GETTING TO ZERO COALITION
GLOBAL MARITIME FORUM

Delivering a just and equitable transition: Alternatives for effective and credible management of shipping's climate funds

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Summary

- The International Maritime Organisation's (IMO) 2023 Strategy on Reduction of GHG Emissions from Ships links shipping's decarbonisation pathway to enabling a just and equitable transition. While the exact policy configuration remains uncertain, revenue collection and distribution decisions will play an important role in generating political support and delivering on the strategy.
- The possible scale of revenues has transformative potential but also raises questions about legitimacy, efficiency, and equity. Robust governance, transparency, and accountability will be critical to ensure political buy-in and effective deployment, particularly for lower-income countries and vulnerable states.
- Examples both from within shipping and the wider energy sectors show that this is achievable, but will require maximising experiences from other funds and designing the fund as a flexible, modular architecture rather than a single uniform instrument. Delivering a just and equitable energy transition requires parallel support for mitigation, workforce transition, capacity-building, national planning, and the management of disproportionate impacts, with indicative allocation safeguards to ensure equity without constraining adaptability.
- Leveraging existing climate finance institutions while retaining strategic IMO oversight can enable rapid and credible deployment. Collaborating with established funds can provide immediate fiduciary capacity, project pipelines, and risk management, while the IMO sets priorities, eligibility, and accountability. Full IMO management can remain a longer-term option but should not delay early action.
- Exploring the right combinations of recipients, impact areas and financial instruments can ensure maximum impact in a cost-effective way. A blended approach paired with tailored instruments can build the political and market confidence the maritime industry needs to scale zero-emission solutions globally.

Introduction

In 2023, the International Maritime Organisation (IMO) unanimously agreed to a revised greenhouse gas emissions reduction strategy. This not only outlined a decarbonisation pathway for shipping, but also emphasised two objectives: to drive an energy transition and enable a "just and equitable transition". A just and equitable transition does not have a single, universally agreed-upon definition; it carries different meanings for different countries and stakeholders. For some, it may involve unlocking alternative energy production potential, while for others, it may centre on supporting adaptation or mitigating the negative impacts of the transition. In most cases, delivering on these objectives requires climate finance at scale.[1]

Following the strategy's adoption, the IMO set out to develop a set of policy measures intended to drive shipping's decarbonisation through a global regulatory approach, resulting in the Net-Zero Framework (NZF) in 2025. While the framework was initially set for adoption in October 2025, that decision was postponed by one year, and a wide range of policy scenarios remain on the table.

Previous engagements with the Getting to Zero Coalition highlighted the importance of revenue disbursement to support the delivery of the 2023 strategy. If adopted in its current form, an estimated $11–12 billion in annual revenues from the framework's global fuel standard is expected to be available to drive the energy transition through rewards for zero- and near-zero-emission (ZNZ) fuels. These funds are also expected to enable a just and equitable transition by establishing a global climate fund specifically for international shipping (currently referred to as the Net-Zero Fund). The current design of the NZF may not be the final set of measures that crosses the finish line. Yet it is clear that a significant level of revenue collection will be required to achieve the objectives of the transition and ensure a global energy transition that is inclusive of all economies.

While work on the ZNZ rewards is progressing rapidly in intersessional informal working groups in parallel with the discussion on the policy measures, progress on revenue management remains limited, raising concerns about the challenges that a significant scale of revenue may bring. While the secretariat already undertook a comparative study from existing fund practices in terms of its governance and decision-making processes (MEPC 84/INF.10), this does not yet explore how this could be translated to a fund under the IMO. Without a clear understanding of governance and accountability, the collection and disbursement of these revenues risk facing legitimacy, efficiency, and equity concerns, which may inhibit support for ambitious revenue-generating measures. Conversely, a well-designed fund could strengthen political buy-in for ambitious policy measures and play a critical role in delivering a just and equitable energy transition.

This insight brief examines the proposed fund to support a just and equitable transition, exploring how its revenues could be governed and deployed in an efficient and responsible manner. Rather than advocating for a specific design or revenue allocation, the Brief focuses on key components of a fund, the critical considerations that can shape them, and how different design choices may influence these considerations in practice.

1 This brief uses a broad definition of "climate finance" as covering financial support for climate-related matters, including concessional support for lower-income countries.

Climate finance to ensure a fully global transition

Climate finance has become an increasingly central topic within the United Nations Framework Convention on Climate Change (UNFCCC). At the 16th Conference of the Parties (COP16), countries committed to a collective goal of mobilising $100 billion per year in climate finance by 2020, a target that was subsequently extended at COP21 through 2025.

In practice, however, actual mobilised finance has remained below this level, reaching approximately $80 billion annually. The majority of this has been provided through public sources, including bilateral agreements, multilateral funds, and export credits. Around 57% of total concessional climate finance currently takes the form of concessional loans, followed by grants, with the majority of funding directed towards climate mitigation. Major multilateral climate funds include the Green Climate Fund, the Global Environment Facility, the Adaptation Fund, and the Climate Investment Fund.

