

The ADB logo is a dark blue square with the letters 'ADB' in white, serif font.

ADB Green Ports &

A large cargo ship is docked at a port, heavily loaded with green containers. The ship's hull is black with white text. The text on the hull includes 'ASIAN DEVELOPMENT BANK' in large letters, 'ADB' in a circular logo, and 'MARITIME DECARBONIZATION INITIATION' in a smaller font. Below that, there is text in Indonesian: 'MATE WAMANA FELUWILE' and 'Acién Deptopirnen TF bilienis keluon'. The ship is surrounded by a large stack of colorful containers (red, blue, yellow, green) on the pier. In the background, there are several large gantry cranes. The sky is clear and blue. On the right side of the image, there is a decorative pattern of colorful, stylized flags or pennants in shades of blue, green, yellow, and orange, arranged in a grid-like pattern that recedes into the distance.

MARITIME DECARBONIZATION INITIATION
MATE WAMANA FELUWILE
Acién Deptopirnen TF bilienis keluon

Maritime Decarbonization Initiative

R. Duncan McIntosh, PhD
Senior Regional Maritime Specialist, ADB

ADB's **STRATEGY 2030 VISION**

To achieve a **prosperous, inclusive, resilient, and sustainable Asia and the Pacific**, while sustaining efforts to eradicate extreme poverty



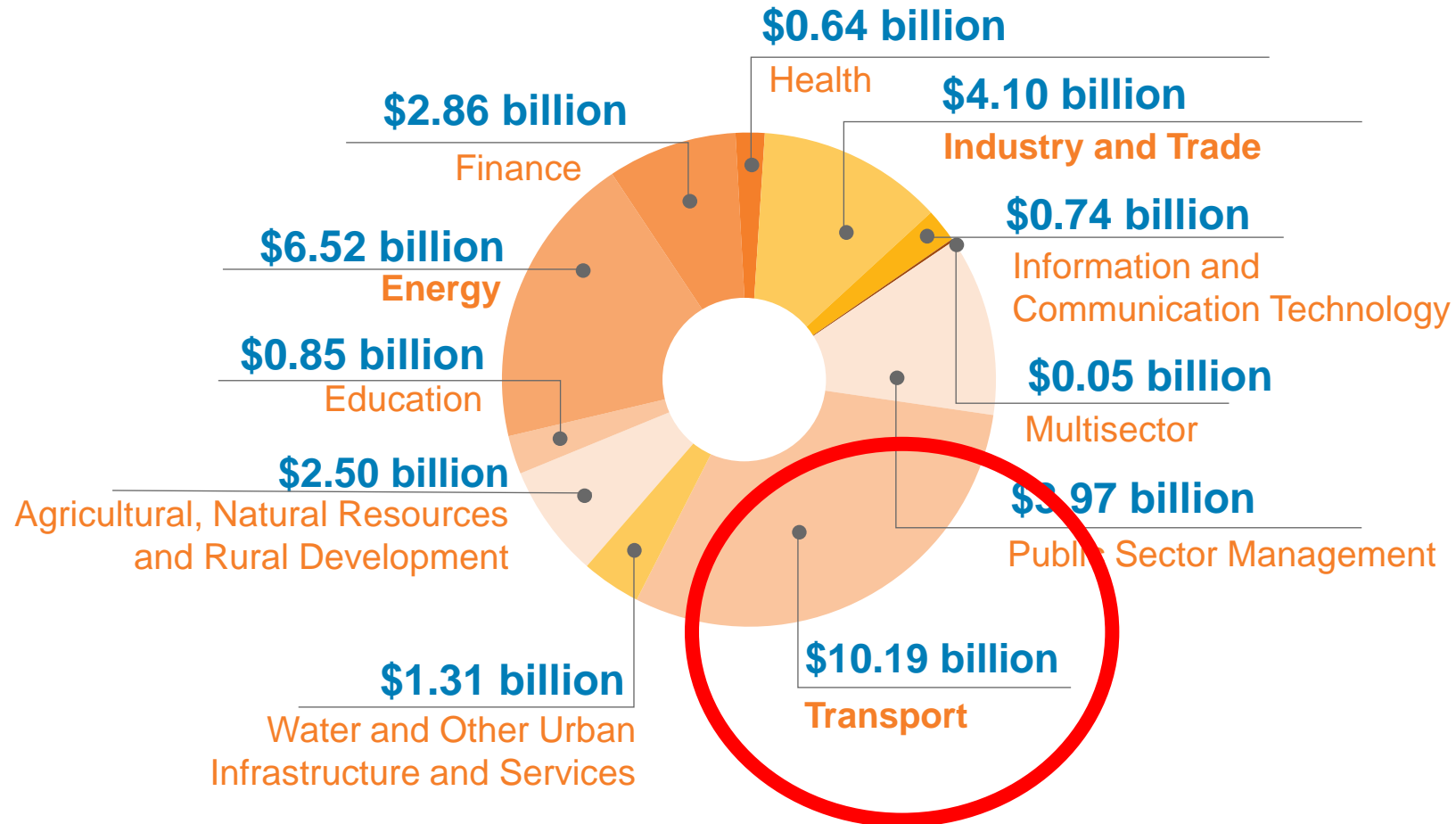
Providing **loans, technical assistance, grants, and equity investments** to promote social and economic development



