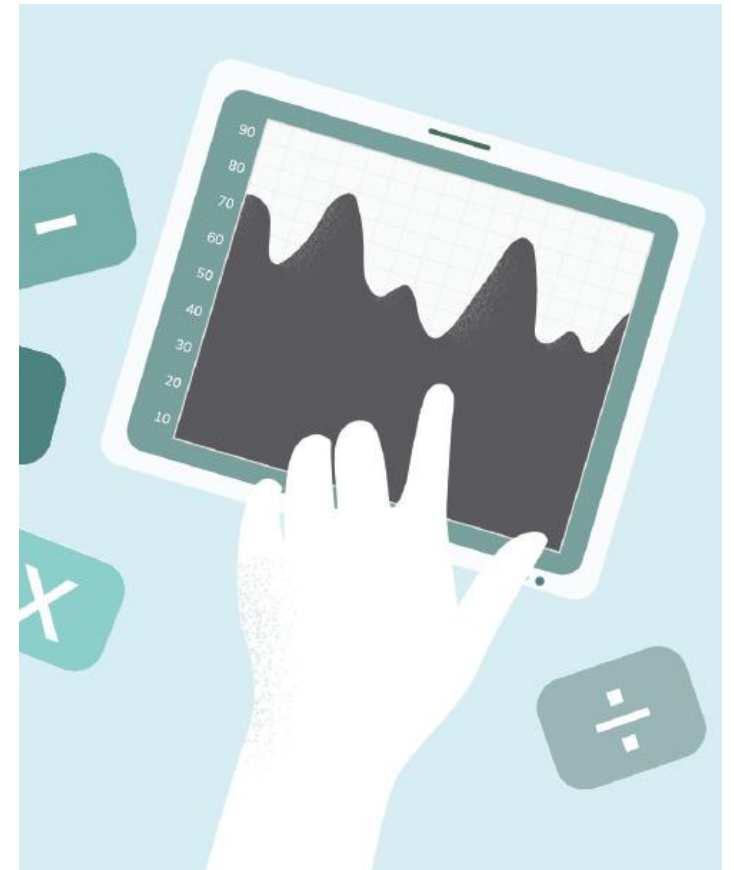
8. Multiply local, regional and global collaboration across stakeholders
9. Set up a decarbonisation centre

Pathways to Maritime Decarbonisation

► #1: Shape common metrics for carbon accounting

Action Plan:

- Map out GHG metrics currently used.
- Evaluate lifecycle carbon cost.
- Improve monitoring, reporting, verification and transparency through collaborations.
- Develop IT platforms to measure and benchmark the carbon impact of different operating or navigational parameters.
- Build upon the IMO's Data Collection System (DCS) to create a registry for maritime-related GHG emissions.
- Establish a centre to coordinate the harmonisation of carbon footprint measurements.

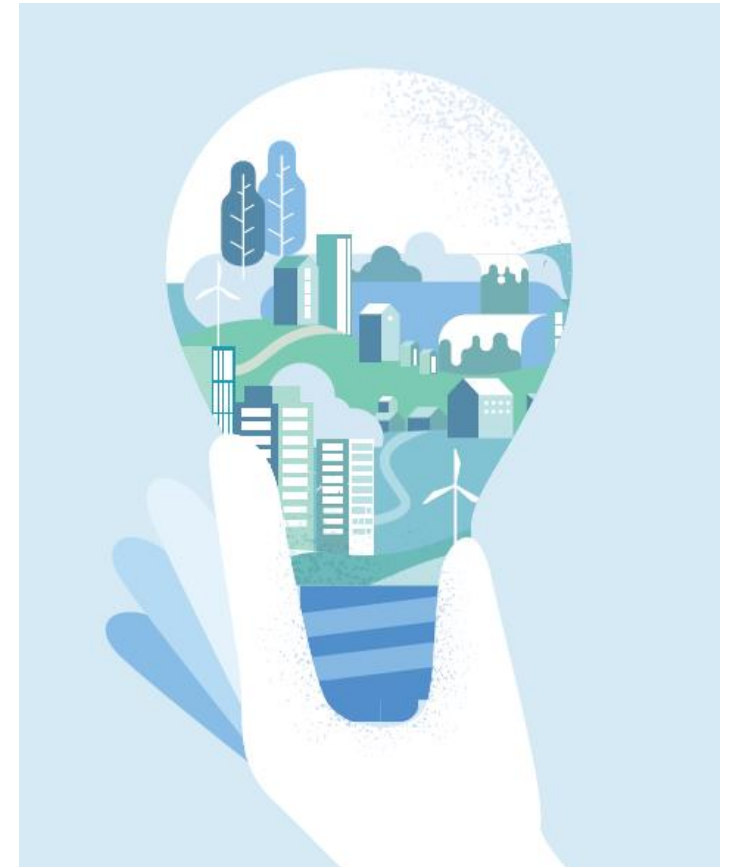


Pathways to Maritime Decarbonisation

▶ #2: Set standards for new technologies and solutions

Action Plan:

