**Special Rapporteur on human rights and the environment**

Policy Brief No. 2

**Air Travel and Maritime Shipping Levies:**

**Making Polluters Pay for Climate Loss, Damages and Adaptation**

A policy brief from the UN Special Rapporteur on Human Rights and the Environment,

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Contents

*Page*

1. [Overview 3](#_TOC_250001)
2. [Proposed Air Travel and Maritime Shipping Levies 4](#_TOC_250000)
	1. Why focus on the commercial aviation and maritime shipping industries? 5
	2. Key operational characteristics of proposed levies 5
	3. Projected climate revenue from the proposed levies 6
3. Arguments in favor of both proposed levies 8
	1. Equitable and Appropriate 8
	2. Effective, Predictable, and Efficient 9
	3. New and Additional 11
4. Existing Precedents 11
5. Moving Forward 13
6. Conclusion 13

Endnotes

# Introduction

 The planet is embroiled in an unprecedented climate emergency that threatens a myriad of human rights including the rights to life, health, food, water and sanitation, freedom from discrimination, education, the rights of children, cultural rights, development, and the right to a healthy and sustainable environment.[[1]](#endnote-1) More than one degree of warming has already occurred at the global level, sparking an increase in extreme weather events, droughts, floods, heat waves, wildfires, increased air pollution, water shortages, and a host of other disruptive phenomena that collectively exacerbate biodiversity loss, ecosystem destruction, poverty, conflict, food and water insecurity, livelihood loss, socioeconomic inequality, and poor health outcomes.[[2]](#endnote-2) As UN Secretary General Antonio Guterres said in response to the latest report from the Intergovernmental Panel on Climate Change, this is “code red for humanity.”

 High- and upper-middle income states, large businesses, and wealthy individuals are primarily responsible for greenhouse gas emissions, deforestation, and other anthropogenic drivers of climate change, yet least developed countries (LDCs) and small island developing states (SIDS) shoulder the heaviest adverse effects. They are least responsible for the crisis, have the least resources to adapt, and lack the financial capacity to respond to devastating losses and damages.[[3]](#endnote-3) According to UNICEF, 850 million children live in nations that are at extremely high risk of adverse climate impacts, with the majority in Africa and Asia, where 41 of the 46 least developed countries are located.[[4]](#endnote-4) Over 860 million people across SIDS and LDCs are already, or are expected to be victims of negative climate change impacts including environmental displacement,[[5]](#endnote-5) and global warming threatens the very habitability of low-lying island states that could be submerged completely by sea-level rise.[[6]](#endnote-6)

 The adverse impacts of climate change include extreme weather events such as cyclones and hurricanes, as well as slow-onset disasters including drought and sea-level rise. In 2019 Cyclone Idai killed more than 1,000 people, displaced 146,000 people, damaged over 100,000 homes, damaged a million acres of crops and caused billions of dollars in damage to infrastructure in Mozambique, Malawi and Zimbabwe.[[7]](#endnote-7) Hurricanes in the Caribbean and the Pacific in recent years have wreaked havoc on the Bahamas, Dominica, Fiji, Vanuatu and other countries, damaging up to 90 percent of buildings and causing damages in some cases exceeding the country’s annual GDP. Drought in Central America’s dry corridor and in sub-Saharan Africa is exacerbating hunger, malnutrition and extreme poverty. All of these climate disasters affect the enjoyment of human rights, with disproportionate effects on vulnerable and marginalized individuals and communities. It is well established that women and girls experience additional harms from climate disasters because of gender inequality.[[8]](#endnote-8) Finally, the economic costs of responding to these disasters and rebuilding afterwards go far beyond these nations’ capacity to pay.

 As the ecological, financial, social and human rights costs of climate change continue to swell, there remains a vast gap between existing climate finance for SIDS and LDCs and these countries’ urgent financial needs. By 2030, developing countries’ climate adaptation burden may reach US$140 - $300 billion or even higher and by 2050, between US$280 - $500 billion per year,[[9]](#endnote-9) yet wealthy States’ commitment to mobilize US$100 billion in annual climate financing for developing states by 2020 was not fulfilled.[[10]](#endnote-10) Between 2016 - 2018, LDCs received just 14 percent of global climate mitigation and adaptation finance (US$12 billion in 2018). SIDS—some of which are also LDCs—received only 2 percent of global climate finance (US$2 billion in 2018).[[11]](#endnote-11) Shockingly, the majority of climate finance takes the form of loans that poor countries will struggle to repay.[[12]](#endnote-12)

 In addition to the failure to mobilize funding for the immense costs associated with adaptation, there has been an almost total failure to provide funds for vulnerable countries to deal with climate loss and damage. It is estimated that the annual economic costs of loss and damage will be between US$290 billion - 580 billion in developing countries by 2030.[[13]](#endnote-13) These economic costs are expected to rise to between US$1 trillion - $1.8 trillion per year by 2050. None of these estimates incorporate non-economic losses inflicted by climate change, such as loss of culture, loss of biodiversity, and the adverse impacts on psychological and mental health.

 To remedy these failures, prevent future loss to human life and human rights violations, and to catalyze progress towards the Sustainable Development Goals, SIDS and LDCs have been calling for innovative measures to mobilize climate finance for over three decades. Vanuatu and the Alliance of Small Island States first proposed financing for climate change-induced losses and damages in 1991. Despite numerous SIDS and LDC proposals, discussions among States, industry and academics, and the establishment of the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts (in 2013 at COP 19), actual funds for climate losses and damages have yet to materialize. Despite 30 years of discussions, **only a miniscule amount of funds** has been transferred from wealthy States to less wealthy States for loss and damages.[[14]](#endnote-14) Unless substantial financial support is mobilized in the short term, citizens of SIDS and LDCs will continue to suffer irreplaceable losses and experience tremendous damage from climate-related natural disasters and slow-onset events caused primarily by wealthier nations.

# Proposed Air Travel and Maritime Shipping Levies

 In response, this policy brief proposes two international levies—one on commercial air passenger travel and another on emissions from international maritime shipping—to help close the gap in SIDS/LDC finance for losses, damages, and adaptation in an expeditious, equitable and efficient manner. Most or all revenue from both levies would be devoted to SIDS’ and LDCs’ response to climate change-induced loss, damage, and adaptation needs, thus benefiting the poorest and most vulnerable people whose contribution to climate change is minimal yet who are most harmed by climate disruption. If deemed desirable, some revenue could be devoted to research, development and deployment of sustainable fuels and emissions-free technologies. Our proposal seeks to amplify climate-vulnerable States’ repeated calls for such levies over the past three decades, and to highlight the benefits and principal arguments in favor of these levies’ rapid and widespread adoption and implementation.

