

INSIGHT BRIEF

Decarbonizing shipping while ensuring an equitable transition

November 2022

Dr Alison Shaw

Research Associate
UCL Energy Institute
Policy Lead
UMAS

Dr Lau Blaxekjær

Senior Project Manager
Global Maritime Forum

Femke Spiegelenberg

Project Coordinator
Global Maritime Forum

Ana Madalena Leitão

Project Assistant
Global Maritime Forum

The views expressed in this Insight Brief are those of the authors alone and not the Getting to Zero Coalition or the Global Maritime Forum.

The Getting to Zero Coalition is an industry-led platform for collaboration that brings together leading stakeholders from across the maritime and fuels value chains with the financial sector and other committed to making commercially viable zero emission vessels a scalable reality by 2030 towards full decarbonization by 2050. The Getting to Zero Coalition is a partnership between the Global Maritime Forum and the World Economic Forum.

Introduction

Shipping, unlike many sectors, has the benefit and advantage of having a global regulator, the International Maritime Organization (IMO), which has the authority to drive a global energy transition, necessitated by climate change and mandated by the Paris Agreement temperature goal.

Any regulation designed and adopted by the IMO is the output of wide acceptance by member states in the form of consensus. Achieving consensus means finding a compromise that represents what can be accepted by the most geographically and economically diverse member states.

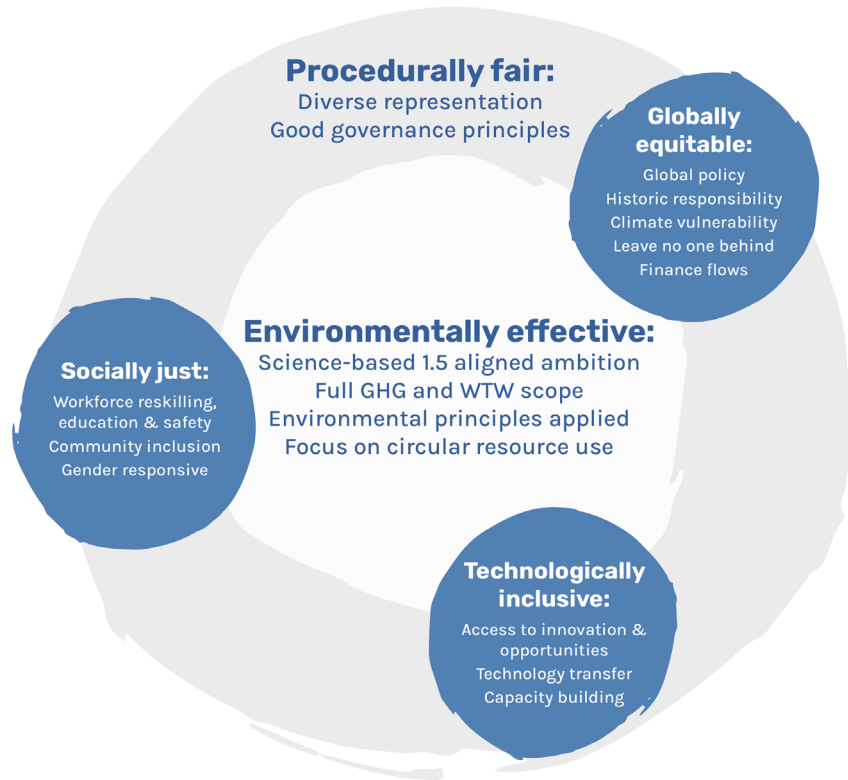
In relation to the revision of the IMO GHG Strategy and adoption of mid- to long-term measures, IMO Member States have increasingly called for an 'equitable', 'just', 'fair', and 'inclusive' transition, or some combination thereof. The concept of an 'equitable transition' now constitutes a key issue in the negotiations on GHG emissions reduction and is central to progress. However, different terminologies are often used interchangeably both inside and outside the IMO, with little clarity on what each may mean in terms of future policy.

Creating a shared understanding across all countries of these concepts, particularly of equitable transition, and what policy could entail would be a major step towards the adoption of a Paris-aligned GHG strategy and an effective basket of mid-term measures. Recent analysis has sought to organize these overlapping and interdependent concepts and to synthesize some of the elements that appear most relevant to each term (see figure 1).¹

1 [Shaw, Alison and De Beukelaer, Christiaan, 2022. Why should we talk about a 'just and equitable' transition for shipping?, UNCTAD Transport and Trade Facilitation Newsletter, N°96, Article No. 93, Third Quarter 2022.](#)

Figure 1: What are the key elements to consider for shipping's transition?