- Develop a global common standard for improved efficiency through JIT arrivals.
- Harmonise data standards to ensure interoperability across port community systems, and enable secure data sharing.
- Develop safety standards for bunkering and regulatory frameworks for the handling of alternative fuels.
- Gather and disseminate knowledge on the potential impact of technical and operational solutions and interventions on carbon emissions.

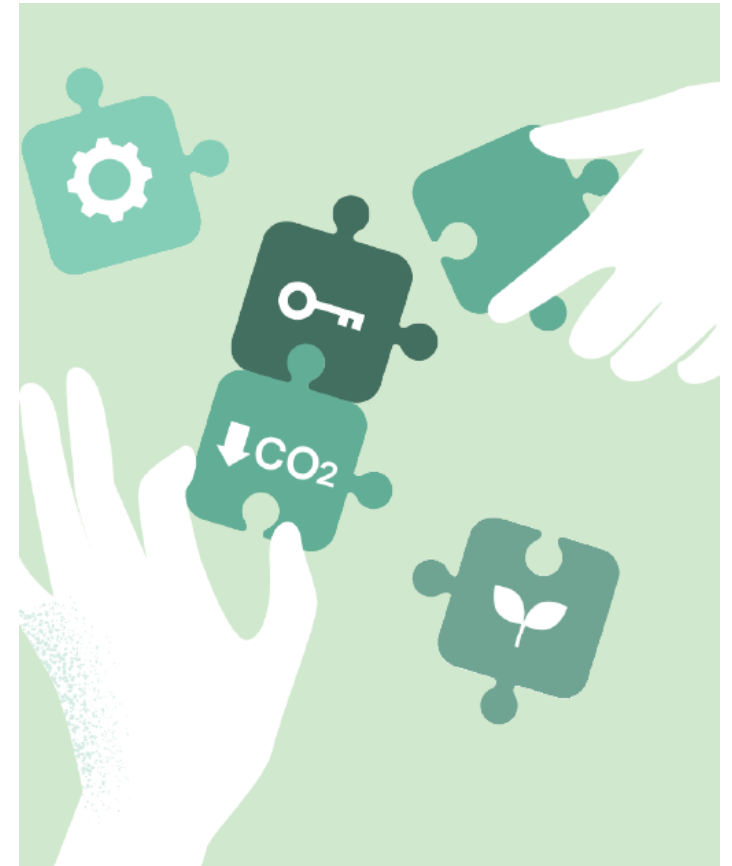


Pathways to Maritime Decarbonisation

▶ #3: Pilot trials and deploy solutions

Action Plan:

- Promote a consortium approach in designing pilot projects.
- Create a platform for the sharing of findings from pilot projects.
- Launch a programme to fund a larger number of feasibility studies and pilot projects.

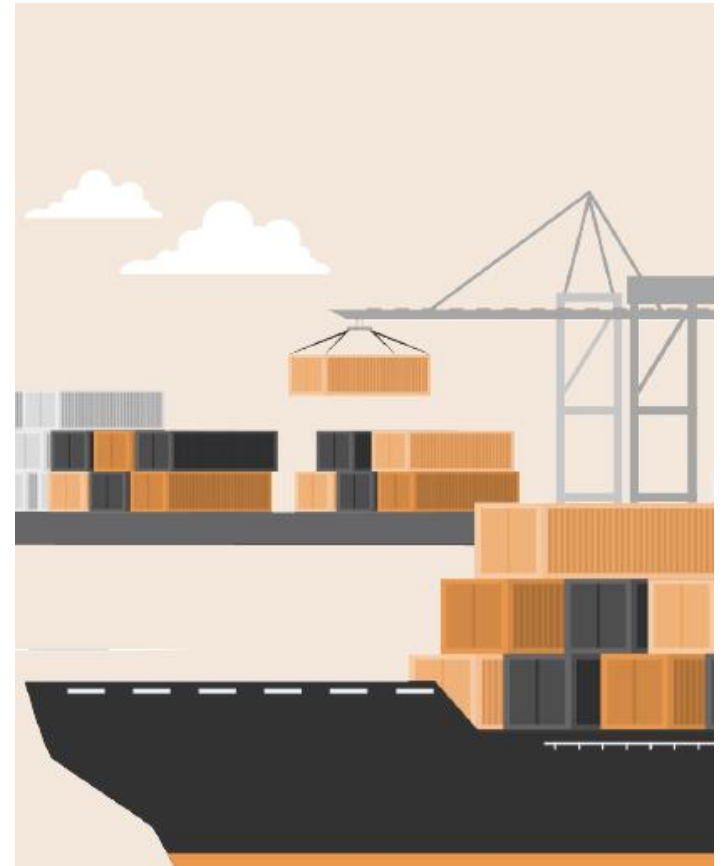


Pathways to Maritime Decarbonisation

▶ #4: Build flexible ship capabilities and relevant infrastructure

Action Plan:

- Support projects which allow for transition to zero-carbon fuels.
- Create flexible ship capabilities and port infrastructure which allows multiple fuels to be supplied, and ensure safety standards in the development of such infrastructure.
- Track the readiness of fuel solutions for adoption.



Pathways to Maritime Decarbonisation

▶ #5: Develop green financing mechanisms

Action Plan:

- Develop green financing schemes to support investments.
- Co-create leasing schemes or financing vehicles to defray upfront cost of new investments.
- Explore schemes to close the price gap of existing and new fuels.
- Offer incentives to distribute the cost burden among different parties.
- Explore schemes to increase carbon footprint disclosure of maritime financial products.



Pathways to Maritime Decarbonisation

▶ #6: Develop mechanisms that could support carbon pricing

Action Plan:

- Press for carbon cost to be included in the fuel price.
- Develop and apply mechanisms for the verification and collection of funds that maximise acceptability and practicality.
- Explore offsets or in-setting as a complementary path to carbon reduction.

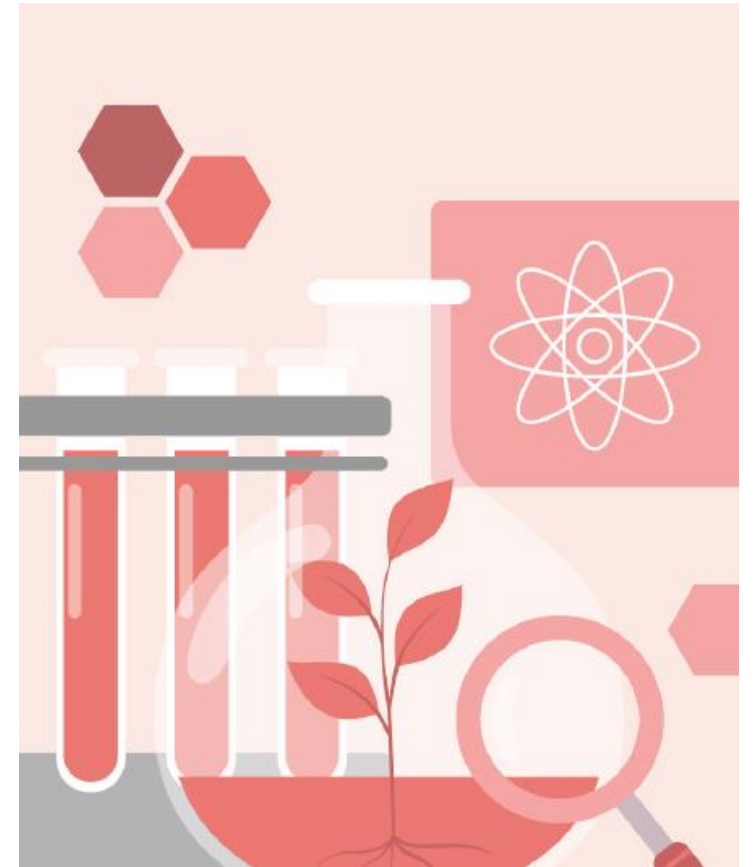


Pathways to Maritime Decarbonisation

- ▶ #7: Act as custodian for and deploy research and development funds and grants

Action Plan:

- Establish a global funding scheme that collects contributions related to bunker consumption (or other suitable metrics), to be deployed for acceleration of maritime decarbonisation.