 While this policy brief focuses on the two levies outlined below, we support numerous proposals for increasing climate finance to assist SIDS and LDCs in responding to the climate crisis, including potential revenues from a financial transaction tax or a climate damages tax, as well as public finance from wealthy States and debt relief.[[15]](#endnote-15)

1. **Why focus on the commercial aviation and maritime shipping industries?**

 Climate levies focused on the commercial aviation and maritime shipping industries are an appropriate means of supporting SIDS’ and LDCs’ capacity to address climate change-induced losses, damages, and adaptation because:

***Both industries are major greenhouse polluters:*** Collectively, carbon dioxide (CO2) emissions from commercial aviation (920 million tons in 2019) and international shipping (919 million tons in 2018)[[16]](#endnote-16) are greater than that of Russia, the world’s fourth-largest CO2-emitting country in 2019.[[17]](#endnote-17) Each industry contributes about 2.5 percent of global CO2 emissions from fossil fuel combustion each year,[[18]](#endnote-18) yet their emissions are largely unregulated and not covered by carbon pricing mechanisms.[[19]](#endnote-19)

 ***Both industries’ CO2 emissions are expected to grow, and their fuel needs are outpacing the development and scalability of carbon-free technology:*** Both industries’ CO2 emissions have grown rapidly in recent decades[[20]](#endnote-20) and are projected to multiply several times over by 2050. Between 2013 and 2019 alone, the total number of passenger flights worldwide increased by 23 percent and the number of international air passengers rose by 50 percent.[[21]](#endnote-21) Prior to the COVID-19 pandemic, the International Civil Aviation Organization (ICAO) estimated that international aviation emissions could more than triple between 2015 and 2050.[[22]](#endnote-22) Similarly, the International Maritime Organization (IMO) forecast that between 2012 and 2050, shipping emissions could increase between 50 - 250 percent.[[23]](#endnote-23) Despite a steep decrease in aviation emissions (48 percent)[[24]](#endnote-24) and a negligible reduction in shipping emissions (1 percent)[[25]](#endnote-25) in 2020 due to the pandemic, emissions from both industries are expected to rebound and then resume their upward trajectories.[[26]](#endnote-26) Because neither industry currently has access to the technology necessary to break its dependence on fossil fuels at scale—the heavy transport sector’s decarbonization progress generally lags behind other sectors[[27]](#endnote-27)—the share of global emissions from aviation and shipping is likely to increase. Therefore, this policy brief proposes climate pollution levies targeting maritime shipping and commercial air passenger travel, and identifies specific arguments in favor of both policies in Section 2. In the future, the climate levy approach could be extended to air freight and maritime cruise ship travel.

1. **Key operational characteristics of proposed** **levies**

 The climate pollution levies proposed in this brief are inspired and influenced by SIDS and LDC proposals to remedy climate finance gaps and rapidly mobilize funds. The proposed shipping levy is based on the 2021 proposal by the Marshall Islands and Solomon Islands to the Marine Environment Protection Committee of the IMO. If established, this would be the first market-based mechanism universally applied to the maritime shipping industry.[[28]](#endnote-28) The proposed air passenger levy is similar to the 2008 international air passenger adaptation levy advanced by the Maldives on behalf of LDCs.[[29]](#endnote-29) The air passenger levy was previously endorsed by the United Nations (UN) Special Rapporteur on Human Rights and the Environment in his 2019 report on climate change and human rights to the UN General Assembly.[[30]](#endnote-30)

The maritime shipping levy would be applied at point of bunker, and the air passenger levy at point of ticketing. Revenue would be collected by the airline or shipping company and transferred to a government agency already responsible for collecting levies and taxes, which would then transfer funds to an experienced international climate finance institution such as the Adaptation Fund, Green Climate Fund or Global Environment Facility. The fund or facility would manage the money and disburse to SIDS and LDCs based on transparent rules to ensure funds’ appropriate use.

 Levy amounts for both policies could be reviewed and potentially increased every five years. As noted in the shipping levy proposal by the Marshall Islands and Solomon Islands, this would allow the levy to gradually approach the amount necessary to effectuate transformational change, which for the international maritime shipping industry is estimated to be between $US250 - $300 per ton of CO2.[[31]](#endnote-31) Key operational characteristics of both proposals are summarized in the table below.

**Table 1: Outline of aviation and maritime shipping levies to support SIDS and LDC responses to climate change-induced losses, damages, and adaptation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Levy Type** | **Collection Point** | **Levy Rate** | **Initial Levy Collector** | **Revenue Manager and Distributor** |
| **Air Passenger Levy** | Purchase of commercial aviation passenger ticket | Differentiated air passenger levy of between **$US10 - 75 per economy and business class ticket**, possibly with progressively higher payments for longer flights. | Airline companies  | The Green Climate Fund, Adaptation Fund, or Global Environment Facility  |
| **International Maritime Shipping Levy** | Bunker (i.e., the fueling of a ship) | **$US100 per ton of CO2,** applied without discrimination or exception across all ships engaged in commercial international transport  | Maritime shipping companies  |

1. **Projected climate revenue from the proposed levies**

Projected revenue ranges reflect:

* a *best-case scenario* where all countries participate and apply both levy policies, and the frequency of air passenger travel returns to 2019 levels (4.486 billion commercial air passengers per year,[[32]](#endnote-32) rounded down to 4 billion for the purposes of this brief); and
* a *worst-case scenario* wherein only half of countries comprising commercial air passenger travel and maritime shipping participate and apply the levy policies, and commercial air passenger travel continues at 2020 levels (approximately 1.787 billion passengers, rounded up to 2 billion passengers for the purposes of this brief), when the COVID-19 pandemic reduced the frequency of commercial air travel by approximately 60 percent.[[33]](#endnote-33)

Calculations further assume that the maritime shipping CO2 emission rate will remain at 2018 levels (919 million tons of CO2 per year), as reported by the IMO.[[34]](#endnote-34)

**Table 2: Summary of projected annual revenue ranges for proposed climate levies**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Annual Revenue**  | **Levy Attributes and Industry Assumptions**  | **Projected Revenue Range (in $US) with Participation of Countries Comprising 50 percent of Commercial Air Passenger Travel and Maritime Shipping** | **Projected Revenue Range (in $US) with Participation of Countries Comprising 100 percent of Commercial Air Passenger Travel and Maritime Shipping** |
| **Air Passenger Levy**  | US$10 – $75 per economy/business class ticket, with 2020 levels of commercial air passenger travel (2 billion passengers per year) | **$10 – $75 billion** | **$20 – $150 billion** |
| US$10 – $75 per economy/business class ticket, with 2019 levels of commercial air passenger travel (4 billion passengers per year) | **$20 – $150 billion** | **$40 – $300 billion** |
| **International Maritime Shipping Levy** | $100 per ton of CO2 emitted, with 919 million tons of CO2 emitted per year (the level of emissions in 2018) | **$45.95 billion** | **$91.9 billion** |
| **Combined Revenue (Worst-Case Scenarios)** | --- | **$55.95 – $120.95 billion** | **$111.9 – $241.9 billion** |
| **Combined Revenue (Best-Case Scenarios)** | --- | **$65.95 – $195.95 billion** | **$131.9 – $391.9 billion** |

