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# DANISH CLIMATE FINANCE CATALOGUE

11 mechanisms through which Denmark can increase climate finance to poor developing countries – in response to Denmark’s 5 billion DKK annual fair share of “new and additional” climate finance

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# SUMMARY OF THE REPORT'S SUGGESTIONS

This catalogue appoints 11 mechanisms through which Denmark can raise additional public revenue to meet and go beyond its international responsibility to deliver ‘new and additional’ climate finance. It is suggested that these public funds are predominantly earmarked for *climate adaptation to least developed countries (LDCs)*; as such efforts are severely underfunded globally.

Mechanism	Revenue potential (billion DKK per year)
1 Air transport tax	2 – 5
2 A wealth tax on the wealthiest 1% of Danes’ fortunes	17.6 – 43.2
3 Financial transaction tax (FTT)	7 – 12
4 Increased inheritance tax	5
5 Digital Service Tax (DST)	0.1 – 0.5
6 Reserve Danish ETS revenue for climate finance	4 – 7
7 Increased road toll for heavy vehicles	0.5
8 Tax income from shares at same rate as personal income	8
<b>Subtotal</b>	<b>44.2 – 81.2</b>

The first eight mechanisms presented in this report could generate at least 44 billion DKK per year in revenue. However, it is suggested finance is raised to cover Denmark’s fair share amount of 5 billion DKK annually, a figure calculated by CARE (2021) to be the Danish portion of the USD 100 billion commitment from COP15 in Copenhagen (2009) and confirmed in the Paris Agreement (2015), based on historic responsibility for human-made emissions.

Denmark has the capacity to provide 5 billion DKK annually as “*new and additional*” climate finance through these mechanisms, replacing the current situation whereby most of the climate finance to developing countries comes from the Danida budget, which was originally intended for development programmes within education, health, good governance, humanitarian aid, etc...

As part of the political process of choosing a financing model for increased Denmark’s climate finance, it is recommended that the Danish Ministry of Finance and/or other relevant ministries develop more precise revenue estimates of the eight financing mechanisms.

In addition to the 8 mechanisms, the report is also presenting two mechanisms aim to mobilise climate finance through Green Sovereign Bonds and Standardised Green Climate Bonds (SGCBs) with low interest rates.

Finally, a proportion of the revenues (grants) from mechanism 1 to 8 outlined in this report could provide funding available through the Danida program ‘*High Risk – High Impact Investment in Africa*’, aimed at de-risking climate projects in LDCs (mechanism 11).

## Mechanism 1 – Tax on air transport

*Mechanism 1* recommends that the Danish Government advocate for international rules to allow aviation taxes based on fuel consumption, with the goal of introducing an aviation GHG-tax of 1,500 DKK per tonne GHG on flights leaving from Danish airports. Until such a tax is possible, *Mechanism 1* recommends a direct fee on flight tickets, i.e. 220 DKK for flights within Europe, and 790 DKK for intercontinental flights.

The estimated revenue would be 2 to 5 billion DKK per year.

Notably, most Danes support the idea of implementing a tax on flight tickets.

An aviation tax, as described above, will be progressive as the use of air transport is disproportionately utilised by the persons and businesses in the highest income brackets. *Mechanism 1* recommends that the Danish Government advocate for international rules to allow aviation taxes based on fuel consumption, with the goal of introducing an aviation GHG-tax of 1,500 DKK per tonne GHG on flights leaving from Danish airports. Until such a tax is possible, *Mechanism 1* recommends a direct fee on flight tickets, i.e. 220 DKK for flights within Europe, and 790

DKK for intercontinental flights.

The estimated revenue would be 2 to 5 billion DKK per year.

Notably, most Danes support the idea of implementing a tax on flight tickets.

An aviation tax, as described above, will be progressive as the use of air transport is disproportionately utilised by the persons and businesses in the highest income brackets. Moreover, there are several options to make the policy even more pro-poor and pro-climate:

- *Keep the first trip tax-free.* Every Danish person can make one tax-free return trip per year.
- *A frequent-flyer tax.* Make the tax increase with the number of flights a person takes within a year.
- *Differentiate fees* on economy and business class.
- *Differentiate fees* based on short- and long-haul flights, as short-hauls have disproportionately high per-kilometer emissions and alternative modes of transportation are readily available.

<b>Pros</b>	<ul style="list-style-type: none"> <li>• Implies the polluter-pays principle</li> <li>• Can easily be implemented and managed</li> <li>• Good examples from neighbouring countries</li> <li>• Reduces economic inequality in Denmark because it effectively targets high-income households and businesses</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>• Potentially significant administrative costs, depending on taxation model utilised</li> <li>• The revenue is influenced by external events such as pandemics, financial crises, terrorist attacks etc. Therefore, the long-term revenue is difficult to predict.</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>• 2 – 5 billion DKK annually</li> </ul>

## Mechanism 2 – A wealth tax on the wealthiest 1% of Danes’ fortunes

*Mechanism 2* recommends a tax that targets the currently untaxed share of personal fortunes exceeding a 10.6 million DKK threshold.

In 2019, a person from the wealthiest 1% in Denmark made emissions comparable to 26 people in the poorest 10%. This strong inequality in emissions budget is strong justification of increasing taxes for the richest 1% of Danes.

The threshold is set at 10.6 million DKK because this, in 2021, is the amount of wealth needed to join the wealthiest 1% of Danes. This means that 99% of Danish people will *not* be subjected to this tax at all. The suggested tax rate is 2.7% on untaxed wealth exceeding 10.6 million DKK. As real estate wealth is already taxed, *Mechanism 2* excludes real estate wealth.

According to the Danish Ministry of Finance, applying a tax rate of 2.7% implies that these fortunes will neither grow nor shrink on average. From an inequality perspective, it would be advantageous to have a higher wealth tax rate than suggested. However, the suggested rate of 2.7% is selected to inspire and inform a political debate and solutions, and demonstrate a reference line to best understand the impact such a tax would have on a rich person’s cumulative wealth.

Furthermore, regardless of any other policy decisions, *Mechanism 2* recommends that the Danish Government ensure that Danish ministries and the state statistical bureaux update their methodology to include the value of unquoted shares in their statistics related to personal wealth.

<b>Pros</b>	<ul style="list-style-type: none"> <li>• Reduces inequality in Denmark and globally</li> <li>• Implies the polluter-pays principle as it taxes wealthy people who are emitting the most CO<sub>2</sub></li> <li>• The wealth tax is progressive and implies no cost to lower- and middle-income households</li> <li>• Raises substantial and reliable revenue</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>• As it is a new tax, it requires time and resources to build the Danish tax authorities’ required methodology, capacity, and IT infrastructure.</li> <li>• Additional regulation may be needed to handle the incentive to circumvent the wealth tax by shifting wealth into real estate not subjected to the wealth tax.</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>• 17.6 - 43.2 bn DKK</li> </ul>

## Mechanism 3 - Financial transaction tax (FTT)

*Mechanism 3* recommends that the Danish Government introduce a financial transaction tax (FTT) of a 0.1 percentage tax on the transfer of shares and bonds and a 0.01 percentage tax on derivative contracts in line with the FTT suggested by the EU Commission.

As FTTs have been successful in many countries, a Danish FTT can draw on experiences from other EU member states.

Moreover, Denmark should join the group of EU countries working on developing a common framework for FTT.

The FTT is a progressive tax. By taxing the trade with financial instruments, the FTT indirectly taxes the owners of financial assets that wealthy families disproportionately own. Therefore, it will positively limit the rise in inequality and imply no cost to lower-income households.

<b>Pros</b>	<ul style="list-style-type: none"> <li>• Reduces inequality in Denmark and globally</li> <li>• Can easily be implemented and managed</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>• The tax is not expected to reduce GHG emissions</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>• 7 - 12 billion DKK per year</li> </ul>

## Mechanism 4 – Increased inheritance tax

*Mechanism 4* suggests a doubling of the current inheritance tax on wealth transferred between generations, increasing the revenue from 5 billion DKK to 10 billion DKK. Denmark would still have a lower inheritance tax than France, Japan, and Belgium if implemented (OECD, 2021b). The tax will increase with the size of the inheritance to ensure further progressivity.

Bringing the tax rate for inheritance closer to the income tax rate aligns with the *horizontal equity principle*, stating that people receiving the same amount of income should be taxed similarly, i.e. the tax burden on income

from inheritance should be the same as the tax burden on income from labour. As inheritances are predominantly received by households who already enjoy high incomes, increasing the inheritance tax will also be aligned to the *vertical equity principle* stating that the broadest shoulders carry the largest burdens.

In terms of economic efficiency, there are strong arguments in favour of inheritance taxation as it increases labour supply, reduces inequality, and can easily be implemented with low administrative costs.

<b>Pros</b>	<ul style="list-style-type: none"> <li>• Reduces inequality in Denmark and globally</li> <li>• It is progressively levied on persons receiving the largest inheritances. Most people will never be subjected to the tax</li> <li>• It is a stable and reliable revenue source</li> <li>• Taxes high-income persons who are emitting the most CO<sub>2</sub> and thus implies the polluter-pays principle</li> <li>• Revenue can be obtained easily with few transactions costs</li> <li>• It has no negative impacts on economic growth and even positively impacts labour supply</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>• The tax is not expected to reduce GHG emissions</li> <li>• Small family-owned businesses may be vulnerable to liquidity problems when passing ownership from one generation to another</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>• 5 billion DKK per year</li> </ul>

## Mechanism 5 – Digital Service Tax (DST)

*Mechanism 5* recommends that the Danish government advocate for international rules (OECD BEPS 2.0), which allow Denmark (and other countries) to introduce a digital service tax (DST) of 3%, targeting big tech companies' sales to Danish companies. The DST will have several benefits, including:

- Defend the tax base of Denmark
- Help level the playing field between digital and physical companies
- Reduce economic inequality
- Support the survival of a diversified media landscape in Denmark

The digital service tax (DST) will defend the Danish tax base against the huge mismatches between actual and reported profits of companies like Google and Facebook, who enjoy lucrative tax deals from their tax havens (PwC, 2017). In 2018 the EU Commission suggested an EU-wide 3% tax on the total turnover of big tech companies. However, as decisions on taxation require unanimity in the EU, an EU-wide DST is unlikely to be implemented any time soon. But unilaterally, many countries are interested in the idea. About half of all European OECD countries have either announced, proposed, or implemented a DST.

The newly signed OECD/G20 Base Erosion and Profit Shifting Project (BEPS2) prohibits signatory countries

from having DSTs (OECD, 2021d). Therefore, the EU and its member states are recommended to demand the OECD amend the BEPS2 rules to allow countries to have unilateral DSTs. If not successful, EU and Denmark should overrule this limitation on the transposition of

the BEPS2-rules. It seems that the Danish government is ready to challenge this aspect of the BEPS2 as the Danish government in February 2022, in conflicts with the BEPS2, proposed a streaming levy on tech giants such as Netflix (Kulturministeriet, 2022).

<b>Pros</b>	<ul style="list-style-type: none"> <li>Follows the polluter-pays principle as IT technologies are responsible for a growing percentage of global GHG-emissions</li> <li>Helps to level the playing field between digital and physical companies</li> <li>Reduces inequality by taxing the owners/shareholders of tech giants and giving the revenue to poor developing countries</li> <li>Defends the tax base of Denmark</li> <li>Supports the survival of a diversified media landscape in Denmark.</li> <li>A reliable and growing revenue source</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>The Danish tax authorities will have to build the methodology and infrastructure needed to levy the tax</li> <li>It conflicts with the newly signed OECD/G20 Base Erosion and Profit Shifting Project (BEPS2) (OECD, 2021d) which prohibits countries from having DSTs.</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>0.1 – 0.5 billion DKK annually</li> </ul>

## Mechanism 6 – Reserve Danish ETS revenue for climate finance

*Mechanism 6* recommends that the income generated from Danish companies’ purchase of CO<sub>2</sub> emission quotas under the EU’s *Emissions Trading System* (ETS) is reserved for climate finance.

With the current ETS price of 55 Euros per tonne, a revenue of 5.2 billion DKK will be generated. However, predicting the future revenue for *Mechanism 6* is difficult due to several uncertainties. One of these is the EU’s *Fit for 55* policy package which is still being developed.

<b>Pros</b>	<ul style="list-style-type: none"> <li>Follows the polluter-pays principle</li> <li>As large companies are the source of the revenue, it is expected to be progressive and not put disproportional burdens on lower-income households</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>Revenue size can only be predicted a few years ahead, depending on many international factors</li> <li>It is not expected to reduce GHG emissions nor change behaviour as it only earmarks the revenues from an existing policy – it is not implementing any new policy</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>4 – 7 billion DKK annually</li> </ul>

## Mechanism 7 – Increased Road toll for heavy vehicles

*Mechanism 7* suggests that the currently proposed increase in road toll for heavy vehicles is raised to at least double the currently suggested levels (500 million DKK).

The additional revenue received by the Danish state should be reserved for climate finance in developing countries.

<b>Pros</b>	<ul style="list-style-type: none"> <li>Follows the polluter-pays principle</li> <li>Increased incentive for a green transition of heavy vehicles</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>Increased cost of heavy transportation in Denmark</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>0.5 billion DKK annually</li> </ul>

## Mechanism 8 – Taxing income from shares at the same rate as personal income

*Mechanism 8* encourages the Danish government to go beyond the currently suggested 3% increase in the tax on income from shares, and instead fully harmonize the

taxation of income from shares and labour. As it is the predominantly the wealthiest Danes who own shares, it is a progressive way to raise revenue.

<b>Pros</b>	<ul style="list-style-type: none"> <li>Reduces inequality in Denmark and globally</li> <li>It is progressively levied on high-income households and businesses.</li> <li>Follows the polluter-pays principle as high-income households have higher CO<sub>2</sub>-emissions</li> <li>The tax is easy to collect as it is simply increasing an already existing tax</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>It is not expected to reduce GHG-emissions</li> <li>The revenue will depend on international business cycles and other external factors affecting the businesses and the stock market.</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>8 billion DKK per year</li> </ul>

Where the first 8 mechanisms are based on raising additional public revenue through taxations, the next two mechanisms aim to mobilise climate finance through Green Sovereign Bonds and Standardised Green Climate Bonds (SGCBs) with low interest rates.



## Mechanism 9 – Green Sovereign Bonds

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*Mechanism 9* recommends that the Danish government either use a large share of the proceeds from the current Danish green sovereign bonds to finance de-risking of climate investments in developing countries or create a new green sovereign bond program with that specific focus. This could benefit from the low interest rates of bonds in Denmark.

Either solution will strengthen the global social balance and comply with the obligation to turn global financial flows in a greener direction while adhering to the EU Green Bond Standard.

## Mechanism 10 - Standardised Green Climate Bonds (SGCBs)

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*Mechanism 10* recommends that the Danish Government initiates a change in the mandate of Denmark's Nationalbank (central bank), as the current mandate does not adequately consider the economic systemic risk presented by climate change.

Nationalbanken should hereafter collaborate with other central banks and development finance institutions (DFIs) to create a model for SGCBs which is attractive not only to the Danish Nationalbanken but also to other central

banks. This could benefit from the low interest rates of bonds in Denmark and other European countries.

Nationalbanken should hereafter purchase SGCBs and thereby set a powerful international example.

Nationalbanken can reliably provide revenue of 5-15 billion DKK in SGCBs annually, which is not dependent on approval by the Danish Ministry of Finance and implies no cost to the Danish state or taxpayers.