Source: Shaw, A. and De Beukelaer, C., 2022. Why should we talk about a 'just and equitable' transition for shipping? Article No. 93, UNCTAD Transport and Trade Facilitation Newsletter N°96 - Third Quarter 2022.



The concept of a 'just transition' appears to have strong roots in the labor movement, being focused more on an individual level and applying predominantly to supporting workers and communities through the transition in areas such as education, reskilling, and safety. It can also be addressed at a national and company level. Within the shipping sector, it is largely being progressed by the **Just Transition Maritime Task Force**. 'Inclusive transition' is often applied to discuss the technology and innovation that will be required as part of the transition and to ensure equal access to opportunities, potentially through innovation partnerships, technology transfer, and capacity building and development. The term 'fair' appears to be associated with the policy process itself and making sure that representation in the process is diverse and relevant, with climate vulnerable voices at the heart of decisions. 'Equitable transition' is focused on a country level and is predominantly linked with the United Nations (UN) principle of 'leaving no one behind'. Ensuring an equitable transition is seen by many countries as integral to gaining consensus in the process of revising the IMO GHG Strategy and agreeing on the economic and technical measures to achieve the GHG emissions reduction objectives.

This Insight Brief therefore explains why prioritizing an equitable transition is a necessary part of shipping's decarbonization transition and presents some of the elements that an equitable transition could include. The aim is to summarize, with no intention of prejudging upcoming IMO meetings, or prescribing an exact definition or application. This Insight Brief seeks to contribute to the policy debate on ensuring an equitable transition while recognizing that such a debate and the resulting multilateral agreement should be procedurally fair and put climate vulnerable countries, especially SIDS and LDCs, at the heart of the process and policies.



Why is an equitable transition imperative for shipping's decarbonization?

The fuels and energy transition for shipping can only happen with the urgency and scale needed if national governments and international regulators establish policy frameworks that make zero emission shipping and fuel production commercially viable and globally available and accessible for all countries and companies alike. The addition of 'equitable' to shipping's decarbonization transition is underpinned by a political, moral, and practical rationale.

The political rationale for an equitable transition

Shipping's transition is not only technological, it is a socio-economic transition that is part of a wider context of sustainable development. The overarching political mandate for an equitable transition can be found in the UN goals, frameworks, and principles, particularly the three UN universal principles,² the UN 2030 Agenda for Sustainable Development,³ and its 17 Sustainable Development Goals (SDGs).⁴ Indeed, 'The imperative to promote more equitable development permeates all 17 goals of the 2030 Agenda'⁵ with SDG10 specifically calling to 'Reduce inequality within and among countries'.⁶ Furthermore, the Paris Agreement emphasizes 'the intrinsic relationship that climate change actions, responses, and impacts have with equitable access to sustainable development and eradication of poverty'⁷ and invokes the principle of equity⁸ as a guiding principle, as well as applying the concept of intergenerational equity.

At COP26 in 2021, the Climate Vulnerable Forum with its 55 developing country members adopted the Dhaka-Glasgow Declaration which, among other issues, recognizes the need for shipping's transition to be equitable.⁹ Developing countries, SIDS, and LDCs are at risk of losing out in the adoption of GHG policy. They may get 'left behind', with investment and innovation primarily favoring developed economies, leaving them burdened with environmentally damaging ships and technologies for much longer than other parts of the world. At the same time, they will experience rising costs and potentially reductions in trade-driven economic development.

There is a clear political mandate for equity to be built into IMO

2 Principle One: Human Rights-based Approach. Principle Two: Leave No One Behind. Principle Three: Gender Equality & Women's Empowerment.

3 [UN 2030 Agenda for Sustainable Development.](#)

4 [UN Sustainable Development Goals.](#)

5 [United Nations, 2017. Leaving No One Behind: Equality and Non-Discrimination at the Heart of Sustainable Development. A Shared United Nations System Framework for Action.](#)

6 [UN Sustainable Development Goal 10.](#)

7 [The Paris Agreement Text.](#)

8 For the purposes of this brief, the terms equity and equitable are treated as synonymous.

9 [The Climate Vulnerable Forum, 2021. Dhaka-Glasgow Declaration of the CVF. 2 November 2021.](#)

regulation on reducing GHG emissions from shipping. Ultimately, the possibility of achieving consensus on a Revised IMO GHG Strategy and a basket of mid-term measures is now, to a large degree, dependent on the strategy and measures also ensuring an equitable transition.