 If all 195 countries that are signatories of the Paris Agreement participate in both levies and air passenger travel returns to pre-pandemic levels, the proposed levies could generate between **$US132 and** **$392 billion of funding** annually to support SIDS’ and LDCs’ responses to climate change-induced losses, damages and adaptation, with the possibility of some funds being allocated to research, development and deployment of sustainable fuel and emissions-free technologies. Even if countries comprising only half of the targeted activities participate and commercial air travel continues at the low 2020 levels due to the ongoing pandemic, the two levies would generate between **$US56 and $121 billion** of revenue each year, a significant amount of funding to address climate damages and vulnerabilities that are already substantial and are rapidly increasing.

 As explained in further detail below, even under the best-case scenario (complete country participation and a return to pre-pandemic levels of air travel), the proposed policies would have little adverse effect on aviation and shipping profits, the tourism industry, or the economies of LDC/SIDSs. In this best-case scenario, the two levies **would generate a combined annual revenue equaling less than 0.5 percent of the global gross domestic product for 2019.[[35]](#endnote-35)** At the same time, implementing these policies would provide a tremendously needed source of assistance and empowerment to SIDS’ and LDCs’ climate change response capacity. Supported SIDS/LDC actions would potentially save thousands of lives, prevent further ecosystem degradation, and avoid billions of dollars in damaged property and infrastructure, all of which have devastating consequences for human rights and sustainable development aspirations.[[36]](#endnote-36) The investments made by SIDS and LDCs would also lead to significant employment and economic benefits.[[37]](#endnote-37)

 Economic modeling and similar international levies (such as the French Solidarity Levy that has been implemented by 11 countries and the implementation of air passenger levies in several European countries (Table 3)) indicate that the proposed climate levies can be structured to mobilize additional funds in a manner that is equitable, appropriate, effective, predictable, and efficient, without appreciably burdening States’ economic development, introducing market distortions, or significantly impacting aviation or maritime shipping industry profits. Key principles and arguments in favor of these levies are outlined below. Specific operational details for each levy will require inter-governmental negotiations that should commence urgently.

# Arguments in favor of both proposed levies

 Compelling justice, human rights, environmental, development, and business arguments exist for implementing the proposed levies. This section outlines the most common arguments and responds to anticipated concerns that the levies may elicit from some States, industry, and citizens.

1. **Equitable and Appropriate**

 Given the egregious inequity between the small subset of human society largely responsible for the climate emergency and the billions of people whose rights and livelihoods are most severely harmed by the impacts of climate disruption, responding to climate-vulnerable countries’ loss, damage, and adaptation needs is a moral and ethical imperative. Both proposed levies are consistent with the “polluter pays” and “common but differentiated responsibility” principles embedded in the UN Framework Convention on Climate Change.[[38]](#endnote-38) The more the air travel and shipping industries contribute to CO2 emissions, the more funds will be collected, and the more revenue available to SIDS and LDCs to prevent and respond to climate change harms.

 Like climate change itself, both the commercial air travel and maritime shipping industries are disproportionately driven by the demands of high- and upper-middle income countries and a relatively small subset of the world’s wealthiest individuals.[[39]](#endnote-39) This is particularly true of the aviation industry. Frequent flyers constituting one percent of the world’s population were responsible for half of the aviation industry’s carbon emissions in 2018.[[40]](#endnote-40) High-income countries comprise 16 percent of the world population but contribute 62 percent of global CO2 emissions from commercial aviation.[[41]](#endnote-41) The three largest markets for air travel (the United States, the European Union, and China) were responsible for 55 percent of passenger CO2 emissions in 2019.[[42]](#endnote-42) Given the relatively small number of individuals and countries that drive commercial aviation, the air passenger levy is a unique opportunity for *individuals* to demonstrate solidarity with those most heavily impacted by climate change through the purchase of a commercial air ticket.

 Equity concerns indicate that a higher levy should be applied to premium class air tickets (i.e., business and first class). Business and first-class flyers generate more emissions than economy flyers because: (1) premium class passenger seats and their associated amenities take up more floor space, and have been calculated to emit between 2.6 to 4.3 times more CO2 than economy seating;[[43]](#endnote-43) and (2) premium class tickets have been highly profitable for many airlines.[[44]](#endnote-44)

 While the bulk of revenue under both climate levies would come from wealthy States, the proposed policies are designed to be global in application (involving shipping companies and air passengers based in all countries). In this way, the proposed levies provide an equitable solution to a climate crisis that is global in scope, involving and impacting citizens, companies, and governments across political and economic spectrums. The aviation levy might pose equity concerns in that some less-wealthy citizens in SIDS and LDCs may be unable to afford commercial air tickets due to the slight increase in ticket prices caused by the levy. However, this potential risk—along with any secondary effects on LDC/SIDS economies that a decrease in citizen mobility might have—could be offset by a domestic policy that provides rebates to low-income citizens. Another option is that all levy revenues from flights departing from SIDS or LDCs could be retained by the departing-country government for domestic climate action, rather than being submitted to an international climate funding agency.

1. **Effective, Predictable, and Efficient**

 Climate adaptation is an ongoing and long-term process, while responses to loss and damage must be rapidly financed and implemented, often with little advance notice (e.g. reconstruction of infrastructure and housing after a devastating hurricane). Consequently, revenue must be: a) sufficiently large to have a significant effect on vulnerable countries’ climate change responses; b) predictable enough to consistently meet adaptation and loss/damage response needs; and c) efficient so as to facilitate the quick disbursement of funds to countries with urgent and acute needs.

*Effectiveness and Predictability:* As demonstrated above, **revenue streams from both proposed levies would be sizeable, predictable, consistent, and therefore effective and reliable.** Rates of maritime shipping emissions are expected to increase, and only experienced a very modest decrease in 2020 despite the COVID-19 pandemic. While the frequency of air travel has decreased due to the pandemic, it is expected to rebound and then increase, and is unlikely to fall below the 2020 levels that this proposal used to develop its “worst-case scenario revenue range.” Even the lowest combined annual revenue range (US$55.95 – $120.95 billion), reflecting a scenario where the frequency of air travel remains at 2020 levels and only half of all countries comprising the targeted activities participate, would have a tremendous impact on SIDS’ and LDCs’ capacity to respond to the climate crisis.