A central challenge of the global energy transition is that, without targeted intervention, it is likely to remain highly geographically skewed. Emissions from developing countries are projected to grow significantly in the coming decades. As the costs of reducing these emissions are likely to rise, the limited financial support to lower-income countries will likely increase geographical disparities further. Yet high-income and more developed countries are far better positioned to attract the public and private capital, whereas private climate finance in lower-income and emerging economies is constrained by multiple market failures that limit the flow of capital. These include:

- **Positive externalities:** Climate projects often generate environmental and social benefits that are not reflected in private financial returns.
- **Information asymmetry and perceived risk:** Climate projects in lower-income countries are often associated with greater uncertainty regarding regulatory conditions, project performance, and long-term revenue stability, increasing perceived investment risk.
- **Market fragmentation and project scale:** Projects in the Global South are frequently smaller in scale and more geographically dispersed, incurring upfront development costs and gaps in supporting infrastructure.
- **Capital market constraints:** Domestic capital markets in many emerging economies typically feature weak equity appetite, high interest rates, a lack of long-term debt instruments, underdeveloped financial institutions, and exposure to currency and governance-related risks.

Principles for climate funding

The major climate funds outlined above are mandated towards catalysing and derisking the shift to net-zero emissions, and generally rely on five key principles: transparency and accountability, equity and inclusivity, impact orientation, efficiency and leverage, adaptability and learning. While general principles, these have strong relevance to a possible fund (see Table 1).

Principles	Why it matters for the IMO	What it could mean in practice
Transparency and accountability	Builds trust among contributors and beneficiaries	Public reporting, third-party audits, disclosure of funding criteria
Equity and inclusivity	Ensures fair access for developing states	Representation in decision-making; "direct access" model for least-developed countries (LDCs) and small island developing states (SIDS)
Impact orientation	Focuses on measurable climate and development outcomes	Results-based disbursement, performance indicators
Efficiency and leverage	Maximises every dollar of IMO revenue	Co-financing with development banks or institutions, blended finance models
Adaptability and learning	Allows iterative improvement	Regular reviews and adaptive management cycles

Table 1: Principles for climate funding

Considerations for an IMO Fund

The IMO Fund will likely be made up of different design elements and possible combinations. To start discussing the potential trade-offs and benefits of different design elements and combinations thereof, this Brief first aims to build a framework of considerations.

The Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report outlined four criteria for evaluating environmental policy instruments: environmental effectiveness, cost-effectiveness, distributional considerations, and institutional feasibility. A recent insight brief for the Getting to Zero Coalition explored these considerations in relation to the rewards for zero- and near-zero-emission fuels, applying them to a maritime context. These considerations can also be translated to better reflect the context of the IMO fund by including aspects such as technological inclusivity, private capital mobilisation, geographical fairness, national differentiation, legitimacy, and the IMO's management ability (see Figure 1). This is not an exhaustive list, but rather a starting point for considering which are applicable to the shipping sector and to what extent.

Environmental effectiveness	▸ Technological inclusivity: Ensuring zero-emission fuels/technologies become available not only in advanced markets but also in developing countries, SIDS, and LDCs.
Cost effectiveness	▸ Private capital mobilisation: Multiplying the impact of limited IMO revenues (e.g., through blended finance or guarantees). ▸ Highest-needs projects: Targets barriers that are most expensive for individual states or private actors to overcome alone, such as first-of-a-kind risks or infrastructure gaps. ▸ Levelised cost of service: The ability for the project to create a lower cost of the alternative than business-as-usual.
Distributional consideration	▸ Geographical fairness: Addresses a wide range of SIDS, LDCs, and vulnerable developing countries. ▸ National differentiation: Respects differentiated national circumstances, allowing flexibility in how states design and implement their own energy transition pathways.
Institutional feasibility	▸ Legitimacy: Can be governed transparently and accountably, with clear fiduciary standards, reporting, and oversight mechanisms. ▸ Liability: Avoids putting significant financial risks on the Net-Zero Fund. ▸ IMO's feasibility: Avoids excessive complexity for IMO, national authorities, and project developers or builds upon existing frameworks.

Figure 1: Considerations for an IMO Fund, derived and adapted from the IPCC's Fourth Assessment Report

Components of a potential IMO Fund

The proposed fund will likely comprise several core design components, including the scope of impact areas ("what"), the governance model, the recipients ("who"), and the delivery mechanisms ("how"). Each of these components offers multiple design options, and the way they are combined can lead to significantly different outcomes. This interdependence makes the fund a highly complex mechanism to design, assess, and implement.

Rather than attempting to examine every possible configuration, this Brief first analyses the design options within each component individually. It then explores selected combination pathways to illustrate how different design choices interact and how these interactions may shape key considerations.

The impact area

Climate finance is generally directed at three overarching impact areas:

1. **Mitigation:** Actions that reduce or prevent the emission of greenhouse gases to limit the magnitude of future climate change.
2. **Adaptation:** Adjustments in systems, infrastructure, or behaviour that help societies, economies, or ecosystems cope with the impacts of climate change.
3. **Resilience:** The capacity of systems, communities, or institutions to absorb, recover from, and anticipate shocks or stresses related to climate change while maintaining essential functions.

Different funds target different areas. For example, the Adaptation Fund naturally focuses more on climate adaptation, the Green Climate Fund has a 50/50 split between adaptation and mitigation, and the EU Innovation Fund focuses primarily on mitigating technologies.