## Mechanism 11 – High Risk – High Impact Investment in Africa (IFU)

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The Danish Investment Fund for Developing Countries (IFU) is making investments in developing countries on commercial terms. This report suggests that the IFU increase its focus on low-income countries, and thus accept a higher risk and reduced expected return on investments compared to current practices. This would be a way to go beyond the fact that current climate investments from IFU and Danish pension's funds primarily target wind energy investments in middle-income countries.

Inspiration and valuable learning for reaching LDC countries with higher risks can be taken from IFU's project *High Risk – High Impact Investment in Africa* (Ministry of Foreign Affairs, 2021). In this program, 300 million DKK from Danida has been provided for blended finance for projects in lower-income countries (LDCs) in Africa where significant development outcomes are possible.

The *High Risk – High Impact* facility is mainly applied for investments that are outside IFU's normal comfort

zone with regards to risk and return. Not only will the risk in terms of country risk (e.g. LDC countries), commercial risk etc. be relatively high, but the risk-adjusted return would also be down to as little as 3-4% - lower than what is normally accepted as a commercial return (approx. 10-12 %) from investing in a given project.

A proportion of the revenues (grants) from mechanism 1 to 8 outlined in this report could provide funding available through '*High Risk – High Impact Investment in Africa*', aimed at de-risking climate projects in the LDCs. Most of the investment capital is expected to take the form of equity as it is the most risk-oriented product.

It would be much better to take the grant elements of blended finance from mechanism 1 to 8 as real "*new and additional finance*" than the current practice of taking money from Danida that instead could be spent on development projects within health, education, democracy, good governance, civil society etc.

# ABBREVIATIONS

<b>BEPS</b>	OECD's programme on Base Erosion and Profit Shifting
<b>BECCS</b>	Bioenergy with Carbon Capture and Storage
<b>BoE</b>	Bank of England
<b>Bn</b>	Billion
<b>CCS</b>	Carbon Capture and Storage
<b>DFIs</b>	Development Finance Institutions
<b>DGF</b>	Den Grønne Fremtidsfond
<b>DKK</b>	Danish Kroner (the national currency)
<b>DST</b>	Digital Service Tax
<b>CBDR</b>	but Differentiated Responsibilities
<b>ETS</b>	EU's Emissions Trading System
<b>FTT</b>	Financial Transaction Tax
<b>GDP</b>	Gross Domestic Product
<b>GHG</b>	Greenhouse gases
<b>GNI</b>	Gross National Income
<b>GWP</b>	Global Warming Potential
<b>IFU</b>	Investeringsfonden for udviklingslande <i>in English: Investment Fund for Developing Countries</i>
<b>LDCs</b>	Least Developed Countries
<b>ODA</b>	Official Development Assistance
<b>OECD</b>	Organisation for Economic Cooperation and Development
<b>RE</b>	Renewable Energy
<b>SDGs</b>	Sustainable Development Goals
<b>GCBs</b>	Standardised Green Climate Bonds
<b>UN</b>	United Nations
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>UNEP</b>	United Nations Environment Programme

Exchange rate between Danish Kroner (DKK) to EURO and USD

As of June 2022, the exchange rate stood at *1 Euro = 7.44 DKK*

As of June 2022, the exchange rate stood at *1 US Dollar = 7.0 DKK*

# 1. INTRODUCTION

To encourage the Danish government to increase climate finance to poor developing countries in relation to the Paris agreement, this report presents a catalogue with a series of revenue-raising mechanisms. It invites stakeholders and political parties to public debate to discuss the proposed mechanisms, particularly for a substantial increase in Danish support for adaptation in the least development countries (LDC), these being most in need.

Climate finance, as presented in the Paris agreement from 2015, is primarily divided into two focus areas:

- Financial assistance to developing countries, commonly referred to as the USD 100 billion commitment (Article 9.1). Towards this goal, Denmark's fair share amounts to 5 billion DKK annually<sup>1</sup> (CARE, 2021).
- Making global financial flows consistent with the Paris Agreement (Article 2.1c).

This report presents a catalogue with 8 mechanisms for revenue that Denmark can provide in increased climate finance to the least developing countries (LDCs) and vulnerable states. Such an increase could be counted as *'New and additional'* resources to developing countries, which is *not* taken from Denmark's provision of at least 0.7% of GNI to Official Development Assistance (ODA).

In addition to the 8 mechanisms, the report is also presenting two mechanisms aim to mobilise climate finance through Green Sovereign Bonds and Standardised Green Climate Bonds (SGCBs) with low interest rates.

Finally, a proportion of the revenues (grants) from mechanism 1 to 8 outlined in this report could provide funding available through *'High Risk – High Impact Investment in Africa'*, aimed at de-risking climate projects in the LDCs (mechanism 11).

The report starts with a Summary of suggestions. In Chapter 2 the context related to climate finance is briefly presented. Chapter 3 contains eight revenue-raising mechanisms for Denmark to increase its climate finance. Finally, Chapter 4 presents public finance mechanisms to shape marketable green investments in development countries.

This study has been undertaken **probono** by INKA Consult, and been offered to be utilized by two Danish NGO networks, Global Fokus and Danish 92-Group. It has been written in English in the hope that it can inspire NGO networks in other European countries.

The study has been carried out by Martin Brehm Christensen, Lasse Pinderup and Hans Peter Dejgaard.

## 2. CONTEXT RELATED TO CLIMATE FINANCE

Climate change impacts are already affecting livelihoods globally. Substantial resources are required to adapt to these climate impacts. Not only are there environmental, human, ethical, and social reasons for providing climate finance there is also an economic rationale (Nature, 2018): climate action is cheaper than climate inaction. Wealthy countries must support developing countries in the transition to a sustainable economy and provide the means necessary for them to adapt to the impacts of climate change.

It is well documented and acknowledged that people in wealthy industrialised countries have disproportionately contributed to climate change. Research by Oxfam

shows that from 1990 to 2015, the richest 10% of the world were responsible for 52% of carbon emissions whereas the poorest half of the world's population emitted only 7%. Tragically, it is also well documented that poor countries are hit the hardest by climate change (McKinsey, 2020). According to IPCC: *"Africa has contributed among the least to greenhouse gas emissions, yet key development sectors have already experienced widespread losses and damages attributable to anthropogenic climate change, including biodiversity loss, water shortages, reduced food production, loss of lives and reduced economic growth"* (Working Group II contribution to the IPCC Sixth Assessment Report).

### 2.1. Climate finance

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From 2020 till 2025, the common goal in the Paris agreement for all Annex II Parties to the United Nations Framework Convention on Climate Change (UNFCCC) is to provide 100 billion USD annually. Unfortunately rich countries are failing to meet the USD 100 billion commitment made at COP15 in Copenhagen in 2009 (and confirmed in the Paris Agreement), which has *not* been met so far. According to the OECD,<sup>3</sup> in 2020 only USD 83.3 billion was provided and mobilised jointly by developed countries for climate action in developing countries (this was 78.3 billion USD in 2018).

Mitigation finance remained the majority, but adaptation finance continued to grow, in both relative and absolute terms. Loans continued to be the main instrument used to provide public climate finance. Climate finance mainly targeted Asia and middle-income countries.

Towards the global USD 100 billion commitment, Denmark's fair share amounts to 5 billion DKK annually<sup>4</sup> (CARE, 2021).

### 2.2. Adaptation projects

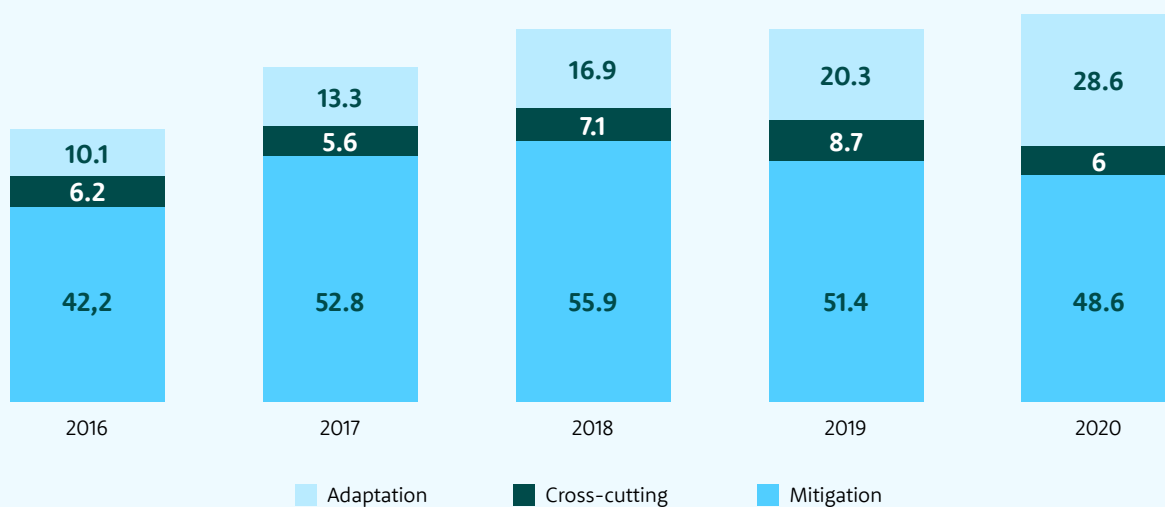
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Most current climate finance goes to mitigation projects (58%); only 34% went to *adaptation in 2020*<sup>2</sup>. There is a long way to go to realize the Paris Agreement commitment to achieve 'a balance' between adaptation and mitigation' finance. Mitigation finance focused

on activities in the energy and transport sectors, while adaptation finance focused on water, agriculture, forestry and fishing. See below figure 2 from the 2022 OECD report: *"Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020"*.

**Figure 2.** Climate theme and sectoral split of climate finance provided and mobilised in 2016–2020

### Thematic split of finance provided and mobilised (USD billion)



Climate finance provided by Denmark to target mitigation has made up 52% of its climate aid commitments from 2011–2020 whilst 48% targeted adaptation. In 2020, 44% of Danish aid targeted mitigation and 56% adaptation.

forward will be provided for climate adaptation. Countries that, like Denmark, deliver their climate finance as grants have a distinct opportunity to correct the global imbalance between mitigation and adaptation funding.

It is positive that the Danish government has stated that 60% of Danish grant-based climate finance moving

## 2.3. Loans versus grants

Public climate finance in 2020 mainly took the form of loans (71% or USD 48.6 billion, including both concessional and non-concessional loans) and, to a lesser extent, grants (26% or USD 17.9 billion) according to recent OECD figures.

Oxfam’s climate finance shadow report 2020 was particularly critical of the fact that an estimated 40% of public climate finance overall is non-concessional with higher interest rates. Most loans continue to be reported at their full face value, rather than as the amount of money given to a developing country once repayments, interest and other factors are accounted for (the grant equivalent).

The world’s poorest countries and communities should not be forced to take out loans to protect themselves from the excess carbon emissions of rich countries. Finance that

should be helping countries respond to climate change should not be harming them by contributing to rising – and in many countries, unsustainable – debt levels.

Not only are rich countries failing to meet the USD 100 billion commitment of the UNFCCC (OECD, 2021a)<sup>5</sup>, but global financial flows are also failing to adequately support low emission pathways which are consistent with the objectives of the Paris Agreement. Consequently, increased *climate finance* in the form of both grants and concessional loans is urgently needed.

Because climate change disproportionately harms the world’s poorest populations, rich countries like Denmark<sup>6</sup> have a moral obligation to compensate developing countries for costs caused by climate impacts and to help mitigate further climate change.

## 2.4. Mobilize revenues for 'new and additional' Danish climate finance

At COP15 in Copenhagen in 2009, Denmark and other rich countries committed collectively to providing 'new and additional' climate funding for developing countries.

The finance should be 'new and additional', which can be defined as *"the need for climate finance to be added on top of existing development aid flows and to ensure that development finance does not decline as climate finance increases"* (Bhattachary et al., 2020). For this INKA study, 'new and additional' is defined as finance in excess of the Official Development Aid target of providing 0.7% of a country's GNI (UN General Assembly, 1970).

With this definition, Denmark has almost *not* delivered on 'new and additional', as only 100 million DKK has been provided as new and additional climate finance in 2021 (Finansministeriet, 2021c). It is even worse, as Denmark and other rich countries are taking most climate finance from their development aid budgets, and in this way reducing support to education, health and other support to poor developing countries.

The catalogue in this report appoints 8 mechanisms through which Denmark can raise additional public revenue to meet and go beyond its international responsibility of delivering its fair share in 'new and additional' funds for climate finance in developing countries. It is suggested that these Danish public funds are predominantly earmarked for *climate adaptation in least developed countries* (LDCs), as such efforts are severely underfunded globally (see section above).

**Recommendation** based on above analysis:

financial resources in the coming years should be found for a significant increase in Denmark's climate finance, first and foremost through **more public grants targeting adaptation and resilience in the least developing countries (LDCs) and vulnerable states**. In this way, Denmark could counterbalance the dominant trend in international climate finance, which shows that climate finance provided as loans is increasing considerably faster than as grants (OECD: 71% was in 2020 provided as loans).

This report presents a catalogue with 8 mechanisms for revenue that Denmark could provide to the least developing countries (LDCs) and vulnerable states. This could be counted as '*New and additional*' resources to be provided to developing countries beyond Denmark's provision of at least 0.7% of GNI to Official Development Assistance (ODA).

The Danish Climate Law (Retsinformation, 2020) is explicit in stating that Denmark has both a historical and moral responsibility and should act as an international role model inspiring and influencing the rest of the world. Hopefully, the Danish government and parliament are encouraged to use this catalogue to discuss how Denmark can strengthen the global financial response to climate change.

# 3. EIGHT REVENUE-RAISING MECHANISMS FOR DENMARK TO MEET ITS CLIMATE FINANCE COMMITMENTS

This Chapter presents the guiding principles for selecting 8 mechanisms for generating revenues for climate finance in developing countries.

## 3.1. Guiding principles for selecting mechanism

The mechanisms presented in Chapter 4 aim to be socially balanced, following the polluter-pays principle, and also aim to reduce GHG emissions<sup>7</sup>.

### a. Socially balanced

Ideally, the climate finance mechanisms will lessen the climate injustice between rich and poor countries not only in the way the revenue is spent (climate finance) but also in the way the revenue is raised.