 **Importantly, country participation—and therefore the *effectiveness and reliability* of the revenue generated—can be reasonably expected to be high for both levies, for a variety of reasons:**

 **First, virtually all nations are parties to the UN Framework Convention on Climate Change (UNFCCC) and the Paris Agreement**, thereby signaling their commitment to not only limit emissions and increase carbon sinks, but to improve their adaptive capacity and enhance support for addressing loss and damage, including through the provision of climate finance for SIDS and LDCs.[[45]](#endnote-45) Wealthy States’ implementation of the two levies would contribute to fulfilling their commitments under Article 9 of the Paris Agreement, which states that: “[d]eveloped country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation …”, and that the scaling up of climate financing should take particular account of those countries “… that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as the least developed countries and small island developing States ….”[[46]](#endnote-46)

 Furthermore, at the current time, 193 countries are member states of ICAO and 174 are member states of the IMO. Both of these organizations have made commitments to increase actions to address the global climate crisis to which their industries are important contributors.

 **Second, there is no evidence that either levy would significantly impact commercial aviation or shipping industry profits, harm tourism in SIDS or LDCs, or otherwise adversely impact SIDS/LDC economic development.** Economic modeling and the experience of EU countries implementing domestic air passenger levies and the French Solidarity Levy (applicable to both international and domestic flights and described in further detail in the following Section of this brief) indicate that the business impact of the proposed levies would be minimal.[[47]](#endnote-47) If both levies were implemented widely, neither would have an appreciable impact on competition. At the same time, spending the revenues would create a significant number of jobs and substantial economic activity in vulnerable countries while building climate resilience.

 With respect to the aviation levy in particular, air passenger sensitivity to price increases is generally low and is estimated to be minimal in comparison to anticipated demand growth.[[48]](#endnote-48) Long-haul flights are consistently characterized by less passenger price sensitivity than short-haul flights,[[49]](#endnote-49) and modest price increases generally do not deter international passengers from flying, in part because international travelers are disproportionately wealthy and from wealthy States. For example, consider that international passenger travel to Africa and South Asia between 1996 and 2006 rose steadily each year, despite significant increases in oil prices during the same period.[[50]](#endnote-50) The more countries participate in the air passenger levy, the lesser the competitive impact on industry revenues, the lesser associated passenger price sensitivity, and the lesser risk of tourism revenue being diverted from participating tourism-dependent SIDS/LDCs to other non-participating countries. This modest latter risk could be offset by allowing SIDS and LDCs to retain revenue from flights departing from these States to be used for domestic climate action. Consequently, tourism-dependent LDC and SIDS economies are unlikely to be negatively impacted by the air passenger levy.

 In regards to the maritime shipping levy, economic modelling indicates that negative impacts would be no more than routinely incurred from oil and freight price variation and would exist only in the short-to-medium term. Disproportionate impacts would only occur in a small subset of States that were already experiencing high shipping costs and low transport supply security,[[51]](#endnote-51) with at least some of these same countries being SIDS or LDCs that stand to benefit from the shipping policy revenues. Furthermore, any economic concerns from this very small subset of SIDS/LDCs could be addressed if revenue derived from ships that bunker in these countries’ ports is specifically utilized for that country’s climate adaptation, loss, and damage needs.

 **Finally, the levies’ lack of substantial business impacts, combined with increasing industry support for decarbonization and net-zero carbon emissions across both the aviation and maritime shipping sectors, suggests that both policies may garner industry support, particularly if a portion of funds is dedicated to research and development.** As acknowledged earlier, neither industry currently has access to the technology necessary to break its dependence on fossil fuels, and the heavy transport sector’s decarbonization progress generally lags behind other sectors.[[52]](#endnote-52) At the same time, aviation and maritime shipping industry support and commitments towards carbon neutrality are increasing, with many airlines and the world’s largest shipping company having already committed to achieving carbon neutrality and meeting the industries’ Paris Agreement goals by 2050.[[53]](#endnote-53) Pressure on companies to reduce their contributions to climate change is especially acute across the aviation sector, which has weathered the economic decline caused by the COVID-19 pandemic in large part through accepting financial bail outs from governments who now hold increased political sway over the industries’ collective future.[[54]](#endnote-54)

*Efficiency*: Funds would be initially collected by companies, transferred to a government agency with pre-existing expertise in revenue collection, and then transferred to the international disbursement agency. The simplicity of the proposed revenue collection process as well as the selection of an experienced international agency (such as the Adaptation Fund, Global Climate Fund or Global Environment Facility) to disseminate grants would ensure that funds could be collected and disbursed in a quick and efficient manner, with the lowest administrative costs possible.

1. **New and Additional**

 Revenue generated by both levies would be genuinely additional, would not affect State budgets, and would help fill the enormous gap in climate change-vulnerable countries’ capacity to address losses, damages, and adaptation. The levies would be independent of national budgets, preventing them from being counted by countries as part of their climate finance commitments. The additionality of the revenue is also reinforced by the newness of both levies; no universal market-based measure has ever been imposed on either industry, and revenue from the aviation levy would come directly from the pockets of individual passengers, thus reinforcing its additionality.

# Existing Precedents

 Several existing air levies serve as useful precedents for the proposed air passenger levy. These include the French Solidarity Levy (FSL)—an air passenger levy on domestic and international flights established in 2006, whereby 11 states support African efforts to combat HIV/AIDs, tuberculosis, and malaria. FSL revenues are managed and disbursed by Unitaid, a global health initiative that combats pandemic diseases in developing countries.[[55]](#endnote-55) As well, several European countries have implemented domestic air passenger levies (see Table 3).

 The FSL imposes a progressive levy on domestic and international air passengers who are departing from France and French territories, with the levy increasing for longer flights and premium tickets. The levy has garnered praise for providing a predictable and substantial source of funding for developing countries’ public health needs, raising approximately 70 percent of Unitaid’s financial resources (180 million euros) in 2011[[56]](#endnote-56) and over 1 billion euros between 2006 and 2013. In addition, it has been championed for its lack of significant impact on developing country tourism or the airline industry.[[57]](#endnote-57) The levy was initially expected to generate 200 million euros in annual revenue, and originally involved passenger levies of between 1 - 40 euros for flights within the European region;[[58]](#endnote-58) in 2019, the levy was increased to a range of 3 - 63 euros.[[59]](#endnote-59) While the number of FSL-implementing countries is relatively small,[[60]](#endnote-60) the significant funds generated for humanitarian purposes demonstrate the feasibility and potential of a global air travel levy to mobilize substantial funds to address the climate crisis.