ASSISTANCE BY SECTOR

TOTAL OPERATIONS

**\$33.74
BILLION**



Note: Numbers may not sum precisely because of rounding.



Samoa: Enhancing Safety, Security, and Sustainability of Apia Port



- \$65M Grant
- Climate and disaster resilience:
 - As the existing breakwater is inadequate to withstand the impact of future climate change (sea level rise) and the 100-year storm, the project will reconstruct and strengthen the breakwater, to enhance its resilience serve as a lifeline port, to operate in the aftermath of disasters to receive vessels carrying aid and emergency supplies.
 - Developed Green Ports Policy



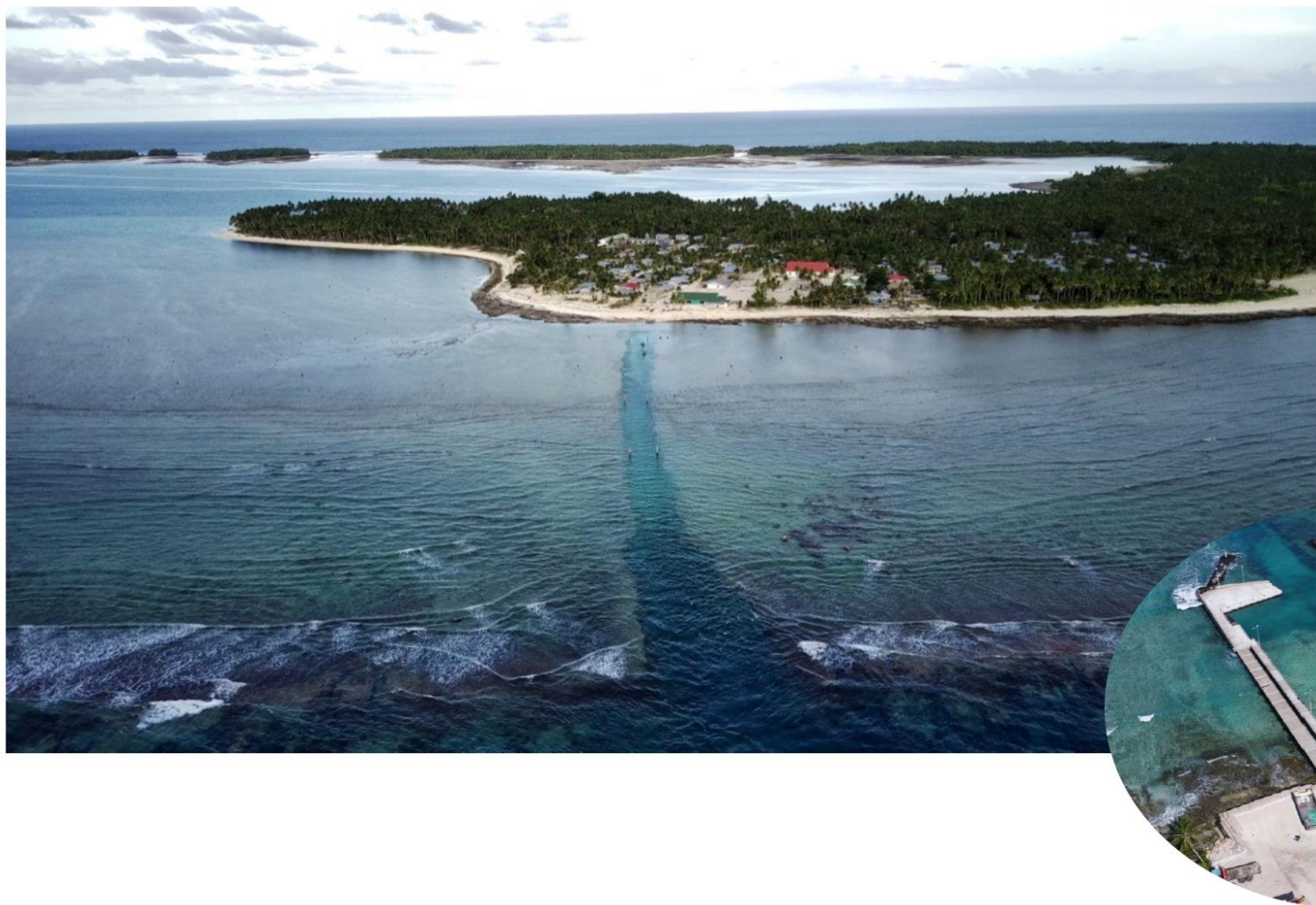
Nauru: Sustainable and Climate-Resilient Connectivity Project



- \$40M Grant
- building a wharf, breakwater, and a berth pocket at Aiwo, reconstructing port buildings and the container storage area, and strengthening the institutional capacity of the Nauru Maritime and Port Authority (NMPA).



Tuvalu: Outer Island Maritime Infrastructure Project



- \$50M Grant
- Small-scale harbors constructed in Nui, Niutao, and Nukulaelae, and boat ramps in Nanumaga and Niutao rehabilitated.
- transport sector master plan for future harbor development in the outer islands created, with a view to promote fisheries and tourism.

- Also \$30M Grant to replace the existing passenger and cargo ship Manu Folau, which is in an unserviceable state





ADB's Climate Change Shift >>>>

ASIA AND THE PACIFIC'S
CLIMATE BANK



ADB is taking an active role as the Climate Bank for Asia and the Pacific.



“
**The battle
against climate
change will be
won or lost in
Asia and the
Pacific.**