As a minimum requirement, the selected mechanisms will not make economic inequality worse. Therefore, they are either socially neutral or respond to the principle of *progressive* taxation<sup>8</sup>, which says that the burden of taxation should follow people's ability to pay – richer people with higher incomes should pay more. An example of a progressive tax is *mechanism 2*, which proposes a tax that only the 1% of Danes with the largest fortunes should pay. It is a highly progressive tax because it doesn't imply any cost for 99% of people in Denmark

but levies all its revenue from the wealthiest people only. As explained further below, one person from the wealthiest 1% has emissions some 26 times larger than someone from the poorest 10% in Denmark. This inequality justifies a revenue raising mechanism which relies on taxation of the richest 1% of Danes

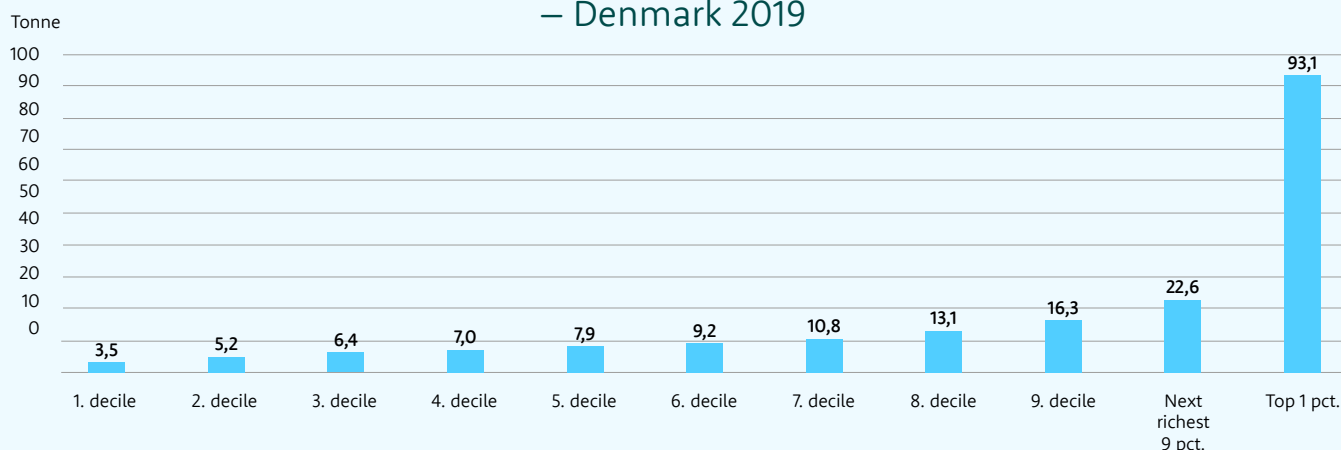
### b. The wealthiest Danes 1% emit 10 times more

With data from the *World Inequality Database*, Oxfambis has analysed the average emissions emitted by different economic groups. The results are clear. On average, the richest 1% emit far more greenhouse gases than any other economic group in Denmark.

On a global level, the World Inequality Database has calculated that the richest 1% contribute to 17% of all CO<sub>2</sub> emissions in a year (they emit on average 110 tonnes). The bottom 50% are responsible for just 12% of global carbon emissions in 2019 (3.8 billion individuals who emit on average 1.6 tonnes per person).

**Figure 3.** Data from World Inequality Database (<https://wid.world>) analysed by Oxfambis

### Distribution of greenhouse gas emissions by income – Denmark 2019



### c. Polluter-pays principle

Combating climate change and building up an energy infrastructure based on renewable energy is a global challenge and necessity. Already at the Earth Summit in 1992, governments acknowledged the concept of Common but *Differentiated Responsibilities* (CBDR). With CBDR it was universally agreed that industrialised countries have contributed more to environmental degradation and should have greater responsibility than developing countries in financing the responses needed.

Research by Oxfam (Oxfam, 2020) shows that from 1990 to 2015, the richest 10% of the world were responsible for 52% of carbon emissions, the top 1% alone was responsible for 15%. In contrast, the poorest half of the world's population emitted only 7% of global greenhouse gases, i.e. the richest 1% of the world is responsible for emissions of more than twice as much carbon dioxide as the poorest half of the world (The Guardian, 2020). In other words, a person from the richest 1% emits more than a hundred times the GHG of a person from the poorest half of humanity.

Following the polluter-pays principle, rich countries therefore have a historical responsibility to pay for cli-

mate adaptation and mitigation investments, not only domestically but also in developing countries.

### d. Reduce GHG-emissions

Ideally, the revenue-raising mechanisms presented in this report will counteract climate change both by raising revenues for climate finance and by guiding people's behaviour towards climate-friendly solutions and activities. For instance, introducing a tax on air transport (mechanism 2) will raise revenue for climate finance and disincentivize people from using air transport.

Mechanisms 2, 3, and 4 present taxes on fortunes, inheritance, and financial transactions. No direct impact on GHG emissions is expected from these mechanisms. However, an indirect GHG reduction is plausible as all three mechanisms are progressively levied predominantly on rich people. Transferring wealth from people at the carbon-intensive top of society to less polluting middle and lower-income households might help reduce GHG emissions. However, more research is needed before any concrete conclusion can be made regarding whether the redistribution of wealth and income affects GHG emissions.

## 3.2. Selected and deselected mechanisms

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This report presents eight selected climate financing mechanisms. Many other potential finance mechanisms have been excluded due to one or more of the following reasons:

- The mechanism is regressive
- The mechanism is partly or wholly included in other mechanisms of this report

- The potential amount of money raised from the mechanism is relatively insignificant
- The idea is legally or practically infeasible

Table 2 lists both the selected and deselected mechanisms.



Selected mechanisms in this report	
1	Tax on air transport
2	Tax on the wealthiest 1% of Danes' fortunes
3	Financial transaction tax
4	Increased inheritance tax
5	Digital service tax
6	Reserve Danish ETS revenue for climate finance
7	Increased road toll for heavy vehicles
8	Tax income from shares at the same rate as personal income
De-selected mechanisms	
not selected	Carbon tax covering all greenhouse gases GHG
not selected	Carbon tax on internet data usage
not selected	Carbon tax on meat and dairy products
not selected	Introduce a national minimum price on ETS quotas
not selected	Auction of the currently free ETS quotas
not selected	Carbon tax on maritime transportation
not selected	Revenue from EU's Carbon Border Adjustment Mechanisms
not selected	Increasing the Danish value-added tax (moms)
not selected	Introduce price-zones for cars in major cities
not selected	End government subsidies to oil and gas extraction in the North Sea
not selected	A "pause" in public expenditure growth
not selected	Increased registration duty on petrol and diesel vehicles
not selected	Tax on digital advertisement

**Table 2:** Mechanisms selected and deselected for this report.

A preliminary version of this report included *a carbon tax covering all greenhouse gases*, aiming at decreasing the demand for GHG-polluting goods and services by increasing their price. It can with the best design be the most cost-efficient way to reduce GHG emissions and obtain revenues. However, this mechanism was left out of this report after the Danish government launched its proposal that was negotiated and agreed with the Danish political parties in the second semester 2022.

The 8 mechanisms are further presented in Chapter 4, aimed at raising at least 5 billion DKK as "new and additional" climate finance that is *not* taking resources from the Danida development budget.

In addition, the Chapter 5 presents two mechanisms related to Green Sovereign Bonds and Standardised Green Climate Bonds, which could also constitute a significant opportunity for Denmark and internationally for green climate investments in developing countries.

Chapter 5 also presents IFU's project *High Risk – High Impact Investment in Africa* (Ministry of Foreign Affairs, 2021), where a proportion of the revenues (grants) from mechanism 1 to 8 could provide funding for de-risking climate projects in the least developed countries (LDCs) mainly in the form of equity capital.

# 4. EIGHT REVENUE-RAISING MECHANISMS FOR DENMARK TO MEET ITS CLIMATE FINANCE COMMITMENTS

This Chapter presents the eight selected climate financing mechanisms that are socially balanced, raise revenue for climate finance and also reduce greenhouse gas (GHG) emissions in Denmark. The revenue intervals presented are rough and conservative estimates. As part of the political process of choosing in favour of increasing Danish climate finance, it is recommended that the Danish Ministry of Finance and/or other relevant ministries develop more precise revenue estimates of the respective financing mechanisms.

Mechanism	Revenue potential (billion DKK per year)
1 Air transport tax	2 – 5
2 A wealth tax on the wealthiest 1% of Danes' fortunes	17.6 – 43.2
3 Financial transaction tax (FTT)	7 – 12
4 Increased inheritance tax	5
5 Digital Service Tax (DST)	0.1 – 0.5
6 Reserve Danish ETS revenue for climate finance	4 – 7
7 Increased road toll for heavy vehicles	0.5
8 Tax income from shares at same rate as personal income	8
<b>Subtotal</b>	<b>44.2 – 81.2</b>

## 4.1. Mechanism 1 - Tax on air transport

*Mechanism 1* suggests a levy on flight tickets for air passengers departing from Danish airports. A majority of Danes support the idea of implementing a tax on flight tickets. When asked in a representative survey about preferences for a climate tax of 250 DKK per flight, only 23% of Danes answered that they did not support the idea, whereas 59% answered that it would be OK (Politiken, 2019).

The EU's Energy Taxation Directive currently prevents member states from introducing a tax on aviation fuels, and the so-called Chicago Convention on International

Civil Aviation prevents states from taxing the fuel international flights bring into a country (Information, 2019a). Therefore, the tax on air transport needs to be designed so that it is not directly linked to fuel consumption (Skatteministeriet, 2019a). A solution to this problem can be a tax directly on the person travelling – a fee on the flight ticket. Such taxes have been unilaterally implemented in most EU-countries already. Out of 28 EU member states, only Denmark, Cyprus, Malta, and Ireland have no taxes on air transport (Information, 2019a).

Taking these legal limitations into account, *Mechanism 1* suggests a direct fee on flight tickets of 220 DKK for flights within Europe, and 790 DKK for intercontinental flights. The estimated revenue is 2 to 5 billion DKK per year.

The tax will on average imply a cost to air transport close to 1.500 DKK per ton GHG as recommended by the Danish Climate Council (Klimarådet, 2021).

#### 4.1.1 A polluting and tax-free transport for the rich

Flying is an activity dominated by the global elite, with 1% of the world's population accounting for more than half of all flight emissions (Gössling et al., 2020). Over 80% of people in the world have never taken a flight (CNBC, 2017), and less than 5% of people in the world fly within a year (Airspace, 2016). To draw an illustrative perspective: One Congolese person will emit less CO<sub>2</sub> in ten years than one Danish person emits from flying to Spain on holiday (Danmarks Radio, 2018). Flying in *business class* emits more than double the amount of CO<sub>2</sub> of flying *economy class* (Larsson and Kamb, 2021).

Unlike transport in cars, busses, and trains, aviation companies pay no tax on their fuels. A flight from Copenhagen to Vienna pays none of the fuel taxes that a bus, train, or truck pays passing that same route. Moreover, aviation is almost untouched by the EU's Emissions Trading System (ETS)<sup>9</sup>. This all adds to a severe distortion of competition between air transport and land transport – an unlevel playing field where the polluting means of transportation (air transport) is being privileged by the current tax rules.

#### 4.1.2 GHG emissions and air transportation

The GHG emissions from industries in Denmark and Europe are generally decreasing (Europaparlamentet, 2019), but the aviation industry does not follow this tendency. If the Covid pandemic 2020-2021 is disregarded, CO<sub>2</sub> emissions from aviation have been increasing rapidly, and this increase is expected to continue in the coming decades. During the five years pre-dating the Covid pandemic, CO<sub>2</sub> emissions from civil aviation in Europe rose by 26%, making it responsible for around 3% of Europe's GHG emissions (Ingeniøren, 2019). Domestic flights in Denmark emit 133.000 tons (Energistyrelsen, 2020) CO<sub>2</sub> per year, whereas international flights departing from Danish airports are responsible for

3 million tons<sup>10</sup> of CO<sub>2</sub> annually. This 2018 data is based on the Danish Energy Agency and only includes the direct CO<sub>2</sub> emissions – it does not include other greenhouse gases (GHG) like NO<sub>x</sub>. Moreover, because aviation emits GHGs at high altitudes, aviation has an amplified Global Warming Potential (GWP). The Danish Climate Council suggests that a GWP element is included when regulating the aviation industry (Klimarådet, 2019). The latest scientific research shows a GWP value of approximately 3 (Lee et al., 2021). This means that one tonne of GHG emitted by an aeroplane causes three times more warming to the climate than the same emission from a source on the ground. Factoring in the GWP, flights departing from Denmark alone cause harm to the climate equivalent to 9.4 million tons GHG<sup>11</sup>.

#### 4.1.3 Social balance

An aviation tax as described above will be progressive as air transport is disproportionately used by persons and businesses in the highest income brackets (Possible, 2021; Gössling et al., 2020)

Several options exist if the Danish government want to make a tax on air transport even more pro-poor:

- *Keep the first trip tax-free.* Every Danish person can make one tax-free return flight per year. In this way, the aviation tax will not prevent a low-income household from enjoying occasional holidays in remote countries.
- *A frequent-flyer tax.* Increase the tax according to the number of flights a person takes within a year.
- *Differentiate fees* on economy and business class.

As for the climate impact of the proposed aviation fee, additional benefits could be gained by increasing the fee on shorter distances as alternatives for transportation are readily available (e.g. Copenhagen to Aarhus). Furthermore, the GHG emitted per passenger per kilometre is more intensive on short-haul flights than on long-haul flights (Filippone and Parkes, 2021).

#### 4.1.4 Revenue potential

Table 4 uses data from the central Danish statistical authority and calculations from the Chalmers University of Technology in Gothenburg<sup>12</sup> on the GHG emissions per kilometre per passenger<sup>13</sup>. Calculations are in alignment with a Danish general GHG tax of 1,500 DKK per ton.

Number of passengers from Danish airport on flights sorted by length (2019)				
Length of journey (kilometres)	Number of passengers (million)	Tons of GHG (million)	DKK revenue (billion)	Tax per departure (DKK)
1-1000 km	11.33	0.75	1.13	100
1001-2000 km	3.06	0.61	0.91	299
2001-3000 km	2.15	0.71	1.07	499
3001-4000 km	0.55	0.26	0.38	698
4001-5000 km	0.39	0.23	0.35	898
5001 km or more	0.73	0.72	1.09	1,496
<b>TOTAL</b>	<b>18.20</b>	<b>3.29</b>	<b>4.93</b>	

**Table 4:** Danish aviation statistics for 2019 (Danmarks Statistik, 2021; Larsson and Kamb, 2021)<sup>14</sup>.

The EU's Energy Taxation Directive and the Chicago Convention on International Civil Aviation prevents countries from directly taxing the fuel consumption of aviation. Therefore, any fee or tax on aviation will be illegal if it can be directly or indirectly linked to the amount of fuel consumed (Skatteministeriet, 2019b).

This *mechanism* suggests a direct fee on the passenger that is not linked to kilometres travelled, but on the type of destination. Destinations are divided into two categories as seen in the below table 5.

Destination	Passenger fee (DKK)	Number of passengers (million)	DKK revenue (billion)
Europe	220	16.54	3.6
Intercontinental	790	1.66	1.3
<b>TOTAL</b>		<b>18.2</b>	<b>5.0</b>

**Table 5:** Passenger fee on flights departing from Denmark.

The above estimate points to a revenue potential of 5 billion DKK per year. However, it is important to note that this calculation does not include factors such as changing consumption patterns and other derived effects<sup>15</sup>.

These include:

- An aviation tax will (hopefully) encourage Danes to fly less.
- The covid pandemic has heavily impacted aviation in 2020 and 2021. At this point, it is uncertain whether experiences from the covid pandemic (e.g. *remote working and fear of diseases*) will permanently change the patterns of Danish air transportation and reduce future numbers of flights compared with 2019.
- Regulatory changes will play an important role. For instance, it is expected that the EU Commission will reduce the number of ETS free allocations to the aviation industry (Energistyrelsen, 2021).

The Danish Ministry of Taxation have calculated a more conservative version of the fee as presented in *Mechanism 1*, reaching a total revenue potential of at least 2 billion DKK with considerations of behavioural- and tax restructuring impacts included in their calculations (Skatteministeriet, 2020c). Therefore, *Mechanism 1* presents a conservative revenue potential of 2 to 5 billion DKK annually.

#### 4.1.5 Recommendations

Mechanism 1 recommends that the Danish Government advocate for international rules to allow aviation taxes based on fuel consumption, with the goal of introducing an aviation GHG tax of 1,500 DKK per tonne GHG on flights leaving from Danish airports. Until such a tax is possible, *Mechanism 2* recommends a direct fee on flight tickets, i.e. 220 DKK for flight within Europe, and 790 DKK for intercontinental flights.