Rather than referring to those broad categories, Regulation 41(1) of the Net-Zero Framework currently defines multiple impact areas eligible for revenue disbursement, which can be roughly matched to the three categories mentioned above:

1. Making **ZNZ fuels and technologies** globally available and deployable through the support of production, infrastructure, etc.) (Mitigation)
2. Supporting **seafarers** and other maritime workforce (Resilience)
3. **Information-sharing**, technology transfer, capacity-building, training and technical cooperation (Adaptation and Resilience)
4. Supporting the development and implementation of **national action plans**, including fleet renewal and upgrade (Mitigation)
5. Addressing **disproportionate negative impacts** on states, including on food security (Adaptation)

Likely impacts on the considerations

As multiple eligible areas are defined by Regulation 41(1), this discussion is not about which area to pick, but rather the potential impact of prioritising one area over the others. For example, supporting ZNZ fuels and technologies will have the greatest impact on **environmental effectiveness**, whereas areas such as seafarers, information sharing, national action plans, and disproportionate negative impacts are most critical for **distributional considerations**, which are a prerequisite for a just and equitable transition.

From a business perspective, supporting wider investment to achieve a rapid, efficient, just and equitable transition is critical for multiple reasons. All elements are highly interwined, and ensuring a smooth transition requires addressing them holistically to avoid any one of them becoming a bottleneck. Having a mechanism in place to help ensure a just and equitable transition is the only way technical and economic measures can generate the required support worldwide. At the same time, it also provides future investment opportunities if countries are more actively developing national action plans and are not left behind in the transition. For example, if more countries develop their alternative fuel production, constraints on fuel availability and pricing will be more quickly resolved. Addressing disproportionate negative impacts means the measures will be less likely to distort and reduce global trade.

The governance model

Governance is a central design component of the fund and determines who makes decisions over how revenues are allocated, by whom, and under what rules. The governance structure raises fundamental trade-offs between the flexibility and speed of disbursement, the ability to target high-impact projects, and the level of political and institutional control over fund operations. Broadly speaking, two governance approaches are currently under discussion:

- **Full oversight by the IMO**, whereby the fund is established as an integral part of the IMO and the regulator retains full responsibility for managing and disbursing revenues; or
- **Collaboration with external funds**, under which dedicated sub-structures may be created to leverage the legal, financial, and administrative infrastructures of existing climate finance institutions.

Full oversight by the IMO

The IMO Net-Zero Fund is an integral part of the Net-Zero Framework, a mechanism that falls under the International Convention of the Prevention of Pollution from Ships (MARPOL). MARPOL, in turn, falls under the auspices of the Marine Environment Protection Committee (MEPC). The IMO Secretariat has already confirmed the possibility and technical feasibility of establishing the fund under the IMO's financial and regulations (MEPC 83/7). An existing example of industry paying fees to the IMO, which are then directly managed by the organisation, is the International Oil Pollution Compensation Fund (see example below).

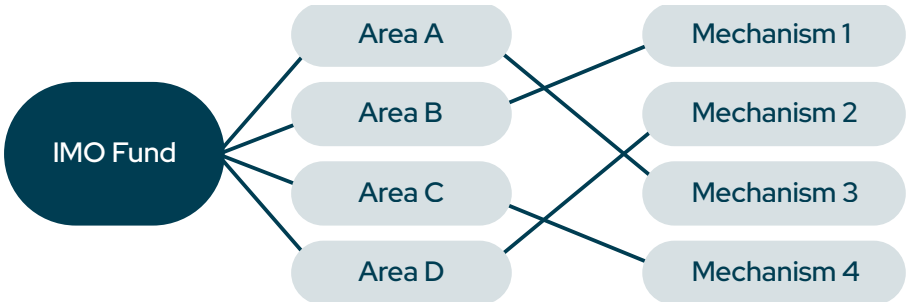

Figure 2: Full oversight by the IMO

Full oversight by the IMO means that the MEPC would hold the decision-making and governance power over the funds. Discussions have already centred on establishing a separate Board to oversee operations, execute plans, and report to the Committee. IMO Member States have already highlighted the importance of an equitable distribution of seats, citing, for example, the Loss and Damage Fund Board, which has 26 seats, 14 of which are held by developing countries.

The International Oil Pollution Compensation Fund

Part of the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992 (1992 Fund Convention), this fund deals with pay-outs in relation to oil pollution.

A separate secretariat is responsible for the overall management, including the fund's ability to deliver on its objectives. The fund has an assembly composed of all the parties to the 1992 Fund Convention, which in turn can break into an administrative council (at least 25 Member States) to act on the full assembly's behalf.

The fund's revenues stem from companies that have received more than 150,000 tonnes of oil (crude and/or heavy) at Member State ports. This includes both shipping companies and oil refineries or oil traders. The levies are decided by the governing bodies.

Collaboration with external funds

An alternative approach is collaboration with existing climate finance institutions, which already have extensive experience in managing large financial flows, evaluating projects, and delivering climate-related investments at scale. Collaboration could take several forms:

- **Co-investment**, whereby the IMO fund and an external fund jointly finance projects;
- **Earmarked contributions**, under which revenues are transferred to an external fund with varying levels of restrictions on how the money may be used; or
- **Sub-structures within external funds**, whereby the IMO fund is established as a dedicated window or facility within an existing institution.

These models allow the IMO to benefit from established governance frameworks, fiduciary standards, and project pipelines, while retaining varying degrees of strategic influence.