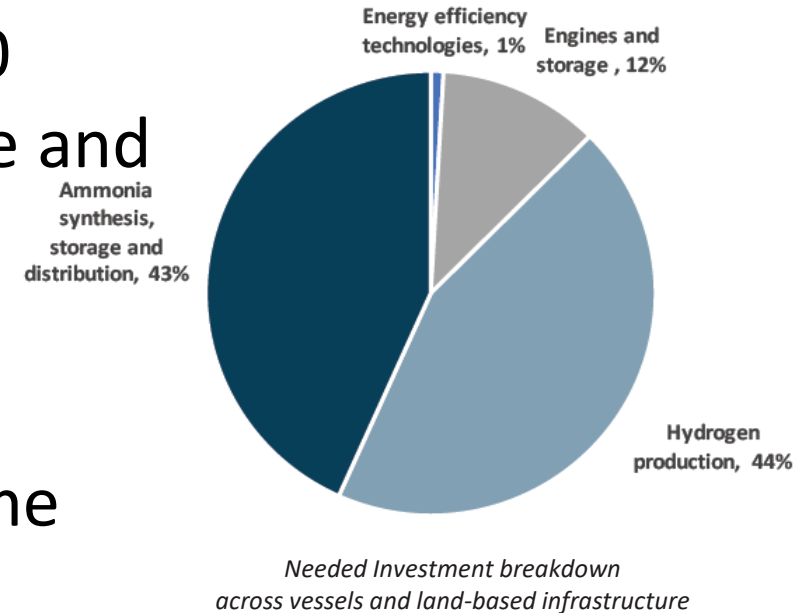
MASATSUGU ASAKAWA
ADB President





Financing Challenges

- > **\$1.9 trillion** will be needed to reach net zero by 2050
 - 87% of which is needed in land-based infrastructure and fuel production facilities
- **Upfront expense and a new type of investment**
 - May not be readily supported by traditional maritime financing instruments.
- Need to **accelerate pathways for zero-carbon bunker fuels**
 - to enable industry to make confident long-term investments
 - to enable DMCs to adapt port infrastructure to climate change.





Opportunities

- Future fuels are 2.5x **less energy dense** → Ships will require **more frequent bunkering**
 - **New bunkering hubs** can be developed in DMCs yielding large economic benefits
- Port infrastructure is key to decarbonizing the maritime industry
 - \$4 net benefit for each dollar invested in resilience
- Fast-track electrification of port operations and provide shore power access
 - Can be done prior to committing capital to develop additional renewable energy capacity
- 40% of maritime cargo is energy related → ports are at the nexus of energy transition
 - Decarbonization will depend on **development of electrofuels at or near ports**
 - Ports as First Movers (e.g., Green Corridors)



Programmatic Approach

- Ensure a just transition with financial and technical support to vulnerable, shipping-reliant DMCs, e.g., SIDS, that are most affected by energy transition and shipping costs
- Fast-track implementation of electrification and smart/digital solutions at DMC ports for improved efficiency and reduced GHG emissions
- Promote RCI for harmonization of regional green shipping policies that give attention to the needs of vulnerable DMCs – enable a level playing field & minimize uncertainty
- Support development of green corridors (designated routes for sustainable vessels) involving DMCs



Programmatic Approach

- Build partnerships with private sector and industry stakeholders to foster knowledge sharing and collaboration
- Enable DMCs to decarbonize domestic fleets - fishing, interisland, inland waterway vessels
- Ensure workforce is adequately trained in the use of alternative fuels and related shipboard systems
- Address financing gap with a multi-donor [Green Ports and Maritime Decarbonization Fund](#)



A Proposed New Fund:

Green Ports and Maritime Decarbonization Fund

In 2023, ADB Commissioned a Study to **Assess the Financing Landscape** for Green Port & Maritime Decarbonization Investments in DMCs



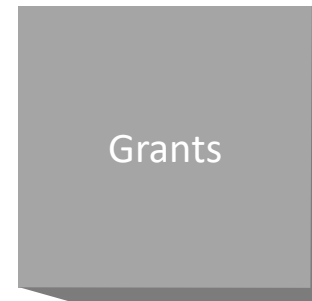
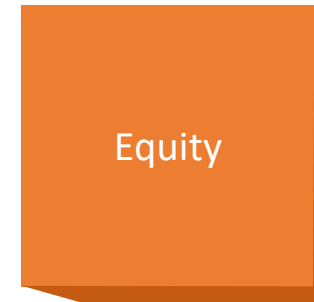
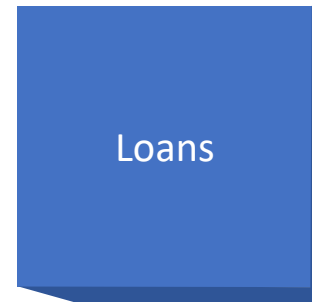