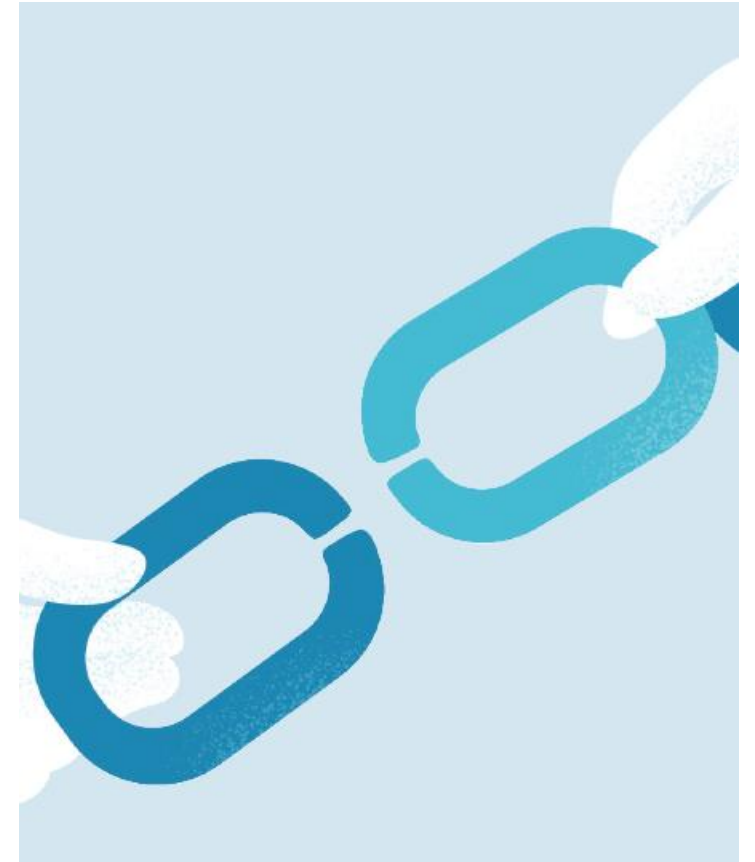


Pathways to Maritime Decarbonisation

- ▶ #8: Multiply local, regional and global collaboration across stakeholders

Action Plan:

- Establish a coalition of ports to develop solutions on a level playing field.
- Strengthen communication and information flows among stakeholders in the port ecosystem.
- Ensure collaborations include all stakeholder types, and enable interconnection with other like-minded organisations.

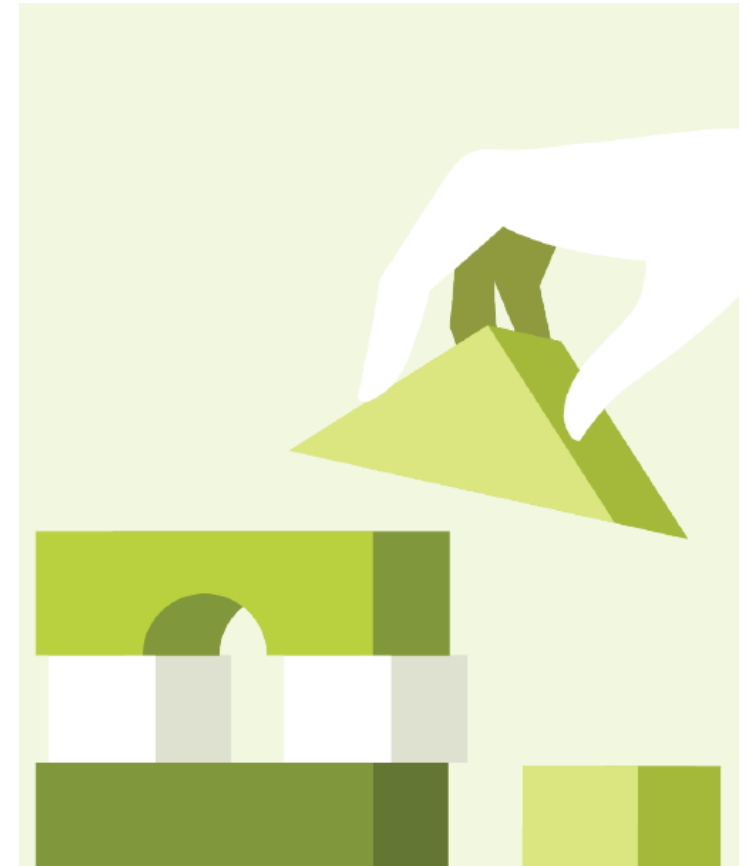


Pathways to Maritime Decarbonisation

▶ #9: Set up a decarbonisation centre

Action Plan:

- Establish a global decarbonisation centre in Singapore that serves as a regional node in a global network of similar centres.
- Leverage the centre to coordinate, drive and sustain decarbonisation efforts.



The way forward: Collaborating for concrete change

- ▶ Collaboration is key to meeting decarbonisation goals.
- ▶ The IAP has identified joint projects to embark on, which you may find in the full report by scanning the QR code below:



- ▶ We welcome everyone who is keen to work with us on this journey. If you would like to contribute, please contact: corpcomms@sgmf.com.sg



Thank You