 As of June 2018, 17 EU member-states imposed levies on domestic aviation and six states impose similar levies on international passenger flights. A 2019 European Commission analysis found that these levies have nominal net impact on jobs or gross domestic product.[[61]](#endnote-61) While negative impacts on the airline industry were recorded, they typically ranged from 3 - 9 percent. Notably, the levy amount suggested for air travel in this brief is closest to the level of levies imposed in Germany and Sweden, where the analysis found that air passenger demand would increase 4 percent in each country if the existing air passenger levy was abolished.[[62]](#endnote-62) These modest impacts on the airline industry would be overcome by growth in passenger numbers in a short period of time.

 Critiques of air passenger levies involve matters that would not apply to the levies proposed in this brief. For example, Air France has criticized the FSL for its modest number of country participants, which the airline claims has resulted in a disproportionate negative impact on its ability to compete.[[63]](#endnote-63) Competitiveness concerns also reportedly contributed to the termination of flight levies imposed by Denmark and Netherlands, countries in a region where passengers can easily use nearby airports in other countries to procure lower priced tickets.[[64]](#endnote-64) In addition, the use of some (in the case of the FSL) or all (in the case of the German Aviation Tax) levy revenue for purposes that are not humanitarian has been criticized.[[65]](#endnote-65)

 As the aviation and shipping levies proposed in this brief would likely be supported by a large number of countries, would be applied without exceptions, and would be entirely devoted to the humanitarian cause of helping SIDS and LDCs address the worst impacts of climate change (with the potential use of some funds for the development of carbon-free technologies), the industry critiques applicable to existing levy mechanisms are unlikely to impact the proposed levies.

**Table 3: Sample of European countries imposing levies on both domestic and international air passenger tickets[[66]](#footnote-1)**

|  |  |  |
| --- | --- | --- |
| **Levy** | **Levy Range (in Euros) as of 2018** | **Purpose** |
| **Austria Air Transport Levy (Flugabgabe)** | 3.50 – 17.50  | Incentivize private transportation with low environmental impact, particularly in light of the exemption for aviation fuel under European directives and international agreements. |
| **German Air Transport Tax (Luftverkehrsteuer)** | 7.47 – 41.99  | Funds generally support the national budget. |
| **Dutch Aviation Tax**  | 7.85 per passenger, regardless of the passengers’ final destination[[67]](#endnote-66) | To achieve international climate goals by reducing global CO2 emissions[[68]](#endnote-67) |
| **Swedish Aviation Tax** | 6.26 – 41.70  | To reduce the number of flights per year to 450,000 – 600,000, thereby cutting emissions by about 2 percent and contributing to the Sustainable Development Goals. |
| **UK Air Passenger Duty** | 14.42 – 499.24 | To meet domestic public finance needs while achieving secondary environmental benefits. |

# Moving Forward

To ensure their intended impact, the proposed policies must be paired with effective implementation processes and strong political commitment across governments, industry, and associated institutions. This brief foresees at least three pathways for the proposed levies’ development and implementation:

1. The proposed levies could be implemented through a decision of the parties to the UNFCCC at the upcoming UN Climate Change Conference of the Parties (COP 26), which is scheduled to take place in Glasgow, United Kingdom.
2. The specialized UN agencies associated with both industries—the IMO and ICAO—could support, coordinate, and galvanize the adoption and implementation of these policies through their agencies’ respective processes, agreements, and industry meetings.
3. An independent coalition of supportive nations could take leadership by agreeing to implement the levies themselves (in a manner similar to the process by which the FSL was established by France), and then carrying out concerted diplomatic efforts to persuade other countries to impose the levies within their jurisdictions.

 This policy brief does not endorse a particular pathway. Each possesses distinct advantages and disadvantages, and a single pathway may not prove suitable for both policies. However, we note that the first approach offers the benefit of involving the largest number of States, the second approach could prove particularly effective in securing private sector support, and the third approach would likely allow the levies to be implemented in the shortest amount of time, which is a key consideration given the urgent need to increase climate finance for SIDS and LDCs.

# Conclusion

 From the perspective of many climate-vulnerable persons in SIDS and LDCs, very little has changed since the establishment of the UNFCCC three decades ago. The devastating consequences of climate disruption on human rights in SIDS and LDCs continue to increase in lockstep with rising emissions and rising temperatures. Yet the amount of climate finance available for these countries, whose citizens, rights and futures are at risk from climate disasters, is grossly inadequate for meeting adaptation needs and virtually non-existent for losses and damages. To reverse this unjust and worsening situation, it is imperative that as many States as possible commit to urgently implementing the proposed air travel and shipping levies. This action would be an overdue, fair, effective, and meaningful way to respond to the innovative ideas advanced by SIDS and LDCs over the past three decades. While some details will need to be ironed out, the timeline should be measured in months, not years.

 Market-based measures to reduce greenhouse gas (GHG) emissions from ships—including the shipping levy proposal advanced by the Marshall Islands and Solomon Islands and a more recent proposal for a shipping emissions levy by the International Chamber of Shipping (ICS) and the International Association of Dry Cargo Shipowners (INTERCARGO)—are scheduled to be discussed at the 77th session of the IMO Marine Environment Protection Committee (November 22 – 26, 2021).[[69]](#endnote-68) Discussions and negotiations over the proposal should be prioritized during this meeting so that a levy on CO2 emissions from maritime shipping that directly benefits LDCs and SIDS can be implemented before the IMO GHG Strategy is reviewed during the spring of 2023. Both the IMO and the ICAO should urge their respective member states to consider and adopt the proposed levies on an industry-wide basis, with revenues dedicated to SIDS and LDCs to address loss, damage and adaptation. However, the ultimate responsibility lies with governments, who must recognize that the time for talking about support for climate-vulnerable countries is long past. Now it is time for urgent action.

 Regardless of the process used to implement the proposed levies, the upcoming Conference of the Parties to the UN Framework Convention on Climate Change (COP 26) in November 2021 should be a turning point in global efforts to develop new and innovative sources of climate finance to address losses, damages, and adaptation, with a particular focus on the needs of SIDS and LDCs. As the primary architects of the climate crisis, wealthy States have legal and ethical obligations to boost support for SIDS and LDCs, which already bear the brunt of climate disruption and will continue to do so for the foreseeable future. After three decades of talk, action to implement the proposed levies on air travel and maritime shipping would be an overdue and inspiring step towards climate justice. As the increasing damage inflicted on the world’s most vulnerable citizens by severe storms, droughts, floods, wildfires and sea-level rise spirals upwards, further delay must be regarded as unacceptable.