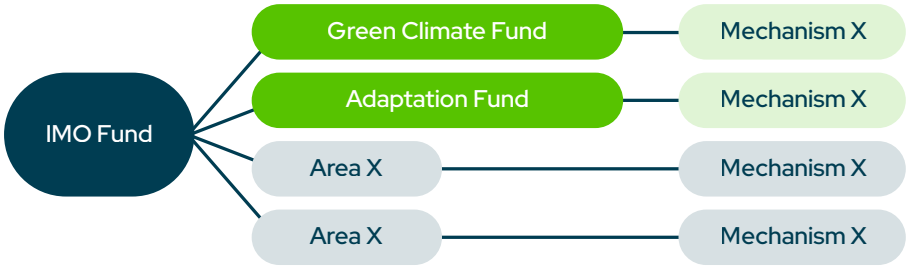

Figure 3: Collaboration with other funds

Likely impact on the considerations

Different governance models affect the fund's core considerations in different ways, though their effects are closely intertwined with the design of other fund components.

In principle, **environmental effectiveness** is unlikely to differ dramatically across governance models. A governance model in which parties are aligned and mandated is naturally more likely to be catalytic across an entire value chain. At the same time, more rigid governance structures and narrowly defined earmarking criteria may constrain the ability to design programmes with systemic, transformational impact. Where investment decisions become overly procedural, there is a risk that funding shifts toward compliance-based "box-ticking" rather than being guided by real-world mitigation potential. At the same time, the longer it takes to set up a governance structure, the more likely it is to slow down the transition.

Cost-effectiveness, particularly in terms of mobilising private capital, is driven more by the financial instruments deployed, the types of projects supported, and their ability to address regulatory and institutional barriers than by governance arrangements alone. The overall cost-effectiveness also hinges on the extent to which the IMO has existing expertise or whether it's a relatively new scope. The same applies broadly to **distributional outcomes**, although governance structures do influence the degree to which low-income countries and geographic balance are reflected in funding decisions.

Institutional feasibility is where governance design becomes most decisive. Managing annual revenues of several billion dollars would represent a qualitatively new function for the IMO. The Oil Pollution Fund, for example, manages revenues of under $10 million per year, whereas revenues under the Net-Zero Framework would likely total $11-12 billion per year. Setting up an IMO-administered fund requires establishing systems to manage grants, debt instruments, and potentially equity investments. This would take considerable time, raising both feasibility and legitimacy concerns. Such delays would directly affect how quickly support can reach lower-income countries.

In contrast, co-investment structures with existing funds offer the highest degree of institutional readiness and speed, as they rely on already operational legal and administrative frameworks. Earmarked contributions to external funds may also be deployed relatively quickly, though timelines depend on the level of earmarking and negotiation required. While tighter earmarking can increase political support among Member States and industry actors for revenues flowing beyond the IMO, it may also reduce flexibility and limit the fund's ability to support broader systems transformation across the energy value chain. At the same time, anything beyond the MEPC's control is much less likely to garner enough political support for adoption.

	Environmental effectiveness	Cost-effectiveness	Distributional considerations	Institutional feasibility
Full oversight by the IMO				
Integrated fund	Highly dependent on the funding and project design	Highly dependent on the funding and project design	Highly dependent on the funding and project design	Slow process, may take many years
Separate charter	Highly dependent on the funding and project design	Highly dependent on the funding and project design	Highly dependent on the funding and project design	Slow process, may take many years
Collaboration with other funds				
Co-investments	Limited ability to set up a holistic programme	Highly dependent on the funding and project design	Highly dependent on the funding and project design	Speedy and easy to set up
Earmarking	The higher the earmarking, the less transformative	More projects can be supported if the scope is narrower	Highly dependent on the funding and project design	Relatively easy and spending can be controlled
Sub-structure	Highly dependent on the funding and project design	Highly dependent on the funding and project design	Highly dependent on the funding and project design	Feasible but will be more of an administrative burden

Table 2: Implications of different governing forms for the four considerations

The recipients

Another key design component of the fund, regardless of the entity responsible for disbursement, concerns the **recipient of the revenues**—the "who". Different recipient models may be applied across different impact areas (see previous section) and funding mechanisms (see next section). Broadly, three main recipient structures can be distinguished:

- **Top-down to national governments:** Funds are disbursed directly to national governments, which then allocate and deploy them, potentially within a defined scope.
- **Bottom-up to private-sector-led initiatives:** Funds are disbursed directly to industry- or project-led initiatives.
- **Hybrid:** Funds are channelled to public–private project consortia involving both governments and industry actors.

Top-down

Under a top-down model, revenues are transferred directly to national governments. This can apply to all funds or only to specific areas or disbursement mechanisms.

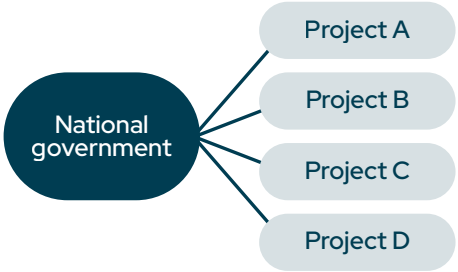

Figure 4: Top-down approach

One relevant example is the **EU Emissions Trading System**, under which close to 90% of auctioning revenues are returned to Member States to be spent on climate-related measures at their discretion, largely independent of the sector in which the revenues were generated. Only a limited share of revenues from maritime emissions is earmarked specifically for shipping through the EU's Innovation Fund, while the remainder supports broader national climate objectives.