Proposed GPMDF Modalities

GPMDF could support **blended finance** solutions to mitigate investment risk



GPMDF could support a range of financing modalities





Potential GPMDF Interventions

Financial support level	Green port topic	Intervention
Upstream	Governance	Support for development of a national level green port policy
		Support for development of a port / terminal level green port policy and strategy
Midstream	Energy Efficiency, Clean energy and fuels and climate resilience	Feasibility studies and design for an energy efficiency, climate resilience and clean energy and fuels related project



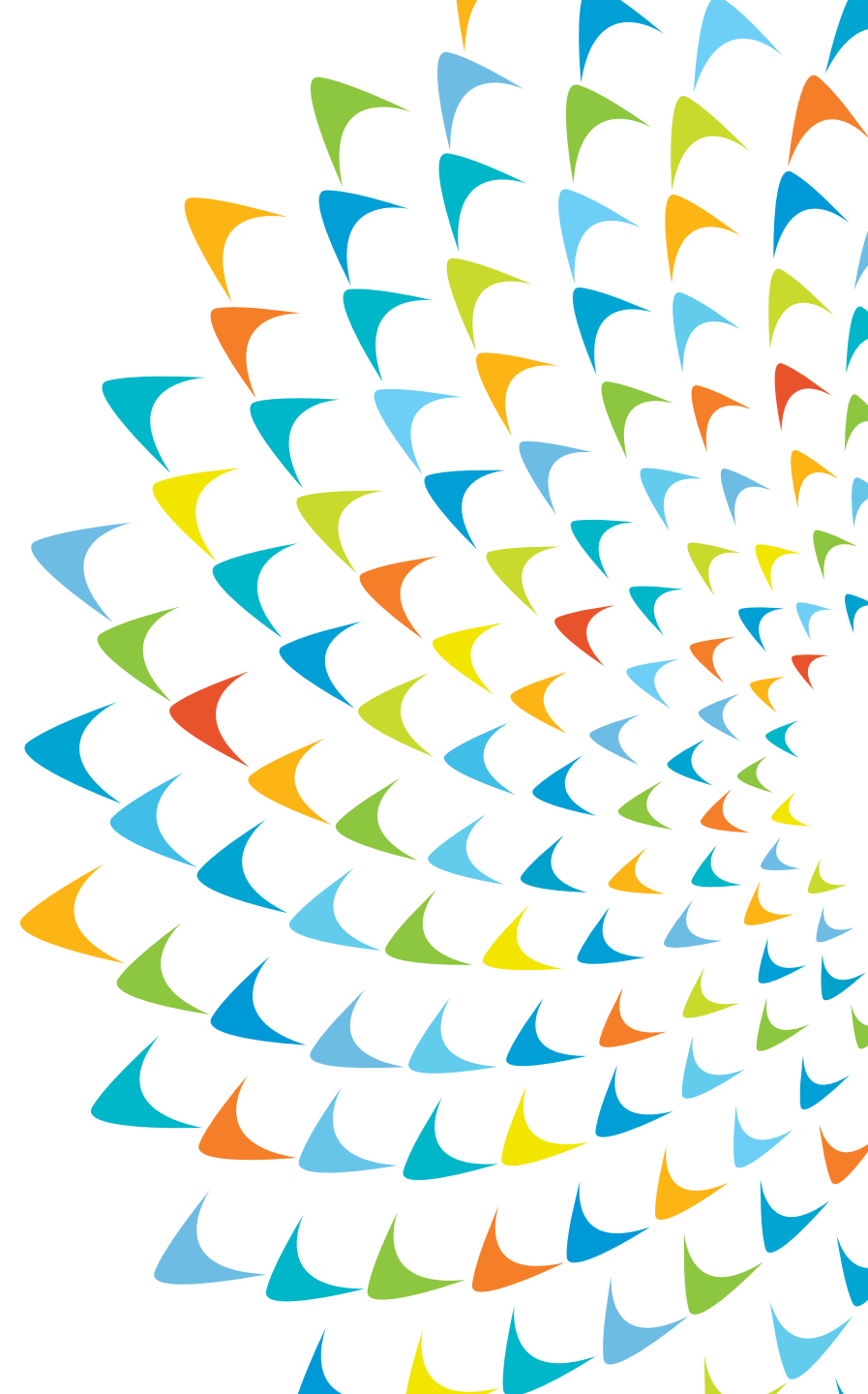
Potential GPMDF Interventions

Financial support level	Green port topic	Intervention
Downstream	Energy Efficiency	Smart energy management
		Retrofit and energy-efficient equipment
		LED lighting conversion
	Clean energy and fuels	Shore power