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1. UN Special Rapporteur on Human Rights and Environment, *Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, July 15, 2020, UN Doc. A/74/161. [↑](#endnote-ref-1)
2. Intergovernmental Panel on Climate Change (IPCC) (2021), *“Climate Change 2021”,* in *The Physical Science Basis: Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.* Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.). Cambridge University Press. In Press. [↑](#endnote-ref-2)
3. UN Special Rapporteur on Human Rights and Environment, *Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, July 15, 2020, UN Doc. A/74/161. [↑](#endnote-ref-3)
4. United Nations Children’s Fund (UNICEF) (2021), *The Climate Crisis is a Child Rights Crisis: Introducing the Children’s Climate Risk Index*. New York, New York. UNICEF; and UNCTAD Website, “UN List of Least Developed Countries”, *available at*: <https://unctad.org/topic/least-developed-countries/list> (last visited October 23, 2021). [↑](#endnote-ref-4)
5. Graham Sem, with Rawleston Moore (researcher) (2009*), The Impact of Climate Change on The Development Prospects of the Least Developed Countries and Small Island Developing States*. Office of the Hight Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS). [↑](#endnote-ref-5)
6. Intergovernmental Panel on Climate Change (IPCC) (2019), “Summary for Policymakers”,in *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate.* H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.). In press;Oppenheimer, M., B.C. Glavovic, J. Hinkel, R. van de Wal, A.K. Magnan, A. Abd-Elgawad, R. Cai, M. Cifuentes-Jara, R.M.  DeConto, T. Ghosh, J. Hay, F. Isla, B. Marzeion, B. Meyssignac, and Z. Sebesvari (2019), “Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities”, in *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate.* H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.). In press; and Rita Issa, Independent, “Sea Level Rise Threatens Low Lying Islands Like the Maldives – It Isn’t Enough to Simply Adapt to the Change”, May 12, 2021. [↑](#endnote-ref-6)
7. John Podesta (2019), *The Climate Crisis, Migration and Refugees*. Global Economy and Development, Brookings Institute. [↑](#endnote-ref-7)
8. Sonja Ayeb-Karlsson, “When the Disaster Strikes: Gendered (Im)mobility in Bangladesh”, *Climate Risk Management,* Vol.29:100237 (June 2020). [↑](#endnote-ref-8)
9. United Nations Environment Programme (UNEP) (2021), *Adaptation Gap Report 2020: Executive Summary*. Nairobi, Kenya. UNEP. [↑](#endnote-ref-9)
10. The Independent Expert Group on Climate Finance (Amar Bhattachary, Richard Calland, Alina Averchenkova, Lorena Gonzalez, Leonardo Martinez-Diaz, and Jerome Van Rooij) (2020), *Delivering on the $100 Billion Climate Finance Commitment and Transforming Climate Finance*. United Nations; and Jess Shankleman, Bloomberg Green, “Rich Countries Missing the $100 Billion Climate Finance Goal”, November 6, 2020. [↑](#endnote-ref-10)
11. Organization for Economic Co-operation and Development (OECD) (2020), *Climate Finance Provided and Mobilised by Developed Countries in 2013-18*: *Climate Finance and the USD 100 Billion Goal.* Paris, France. OECD Publishing. [↑](#endnote-ref-11)
12. Organization for Economic Co-operation and Development (OECD) (2020), *Climate Finance Provided and Mobilised by Developed Countries in 2013-18*: *Climate Finance and the USD 100 Billion Goal.* Paris, France. OECD Publishing; and Tracy Carty, Jan Kowalzig and Bertram Zagema, Oxfam International (2020), *Climate Finance Shadow Report 2020: Assessing Progress Towards the $100 Billion Commitment*. Oxford, United Kingdom. Oxfam International. [↑](#endnote-ref-12)
13. Anil Markandya and Mikel González-Eguino, “Integrated Assessment for Identifying Climate Finance Needs for Loss and Damage from Climate Change”, *in* Mechler R., Bouwer, L., Schinko, T., Surminski, S. Linnerooth-Bayer, J. (eds), *Loss and Damage from Climate Change: Concepts, Methods, and Policy Options*,(Springer, Cham, 2019). [↑](#endnote-ref-13)
14. For example, a modest amount of multilateral climate finance directed to Bangladesh could arguably be classified as responding to loss and damage. Shaikh Eskander and Paul Steele, International Institute for Environment and Development (IIED) (2019), *Bearing the Climate Burden: How Households in Bangladesh are Spending Too Much.* London, United Kingdom. IIED. [↑](#endnote-ref-14)
15. Heinrich Böll Stiftung North America (2021), *Lessons from COVID-19 for Addressing Loss and Damage in Vulnerable Developing Countries*. Unpacking Finance for Loss and Damage Series, Paper One. [↑](#endnote-ref-15)
16. International Maritime Organization (IMO) (2021), *Fourth IMO Greenhouse Gas Study 2020: Executive Summary.* London, United Kingdom. IMO;and Brandon Graver, Dan Rutherford, and Sola Zheng, International Council on Clean Transport (ICCT) (2020), *CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019.* Washington, DC. ICCT. The commercial aviation industries’ CO2 contribution increased by 33 percent between 2013 and 2019. Passenger flights were responsible for approximately 85 percent of commercial aviation CO2 emissions in 2013, 2018, and 2019, and approximately 61 percent of passenger transport CO2 emissions in 2019 stemmed from international aviation. Brandon Graver, Dan Rutherford, and Sola Zheng, International Council on Clean Transport (ICCT) (2020), *CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019.* Washington, DC. ICCT. [↑](#endnote-ref-16)
17. Statista (2020), “Carbon Dioxide Emission in 2009 and 2019, by Select Country”, *available at:* <https://www.statista.com/statistics/270499/co2-emissions-in-selected-countries/>. [↑](#endnote-ref-17)
18. International Maritime Organization (IMO) (2021), *Fourth IMO Greenhouse Gas Study 2020: Full Report,* Table 1.London, United Kingdom. IMO; International Maritime Organization (IMO) (2015), *Third IMO Greenhouse Gas Study 2014: Executive Summary and Final Report,* Table 1.London, United Kingdom. IMO; Brandon Graver, Kevin Zhang, and Dan Rutherford, International Council on Clean Transport (ICCT) (2019), *CO2 Emissions from Commercial Aviation, 2018.* ICCT(finding that commercial aviation’s 2018 CO2 emissions totaled 918 million metric tons, or 2.4 percent of global CO2 emissions from fossil fuel use in 2018); International Energy Association (IEA) (2020), *Aviation*. Paris, France. IEA (“CO2 emissions from aviation have risen rapidly over the past two decades, reaching nearly 1 Gt in 2019, or about 2.8% of global CO2 emissions from fossil fuel combustion.”); and Brandon Graver, Dan Rutherford, and Sola Zheng, International Council on Clean Transport (ICCT) (2020), *CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019.* Washington, DC. ICCT (finding that commercial aviation was responsible for 920 million tons of CO2 emissions in 2019). [↑](#endnote-ref-18)
19. An exception is the European Union’s Emissions Trading System, which began to incorporate some air travel emissions in 2012. [↑](#endnote-ref-19)
20. Brandon Graver, Dan Rutherford, and Sola Zheng, International Council on Clean Transport (ICCT) (2020), *CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019.* Washington, DC. ICCT; and NewClimate Institute and Climate Analytics (2021), *Climate Action Tracker: Evaluation Methodology for National Net Zero Targets.* [↑](#endnote-ref-20)
21. Brandon Graver, Dan Rutherford, and Sola Zheng, International Council on Clean Transport (ICCT) (2020), *CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019.* Washington, DC. ICCT. [↑](#endnote-ref-21)