Bottom-up

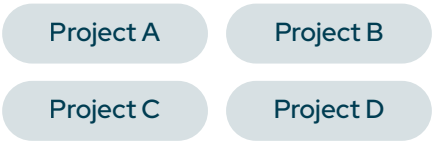

Figure 5: Bottom-up approach

Bottom-up disbursement involves allocating funds directly to individual projects that have applied for support. This may include, for example, renewable energy production facilities, food security and agricultural resilience projects, or seafarer training and workforce transition programmes.

For instance, the **Green Climate Fund** receives proposals for climate investments from its accredited entities and, subject to compliance with stringent investment criteria and board approval, disburses funds accordingly. For example, it has directly supported climate adaptation programmes for farmers to enhance food security in climate-vulnerable regions. Similarly, its **Acumen Resilient Agriculture Fund** has financed projects in countries including Uganda, Nigeria, and Ghana through a direct bottom-up investment approach, complemented by national and regional planning support.

Hybrid

A hybrid approach involves **public–private project** consortia, in which national governments collaborate directly with industry and other stakeholders and all involved parties have agency over how to distribute the funds within the scope of the project. In this model, governments may retain a leadership or convening role while participating in concrete, investment-ready projects.

Figure 6: Hybrid approach

An illustrative example is a project supported by the **Climate Investment Fund** in Brazil to scale up green hydrogen production in Pecém. The project involves the national government working alongside local energy producers and prospective offtake sectors, including the steel industry, which is of strategic importance given Brazil's role as one of the world's largest iron ore exporters.

Likely impacts on considerations

Environmental effectiveness is generally higher in bottom-up and hybrid models, where funds can be directly targeted at clearly defined, high-impact projects with measurable mitigation or adaptation outcomes. In contrast, tracking environmental impacts under a top-down model becomes more difficult as funds pass through multiple layers of national administration. Without robust earmarking and reporting requirements, revenues may be absorbed into broader national budgets and spent outside the priority areas defined at the IMO level. There will also likely be greater variation in impact, as some countries will have more established mechanisms for these types of disbursements. This also limits the potential for cross-border technology diffusion and coordinated knowledge exchange—an issue that bottom-up and hybrid approaches are better suited to address, as the private sector often brings more international experience.

Cost-effectiveness is relatively limited in a top-down approach. Such an approach may be more likely to be combined with national climate funding, when available, and the IMO's administrative costs may be lower as it does not have to elect and monitor individual projects. However, top-down spending risks being impacted by governmental inefficiencies. Bottom-up and hybrid projects have a higher potential to mobilise the private sector, significantly increasing the impact of each IMO dollar spent. Hybrid projects can also combine this with available national climate finance.

In terms of **distributional considerations**, top-down and hybrid approaches are generally better aligned with national contexts and policy priorities, allowing governments to integrate maritime-related funding into wider development strategies. Hybrid projects, in particular, offer strong potential for capacity-building and knowledge exchange between industry and public authorities.

However, top-down approaches often require substantial additional technical assistance, institutional strengthening, and technology transfer to ensure effective use of funds. Bottom-up models require less institutional capacity from governments but carry the risk of funding becoming concentrated in upper lower-income or middle-income countries that already have the enabling conditions for bankable projects, potentially leaving LDCs behind.

The IMO's **institutional feasibility** is generally higher for top-down and hybrid disbursement, as these models rely on existing national or consortium-based implementation structures. However, this requires robust monitoring, reporting, and safeguards to minimise corruption and opaque spending risks. Bottom-up models place a heavier burden on the disbursing entity in terms of project appraisal, due diligence, and monitoring, but they also offer stronger transparency and direct accountability at the project level.

	Environmental effectiveness	Cost-effectiveness	Distributional considerations	Institutional feasibility
The recipient				
Top-down	Likely limited due to government inefficiencies	Could leverage national funds but limited private capital mobilisation	Can fit national contexts and needs but require more assistance	More straightforward but requires robust monitoring and reporting
Bottom-up	Can be funnelled directly into highest-impact projects	Likely to mobilise private capital	Funds may concentrate in upper lower-income countries	Higher transparency and accountability but burdensome selection process
Hybrid	Can be funnelled directly into highest-impact projects through national prioritisation	Likely to mobilise private capital and combine available national funding	Can fit national needs and improve knowledge exchange	Burdensome selection process and are likely to take more time

Table 3: Implications of the types of funding recipient for the four considerations

The delivery mechanism

Evaluating the fund's potential delivery mechanisms is complex, as multiple mechanisms can be, and often are, combined. Additionally, the main categories contain many critical subcategories that can have different impacts on the considerations, and some mechanisms only work in some areas and for some recipients. The main objective of the mechanism is how it can most effectively catalyse climate investments and make the desired alternative more attractive than business-as-usual.

Looking across the existing climate finance structure, there are many different types of mechanisms to be considered, including:

Depending on the chosen governance model, decisions on the specific financing mechanisms may not rest directly with the IMO, particularly in structures based on collaboration with experienced external funds. In such cases, the selection of instruments is often delegated to implementing entities and does not form part of the core political negotiations. Nevertheless, the choice of financing mechanisms is central to how responsibly and efficiently the fund can operate. This section therefore outlines the main financing instruments that could be applied and assesses their implications for the key considerations.