The estimated revenue is 2 to 5 billion DKK per year

Notably, most Danes support the idea of implementing a tax on flight tickets.

An aviation tax, as described above, will be progressive as the use of air transport is disproportionately utilised by the people and businesses in the highest income brackets. Moreover, there are several options to make the policy even more pro-poor and pro-climate:

- *Keep the first trip tax-free.* Every Danish person can make one tax-free return trip per year.
- *A frequent-flyer tax.* Make the tax increase with the number of flights a person takes within a year.
- *Differentiate fees* on economy and business class.
- *Differentiate fees* based on short- and long-haul flights, as short-hauls have disproportionately high per-kilometer emissions and alternative modes of transportation are readily available.

<b>Pros</b>	<ul style="list-style-type: none"><li>• Implies the polluter-pays principle</li><li>• Can easily be implemented and managed</li><li>• Good examples from neighbouring countries</li><li>• Reduces economic inequality in Denmark because it effectively targets high-income households and businesses</li></ul>
<b>Cons</b>	<ul style="list-style-type: none"><li>• Potentially significant administrative costs, depending on taxation model utilised</li><li>• The revenue is influenced by external events such as pandemics, financial crises, terrorist attacks etc. Therefore, the long-term revenue is difficult to predict.</li></ul>
<b>Revenue</b>	<ul style="list-style-type: none"><li>• 2 – 5 billion DKK annually</li></ul>

## 4.2. Mechanism 2 - Tax on the wealthiest 1% of Danes' fortunes

*Mechanism 2* is a general wealth tax for the wealthiest 1% of Danes. In 2021 you needed to own at least 10.6 million DKK to join the richest 1% of Danes according to CEPOS (CEPOS, 2021).

*Mechanism 2* suggests taxing personal wealth exceeding a 10.6 million DKK threshold. In other words, taxing the wealthiest 1% of Danes. Excluded however is real estate wealth as it is already subjected to real estate taxes. CEPOS' calculations have some limitations as they do not include unquoted shares, cash, and personal belongings such as paintings and jewellery. *Mechanism 2* suggests that Danish revenue authorities develop methods to obtain adequate data enabling an effective implementation of a Danish wealth tax.

Besides raising revenue, *Mechanism 2* has the intention and benefit of limiting the growing inequality of wealth and income in Denmark. Other European countries, including Norway, Spain, Switzerland, France, and Italy have already implemented general

wealth taxes or wealth taxes on selected asset types (Asen, 2020).

### 4.2.1 Distribution of fortunes in Denmark

The Danish government portrays Denmark as “one of the most equal countries in the world” (Finansministeriet, 2020). This statement refers to Denmark's level of income equality, where Denmark ranks among the twenty most equal countries (The World Bank, 2021a)<sup>16</sup>. However, living standards and life possibilities are reflected both by a person's income and wealth.

In 2019, the average wealth per adult in Denmark was 1.4 million DKK, according to the Danish Statistical Authority (Danmarks Statistik, 2021). In total, private wealth in Denmark was in 2020 around 6,433 billion DKK. This wealth is unequally distributed, with the top 1% owning 18% (Finansministeriet, 2020c) and the top 10% holding half of all wealth (Danmarks Statistik, 2021). Moreover, OECD statistics show that the bottom 60% of Danish households actually have negative wealth<sup>17</sup>.

#### 4.2.2 Political and practical considerations

As real estate assets are already subject to taxes in Denmark, these assets will not be included in the calculated revenue potential of *Mechanism 3*.

*Mechanism 2* suggests a tax rate of 2.7% as it is the standard rate used by the Danish Ministry of Finance for interest yield after inflation, i.e. it is assumed that the annual income from assets equals 2.7% of the asset's value (CEPOS, 2020). By choosing a tax rate of 2.7% on the personal fortunes (real estate excluded) of the wealthiest 1%, their personal wealth should, on average, neither increase nor decrease. A tax of 2.7% on wealth will therefore serve only to slow-down (or in the best case to stagnate) the wealth accumulation of the richest 1% of Danes.

Several studies (Information, 2019b) have documented how inequalities harm economic growth, social mobility, and trust and belief in democratic institutions<sup>18</sup>. Conversely, the same pool of research also reveals consistent evidence that policies to reduce inequality through redistribution do not lead to slower growth (OECD, 2015). As the Danish Economic Council has pointed out, inequality in Denmark is rising, and policy decisions have had an essential role in this (De Økonomiske Råd, 2011). A general wealth tax is potentially a key policy instrument to redistribute wealth and reduce inequality in Denmark, thus strengthening the Danish economy.

To avoid liquidity problems in paying the wealth tax, precautions similar to those currently in place for Danish inheritance taxes (tax-deferral schemes etc.) should be considered.

The administrative burden and cost for tax authorities of raising revenue will be small compared to the revenue raised. The Danish tax authorities already receive information about most assets, including real estate, shares, bonds and bank deposits. Information from insurance schemes can be used to evaluate the value of personal belongings not already disclosed to the tax authorities, such as boats, art and jewellery (CEVEA, 2019). Implementing the wealth tax will also solve a severe data problem undermining Denmark's policy decisions, that of 'invisible' unquoted shares.

#### 4.2.3 Unquoted shares - a severe data error in official Danish statistics

The Danish tax authorities and the official statistical bureau have a severe problem with data on wealth in Denmark. The data does not include the value of unquoted

shares. Unquoted shares are shares that are not traded on stock exchanges or other organised financial markets. Many of the largest corporations in Denmark (e.g. Lego, Danfoss, Jysk, Ecco, and Velux) are not traded on stock exchanges but owned by private families through unquoted shares (MS Action Aid, 2019).

To give an idea of the error scale, one can look at the 100 wealthiest families in Denmark. Each year, the Danish media house Berlingske publishes a list of the 100 wealthiest Danish families. Berlingske's list, which includes unquoted shares, estimates the fortune of the 100 wealthiest Danish families to be 647 billion DKK (Berlingske, 2018). This is 700% larger than the official answer (88 billion DKK) that the Danish parliament received in 2018 from the Ministry of Taxation (MS Action Aid, 2019).

Certainly, a share of the difference is due to the Berlingske calculation being based on the richest *families* while the Ministry's answer is based on *individuals*, but the fact remains that by ignoring unquoted shares the Ministry severely misinforms the Danish parliament as well as the public in general<sup>19</sup>. Furthermore, only 2.2% of Danes own unquoted shares. These 2.2% are on average 7 times as wealthy as the average Dane (Finansministeriet, 2020c). As such unquoted shares will have a huge impact on the revenue potential of the suggested tax.

Independent from Berlingske's list, *Økonomisk Ugebrev* also develops a list ranking the 100 wealthiest Danish families. Their estimates point to an even larger combined wealth for these 100 families, namely more than 1,000 billion DKK in 2020 (*Økonomisk Ugebrev*, 2021).

Another striking contrast is between the official Danish estimates of wealth and analyses done by renowned companies such as Forbes and WealthX. WealthX have developed the world's most extensive collection of records on wealthy individuals. WealthX data discloses that 25,245 Danish individuals (about 0.5% of the adult population) have a net worth of at least 32.5 million DKK and a combined wealth of 3,286 bn DKK. This is about three times bigger than the official wealth estimate for the 47,000 richest Danes (the top 1%) who according to the Ministry of Finance own 1,159 billion DKK.

Because Denmark doesn't have a wealth tax, tax authorities do not face any urgency in developing an official methodology to assess the value of these assets. Therefore, in practice, most official statistics ignores these assets, i.e. set the value at zero. This significantly distorts the basis on which policies and public debates



are based. The data error is not marginal, and unfortunately, the policy consequences of this error might be severe. Information given to the Danish parliament has been, and still is, severely misleading.

Because of these incomplete data, Mechanism 3 can only present a conservative estimate of the revenue potential which in reality is expected to be considerably higher.

#### 4.2.4 Revenue potential

It is worth noting that a wealth tax targets the accumulated stock of value and not gains or losses of wealth. Therefore, the revenue source is expected to be stable

and reliable. Estimating this revenue potential takes several steps.

Mechanism 2's *low estimate* is based on the official data from the Danish Ministry of Finance which estimates the total personal wealth in Denmark (excluding unquoted shares) to be 6,443 billion DKK. The top 1% richest owns an estimated 18% of this. Not having exact data for the asset composition of the top 1% mechanism 3 makes the conservative assumption<sup>20</sup> that real estate assets make up 47% of their total assets - as 47% is the percentage for the top 10% wealthiest Danes for which *Danish Statistics* do provide data.

Danish net wealth excluding unquoted shares	Top 1% part (18% of total)	Excluding the first 10.6 million DKK per person (Top 1% equals 47,000 persons)	Excluding real estate assets (Estimated at 47% to the group's total asset)	Revenue potential by taxing at 2.7%
6,443 bn DKK	1,160 bn DKK	662 bn DKK	351 bn DKK	9.5 bn DKK

**Table 6a:** Lower estimate of the revenue potential of Mechanism 3 excluding unquoted shares<sup>22</sup>.

The second step is to include unquoted shares: according to the Danish Ministry of Finance 100,000 Danes own unquoted shares with a combined value of 640 billion DKK (Finansministeriet, 2020c), i.e. 6.4 million DKK per person. Mechanism 3's *low estimate* assumes that the top 1% has wealth in unquoted shares equal to the average of all own-

ers of unquoted shares<sup>21</sup>, i.e. 6.4 million DKK per person. Taxing this at 2.7% adds 8.1 billion DKK to the *low estimate*. This is considered, to be a conservative estimate as Økonomisk Ugebrev shows the wealth of only the 100 richest Danish families to be more than 1,000 billion DKK and a major part of this wealth is held in unquoted shares.

Average wealth in unquoted shares per owner of unquoted shares	Top 1% number of people	Total value of unquoted shares owned by top 1%	Total revenue by taxing at 2.7%
6.4 million DKK	47,000	300,8 bn DKK	8.1 bn DKK

**Table 6b:** Lower estimate of the revenue potential of unquoted shares.

All in all, the low estimate points to a revenue potential of 17.6 billion DKK.

Lower revenue potential in total
9.5 bn DKK + 8.1 bn DKK = 17.6 bn DKK

**Table 6c:** Lower estimate of the total revenue potential of Mechanism 3.

The higher revenue estimate of *Mechanism 2* is based on data from WealthX (Institute for Policy Studies et. al., 2022) disclosing that the richest 25,245 Danish persons (equal to roughly 0.5% of adult Danes) have a combined wealth of 3,286 billion DKK.

To arrive at *Mechanism 2*'s high estimate, first real estate wealth has to be excluded and second 10.6 million DKK

per person has to be excluded. Taxing the remaining wealth at 2.7% still yields a revenue of 43,2 billion DKK per year despite the fact that it only includes the richest 0.5% of Danes which is only about half of the number of taxpayers suggested for *Mechanism 2*. Thus even this higher revenue estimate can be considered to be conservative.

Net wealth of the 25,245 individuals with a net worth of \$5 million USD or more.	Excluding the first 10.6 million DKK per person (25,245 persons)	Excluding real estate assets (estimated at 47% of the group's total asset)	Revenue potential by taxing at 2.7%
3,286 bn DKK	3,018 bn DKK	1,600 bn DKK	43.2 bn DKK

**Table 7:** Higher estimate of the revenue potential of Mechanism 3.

#### 4.2.5 Recommendations

*Mechanism 2* recommends a tax that targets the currently untaxed share of personal fortunes that exceed the threshold 10.6 million DKK. The threshold is set at 10.6 million DKK because this, in 2021, is the amount of wealth needed to join the top 1% wealthiest Danes, i.e. 99% of Danish people will not be subjected to this tax at all. The suggested tax rate is 2.7% on untaxed wealth exceeding 10.6 million DKK. As real estate wealth is already tax, *Mechanism 3* excludes real estate wealth. According to the Danish Ministry of Finance, applying the tax rate of

2.7% implies that these fortunes on average will neither grow nor shrink. From an inequality perspective, it would be advantageous to have a higher wealth tax rate than suggested. However, the suggested rate of 2.7% is selected to inspire and inform a political debate and solutions.

Furthermore, regardless of any other policy decisions *Mechanism 2* recommends that the Danish Government make sure that the Danish ministries and state statistical bureaux update their methodology to include the value of unquoted shares in their statistics.

<b>Pros</b>	<ul style="list-style-type: none"> <li>Reduces inequality in Denmark and globally</li> <li>Implies the polluter-pays principle as it taxes wealthy people who are emitting the most CO<sub>2</sub></li> <li>The wealth tax is progressive and implies no cost to lower- and middle-income households</li> <li>Raises substantial and reliable revenue</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>As it is a new tax, it requires time and resources to build the Danish tax authorities' required methodology, capacity, and IT infrastructure</li> <li>Additional regulation may be needed to handle the incentive to circumvent the wealth tax by shifting wealth into real estate not subjected to the wealth tax</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>17.6 - 43.2 bn DKK</li> </ul>



### 4.3. Mechanism 3 - Financial transaction tax (FTT)

A financial transaction tax (FTT), also known as a Tobin tax, is a tax levied on the trade of financial instruments such as stocks, bonds, or derivatives. The FTT is a progressive tax because it taxes trading of financial instruments and thereby indirectly taxes the (wealthy) owners. Denmark may seek inspiration from France, who implemented an FTT in 2012 and in 2021 allocated 32% of the FTT revenue for development assistance (Donor Tracker, 2021).

It is worth mentioning that the theoretical literature is inconclusive as to whether an FTT will improve overall financial stability and economic growth<sup>23</sup>. However, in many countries FTTs have already been successful and in none of these countries has the FTT inflicted any damage to the economy (Henry, 2021).

#### 4.3.1 FTT proposed by the European Commission to stabilise financial markets

After the 2008 financial crisis, the European Commission proposed an EU-wide FTT to raise revenue from financial institutions and create appropriate disincentives for transactions that do not enhance the efficiency or stability of financial markets (EU Commission, 2013).

The EU Commission suggested a 0.1 percentage tax on the transfer of shares and bonds and a 0.01 percentage tax on derivative contracts. However, Denmark and other EU member states opposed the EU Commission's proposal in 2011, and an EU-wide policy has not been adopted (Asen, 2020).

Holding the EU Council Presidency in 2021, Portugal attempted to relaunch discussions between the 27 Member States over the FTT. A leaked EU document intended to guide EU Council discussions highlights the FTT's potential. It urges European countries to build on "an FTT that has already been successfully introduced and secured with minimal distortions to the financial markets" in France and Italy, and to "start testing at the European

level, as early as possible, the approaches developed and already tested" (Agence Europe, 2021).

Individually, several European countries (Belgium, Finland, France, Ireland, Italy, Poland, Switzerland, and United Kingdom) have implemented different variations of FTTs. A further ten EU countries (Austria, Belgium, France, Germany, Greece, Italy, Portugal, Slovakia, Slovenia, and Spain) are interested in implementing a common FTT.

#### 4.3.2 Revenue potential

According to the Danish Ministry of Finance, implementing the EU Commission's 2013 proposal of a 0.1% tax on the transfer of shares and bonds and a 0.01% tax on derivative contracts would yield 0.4-0.5% of GNP (Finansministeriet, 2019), or around 9 and 12 billion DKK. To raise this level of revenue, however, it is required that at least 11 countries levy this tax. A current conservative estimate is therefore a revenue potential of 7 to 12 billion DKK. This estimate does not include effects of tax rebates and behaviour changes.

#### 4.3.3 Recommendations

*Mechanism 3* recommends that the Danish Government introduce a financial transaction tax (FTT) of a 0.1 percentage tax on the transfer of shares and bonds and a 0.01 percentage tax on derivative contracts in line with the suggested FTT by the EU Commission.