The moral imperative for an equitable transition

Underlying the political mandate, there is also a moral imperative for an equitable transition. Many climate vulnerable countries already suffer the harsh impacts of climate change and the resulting social and economic damage.¹⁰ A slow and stilted transition will only perpetuate these climate impacts, which disproportionately affect countries that are the least economically capable of responding to such impacts, while also having the least historic responsibility for climate change.¹¹ There are serious costs of inaction and indeed of low ambition, and slow transition.¹²

For many climate vulnerable countries, the cost of climate impacts threatens to be far more than economic, affecting culture, heritage, and damaging intergenerational equity.¹³ This is particularly the case for indigenous peoples who have historically suffered poor representation with their rights for self-determination overshadowed by the representation of wider state interests in multilateral processes.¹⁴ Many indigenous communities suffer unique threats to their environment and way of life from climate change. The protection and support of vulnerable countries and communities therefore require effective climate policies.

10 IPCC, 2022. *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, et. al. (eds.)]. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp.

11 IPCC, 2022, and IPCC, 2018. *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., et. al. (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA.

12 On the cost of inaction, the IPCC 1.5 Special Report states: “*Global economic damages of climate change are projected to be smaller under warming of 1.5°C than 2°C in 2100 (Warren et al., 2018c). The mean net present value of the costs of damages from warming in 2100 for 1.5°C and 2°C (including costs associated with climate change-induced market and non-market impacts, impacts due to sea level rise, and impacts associated with large-scale discontinuities) are \$54 and \$69 trillion, respectively, relative to 1961–1990.*” (IPCC 2018, Box 3.6, p. 264). Further, as concluded in *The New Climate Economy 2018 Report*: “*bold action could yield a direct economic gain of \$26 trillion through to 2030 compared with business-as-usual. And this is likely to be a conservative estimate.*” **The Global Commission on the Economy and Climate, 2018. *Unlocking the Inclusive Growth Story of the 21st Century: Accelerating Climate Action in Urgent Times.***

13 IPCC, 2022.

14 Lightfoot, S. and MacDonald, D., 2020, *The United Nations as Both Foe and Friend to Indigenous Peoples and Self-Determination. E-International Relations.*



Yet, policy measures taken to ensure and accelerate shipping's transition will have different, and potentially disproportionately negative effects on countries due to existing and pervasive global inequalities in resources and capacities.¹⁵ Furthermore, as demonstrated above, the transition must take place against a backdrop of sustainable development which seeks to decrease inequalities between countries. Thus, policy must have high ambition in terms of limiting temperature rise in order to reduce the threat of climate change impacts, while at the same time it must be geared towards supporting the climate vulnerable and should not widen global disparities. The balance between needing the transition and deserving support is the rationale that drives the call for a high ambition, environmentally effective, and equitable transition that has been embedded in several submitted proposals to the IMO by Member States.

The practical advantages of an equitable transition

To be successful, research has shown that rapid policy and industry transitions, in general, need to put in place equity measures to support vulnerable countries and communities.¹⁶ Zero emission shipping and fuel production must become commercially viable and globally accessible for all countries and companies.

Being a truly global industry, the shipping sector has often voiced its support for a level playing field. Designing and adopting regulation that facilitates a transition without leaving countries behind is likely to result in a more geographically uniform transition, without exemptions and market distortions, and which allows ships to experience a similar rate of infrastructure and fuel change across the world. Such a transition would seem preferable to a global industry and is now reliant on achieving consensus in the IMO discussions which, as stated above, must satisfy a diverse number of countries calling for an equitable transition.

Among the elements of an equitable transition that are raised in dialogues, is the opportunity for all countries, regardless of their resources and capacities, to participate in and benefit from shipping decarbonization. Shipping's transition offers strategic development opportunities with the creation of a global market for scalable zero emission fuels and new technologies and infrastructure. Recent studies have highlighted the scale and range of opportunities for emerging nations based on potential for renewable energy.¹⁷ If policy that supports equitable access to the benefits of a transition can be adopted at IMO, this would also help unlock these opportunities for developing countries.