Grants

Grants are non-repayable transfers of funds. Depending on the recipient model, these could take the form of direct transfers to national governments or subsidies for private or public–private projects. For government transfers, earmarking would likely be required to ensure alignment with the IMO's defined scope. This could include eligibility rules for spending or the use of predefined allocation keys across spending categories.

For private or consortium-based projects, grants are most commonly used to support capital expenditure, including fleet renewal, zero-emission vessel deployment, fuel production, port and energy infrastructure, or climate adaptation investments. Where grants are awarded to consortia, internal distribution follows the governance arrangements of the project itself.

The EU's Innovation Fund is an example, having made billions available for the energy transition. It also recently announced earmarking $10 billion specifically for the shipping sector. The grants, which can be awarded to individual companies as well as consortia, can support up to 60% of project costs. Of the total grant money, one portion is awarded during project preparation, independent of emission abatement. The majority is then awarded during construction and operation, based on verified avoided emissions.

Debt financing

The fund's revenues could be used for debt financing, which could include debt mechanisms or loan guarantees. Examples include:

- Low-interest loans with below-market interest rates to reduce the capital costs of a project.
- Long-tenor loans that have extended repayment periods and thus reduce capital costs.
- Subordinated debt takes junior position in the capital stack, absorbing first losses to attract private investors.
- Loan guarantees that reduce risks for commercial lenders by covering part of their potential losses.
- Debt-for-climate swaps in which (parts of) an outstanding debt are cancelled in return for climate action.

Equity financing

Equity finance refers to capital invested in climate-related projects or companies in exchange for an ownership stake, rather than repayment through fixed interest or debt obligations. In climate finance, equity is used to support high-risk or early-stage mitigation and adaptation solutions—such as clean energy projects, emerging low-carbon technologies, or climate-resilient infrastructure—by absorbing risk, leveraging additional private funding, and enabling long-term value creation aligned with climate goals. Examples could include first-loss capital participation that serves as a guarantor for more senior equity, or quasi-equity instruments that can convert debt into equity over time. The Construction Equity Fund under Climate Investor One is an example of equity financing that acts as a bridge between early-stage development and operational debt financing. The overall budget of $700 million is estimated to build ~30 renewable energy projects, with a total projected capacity of ~1,700 megawatts and ~1.9 million tonnes of CO_2 abated.

Incentive mechanisms

Incentive mechanisms include both financial and non-financial tools to remove barriers to investments. These could include:

- Tax breaks given by national governments to projects.
- Insurance support against adverse government actions or war, civil strife, and terrorism. Insurance is generally considered a significant barrier to effective climate finance, and supporting the right insurance mechanisms can be key, for example through Political Risk Insurance.
- Currency risk hedging via back-to-back funding (local currency lending) that protects an investment or project from losses caused by fluctuations in exchange rates through, for example, covering the cost of project hedging, currency swaps, forward contracts, derivatives, etc.
- Guaranteed offtake for fuel production to link customers to projects and increase bankability.

Technical assistance

Technical assistance refers to targeted support that helps countries, especially developing states and SIDS, build the institutional, regulatory, and operational capacity needed to implement maritime decarbonisation measures effectively. This can include developing national action plans, strengthening emissions monitoring and reporting systems, designing policies aligned with IMO requirements, evaluating technology options for zero-emission vessels and fuels, improving port and supply-chain readiness, or enhancing access to other forms of climate finance mechanisms. Technical assistance can also be provided directly to projects. This can include support with feasibility studies, technology assessments, regulatory compliance, cost–benefit analysis, environmental and social impact evaluations, project design and structuring, and guidance on accessing appropriate financing instruments. A key existing example of this is the IMO's GreenVoyage2025, which provides support for policy development and technical capacity for projects focused on lower-income countries.

Likely impacts on the considerations

All instruments can support high-impact mitigation and adaptation projects to **achieve environmental effectiveness, impact, and leverage**, but with different risk–return profiles. Grants are particularly effective in de-risking unproven or early-stage technologies and unlocking follow-on private investment. However, they offer no protection against project failure. If a grant-funded project fails, the funds are lost. Debt instruments, by contrast, preserve the possibility of repayment but impose stronger performance requirements on borrowers. Equity instruments accept higher upfront risk in exchange for potentially transformative long-term impact.

Cost-effectiveness varies significantly across instruments. Many mechanisms can mobilise private capital and multiplier effects. Grants are highly attractive to investors as they reduce debt burdens and risk exposure, but they are expended only once. Debt finance, by contrast, can generate substantially higher long-term leverage if repayments are recycled into new projects. Guarantees and concessional debt often offer particularly strong crowding-in effects.

All instruments can, in principle, be deployed across income groups, but **distributional outcomes** depend heavily on design choices. Grants risk being captured by multinational firms operating in lower-income countries rather than generating strong domestic spillovers. Debt instruments, if insufficiently concessional, may exacerbate debt vulnerabilities and increase the risk of sovereign credit rating downgrades. Without careful structuring, lower-income countries could face increased repayment burdens without commensurate economic returns. Technical assistance is often essential to ensure that these instruments benefit domestic institutions and local actors.