22. International Civil Aviation Organization (ICAO) (2019), “Aviation and Environmental Outlook”, in *2019 Environment Report: Aviation and Environment.* Montreal, Canada. ICAO. [↑](#endnote-ref-22)
23. International Maritime Organization (IMO) (2015), *Third IMO Greenhouse Gas Study 2014: Executive Summary.* London, United Kingdom. IMO. [↑](#endnote-ref-23)
24. Jeff Tollefson, Nature, “COVID Curbed Carbon Emissions in 2020 – But Not by Much”, January 15, 2021. [↑](#endnote-ref-24)
25. Jasmina Ovcina, Offshore Energy, “Marine Benchmark: 2020 Global Shipping CO2 Emissions Down 1%”, March 4, 2021. [↑](#endnote-ref-25)
26. Ciara Nugent, Time 2030, “Airlines’ Emissions Halved During the Pandemic. Can the Industry Preserve Some of Those Gains as Travel Rebounds?”, May 17, 2021; The Maritime Executive, “Shipping’s CO2 Emissions Fell in 2020 Due to Impact of Pandemic”, March 5, 2021; and International Energy Agency (IEA) (2020), *The Covid-19 Crisis and Clean Energy Progress.* Paris, France. IEA. [↑](#endnote-ref-26)
27. International Chamber of Shipping (2020), *Catalysing the Fourth Propulsion Revolution: The Urgent Need to Accelerate R&D to Deliver Zero-Carbon Shipping by 2050*. London, United Kingdom. Marisec Publications; and Samantha Gross (2020), *The Challenge of Decarbonizing Heavy Transport.* Brookings. [↑](#endnote-ref-27)
28. Republic of the Marshall Islands and the Solomon Islands, *Reduction of GHG Emissions from Ships: Proposal for IMO to Establish a Universal Mandatory Greenhouse Gas Levy,* March 10, 2021, MEPC76/7/xxl; and Anastassios Adamopoulos, Lloyd’s List, “Marshall Islands Demands $100 Tax on Shipping Emissions”, March 11, 2021. [↑](#endnote-ref-28)
29. Republic of the Maldives, *International Air Passenger Adaptation Levy: A Proposal by The Maldives on Behalf of the Group of Least Developed Countries (LDCs) within the Framework of the Bali Action Plan*, December 12, 2008. [↑](#endnote-ref-29)
30. UN Special Rapporteur on Human Rights and Environment, *Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, July 15, 2020, UN Doc. A/74/161. [↑](#endnote-ref-30)
31. Republic of the Marshall Islands and the Solomon Islands, *Reduction of GHG Emissions from Ships: Proposal for IMO to Establish a Universal Mandatory Greenhouse Gas Levy,* March 10, 2021, MEPC76/7/xxl. [↑](#endnote-ref-31)
32. International Civil Aviation Organization (ICAO) (2020), Annual Report 2019 – ICAO. [↑](#endnote-ref-32)
33. PowerPoint Presentation by the International Civil Aviation Organization (ICAO), “Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis” (Montreal, Canada, October 19, 2021), *available at:* <https://www.icao.int/sustainability/Documents/Covid-19/ICAO_coronavirus_Econ_Impact.pdf>; and Jeff Tollefson, Nature, “COVID Curbed Carbon Emissions in 2020 – But Not by Much”, January 15, 2021. [↑](#endnote-ref-33)
34. International Maritime Organization (IMO) (2021), *Fourth IMO Greenhouse Gas Study 2020: Executive Summary.* London, United Kingdom.IMO. [↑](#endnote-ref-34)
35. The World Bank Website, “GDP (Current US$)”, *available at*: <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD> (last visited October 24, 2021) (reporting a 2019 global gross domestic product of US$ 87.608 trillion). [↑](#endnote-ref-35)
36. UN Special Rapporteur on Human Rights and Environment, *Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, July 15, 2020, UN Doc. A/74/161. [↑](#endnote-ref-36)
37. Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED. [↑](#endnote-ref-37)
38. United Nations Framework Convention on Climate Change (May 9, 1992), Arts. 3 and 4. [↑](#endnote-ref-38)
39. Brandon Graver, Dan Rutherford, and Sola Zheng, International Council on Clean Transport (ICCT) (2020), *CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019.* Washington, DC. ICCT. [↑](#endnote-ref-39)
40. The Guardian, “1% of People Cause Half of Global Aviation Emissions – Study”, November 17, 2020. [↑](#endnote-ref-40)
41. Hannah Ritchtie, Our World in Data, “Short-haul vs. Long-haul; Rich vs. Poor countries: Where do Global CO2 Emissions from Aviation Come From?” October 23, 2020. [↑](#endnote-ref-41)
42. Brandon Graver, Dan Rutherford, and Sola Zheng, International Council on Clean Transport (ICCT) (2020), *CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019.* Washington, DC. ICCT. [↑](#endnote-ref-42)
43. Brandon Graver, Dan Rutherford, and Sola Zheng, International Council on Clean Transport (ICCT) (2020), *CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019.* Washington, DC. ICCT. [↑](#endnote-ref-43)
44. Scott Mayerowitz, The Christian Science Monitor, “Airline Travel: Life in First Class is Getting Cushier (But Not Back in Steerage),” November 19, 2011. [↑](#endnote-ref-44)
45. Paris Agreement to the United Nations Framework Convention on Climate Change (December 12, 2015), Arts. 7, 8 9 and 11. [↑](#endnote-ref-45)
46. Paris Agreement to the United Nations Framework Convention on Climate Change, (December 12, 2015), Art. 9(1 and 4). [↑](#endnote-ref-46)
47. Laurel Pentelow and Daniel Scott, “The Implications of Climate Change Mitigation Policy and Oil Price Volatility for Tourism Arrivals to the Caribbean”. *Tourism and Hospitality Planning & Development*, Vol. 7, Issue 3 (September 17, 2010); Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED; Cameron Hepburn and Benito Müller, “International Air Travel and Greenhouse Gas Emissions: A Proposal for an Adaptation Levy”. *The World Economy*, Vol. 33, Issue 5 (June 1, 2010); Muyeye Chambwera with Benito Müller, International Institute for Environment and Development (IIED) (2008), *Fairer* *Flying: An International Air Travel Levy for Adaptation*. London, United Kingdom. IIED; Republic of the Maldives, *International Air Passenger Adaptation Levy: A Proposal by The Maldives on Behalf of the Group of Least Developed Countries (LDCs) within the Framework of the Bali Action Plan*, December 12, 2008; and Republic of the Marshall Islands and the Solomon Islands, *Reduction of GHG Emissions from Ships: Proposal for IMO to Establish a Universal Mandatory Greenhouse Gas Levy,* March 10, 2021, MEPC76/7/xxl. [↑](#endnote-ref-47)
48. Republic of the Maldives, *International Air Passenger Adaptation Levy: A Proposal by The Maldives on Behalf of the Group of Least Developed Countries (LDCs) within the Framework of the Bali Action Plan*, December 12, 2008; Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED; CE Delft (2019), *Taxes in the Field of Aviation and Their Impact: Final Report.* Brussels, Belgium. European Commission; and Brian Pearce, “What is Driving Travel Demand? Managing Travel’s Climate Impacts”, in Jennifer Blanke and Thea Chiesa (eds.), *The Travel & Tourism Competitiveness Report 2008: Balancing Economic Development and Environmental Sustainability*, (Geneva, Switzerland, World Economic Forum, 2008). [↑](#endnote-ref-48)
49. Brian Pearce, “What is Driving Travel Demand? Managing Travel’s Climate Impacts”, in Jennifer Blanke and Thea Chiesa (eds.), *The Travel & Tourism Competitiveness Report 2008: Balancing Economic Development and Environmental Sustainability*, (Geneva, Switzerland, World Economic Forum, 2008). [↑](#endnote-ref-49)
50. Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED; and Muyeye Chambwera with Benito Müller, International Institute for Environment and Development (IIED) (2008), *Fairer* *Flying: An International Air Travel Levy for Adaptation*. London, United Kingdom. IIED.