		Solar and wind
		Battery-Energy Storage Systems
		Zero-emission equipment and vehicles
	Alternative fuel bunkering	
	Climate Resilience	Adaptation (Structural and non-structural)



Thank you

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Senior Regional Maritime Specialist
Asian Development Bank





Allocation of Resources

Some DMCs can **borrow** from ordinary capital resources (OCR):

- at near-market terms (regular OCR), or
- at concessional OCR loan (COL) terms

Some DMCs can **receive grants** from:

- Asian Development Fund (ADF), or
- other Special Funds and Trust Funds

Eligibility is determined by **DMC classification** based on:

- Gross National Income (GNI) per capita,
- and creditworthiness

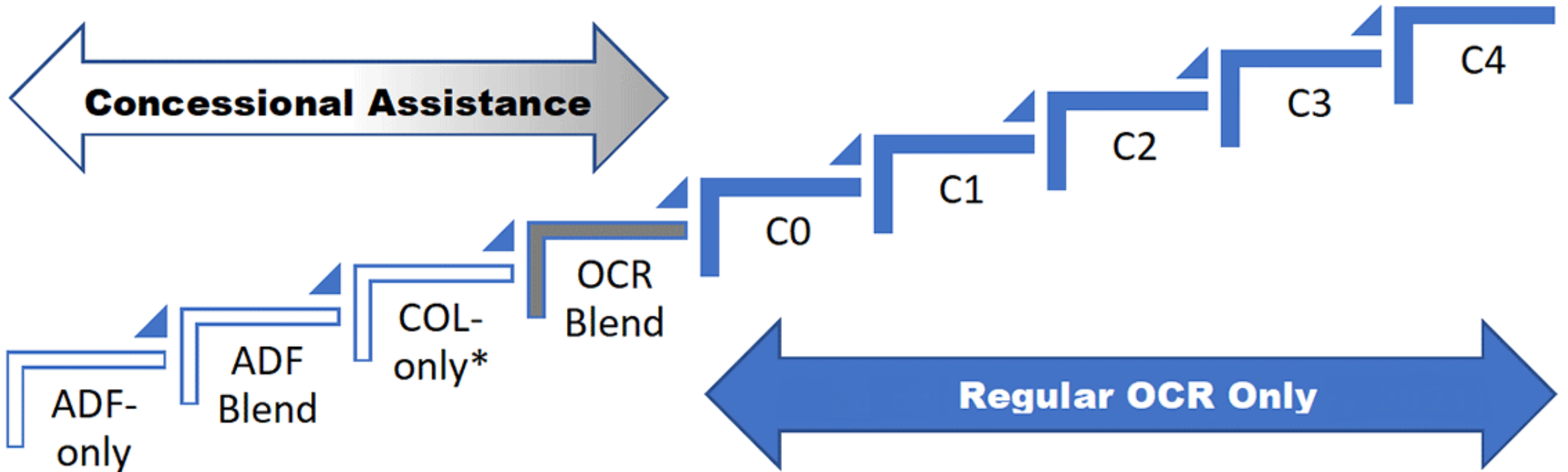


DMC Classification

Group A

Group B

Group C



* Including gap countries



ADB's Climate Targets and Ambition