As FTTs have been successful in many countries, a Danish FTT can draw on experiences from other EU member states. Moreover, Denmark should join the group of EU countries working on developing a common framework for FTT.

The FTT is a progressive tax. By taxing the trade with financial instruments, the FTT indirectly taxes the owners of financial assets that wealthy families disproportionately own. Therefore, it will positively limit the rise in inequality and imply no cost to lower-income households.

<b>Pros</b>	<ul style="list-style-type: none"><li>• Reduces inequality in Denmark and globally</li><li>• Can easily be implemented and managed</li></ul>
<b>Cons</b>	<ul style="list-style-type: none"><li>• The tax is not expected to reduce GHG emissions</li></ul>
<b>Revenue</b>	<ul style="list-style-type: none"><li>• 7 - 12 billion DKK per year</li></ul>

## 4.4. Mechanism 4 - Increased inheritance tax

Denmark's current inheritance tax raises a revenue of 5 billion DKK (Berlingske, 2021a). Currently, inheritances lower than 308.000 are not taxed while inheritances surpassing 308,800 DKK are taxed at 0% if the recipient is a spouse, at 15% for children, parents, or registered partners, and up to 36% for siblings and more distant relatives. The tax rates are flat, i.e. they do not change as the size of the inherited wealth increases. Countries like Finland and the Netherlands have progressive inheritance taxes – an example Denmark could follow (CEVEA, 2021).

*Mechanism 4* recommends making the Danish inheritance tax progressive so that the current tax rates increase with the size of the inherited amount. In total, *Mechanism 5* suggests a doubling of the revenue raised from inheritance tax, increasing revenue raised to 10 billion DKK. If implemented, Denmark would still have a lower inheritance tax than France, Japan, and Belgium (OECD, 2021b).

### 4.4.1 A substantial share of wealth and privileges are inherited

The share of inheritances in overall wealth varies between 30% and 60% in Western countries (Wolff, 2015; Piketty and Zucman, 2015). Furthermore, OECD studies show that the share of inherited wealth in total household wealth has increased in several countries, and that this trend is expected to increase in the future (OECD, 2021c).

Danish studies show that income from inheritance disproportionately benefits people who already enjoy high incomes (Arbejderbevægelsens Erhvervsråd, 2018). Consequently, privileges are increasingly passed from one generation to the next, thus harming social mobility in Denmark (CEVEA, 2021). Therefore, with asset prices continuing to rise while the baby-boom generation ages, wealth transfers may increase in value and lead to an increase in intra-generational wealth inequality.

Recipients of inheritance are currently being taxed less than recipients of general income. Furthermore, people who inherit large bequests often benefit from other economic and social advantages. According to the horizontal and vertical equity principle (Kagan and Berry-Johnson, 2020; Kagan and Uradu, 2020) increasing inheritance tax is thus beneficial for social balance.

- Following the horizontal equity principle, people receiving the same income or assets should be taxed similarly. There should not be a difference in the tax burden of people in similar circumstances. An inheritance tax can therefore be justified to level the playing field between inheritance and other sources of income (OECD, 2021c).
- According to the vertical equity principle, the broadest shoulders should carry the largest burdens, i.e. people with a greater ability to pay tax should pay relatively more tax. An inheritance tax ensures that those who receive more wealth pay more tax. The vertical equity principle is even more valid if the inheritance tax is made progressive with higher rates for higher amounts of inherited wealth (OECD, 2021c).

### 4.4.2 A smart way to raise revenue

Taxing inherited wealth is a smart way of raising revenue for several reasons. In terms of economic efficiency, there are several strong arguments in favour of inheritance taxation:

- *Increases labour supply*  
A growing concern for the Danish government is that labour supply in Denmark may be insufficient to meet demand (Berlingske, 2021b). Studies from the OECD (2021b) and the Danish Economic Council (De Økonomiske Råd, 2019) point out that inheritance taxes can increase labour supply.
- *Low administrative and compliance costs*  
Inheritance taxes also have several administrative advantages compared to other forms of wealth taxation as administrative and compliance costs are low.
- *Reduces inequality*  
Studies by the OECD shows that inheritance tax can improve equality of opportunity and reduce wealth inequality (OECD, 2021b).

### 4.4.3 Recommendations

*Mechanism 4* suggests a doubling of the current inheritance tax on wealth transferred between generations, increasing the revenue from 5 billion DKK to 10 billion DKK. Denmark would still have a lower inheritance tax than France, Japan, and Belgium if implemented (OECD, 2021b). The tax will increase with the size of the inheritance to ensure further progressivity.

Bringing the tax rate for inheritance closer to the income tax rate aligns with the *horizontal equity principle*, stating that people receiving the same amount of income should be taxed similarly, i.e. the tax burden on income from inheritance should be the same as the tax burden on income from labour. As inheritances are predominantly received by households who already enjoy high incomes, increasing the inheritance tax will also be

aligned to the *vertical equity principle* stating that the broadest shoulders carry the largest burdens.

In terms of economic efficiency, there are strong arguments in favour of inheritance taxation as it increases labour supply, reduces inequality, and can easily be implemented with low administrative costs.

<b>Pros</b>	<ul style="list-style-type: none"> <li>• Reduces inequality in Denmark and globally</li> <li>• It is progressively levied on persons receiving the largest inheritances. Most people will never be subjected to the tax</li> <li>• It is a stable and reliable revenue source</li> <li>• Taxes high-income persons who are emitting the most CO<sub>2</sub> and thus implies the polluter-pays principle</li> <li>• Revenue can be obtained easily with few transaction costs</li> <li>• It has no negative impacts on economic growth and even positively impacts labour supply</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>• The tax is not expected to reduce GHG emissions</li> <li>• Small family-owned businesses may be vulnerable to liquidity problems when passing ownership from one generation to another</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>• 5 billion DKK per year</li> </ul>

## 4.5. Mechanism 5 - Digital Service Tax (DST)

A digital service tax (DST) is a tax on selected gross revenue streams of large digital companies. It can be levied on digital services, from online advertising and digital platforms to search engines and data trading. A DST can ensure that foreign digital service providers pay their fair share of tax on revenues generated in a domestic digital market. Currently, large digital companies have avoided their fair share of taxes, while taking over markets (European Parliament, 2021). A Danish DST can help to make taxation of companies more equal i.e., that big or small, digital, or traditional companies all pay a fair share of tax to contribute to society.

Unfortunately, the OECD/G20 *Base Erosion and Profit Shifting Project* (BEPS2) (OECD, 2021d) which was signed by Denmark in 2021 prohibits countries from having DSTs, and thus challenges the possibility of implementing a Danish DST. However, in February 2022 the Danish

government proposed a *streaming levy* of 5% of turnover on foreign streaming services such as Netflix and HBO (Kulturministeriet, 2022). As this conflict with the BEPS2 agreement, it seems that the Danish government is ready to challenge this aspect of the BEPS2. *Mechanism 5* recommends the Danish Government to advocate for joint EU pressure on the OECD to amend the BEPS rules to allow countries to have unilateral DSTs.

### 4.5.1 GHG emissions and internet usage

Data consumption worldwide has increased a thousand times since 2000, and this dramatic increase in data consumption is expected to continue (Oxenløwe, 2020). Mobile data usage in Denmark is growing by 40% per year (Siri-Kommissionen 4.0., 2021). One estimate from 2020 points to IT technologies as being responsible for around 3% of global GHG emissions (Masanet et al., 2020), which equals the amount emitted by the aviation

industry (pre-Covid 19) (BBC, 2020). Data centres worldwide are responsible for around 1% of global electricity use (Masanet et al., 2020).

Furthermore, it is estimated that 80% of the internet's energy consumption is sourced from fossil fuels (Go-Climite, 2020). While electricity in Denmark is becoming increasingly carbon neutral, a large portion of the electricity for Danes' internet usage goes to datacentres, servers, and cables outside Denmark (Siri-Kommissionen 4.0., 2021).

#### 4.5.2 Taxation in an increasingly digitalized world economy

The digital economy makes up 15.5% of global GDP in 2021 and has grown two and a half times faster than global GDP over the past 15 years (The World Bank, 2021b). Big tech companies pay on average only 9.5 percentage tax in the EU, whereas physically present companies pay 23.2 percentage (CEVEA, 2019). Thus, there is a damaging non-level playing field and unfair competition between physical and digital companies. Furthermore, tech giants are eroding the tax base in the countries where they generate their revenue.

In Denmark, an analysis made by PricewaterhouseCoopers estimates that in 2016 Google and Facebook sold advertisements in Denmark worth 3.7 billion DKK (PwC, 2017). The reported Danish turn-over from Google that same year was only 209.8 million DKK, and the tax payment was only 4 million DKK. The mismatch between the actual and the reported turnover is connected to the fact that Google sends its invoices from its subsidiary in Ireland. Facebook uses the same trick. Therefore, the turnover arising from advertising in Denmark is not reported in Denmark but in Ireland, where the tech giants enjoy very lucrative tax deals (PwC, 2017).

Therefore, placing a tax on digital advertisement and using the revenue for climate finance has several merits, as it will:

- Help to level the playing field and competition between digital and physical companies
- Reduce global inequality by redistributing wealth by taxing tech giants and redistributing the revenue to poor developing countries
- Defend the tax base of Denmark
- Supporting the survival of a diversified media landscape in Denmark

#### 4.5.3 DSTs are increasingly popular

In 2018, the EU Commission suggested an EU-wide 3% tax on the total turnover of big tech companies. However, the idea of an EU-wide DST was dropped after Denmark and a few other countries opposed the suggestion. As tax decisions require unanimity in the EU, an EU-wide policy on this topic is unlikely to be implemented soon. But unilaterally, many countries are interested in the idea. France introduced the so-called GAFA-tax (Google, Amazon, Facebook and Apple) in 2019, raising around 4 billion DKK per year. About half of all European OECD countries have announced, proposed, or implemented a digital services tax (DST). Italy, Austria, Spain, France, and the United Kingdom all apply a DST. Other countries have proposed a similar tax or are still considering it (Schulze, 2021).

#### 4.5.4 Revenue potential

*Mechanism 5* suggests that the Danish government implements a tax similar to the Italian DST, levied on digital services sold to domestic companies (JDSupra, 2021). More specifically, this could be a DST of 3% on digital services sold to Danish companies. The DST should not be applied to small companies but only to companies with more than 1,500 transactions with Danish customers within a year. These companies will be taxed regardless of what geographical location they declare for their official permanent establishment. The tax will not target e-commerce but digital services such as advertising services, digital interface services, sponsored links, and data transmission services.

A report from the Danish Ministry of Culture in 2017 concludes that the Danish market for advertisement is shaped by the duopoly of Google and Facebook, representing more than half of the total market (Slots- og Kulturstyrelsen, 2017). And a PriceWaterhouseCooper report from 2016 estimates that Google and Facebook sold advertisements in Denmark worth 3.7 billion DKK in 2016 (PwC, 2017). Applying the 3% tax to this turnover gives revenue of 111 million DKK. Considering that other companies besides Google and Facebook provide digital services, and considering that digital services have increased since 2016 and are expected to continue to do so the revenue from a DST may be multiple times larger than 111 million DKK. *Mechanism 5* suggest a revenue potential of 0.1 – 0.5 billion DKK annually.

Considering the current discrepancies between tax rates on physically present companies and digital companies, a higher tax rate could help level the playing field between digital and physical companies further.

#### 4.5.5 Recommendations

Mechanism 5 recommends that the Danish government advocate for international rules (OECD BEPS 2.0) which allow Denmark (and other countries) to introduce a digital service tax (DST) of 3%, targeting big tech companies' sales to Danish companies. The DST will have several benefits, including:

- Defend the tax base of Denmark
- Help level the playing field between digital and physical companies
- Reduce economic inequality
- Support the survival of a diversified media landscape in Denmark

The DST will defend the Danish tax base against the huge mismatches between actual and reported profits of companies like Google and Facebook, who enjoy lucrative tax deals from their tax havens (PwC, 2017). In 2018, the EU

Commission suggested an EU-wide 3% tax on the total turnover of big tech companies. However, as decisions on taxation require unanimity in the EU, an EU-wide DST is unlikely to be implemented any time soon. But unilaterally, many countries are interested in the idea. About half of all European OECD countries have either announced, proposed, or implemented a DST.

The newly signed OECD/G20 Base Erosion and Profit Shifting Project (BEPS2) prohibits signatory countries from having DSTs (OECD, 2021d). Therefore, the EU and its member states are recommended to demand the OECD to amend the BEPS2 rules to allow countries to have unilateral DSTs. If not successful, EU and Denmark should overrule this limitation in the transposition of the BEPS2-rules. It seems that the Danish government is ready to challenge this aspect of the BEPS2 as the Danish government in February 2022, in conflicts with the BEPS2, proposed a *streaming levy* on tech giants such as Netflix (Kulturministeriet, 2022).

<b>Pros</b>	<ul style="list-style-type: none"> <li>• Follows the polluter-pays principle as IT technologies are responsible for a growing percentage of global GHG-emissions</li> <li>• Helps to level the playing field between digital and physical companies</li> <li>• Reduces inequality by taxing the owners/shareholders of tech giants and giving the revenue to poor developing countries</li> <li>• Defends the tax base of Denmark</li> <li>• Supports the survival of a diversified media landscape in Denmark</li> <li>• A reliable and growing revenue source</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>• The Danish tax authorities will have to build the methodology and infrastructure needed to levy the tax</li> <li>• It conflicts with the newly signed OECD/G20 Base Erosion and Profit Shifting Project (BEPS2) (OECD, 2021d) which prohibits countries from having DSTs</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>• 0.1 – 0.5 billion DKK annually</li> </ul>



## 4.6. Mechanism 6 - Reserve Danish ETS revenue for climate finance

The EU's Emissions Trading System (ETS) aims to reduce greenhouse gas emissions in the EU. It covers GHG emissions from GHG-heavy industries and the power sector. It is thus in accordance with the *polluter-pays* principle as companies must purchase ETS quotas depending on how much GHG they emit.

The system works by setting an annually decreasing limit for overall emissions from a select number of industries and sectors. Within this limit, companies can buy and sell emissions allowances as needed. This 'cap-and-trade' approach gives companies the flexibility they need to cut their emissions in the most cost-effective way (EU Commission, 2016).

*Mechanism 6* suggests that the revenue received by the Danish state from Danish companies' purchase of ETS quotas should be reserved for climate finance to developing countries.

### 4.6.1 Revenue potential

The ETS price depends on the total number of available ETS quotas and the total amount of GHG-emitting activities companies within the ETS system have. In 2019, Danish companies purchased 12.6 million ETS quotas (EU Commission, 2021c). Multiplying the current ETS price of 55 Euros per tonne (EMBER, 2021), it generates a revenue of 5.2 billion DKK<sup>24</sup>.

However, one can expect the ETS price to rise over the next ten years (Bloomberg, 2021) and the amount of ETS quotas allocated to Danish companies to fall. The income that the Danish state received from the ETS has significantly increased in the last year. The average ETS price has risen from about 25 Euros per tonne in 2019-2020 (FitchWire, 2021) to around 55 Euros by mid-2021 (Reuters, 2021). The income is expected to increase further because of the EU Commission's "Fit for 55" proposal, which includes (Clean Energy Wire, 2021):

- A new 2030 reduction target for ETS emissions of 61% (previously 43%) compared to 2005.
- A new linear reduction factor: 4.2% cut to ETS emissions cap every year (if started in 2024).
- Shipping emissions will be included in the ETS.
- Free allocations to aircraft operators should be phased out. Aviation allowances under the ETS will be capped at current levels and be reduced annually by 4.2%.
- Establishing a separate Emissions Trading System for road transport and buildings.