 [↑](#endnote-ref-50)
51. Republic of the Marshall Islands and the Solomon Islands, *Reduction of GHG Emissions from Ships: Proposal for IMO to Establish a Universal Mandatory Greenhouse Gas Levy,* March 10, 2021, MEPC76/7/xxl. [↑](#endnote-ref-51)
52. International Chamber of Shipping (2020), *Catalysing the Fourth Propulsion Revolution: The Urgent Need to Accelerate R&D to Deliver Zero-Carbon Shipping by 2050*. London, United Kingdom. Marisec Publications. [↑](#endnote-ref-52)
53. *See, for example*, Edie Newsroom, “13 Major Airlines Commit to Joint 2050 Net-Zero Vision”, September 14, 2020; Aerospace Technology, “Airlines for America Pledge to Achieve Net-Zero Carbon Emissions by 2050”, March 31, 2021; and Stine Jacobsen, Thompson Reuters, “World’s Largest Container Shipper Maersk Aims to be CO2 Neutral by 2050”, December 5, 2018. [↑](#endnote-ref-53)
54. Ciara Nugent, Time 2030, “Airlines’ Emissions Halved During the Pandemic. Can the Industry Preserve Some of Those Gains as Travel Rebounds?”, May 17, 2021. [↑](#endnote-ref-54)
55. French Ministry of Ecological Transition (Ministère de la Transition Écologique), “Taxes Aéronautiques”, May 25, 2021; Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED; and FCC Aviation Website, “French Solidarity Tax”, *available at:* <https://www.fccaviation.com/regulation/france/solidarity-tax> (last visited October 24, 2021). [↑](#endnote-ref-55)
56. Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED. [↑](#endnote-ref-56)
57. Unitaid, “French Levy on Airline Tickets Raises More Than One Billion Euros for World’s Poor Since 2006”, January 25, 2013; and Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED. [↑](#endnote-ref-57)
58. Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED. [↑](#endnote-ref-58)
59. French Ministry of Ecological Transition (Ministère de la Transition Écologique), “Taxes Aéronautiques”, May 25, 2021. [↑](#endnote-ref-59)
60. Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED. [↑](#endnote-ref-60)
61. CE Delft (2019), *Taxes in the Field of Aviation and Their Impact: Final Report.* Brussels, Belgium. European Commission. [↑](#endnote-ref-61)
62. CE Delft (2019), *Taxes in the Field of Aviation and Their Impact: Final Report.* Brussels, Belgium. European Commission. [↑](#endnote-ref-62)
63. Cécile Barbière, Euractiv, “French Auditors Launch Assault on “Solidarity Tax” for World Aid” (translated by Samuel White), October 18, 2016. [↑](#endnote-ref-63)
64. Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED. [↑](#endnote-ref-64)
65. Muyeye Chambwera, Evans Davie Njewa, and Denise Loga, International Institute for Environment and Development (IIED) (2012), *The International Air Passenger Adaptation Levy: Opportunity or Risk for Least Developed Countries?.* IIED. *See also,* Cécile Barbière, Euractiv, “French Auditors Launch Assault on “Solidarity Tax” for World Aid” (translated by Samuel White), October 18, 2016; and Sébastien Meurs, Capital, “La Taxe Chirac Reliftée par Les Députés”, May 23, 2019. [↑](#endnote-ref-65)
66. Unless otherwise noted, information in this table stems from the following report to the European Commission: CE Delft (2019), *Taxes in the Field of Aviation and Their Impact: Final Report.* Brussels, Belgium. European Commission, *available at:* <https://www.politico.eu/wp-content/uploads/2019/06/Aviation-taxes.pdf>. [↑](#footnote-ref-1)
67. FCC Aviation Website, “Dutch Aviation Tax”, *available at:* <https://www.fccaviation.com/regulation/netherlands/dutch-aviation-tax> (last visited October 24, 2021). [↑](#endnote-ref-66)
68. DutchNews, “Dutch to Press Ahead with €7 Tax Levy on All Airline Tickets”, March 12, 2020; and Bart Noëth, Aviation24, “From 1 January 2021, The Netherlands Will Levy €7.45 Tax Per Passenger Ticket”, November 14, 2020. [↑](#endnote-ref-67)
69. International Chamber of Shipping (ICS) and International Association of Dry Cargo Shipowners (INTERCARGO), *Consideration of Mid-term GHG Reduction Measures in the Context of Phase I of the Workplan for the Development of Mid- and Long-term Measures: A Levy-Based MBB, per Tonne of CO2 Emissions, to Expedite the Uptake and Deployment of Zero-Carbon Fuels*, September 2021, ISWG-GHG 10/5/X; International Chamber of Shipping (ICS), *Reduction of GHG Emissions from Ships: Comments on Proposal for a Cap-and Trade System, as Opposed to a Carbon Levy*, October 1, 2021, MEPC 77/7/23; and Chair of the Marine Environment Protection Committee (MEPC), *Adoption of Agenda*, October 12, 2021, MEPC 77/1/1. [↑](#endnote-ref-68)