Institutional feasibility differs markedly across instruments. Grants are comparatively simple to administer, though they still require strong systems for project selection, monitoring, and reporting. However, questions of testing additionality and ensuring their non-distortionary nature can increase the burden on fund managers. Nevertheless, debt and guarantee instruments are significantly more complex, requiring both additionality and distortion analyses, as well as financial risk management, portfolio oversight, and long-term balance-sheet exposure. It remains unclear whether the IMO could directly manage such functions without substantial institutional expansion. Debt instruments also expose the fund to long-term credit and regulatory risk. Guarantees introduce moral hazard risks, as borrowers may pursue higher-risk strategies when losses are partially absorbed by the guarantor.

	Environmental effectiveness	Cost-effectiveness	Distributional considerations	Institutional feasibility
The mechanism				
Grants	Can directly derisk projects	Mobilises private capital but limited long-term multiplication of funds	Risks inequitable allocation or capture by multinationals unless carefully structured	Relatively straightforward but require robust oversight
Debt instruments	Lower capital costs for zero-/low-emission technologies and help scale	Debt can recycle capital through repayment and mobilise large volumes of private finance	Risks increasing repayment burdens or exacerbating debt distress in lower-income countries	Requires significant institutional capacity and exposes the IMO to long-term financial risk
Equity financing	Can support high-risk, early-stage climate solutions	Can leverage substantial private co-investment	Can fit diverse national contexts but may gravitate toward countries or sectors with stronger enabling environments	Administratively complex and risk-intensive
Incentive mechanisms	Directly address barriers such as currency risk, political risk, or market uncertainty	By reducing risk, incentives can attract large volumes of private capital at relatively low public cost	Incentives can be applied broadly but may not automatically prioritise the most vulnerable countries	Depending on the type, relatively straightforward
Technical assistance	Won't have transformative impact alone but can increase impact of other mechanisms	Can build confidence in projects but not a major contributor to cost effectiveness	Addresses capacity gaps, benefiting developing states, SIDS, and LDCs	One of the most feasible functions for the IMO to administer, no time delay necessary

Table 4: Implications of the delivery mechanism for the four considerations

Interactions of combinations of elements

Design choices across the fund's four core components are not independent. Certain combinations may be mutually reinforcing, while others are structurally incompatible. For example, a government recipient under a top-down model is generally ill-suited to receive equity financing, while a company under a bottom-up approach would not be able to access tax incentives administered directly by a global fund. Or, if revenues are fully managed by the IMO, the scope for deploying debt instruments is considerably more limited than under a structure that relies on partial or full management by experienced external funds.

These interdependencies mean that the fund's design must be understood as a system of linked choices, rather than a menu of independently selectable options.

To illustrate how these interactions play out in practice, this section explores two stylised configuration pathways, each representing a coherent and plausible combination of design choices. This does not imply any position on how the distribution should be or argue that only one pathway has been chosen, but rather illustrates what a path could look like for a specific objective.

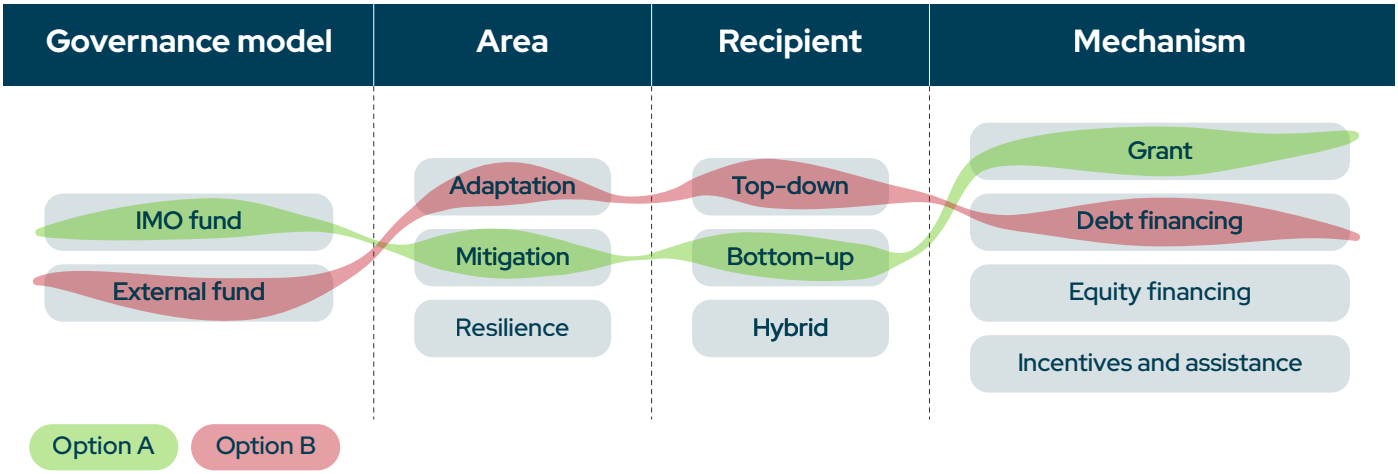

Figure 7: Illustrative combinations of different choices for each fund element

Option A: IMO-managed fund provides grants for company-led mitigation projects

Under this pathway, revenues are fully managed by the IMO, directed primarily toward mitigation, and disbursed to the private sector through grants. The main spending focus would be on accelerating the uptake of zero- and near-zero-emission fuels and technologies, including fuel production, bunkering infrastructure, and early fleet renewal. Funds would be transferred to project developers directly, for example, fuel producers developing a synthetic fuel production plant or a shipowner seeking support for a zero-emission vessel in the form of subsidies.