A cautious estimate is that Danish ETS revenues will be between 4-7 billion DKK per year over the next couple of years. Predicting the revenue further into the future is very difficult because, among other reasons, the outcome of the *Fit for 55* proposal is still uncertain. Factors influencing the revenue include:

- The amount of available ETS emissions quotas.
- The amount of carbon-emitting activities in Europe (determining the demand for quotas).
- Regulatory changes in the EU ETS system.
- How much and how quickly Danish companies reduce their GHG emissions.

### 4.6.2 Recommendations

*Mechanism 6* recommends that the income generated from Danish companies' purchase of CO2 emission quotas under the EU's *Emissions Trading System* (ETS) is reserved for climate finance.

With the current ETS price of 55 Euros per tonne, a revenue of 5.2 billion DKK will be generated. However, predicting the future revenue for *Mechanism 6* is difficult due to several uncertainties. One of these is the EU's *Fit for 55* policy package which is still being developed.

<b>Pros</b>	<ul style="list-style-type: none"> <li>• Follows the polluter-pays principle</li> <li>• As large companies are the source of the revenue, it is expected to be progressive and not put disproportional burdens on lower-income households</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>• Revenue size can only be predicted a few years ahead, depending on many international factors</li> <li>• It is not expected to reduce GHG-emissions nor change behaviour as it only earmarks the revenues from an existing policy – it is not implementing any new policy</li> </ul>
<b>Revenue</b>	<ul style="list-style-type: none"> <li>• 4 – 7 billion DKK annually</li> </ul>

## 4.7. Mechanism 7 - Increased road toll for heavy vehicles

Together with the political parties Radikale Venstre, Socialistisk Folkeparti and Enhedslisten, the Danish government agreed on a *Green transition of road transportation* (Skatteministeriet, 2020b). The specific details for this agreement will be concluded in the coming year(s) (Skatteministeriet, 2020a).

The rationale for a road toll is to make heavy vehicle users compensate for negative externalities created. These include accidents, wear and tear on infrastructure, emissions, and air and noise pollution. Current taxes on heavy vehicles fall far short of covering these socio-economic costs (Skatteministeriet, 2020a).

### 4.7.1 Revenue potential

The road toll for heavy vehicles envisaged by the Danish government will raise revenue of 500 million DKK from 2025-2027, increasing to 1 billion from 2028. *Mechanism 8* suggests that the road toll be doubled and thus expected revenues are at least 500 million DKK.

### 4.7.2 Recommendations

*Mechanism 7* suggests that the currently proposed increase in road toll of heavy vehicles is raised to at least double that of currently suggested levels (500 million DKK). The additional revenue received by the Danish state should be reserved for climate finance in developing countries.

<b>Pros</b>	<ul style="list-style-type: none"><li>• Follows the polluter-pays principle</li><li>• Increased incentive for a green transition of heavy vehicles</li></ul>
<b>Cons</b>	<ul style="list-style-type: none"><li>• Increased cost of heavy transportation in Denmark</li></ul>
<b>Revenue</b>	<ul style="list-style-type: none"><li>• 0.5 billion DKK annually</li></ul>

## 4.8. Mechanism 8 – Taxing Income from Shares at the same rate as Personal Income

The Danish taxation of income from shares targets the income generated from unquoted and quoted shares. In Denmark, such income is taxed 27% on the first 57,200 DKK of income and then 42% on any income above that threshold (Skat, 2021a). Today, around 1 million Danes are shareholders. Of those, 80,000 Danes pay the higher rate of tax (42%) and are responsible for 80% of the revenue raised from this taxation (Euroinvestor, 2021).

*Mechanism 8* recommends that the Danish government align the tax rates on income from shares with that for regular income tax<sup>25</sup>.

In September 2021, the Danish government suggested an increase of the higher rate tax from 42% to 45%. The Danish Ministry of Finance estimated that 80% of this revenue will come from the wealthiest 1% of Danes. The remaining revenue comes predominantly from the top 10% of Danes (Finansministeriet, 2021).

### 4.8.1 Revenue potential

The Danish Government's current proposal of raising the

upper tax rate from 42% to 45% on income from shares is estimated to raise a revenue of 1.3 – 1.5 billion DKK annually (Finansministeriet, 2021). Mechanism 8, however, suggests that the tax rate on income from shares is aligned with the tax rate on labour income, which means a flexible tax rate of up to 52.06%.

According to the Danish Ministry of Taxation, taxing income from shares as regular income will raise revenue of around 8 billion DKK annually, excluding considerations of behavioural and tax restructuring impacts (Skatteministeriet, 2021). Furthermore, national equality will increase with an estimated reduction of the GINI-coefficient by 0.43%.

### 4.8.2 Recommendation

*Mechanism 8* encourages the Danish government to go beyond the currently suggested 3% increase in the tax on income from shares, and instead fully harmonize the taxation of income from shares and labour. As the wealthiest Danes predominantly own shares, it is a progressive way to raise revenue.

<b>Pros</b>	<ul style="list-style-type: none"><li>• Reduces inequality in Denmark and globally</li><li>• It is progressively levied on high-income households and businesses</li><li>• Follows the <i>polluter-pays</i> principle as high-income households have higher CO<sub>2</sub> emissions</li><li>• The tax is easy to collect as it is simply increasing an already existing tax</li></ul>
<b>Cons</b>	<ul style="list-style-type: none"><li>• It is not expected to reduce GHG emissions</li><li>• The revenue will depend on international business cycles and other external factors affecting businesses and the stock market</li></ul>
<b>Revenue</b>	<ul style="list-style-type: none"><li>• 8 billion DKK per year</li></ul>



# 5. PUBLIC FINANCE MECHANISMS TO SHAPE MARKETABLE INVESTMENTS

This second part of the report presents two additional mechanisms to mobilise and/or redirect climate finance flows through public interventions:

- Green Sovereign Bonds to finance de-risking and a greener direction for climate investments in developing countries (*mechanism 9*)
- Standardised Green Climate Bonds (SGCBs) as a new monetary tool for the Danish central bank (Nationalbanken) that can mobilise higher investment volumes, and thus facilitate significant climate-relevant projects in developing countries (*mechanism 10*)

By making public funds available through guarantees, grants, or favourable loans, grant money from mechanism 1 to 8 and loans from mechanism 9 and 10 (loans) can provide financial resources to be spent on a blended finance mechanism, no. 11, aiming at de-risking climate projects in LDC countries. This would be a way to increase Danish climate investments in lower-income countries (LDCs) in Africa, which can build on the ongoing project *High Risk – High Impact Investment in Africa* managed by IFU that could invest in mitigation projects in Least Developed Countries (LDCs) or even adaptation projects.

The *High Risk – High Impact* facility is outside IFU's standard investment portfolio regarding risk and expectations for a return of approx. 10-12 % return from investing in a given project. IFU can through this blended finance mechanism 11 enter into LDC countries with higher risk and also accept a return down to e.g. 3-4%.

The *High Risk – High Impact* facility has so far received 300 million DKK grants from Danida's budget. It would be much better to take the grant elements of blended finance from mechanism 1 to 8 as real "*new and additional finance*", instead of taking them from Danida's budget that should be spent on development projects within health, education, democracy, good governance, civil society etc.

Developing countries urgently need access to financial resources to invest in a green transition and adapt to climate change. But unlike Denmark, developing countries do *not* have easy access to borrow money – for developing countries, borrowing comes at a high cost. In 2018, more than sixty developing countries could *only* access loan capital at interest rates higher than 18 percent for projects lasting longer than two years. Climate projects can rarely meet such high requirements for financial return, and therefore, currently, most of the necessary climate investments never happen (Koch, 2020). The provision of grants for adaptation purposes is of utmost importance in the most climate-vulnerable developing countries. Still, marketable climate mitigation and adaptation loans to developing countries must also be secured. Stocks, bonds and preferred shares are some examples of marketable securities.

## 5.1. Mechanism 9 - Green Sovereign Bonds

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Danish government bonds enjoy a very high AAA credit rating<sup>26</sup>. Thus, the Danish government can issue bonds and borrow money at interest rates close to zero percent (Forsikring og Pension, 2021). This is potentially more than one hundred times lower than the interest rate paid by developing country governments (CFR, 2021).

The Danish government has already planned to issue 10 – 12 billion DKK in green sovereign bonds to cover some of the national costs of the green transition. Following that example, *Mechanism 9* suggests that the Danish government issue a similar green sovereign bond that can facilitate de-risking of climate finance projects in developing countries.

### 5.1.1 A Danish Green Sovereign Bond

The Danish Ministry of Finance published in December 2021 the “*Kingdom of Denmark Green Bond Framework*” (Finansministeriet, 2021a), clarifying the modalities of Danish green sovereign bonds.

According to The Danish Ministry of Finance, the Danish green sovereign bonds will be based on the German twin-bond model (Finansministeriet, 2021b). The bonds will also be aligned with best international practices, the EU Taxonomy and the newly published Green Bond Principles, and developments around the EU Green Bond Standard (Finansministeriet, 2021a). This is well in line with market demands, as Danish and foreign pension funds emphasise the EU Green Bond Standard as the most marketable solution.

By aligning the Danish Green Sovereign Bond with the EU Green Bond Standard, which is a voluntary standard, the market for these bonds is ensured. The EU Green

Bond Standard can ease the minds of potential investors as it ensures adherence to the EU Taxonomy (EU Technical Expert Group, 2020a).

The EU Taxonomy classifies what constitutes sustainable activities, guiding investors, companies and policymakers in what activities are sustainable and in line with Article 2.1c of the Paris Agreement. Furthermore, it sets a series of screening criteria for each economic activity. Thus transparency regarding the green finance share of economic activities is ensured. Furthermore, it sets a common reporting standard as well as a common standard for external verification (EU Technical Expert Group, 2020b).

It is recommended that Nationalbanken continue its commitment to adhere to the EU Green Bond Standard.

The eligible green expenditures in the Danish model for green sovereign bonds are linked solely to transportation and renewable energy investments nationally. While positive for the Danish green transition it does little for global equality.

### 5.1.2 Recommendations

*Mechanism 9* recommends that the Danish government either use a large share of the proceeds from the current Danish green sovereign bonds with low interest rates to finance de-risking of climate investments in developing countries or create a new green sovereign bond program with that specific focus. Either solution will strengthen the global social balance and comply with the obligation to turn global financial flows in a greener direction while adhering to the EU Green Bond Standard.

## 5.2. Mechanism 10 - Standardised Green Climate Bonds (SGCBs)

In early 2021, the British finance minister Rishi Sunak updated the mandate of the British central bank, Bank of England (BoE). He said that BoE should support the government's efforts to make the UK economy greener and achieve zero greenhouse gas emissions by 2050 (Financial Times, 2021). If Danish politicians are serious about climate change, the Danish parliament should follow the British example and revise the official mandate of the Danish central bank, Nationalbanken, to reflect this.

Systemic risk resulting from climate change must be regarded as part of the mandate of central banks. In Denmark, this would give Nationalbanken the certainty that its actions are not against the democratic will of the parliament.

Just as in the case of the British BoE, Nationalbanken does not currently hold climate stability as part of its mandate. Nationalbanken's current mandate is to (1) stabilize prices, (2) ensure payment functions, and (3) stabilize the financial system (Nationalbanken, 2021). However, it would be in line with Danish Climate Law (*Lov om klima Retsinformation, 2020*) if the Danish Parliament and government decided to follow the British lead and update the mandate to include climate considerations. Furthermore, Nationalbanken has since 2019 been a member of the Network for Greening the Financial System' (NGFS) (Nationalbanken, 2019), which in 2019 asserted: "*Climate change is a source of structural change in the economy and financial system and therefore falls within the mandate of central banks and supervisors*" (Network for Greening the Financial System, 2019a).

Giving Nationalbanken (and other central banks of rich countries) a mandate to support green transition in developing countries will not burden the taxpayer, as the central banks' monetary operations are conducted independently and not reliant on funding from governments' Ministries of Finance. Therefore, contributions can get significantly larger than via financing methods that only depend on public budgets and tax revenues.

Having such a mandate, Nationalbanken could play a significant role in financing developing countries' transition to renewable energy sources by establishing a new class of bonds inspired by the Standardised Green Climate Bonds (SGCBs).

### 5.2.1 What are Standardised Green Climate Bonds (SGCBs)?

Ordinary bonds investing in the green transition of developing countries are already sold by Development Finance Institutions (DFIs) such as the EU's European Investment Bank (EIB) and the World Bank's International Finance Corporation (IFC), by states (government bonds) or by companies (corporate bonds). However, investors in such bonds expect a financial return.

In LDCs, the main barrier to increasing resources to invest in climate projects is not a lack of (green) investment capital but rather a lack of bankable projects (IRENA, 2018), i.e. projects with a sufficiently high risk-adjusted return on investment. SGCBs can help alleviate this problem.

The basic idea of the SGCBs is that DFIs can offer interest-free perpetual bonds for green investments (SGCBs), which central banks can purchase. SGCBs thereby provide a new option for DFIs to raise new and virtually repayment-free capital. This could de-risk DFI investments and increase their projects' marketability in climate-vulnerable contexts.

A central bank does not rely on bonds being repaid at a specific date. It can absorb bonds with unlimited terms into its balance sheet<sup>27</sup>. Due to their perpetual duration, SGCBs will become permanent assets of Central Banks and part of regular money creation (World Future Council, 2018). Seen from the perspective of a central bank, the advantage of this new monetary tool is that it leads directly to the purchase of new goods and services in the real economy, which thereby is stimulated without a need for the usual detour of credit creation by private banks. This means that no new debtors and creditors need to be found. The new money is created debt-free<sup>28</sup>.

Ideally, all UNFCCC member states, and their Central Banks, should participate in this new SGCB system. The Danish government and the Nationalbanken are in an excellent position to lead the way, as Denmark has its own currency, *kroner*, which is strong because Denmark has solid trade surpluses and large amounts of foreign exchange reserves in the central bank.

## 5.2.2 Why should the Danish Nationalbanken be concerned about climate change?

Today, climate change already constitutes a systemic risk for the global economy. Therefore central banks, which are in charge of providing legal tender (money) and maintaining financial stability, have several reasons to invest in SGCBs:

1. *Nationalbanken needs new “going direct” monetary tools to deal with future economic and financial crises (World Future Council, 2020).*

SGCBs can fulfil this need while supporting a green transition of economies. The traditional monetary tool – determining the interest rate in the money market – cannot stimulate the economy if interest rates are already very low (or even negative). SGCBs offer central banks a new tool to stimulate stable growth at a scale that can create favourable interest rates and trigger inflation rates to the desired level at near two percent.

2. *Climate change constitutes a major financially destabilizing factor.*

The financial resources needed to limit global warming at 1.5°C are most likely less than the amount needed to compensate for the financial crises resulting from future climate-related disruptions (World Future Council, 2020). Consequently, the cheapest and most efficient way to handle future climate-related economic crises is, with all likelihood, to take preventive measures against them<sup>29</sup>.

Central banks have reacted with significant asset purchasing power in crises such as the 2007-2008 financial crisis or the Covid pandemic. For instance, the European Central Bank responded to the outbreak of the Covid pandemic with a “Pandemic Emergency Purchase Program” worth 750 billion euro for an immediate tackling of the economic downturn (ECB, 2021). The systemic risk resulting from climate change should be given a similar priority and be regarded as part of the mandate of central banks (Network for Greening the Financial System, 2019b). If Central Banks act now rather than later, climate disaster emergency packages of the future can be avoided or reduced.