15 United Nations, 2017.

16 Gambhir, A., Green, F., and Pearson, P. J. G., 2018. *Towards a just and equitable low-carbon energy transition*. Grantham Institute Briefing Paper. No. 26. Imperial College London.

17 The Getting to Zero Coalition, 2022. *Resources. Country Opportunities*.

What could be part of ensuring an equitable transition?

Currently, a number of submissions to the IMO relate to ensuring an equitable transition. The following explores this, not to assess individual proposals but rather to comment on elements that either preclude supporting an equitable transition or would support it. There are two main areas that link to an equitable transition; firstly, the ambition level of the Revised IMO GHG Strategy, and secondly, the proposed mid-term measures. In terms of ambition level, the answer is relatively simple. To avoid the damaging effects of climate impacts on vulnerable nations and the associated costs, an equitable transition relies on high ambition for GHG emissions reduction, grounded in science (i.e. IPCC) and aligned with the Paris Agreement.

There is an established obligation to assess and address disproportionately negative impacts (DNI) of measures on developing states, particularly SIDS and LDCs, laid out in the Initial IMO GHG Strategy. These nations are often already paying the highest shipping costs for essential goods and are remote in relation to major global markets. Cost increases as a result of policy measures are unlikely to be borne easily. However, some member states have emphasized that assessing and addressing DNI is not enough and propose that enabling an equitable transition should be embedded in the design of the measures themselves.

In relation to mid-term measures, there are two main options proposed; command and control (e.g. a global GHG fuel standard) and/or market-based measures (e.g. a feebate, an ETS, or a levy).¹⁸ A global fuel standard is likely to give certainty to industry and make the transition more investible by effectively mandating the switch to new scalable zero emission fuels. However, it is not clear how such a measure can address the price gap between current fuels and new alternatives, or how it would provide support for developing countries, especially SIDS and LDCs in terms of accessing opportunities and adaptation and mitigation.¹⁹

Another potential stumbling block for an equitable transition is the use of exemptions in policy design, for example, port or route-based allowances, which feature in one mid-term measure proposal.²⁰ Making use of exemptions for some ships or allowances for certain ports/routes would most likely create distortions rather than promote uniformity. These approaches do not appear to offer wholesale support to developing economies, SIDS, and LDCs. Instead, they risk leaving them behind technologically, reducing access to investment

18 For a more detailed discussion on individual proposals and how they have been received during discussions see [Shaw, A., and Smith, T., 2022. An overview of the discussions from IMO. ISWG-GHG12. UMAS.](#)

19 [Baresic et. al. 2022. Closing the Gap: An Overview of the Policy Options to Close the Competitiveness Gap and Enable an Equitable Zero-Emission Fuel Transition in Shipping. Prepared by UMAS, January 2022, London.](#)

20 ISWG-GHG 12/3/9, Proposal to establish an International Maritime Sustainability Funding and Reward (IMSF&R) mechanism as an integrated mid-term measure, submitted by Argentina, Brazil, China, South Africa, and United Arab Emirates.



for strategic opportunities. They also risk leading to a lower reduction of emissions and air pollution if some ports/routes are serviced by ships with lower stringency of compliance. The underlying aim of these approaches may be to reduce the costs of the transition to developing countries or regions, however, they may adversely increase inequality between countries.²¹

A promising solution, and one that appears to be gathering support, is the use of a basket of measures combining a GHG fuel standard and an economic measure. Such a basket would give certainty to the fuels transition and unlock investment, while also closing the competitiveness gap between incumbent fossil fuels and zero emission alternatives, and would generate revenue as a by-product. A portion of this revenue could then be a source of funding for ensuring that developing countries', especially SIDS and LDCs, are not left behind in shipping's energy transition.²²

Some countries have proposed that revenue created from an economic instrument be allocated for in-sector use (i.e. revenues reinvested back into the sector for decarbonization), thereby accelerating the transition and possibly reducing the level needed of the carbon price. Calling for 'in-sector' use alone however risks constraining the options to support an equitable transition. A number of member states have therefore called for further consideration of relevant out-of-sector revenue use at the recent MEPC 78. Securing policy that can drive decarbonization-aligned investment requires an understanding of the needs of a broad spectrum of member states, and additionally will need to incorporate not just in-sector spending but also revenue uses that can ensure an equitable transition.