This configuration offers strong potential from an **environmental effectiveness** perspective, as funding can be precisely targeted at projects with high mitigation impact and clear emissions-reduction pathways. Traceability and accountability are comparatively high if the institutional structure is strong enough, as financial flows and performance can be monitored at the project level. In terms of **cost-effectiveness**, grants can unlock more private capital in addition to the subsidies by derisking the project and reducing the overall private capital needed, potentially playing a catalytic role in unlocking early-stage investment. However, from a **distributional perspective**, bottom-up project finance risks favouring countries with strong project pipelines and developer capacity, potentially disadvantaging LDCs unless accompanied by substantial technical assistance and geographic targeting. It also limits the scope of the revenues to countries with an economic stake in shipping, leaving behind those that may be negatively affected by increased trade costs but lack a stake in shipping (i.e., landlocked countries). At the same time, this pathway raises significant **institutional feasibility challenges**. Administering large volumes of project-level grants would require the IMO to develop extensive internal capacity for project appraisal, monitoring, compliance, and financial oversight, functions well beyond its current remit.

Option B: External fund supports government-led adaptation through debt financing

Under this configuration, (part of the) revenues are channelled to an external climate finance institution, which directs them toward adaptation objectives and deploys them through a top-down model to national governments using debt-based instruments. Financing would take the form of concessional sovereign loans, policy-based lending, or debt-for-climate swap arrangements, supporting national adaptation priorities. Funds could be used to finance food security efforts, climate-resilient port infrastructure, and institutional strengthening linked to climate impacts. Governments would integrate these resources into national adaptation strategies, with implementation occurring through public investment programmes.

From a **cost-effectiveness perspective**, this model allows adaptation investments, often associated with limited direct revenue streams, to be supported at scale through long-term concessional finance, while maintaining the potential for repayment and capital recycling. However, the ability to mobilise private capital remains more limited than under hybrid or bottom-up structures, given the public-good nature of many adaptation investments.

In terms of **distributional considerations**, this pathway aligns well with the needs of vulnerable coastal and climate-exposed states, including SIDSs and LDCs. However, the use of debt for adaptation carries clear sovereign debt risks, particularly for fiscally constrained countries. Strong concessionality, grant elements, or debt-for-climate swap structures would therefore be essential to avoid exacerbating debt distress.

From an **institutional feasibility** standpoint, this configuration is relatively strong. External funds already possess the legal, fiduciary, and financial capacity to manage sovereign lending at scale, reducing operational burdens on the IMO. The main governance challenge lies in ensuring that maritime-specific adaptation priorities remain central within broader national adaptation spending.

Recommendations

To ensure that the policy measures deliver both emissions reductions and a just and equitable transition, their design should balance ambition with institutional feasibility and political legitimacy. A fund should be conceived as a flexible architecture rather than a single, uniform instrument.

- ⇒ **Areas of support:** A fund should support multiple areas in parallel, aligned with what was agreed by IMO Member States in the current Net-Zero Framework. While mitigation investments in zero- and near-zero-emission fuels and technologies are essential for environmental effectiveness, parallel support for workforce transition, capacity-building, national action plans, and the mitigation of disproportionately negative impacts is critical for securing global buy-in. Indicative allocation ranges, or minimum floors for non-mitigation spending, can help safeguard equity objectives without overly constraining flexibility.
- ⇒ **Governance:** Given the scale of anticipated revenues and the urgency of deployment, the IMO should explore collaboration with established climate finance institutions to accelerate operationalisation. Dedicated windows or sub-structures within external funds can provide immediate fiduciary capacity and project pipelines, while the IMO retains strategic oversight by setting allocation priorities, eligibility criteria, and reporting requirements. Full IMO management may remain a longer-term option but should not delay early action.
- ⇒ **Recipients:** No single recipient model is optimal and may need to include a blend, depending on the areas: top-down support to governments for adaptation, resilience, and national planning; bottom-up support for clearly defined mitigation projects; and a strong role for hybrid public–private consortia in fuel production, infrastructure, and fleet renewal. Hybrid models offer a pragmatic balance between national ownership and private capital mobilisation but require targeted technical assistance to ensure access for LDCs and SIDS

⇒ **Mechanisms:** Financing instruments should be matched to objectives and institutional capacity. Grants should prioritise early-stage mitigation, capacity-building, and support to vulnerable states. Concessional debt, guarantees, and equity should be deployed selectively through experienced external institutions to mobilise private capital while managing financial risk. Incentive mechanisms such as offtake guarantees, currency hedging, and political risk insurance can unlock investment at relatively low public cost. Technical assistance should be embedded across all areas as a foundational enabler.

Overall, a modular and adaptive design that combines multiple governance arrangements, recipient models, and instruments is likely to offer the strongest pathway to delivering a just and equitable transition while maintaining environmental effectiveness and political viability.

Designing a system to reliably, responsibly, and effectively manage funds is critical. Examples from both within shipping and the wider energy sector show that this is achievable. For the maritime industry, supporting spending on areas that are not directly related to shipping is essential not only to accelerate the global availability of zero-emission fuels and technologies, but also to secure the political buy-in, market stability, and investment confidence needed to plan, invest, and scale solutions across all regions without fragmenting trade or competitiveness.