3. *It is Nationalbanken’s mandate to pursue price stability.*

Stable energy prices are an essential element of overall price stability, and central banks can foster this by replacing volatile fossil fuels with stable renewal energy systems, which produce electricity at much more stable prices than

fossil-fuel based energy generation (World Future Council, 2020). Therefore, RE investments help prevent damaging fluctuations in (energy) prices. In this way, developing countries, the climate, and Danish renewable energy companies will benefit significantly from SGCBs. And SGCBs can moreover help central banks to fulfil their mandate of *financial stability and price stability*.

Lastly SGCBs can boost Danish exports. Because SG-CB-financed projects in developing countries will create additional demand for RE-technologies and products. Purchasing SGCBs makes especially good sense for central banks of countries like Denmark that produce and deliver RE equipment.

## 5.2.3 Revenue potential

The Danish economy has a total output (GDP) of about 2.3 trillion DKK and a trade surplus in a range of around 200 billion DKK or 9% of GDP<sup>30</sup>. On this basis, Nationalbanken could purchase SGCBs for 5 -15 billion DKK annually (around 0.5 pct. of GDP) without adding any risk to the stability of the Danish currency<sup>31</sup>.

## 5.2.4 Recommendations

*Mechanism 10* recommends that the Danish central bank, Nationalbanken, invest in SGCBs.

The Danish Government must initiate a change of Nationalbanken’s mandate to do so, as the current mandate does not adequately consider the systemic risk presented by climate change.

Nationalbanken should hereafter collaborate with other central banks and development finance institutions (DFIs) to create a model for SGCBs which is attractive not only to the Danish Nationalbanken but also to other central banks. If Nationalbanken decides to purchase SGCBs, it can set a powerful international example.

Nationalbanken can reliably provide revenue of 5-15 billion DKK in SGCBs annually, which is not dependent on approval by the Danish Ministry of Finance and implies no cost to the Danish state or taxpayers. The potential of *blended finance* (explained in the next section) renders possible that 5-15 billion DKK invested by Nationalbanken can mobilise much higher investment volumes, and thus facilitate significant climate-relevant projects in developing countries.

## 5.3. Danish Investment Fund for Developing Countries (IFU)

### 5.3.1 Introduction to IFU

The Danish Investment Fund for Developing Countries (IFU) is making investments in developing and emerging market countries on commercial terms with the dual purpose of creating measurable, beneficial development impact alongside a financial return.

IFU has supported more than 1.300 projects through co-investments with more than 900 Danish companies. By leveraging the state-funded finances through blended finance, IFU has co-invested 227 billion DKK, of which IFU provided 25 billion DKK (IFU, 2022).

The Danish Government has recognized, with its Strategy document for IFU (Ministry of Foreign Affairs, 2017), that current levels of internationally provided ODA are *not* sufficient to achieve the SDGs. Facilitating blended finance projects through IFU thus presents the Danish Government with the opportunity to leverage both domestic and recipient country private finance to achieve marketable sustainable investments. Development Finance Institutions (DFIs), such as the IFU, are in a position to facilitate such investments.

#### Box 4: BLENDED FINANCE – leveraging resources for climate finance

Public resources for climate finance can be increased severalfold if employed in blended finance schemes via Development Finance Institutions (DFIs). The DFI Blended Finance Working Group defines blended finance as “Combining concessional finance from donors or third parties alongside DFIs’ normal own account finance and/or commercial finance from other investors, to develop private sector markets, address the Sustainable Development Goals (SDGs), and mobilise private resources” (DFI Working Group, 2020). Simply put, DFI’s blended concessional finance can unlock and catalyse investments into sustainable investments from primarily private investors.

If non-public investors, for instance, require a 10-12 % risk-adjusted return to invest in a given project, public funds, in the form of grants or long-term contributions to dedicated DFIs, can through blended finance offer guarantees that reduce the risk-adjusted return requirements of other investors to e.g. 3-4%. In this way, by offering guarantees, public funds can facilitate projects in developing countries, which otherwise would not be marketable.

Currently, blended finance is mainly utilised for investments in productive sectors in countries experiencing growth (OECD, 2020b). Tackling the increased need for de-risking funding for e.g. adaptation in the LDCs is not as marketable and thus not as readily available for blended finance. What blended finance can do, however, is to bridge the gap between private investors and the need for developmental finance in middle-income countries with growth potential.

According to the DFI Blended Finance Working Group, 80% of blended finance targets middle-income countries, while low-income countries receive 19% of the investments (DFI Working Group, 2020). However, as little as 6% were allocated to the LDCs, many of which are also considered low-income countries (OECD, 2020b).

Considering that the average private capital leveraged per dollar of blended finance extended is 0.8 to 4 (IFC, 2020) and the private capital leveraged per dollar blended finance extended for climate finance is 1:6, there seem to be significant benefits in investing in climate adaptation and mitigation (DFI Working Group, 2020).

### 5.3.2 High Risk – High Impact Investment in Africa

It is suggested that IFU increase its focus on low-income countries, and thus, accept a higher risk and reduced expected return on investments compared to current practices. This would be a way to go beyond the fact that current climate investments from IFU and Danish pensions funds primarily target wind energy investments in middle-income countries.

Inspiration and valuable learning to reach LDC countries with higher risks can be taken from IFU's project *High Risk – High Impact Investment in Africa* (Ministry of Foreign Affairs, 2021). In this program, 300 million DKK from Danida has been provided for blended finance for projects in lower-income countries (LDCs) in Africa, where significant development outcomes are possible (e.g. decent jobs generated, number of smallholder beneficiaries, installed capacity of affordable renewable energy, mitigated CO<sub>2</sub> emissions, women's financial inclusion).

The *High Risk – High Impact* facility is mainly applied for investments that are outside IFU's normal comfort zone with regards to risk and return. Not only will the risk in terms of country risk (e.g. LDC countries), commercial risk etc. be relatively high, but the risk-adjusted return would also be down to as little as 3-4%, lower than what is normally accepted as a commercial return (approx. 10-12 %) from investing in a given project.

Most of the blended investment capital in "*High Risk – High Impact*" is expected to take the form of equity as it is the most risk-oriented product, which is strongly needed in developing countries.

### 5.3.3 Recommendations to IFU

This report recommends that the IFU prioritises an increase in higher risk – higher impact projects that can target climate projects in least developed countries (LDCs). This would reinforce the support to green projects, including adaptation, with higher concessionality and risk-willingness.

A proportion of the revenues from the various revenue mechanisms outlined in this report could provide extra funds available through 'High Risk – High Impact Investment in Africa' facility as an opportunity to progress on climate change interventions in poor countries.

It would be much better to take the grant elements of blended finance from mechanism 1 to 8 as real "*new and additional finance*" than the current practice of taking money from Danida that instead could be spent on development projects within health, education, democracy, good governance, civil society etc.



# REFERENCES

- Abadie, L., Galarraga, I., and Rübhelke, D. 2013. "An analysis of the causes of the mitigation bias in international climate finance," *Mitigation and Adaptation Strategies for Global Change*, Springer, vol. 18(7), pages 943-955, October.
- Agence Europe 2021. Europe Daily Bulletin No. 12658. Portuguese Presidency of the EU Council relaunches EU-27 discussions on design of FTT.  
<https://agenceurope.eu/en/bulletin/article/12658/1>
- Airspacemag 2016. How Much of the World's Population Has Flown in an Airplane? [www.airspacemag.com/daily-planet/how-much-worlds-population-has-flown-airplane-180957719/](http://www.airspacemag.com/daily-planet/how-much-worlds-population-has-flown-airplane-180957719/)
- Arbejderbevægelsens Erhvervsråd 2018. Skæv fordeling af lavere arveafgift 900 mio. kr. til de ti procent rigeste ved at fjerne arveafgift.  
[www.ae.dk/sites/www.ae.dk/files/dokumenter/analyse/ae\\_900\\_mio-kr-til-de-ti-procent-ved-at-fjerne-arveafgiften.pdf](http://www.ae.dk/sites/www.ae.dk/files/dokumenter/analyse/ae_900_mio-kr-til-de-ti-procent-ved-at-fjerne-arveafgiften.pdf)
- Asen, E. 2020. Carbon Taxes in Europe.  
<https://taxfoundation.org/carbon-taxes-in-europe-2020/>
- BBC 2020. Should we give up flying for the sake of the climate? [www.bbc.com/future/article/20200218-climate-change-how-to-cut-your-carbon-emissions-when-flying](http://www.bbc.com/future/article/20200218-climate-change-how-to-cut-your-carbon-emissions-when-flying)
- Berlingske 2018. Her er Danmarks rigeste mand og de 99 andre på Berlingskes liste over landets 100 mest velhavende familier.  
[www.berlingske.dk/business/se-listen-her-er-danmarks-100-rigeste](http://www.berlingske.dk/business/se-listen-her-er-danmarks-100-rigeste)
- Berlingske 2021a. Sæt arveskatten op.  
[www.berlingske.dk/kommentarer/saet-arveskatten-op](http://www.berlingske.dk/kommentarer/saet-arveskatten-op)
- Berlingske 2021b. Mette Frederiksen er bekymret for mangel på arbejdskraft – men regeringens egen politik får 10.000 sæt hænder til at forsvinde fra arbejdsmarkedet.  
[www.berlingske.dk/politik/mette-frederiksen-er-bekymret-for-mangel-paa-arbejdskraft-men-regeringens](http://www.berlingske.dk/politik/mette-frederiksen-er-bekymret-for-mangel-paa-arbejdskraft-men-regeringens)
- Bloomberg 2021. Europe CO2 Prices May Rise More Than 50% by 2030, EU Draft Shows.  
[www.bloomberg.com/news/articles/2021-06-29/europe-co2-prices-may-rise-more-than-50-by-2030-eu-draft-shows#:~:text=%E2%80%9CThe%20projected%202030%20carbon%20prices,the%20impact%20assessment%20seen%20by](http://www.bloomberg.com/news/articles/2021-06-29/europe-co2-prices-may-rise-more-than-50-by-2030-eu-draft-shows#:~:text=%E2%80%9CThe%20projected%202030%20carbon%20prices,the%20impact%20assessment%20seen%20by)
- CARE 2021. CARE Danmarks anbefalinger til ny udviklingspolitisk strategi.  
[https://care.dk/media/1926/care-dk-s-anbefaling\\_nyudvikling-spolitisk-strategi2021.pdf](https://care.dk/media/1926/care-dk-s-anbefaling_nyudvikling-spolitisk-strategi2021.pdf)
- CEPOS 2020. Formueredegørelse 2020.  
<https://cepos.dk/media/5361/formueredegoerelse-2020.pdf>
- CEPOS, 2021. Formueredegørelse 2021. h  
<https://cepos.dk/artikler/formueredegoerelse-2021/>
- CEVEA 2019. For bedre velfærd og mindre ulighed.  
<http://sf.dk/wp-content/uploads/2019/01/for-bedre-velfaerd-og-mindre-ulighed.pdf>
- Ceva 2021. PROGRESSIV ARVESKAT: Klog og retfærdig finansiering af vores samfund.  
<https://ceva.dk/presse/progressiv-arveskat-klog-og-retfaerdig-finansiering-af-vores-samfund/>
- CFR 2021. Why Climate Finance Is Critical for Accelerating Global Action.  
<https://www.cfr.org/in-brief/why-climate-finance-critical-accelerating-global-action>
- Clean Energy Wire 2021. Understanding the European Union's Emissions Trading System (EU ETS).  
<https://www.cleanenergywire.org/factsheets/understanding-eu-european-unions-emissions-trading-system>
- Climate Change Connection 2021. CO2 EQUIVALENTS.  
<https://climatechangeconnection.org/emissions/co2-equivalents/>
- CNBC 2017. Boeing CEO: Over 80% of the world has never taken a flight. We're leveraging that for growth.  
[www.cnn.com/2017/12/07/boeing-ceo-80-percent-of-people-never-flown-for-us-that-means-growth.html](http://www.cnn.com/2017/12/07/boeing-ceo-80-percent-of-people-never-flown-for-us-that-means-growth.html)
- Concito 2020. Klimabarometeret 2020.  
[https://concito.dk/sites/concito.dk/files/media/document/Klimabarometeret%202020\\_f%C3%A6rdigrapport.pdf](https://concito.dk/sites/concito.dk/files/media/document/Klimabarometeret%202020_f%C3%A6rdigrapport.pdf)
- Danida 2018. MMR Danish Reporting 2018.  
[http://cdr.eionet.europa.eu/dk/eu/mmr/art16\\_finance](http://cdr.eionet.europa.eu/dk/eu/mmr/art16_finance)
- Danmark 2021. Climate adaptation.  
<https://denmark.dk/cop-26-english/subpage-2>
- Danmarks Nationalbank, 2021. Grønne Udstedelser.  
[www.nationalbanken.dk/da/statsgaeld/IR/Sider/Model-for-https://www.dr.dk/interaktiv/webfeature/klima-rejsegroenne-statsobligationer.aspx](http://www.nationalbanken.dk/da/statsgaeld/IR/Sider/Model-for-https://www.dr.dk/interaktiv/webfeature/klima-rejsegroenne-statsobligationer.aspx)
- Danmarks Radio 2018. SÅ MEGET SKADER DIN FLYFERIE.
- Danmarks Radio, 2021. Danmark vil skrue op for klimabistanden fra 2023.  
[www.dr.dk/nyheder/seneste/danmark-vil-skrue-op-klimabistanden-fra-2023-vi-skal-agere-her-og-nu](http://www.dr.dk/nyheder/seneste/danmark-vil-skrue-op-klimabistanden-fra-2023-vi-skal-agere-her-og-nu)
- Danmarks Statistik 2021: FORMUE8A: Nettoformue pr. person på mindst 18 år efter formuens størrelse.  
[www.statistikbanken.dk/statbank5a/SelectVarVal/Define.asp?MainTable=FORMUE8A&PLanguage=0&PXSid=0&wsid=cftree](http://www.statistikbanken.dk/statbank5a/SelectVarVal/Define.asp?MainTable=FORMUE8A&PLanguage=0&PXSid=0&wsid=cftree)
- De Økonomiske Råd 2011. Dansk økonomi. Lighed, omfordeling og effektivitet.  
<https://dors.dk/oevrige-publikationer/kronikker-artikler/indkomstlighed-godt-samfundets-velstand>
- De Økonomiske Råd 2019. DANSK ØKONOMI FORÅR 2019. SAMMENFATNING OG ANBEFALINGER KONJUNKTUR OG OFFENTLIGE FINANSER KAPITALINDKOMSTBESKATNING.  
[https://dors.dk/files/media/rapporter/2019/f19/endelig\\_rapport/dansk\\_oekonomi\\_foaraar\\_2019.pdf](https://dors.dk/files/media/rapporter/2019/f19/endelig_rapport/dansk_oekonomi_foaraar_2019.pdf)