Indeed, these elements are central to one of the current mid-term measure proposals, a levy submitted by the Republic of the Marshall Islands and the Solomon Islands.²³ The elements of the 'Pacific levy' have essentially been supported on a broader scale at COP26 by the Climate Vulnerable Forum and their Dhaka-Glasgow Declaration. The declaration calls for the IMO to establish, 'a mandatory GHG levy on international shipping to ensure that IMO emission measures are fully aligned with a 1.5oC pathway following IPCC AR6.' and specifically recognizes the need for shipping's transition to be, 'equitable and benefit all states'. On revenue disbursement, the declaration explicitly supports 'that the majority of the levy's revenues be employed as additional financial support for urgent climate actions, particularly by the vulnerable developing countries', and urges 'adopting ambitious targets in domestic maritime emissions for a transition to zero emissions that leaves no one behind'.

21 [Shaw, A. and De Beukelaer, C., 2022.](#)

22 [Dominioni, G.; Englert, D.. 2022. Carbon Revenues from International Shipping: Enabling an Effective and Equitable Energy Transition – Technical Paper. World Bank, Washington, DC.](#)

23 [MEPC76/7/12 Proposal for IMO to establish a universal mandatory greenhouse gas levy, submitted by the Republic of the Marshall Islands and Solomon Islands and additionally see Shaw, A., and Smith, T., 2022.](#)



As mentioned earlier, the concept of an equitable transition does not sit alone. Fair representation in the process is also a mutually reinforcing concept, where support, including financial, is needed to facilitate the participation of SIDS and LDCs. Relevant voices in the process will result in the design of more suitable policies, thus the implementation of IMO's voluntary multi-donor trust fund (GHG T-C Trust Fund)²⁴ would be a step in the right direction.

Conclusion and implications

The Getting to Zero Coalition's [Call to Action for Shipping Decarbonization](#) with more than 240 signatories stresses the need for policy frameworks that enable an equitable transition.²⁵ All in all, countries, international organizations, and companies alike seem to be increasingly aligned in the desire for an equitable transition. As laid out in this Insight Brief, an effective implementation of GHG emissions reduction policies that prioritize an equitable transition is mandated politically, morally, and in practice – and will be key to finding consensus at the IMO. The Insight Brief also stresses the urgency of the transition, the needs of SIDS and LDCs at stake, and the opportunities of many developing and middle-income countries to benefit from shipping's energy transition through their potential as future renewable fuel producers.

At a minimum, ensuring an equitable transition would appear to currently require:

- Explicit inclusion of the concept in the Revised IMO GHG Strategy
- Addressing the existential threat posed to climate vulnerable countries by aligning policies to limit warming to 1.5 degrees
- Assessing and addressing, as appropriate, disproportionately negative impacts on States, particularly SIDS and LDCs, that arise from GHG policy measures. This should include defining 'disproportionate' and then using a reliable state-of-the-art methodology, scientifically capable of capturing specific geographical and socio-economic characteristics of impacted States, which is crucial for determining the outcomes of the assessment.
- Adoption of an economic instrument, as part of a basket of measures, which implements the Polluter Pays Principle to economically drive the energy transition, by addressing the price gap between new scalable zero emission fuels and incumbent fossil fuels.
- Revenue generated by an effective MBM to be, at least in part, allocated towards supporting the mitigation, adaptation, and resilience of those most in need, i.e. SIDS and LDCs.

24 [About IMO's Multi-donor GHG Trust Fund.](#)

25 For a detailed analysis of signatories (geographic and value chain scope, etc), commitments, and actions see the [Report on Climate Commitments by Signatories to the Call to Action for Shipping Decarbonization.](#)



- Consideration of indigenous peoples, who, despite historically poor representation in multilateral processes,²⁶ are connected both economically and culturally to the land and ocean, experiencing unique threats to their way of life.

A fair process where representation and participation of climate vulnerable countries with limited resources is supported is essential for achieving the above and ensuring an equitable transition. In addition to potential revenue from an MBM, other equivalent financial support could also be explored.

These elements are not considered exhaustive and represent a small summary of broad and progressing debates. It is also crucial that industry action, as well as global policy, is geared to enable access to new opportunities, technologies, and scalable zero emission fuels in developing countries, particularly for SIDS and LDCs.

26 [Lightfoot, S. and MacDonald, D., 2020.](#)