- De Økonomiske Råd 2021. DANSK KLIMAPOLITIK FREM MOD 2030  
[https://dors.dk/files/media/rapporter/2020/m20/diskussiono-plaeg/diskussionsoplaeg\\_oekonomi\\_og\\_miljoe\\_2020\\_web.pdf](https://dors.dk/files/media/rapporter/2020/m20/diskussiono-plaeg/diskussionsoplaeg_oekonomi_og_miljoe_2020_web.pdf)
- DFI Working Group, 2020. Blended Concessional Finance for Private Sector Projects, Joint Report.  
[www.ifc.org/wps/wcm/connect/cdd65b83-f128-4046-a919-38507141ead5/202012-DFI-BCF-Joint-Report.pdf?MOD=AJPERES&CVID=npTbunN](http://www.ifc.org/wps/wcm/connect/cdd65b83-f128-4046-a919-38507141ead5/202012-DFI-BCF-Joint-Report.pdf?MOD=AJPERES&CVID=npTbunN)
- DI Business 2017. Topskatten rammer hårdt i udkanten.  
[www.danskindustri.dk/di-business/arkiv/blogs/2017/12/topskatten-rammer-hardest-i-udkanten/](http://www.danskindustri.dk/di-business/arkiv/blogs/2017/12/topskatten-rammer-hardest-i-udkanten/)
- Donor tracker 2021. France June 30, 2021.  
<https://donortracker.org/country/france>
- ECB, 2021. What is the pandemic emergency purchase programme (PEPP)?  
[www.ecb.europa.eu/explainers/tell-me/html/pepp.en.html](http://www.ecb.europa.eu/explainers/tell-me/html/pepp.en.html)
- EMBER 2021. Daily Carbon Prices.  
<https://ember-climate.org/data/carbon-price-viewer/>
- Energistyrelsen 2020. 2019 Data, tabeller, statistikker og kort. Energistatistik 2019.  
[https://ens.dk/sites/ens.dk/files/Statistik/energistatistik2019\\_dk-webtilg.pdf](https://ens.dk/sites/ens.dk/files/Statistik/energistatistik2019_dk-webtilg.pdf)
- Energistyrelsen 2021. Global Afrapportering 2021.  
<https://ens.dk/service/fremskrivninger-analyser-modeller/global-afrapportering-2021>
- EU Commission 2013. COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT. Accompanying the document. Proposal for a COUNCIL DIRECTIVE implementing enhanced cooperation in the area of financial transaction tax Analysis of policy options and impacts  
[https://ec.europa.eu/taxation\\_customs/sites/default/files/resources/documents/taxation/swd\\_2013\\_28\\_en.pdf](https://ec.europa.eu/taxation_customs/sites/default/files/resources/documents/taxation/swd_2013_28_en.pdf)
- EU Commission 2016. The EU Emissions Trading System (EU ETS).  
[https://ec.europa.eu/clima/sites/clima/files/factsheet\\_ets\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/factsheet_ets_en.pdf)
- EU Commission 2021a. Carbon leakage.  
[https://ec.europa.eu/clima/policies/ets/allowances/leakage\\_en](https://ec.europa.eu/clima/policies/ets/allowances/leakage_en)
- EU Commission 2021b. Carbon Border Adjustment Mechanism: Questions and Answers.  
[https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_21\\_3661](https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_3661)
- EU Commission 2021c. Union Registry - 06/04/2021 - Verified Emissions for 2020.  
[https://ec.europa.eu/clima/sites/default/files/ets/registry/docs/verified\\_emissions\\_2020.xlsx](https://ec.europa.eu/clima/sites/default/files/ets/registry/docs/verified_emissions_2020.xlsx)
- EU Technical Expert Group, 2020a. Taxonomy: Final report of the Technical Expert Group on Sustainable Finance  
[https://ec.europa.eu/info/sites/default/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy\\_en.pdf](https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf)
- EU Technical Expert Group, 2020b. Usability Guide EU Green Bond Standard.  
[https://ec.europa.eu/info/sites/default/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/200309-sustainable-finance-teg-green-bond-standard-usability-guide\\_en.pdf](https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-green-bond-standard-usability-guide_en.pdf)
- Euroactiv 2020. Germany raises €6.5 bln from first-ever green bond.  
[www.euractiv.com/section/energy-environment/news/germany-raises-e6-5-bln-from-first-ever-green-bond/](http://www.euractiv.com/section/energy-environment/news/germany-raises-e6-5-bln-from-first-ever-green-bond/)
- Europaparlamentet 2019. CO2-udslip fra luft- og skibsfart: Fakta og tal.  
[www.europarl.europa.eu/news/da/headlines/society/20191129S-TO67756/co2-udslip-fra-luft-og-skibsfart-fakta-og-tal](http://www.europarl.europa.eu/news/da/headlines/society/20191129S-TO67756/co2-udslip-fra-luft-og-skibsfart-fakta-og-tal)
- European Parliament. Taxing the digital economy.  
[www.europarl.europa.eu/RegData/etudes/BRIE/2021/698761/EPRS\\_BRI\(2021\)698761\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698761/EPRS_BRI(2021)698761_EN.pdf)
- Filippone, A. and Parkes, B. 2021. Evaluation of commuter airplane emissions: A European case study.  
[www.sciencedirect.com/science/article/pii/S1361920921002777?via%3DIihub](http://www.sciencedirect.com/science/article/pii/S1361920921002777?via%3DIihub)
- Financial Times 2021. Bank of England given new mandate to buy 'green' bonds.  
[www.ft.com/content/f436d69b-2bf0-48cd-bb34-644856fba17f](http://www.ft.com/content/f436d69b-2bf0-48cd-bb34-644856fba17f)
- Finansministeriet 2019. Svar på Finansudvalgets spørgsmål nr. 235 (alm. del) af 7.december 2018.  
[www.ft.dk/samling/20181/almudel/fiu/spm/579/svar/1576666/2049772/index.htm](http://www.ft.dk/samling/20181/almudel/fiu/spm/579/svar/1576666/2049772/index.htm)
- Finansministeriet 2020a. Finanslov for finansåret 2021.  
<https://fm.dk/media/18433/fl21a38.pdf>
- Finansministeriet 2020b. Aftale mellem regeringen og Venstre, Radikale Venstre, Socialistisk Folkeparti og Det Konservative Folkeparti om: Grøn skattereform (8. december 2020).  
[https://fm.dk/media/18517/aftale-om-groen-skattereform\\_a.pdf](https://fm.dk/media/18517/aftale-om-groen-skattereform_a.pdf)
- Finansministeriet 2020c. Ulighedsredegørelsen.  
[https://fm.dk/media/18359/ulighedsredegørelsen-2020\\_web.pdf](https://fm.dk/media/18359/ulighedsredegørelsen-2020_web.pdf)
- Finansministeriet 2021a. Kingdom of Denmark Green Bond Framework.  
<https://fm.dk/media/25347/kingdom-of-denmark-green-bond-framework.pdf>
- Finansministeriet 2021b. Danmark er nu klar til at udstede grønne statsobligationer.  
[https://fm.dk/nyheder/nyhedsarkiv/2021/december/danmark-er-nu-klar-til-at-udstede-groenne-statsobligationer/?fbclid=IwAR1njqjCylnFwlyDqLwgjw004\\_9835e3gyfnb-v7cET\\_lQQXBhnfLBmzaAA](https://fm.dk/nyheder/nyhedsarkiv/2021/december/danmark-er-nu-klar-til-at-udstede-groenne-statsobligationer/?fbclid=IwAR1njqjCylnFwlyDqLwgjw004_9835e3gyfnb-v7cET_lQQXBhnfLBmzaAA)
- Finansministeriet 2021c. Finanslov for finansåret 2021.  
<https://fm.dk/udgivelser/2021/februar/finansloven-for-2021/>
- FitchWire 2021: High EU Carbon Prices to Weigh on Steelmakers' Profitability.  
[www.fitchratings.com/research/corporate-finance/high-eu-carbon-prices-to-weigh-on-steelmakers-profitability-12-05-2021](http://www.fitchratings.com/research/corporate-finance/high-eu-carbon-prices-to-weigh-on-steelmakers-profitability-12-05-2021)
- Forsikring og Pension 2021. Grønne danske statsobligationer skal følge europæiske standarder, hvis de skal blive en succes.



- [www.forsikringogpension.dk/nyheder/groenne-danske-stats-obligationer-skal-foelge-europaeiske-standarder-hvis-de-skal-blive-en-succes/](http://www.forsikringogpension.dk/nyheder/groenne-danske-stats-obligationer-skal-foelge-europaeiske-standarder-hvis-de-skal-blive-en-succes/)
- Global Landscapes Forum 2020. What are – and aren't – nature-based solutions?  
<https://news.globallandscapesforum.org/48171/what-are-and-arent-nature-based-solutions/>
- GoClimate 2020. What is the carbon footprint of the internet and streaming?  
<https://www.goclimat.com/se/blog/what-is-the-carbon-footprint-of-the-internet-and-streaming/>
- Gössling et al. 2020. Global Environmental Change. Volume 65, November 2020, art. 102194. The global scale, distribution and growth of aviation: Implications for climate change.  
[www.sciencedirect.com/science/article/pii/S0959378020307779](http://www.sciencedirect.com/science/article/pii/S0959378020307779)
- Henry, J. S. 2021. Submission to New York State Assembly: the case for Financial Transactions Taxes.  
<https://taxjustice.net/2021/02/19/submission-to-new-york-state-assembly-the-case-for-financial-transactions-taxes/>
- IFC, 2020. THE WHY AND HOW OF BLENDED FINANCE.  
[www.ifc.org/wps/wcm/connect/768bcbe9-f8e9-4d61-a179-54e5cc315424/202011-New-IFC-Discussion-Paper.pdf?MOD=AJPERES&CVID=noOdb6M](http://www.ifc.org/wps/wcm/connect/768bcbe9-f8e9-4d61-a179-54e5cc315424/202011-New-IFC-Discussion-Paper.pdf?MOD=AJPERES&CVID=noOdb6M)
- IFU, 2022. Om IFU. Publication date unknow. Accessed 2022.  
<https://www.ifu.dk/om-ifu/>
- Information 2019. Flyafgifter på passagerer, brændstof eller CO2 – hvad er mest smart?  
[www.information.dk/indland/2019/07/flyafgifter-paa-passagerer-braendstof-co2-mest-smart](http://www.information.dk/indland/2019/07/flyafgifter-paa-passagerer-braendstof-co2-mest-smart)
- Information 2019b. Lav en skat på formuer over 7,5 millioner – det kan da ikke være så svært.  
[www.information.dk/debat/2019/01/lav-skat-paa-formuer-75-millioner-kan-vaere-saa-svaert](http://www.information.dk/debat/2019/01/lav-skat-paa-formuer-75-millioner-kan-vaere-saa-svaert)
- Information 2020. De Gule Veste to år: Praktiske visioner for fremtidens demokrati.  
[www.information.dk/moti/2020/11/gule-veste-to-aar-praktiske-visioner-fremtidens-demokrati?lst\\_tag](http://www.information.dk/moti/2020/11/gule-veste-to-aar-praktiske-visioner-fremtidens-demokrati?lst_tag)
- Ingeniøren 2019. Flytrafik udleder rekordmeget CO2: Stiger 26 pct. på fem år.  
<https://ing.dk/artikel/flytrafik-udleder-rekordmeget-co2-stiger-26-pct-paa-fem-aar-225151>
- IRENA, 2018. Scaling up renewable energy investment in emerging markets.  
[https://coalition.irena.org/-/media/Files/IRENA/Coalition-for-Action/Publication/Coalition-for-Action\\_Scaling-up-RE-Investment\\_2018.pdf](https://coalition.irena.org/-/media/Files/IRENA/Coalition-for-Action/Publication/Coalition-for-Action_Scaling-up-RE-Investment_2018.pdf)
- JDSUPRA 2021. Guidelines on Italian Digital Services Tax.  
[www.jdsupra.com/legalnews/guidelines-on-italian-digital-services-9825918/](http://www.jdsupra.com/legalnews/guidelines-on-italian-digital-services-9825918/)
- Kagan, J. and Berry-Johnson, J. 2020. Horizontal Equity.  
[www.investopedia.com/terms/h/horizontalequity.asp](http://www.investopedia.com/terms/h/horizontalequity.asp)
- Kagan, J. & Uradu, L. D. 2020. Vertical Equity.  
[www.investopedia.com/terms/v/vertical\\_equity.asp](http://www.investopedia.com/terms/v/vertical_equity.asp)
- KEFM, 2020. Danmarks Grønne Fremtidsfond og dansk indsats for fossilfri eksportkredit.  
[www.ft.dk/samling/20191/almdel/KEF/bilag/389/2226271/index.htm](http://www.ft.dk/samling/20191/almdel/KEF/bilag/389/2226271/index.htm)
- Klimarådet 2019. Regulering af flysektoren.  
<https://klimaraadet.dk/da/analyser/regulering-af-flysektoren>
- Klimarådet 2020. Kendte veje og nye spor til 70 procents reduktion.  
[www.klimaraadet.dk/da/nyheder/klimaraadet-ny-rapport-om-vejen-til-70-procentsmaalet-i-2030](http://www.klimaraadet.dk/da/nyheder/klimaraadet-ny-rapport-om-vejen-til-70-procentsmaalet-i-2030)
- Klimarådet 2021. Statusrapport 2021.  
<https://klimaraadet.dk/da/rapporter/statusrapport-2021>
- Koch, L. 2020. Grønne obligationer kan betale energigør – og spare 150 mia. kr.  
[www.lighedstanker.dk/post/gr%C3%B8nne-obligationer-kan-betale-energi%C3%B8er-og-spare-150-mia-kr](http://www.lighedstanker.dk/post/gr%C3%B8nne-obligationer-kan-betale-energi%C3%B8er-og-spare-150-mia-kr)
- Kraener, M, 2020. Germany's inaugural green bond... not so green after all.  
[www.ceps.eu/germanys-inaugural-green-bond-not-so-green-after-all/](http://www.ceps.eu/germanys-inaugural-green-bond-not-so-green-after-all/)
- Kraka 2020. Small Great Nation. A Climate Reform that Delivers the Magic 70 Percent.  
[https://kraka.dk/sites/default/files/public/sgn\\_a\\_climate\\_reform\\_that\\_delivers\\_the\\_magic\\_70\\_percent\\_.pdf](https://kraka.dk/sites/default/files/public/sgn_a_climate_reform_that_delivers_the_magic_70_percent_.pdf)
- Kulturministeriet 2022: Udspil til ny medieaftale: Den demokratiske samtale skal styrkes.  
[www.regeringen.dk/media/11046/medieudspil\\_0302.pdf](http://www.regeringen.dk/media/11046/medieudspil_0302.pdf)
- Larsson, J. and Kamb, A. 2021. Semestern och klimatet. Metodrapport version 2.1.  
[www.klimatsmartsemester.se/sites/default/files/metodrapport-klimatsmart-semester-version2-1.pdf](http://www.klimatsmartsemester.se/sites/default/files/metodrapport-klimatsmart-semester-version2-1.pdf)
- Lee, D. S., Fahey, D. W., Skowron, A., Allen, M. R., Burkhardt, U., Chen, Q., Doherty, S. J., Freeman, S., Forster, P. M., Fuglestedt, J., Gettelman, A., De León, R. R., Lim, L. L., Lund, M. T., Millar, R. J., Owen, B., Penner, J. E., Pitari, G., Prather, M. J., Sausen, R., Wilcox, L. J. 2021. The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018.  
<https://doi.org/10.1016/j.atmosenv.2020.117834>
- London School of Economics 2015. New study concludes increases in energy costs are unlikely to have much effect on European businesses and trade.  
[www.lse.ac.uk/granthaminstitute/news/new-report-concludes-increases-in-energy-costs-are-unlikely-to-have-much-effect-on-european-businesses-and-trade/](http://www.lse.ac.uk/granthaminstitute/news/new-report-concludes-increases-in-energy-costs-are-unlikely-to-have-much-effect-on-european-businesses-and-trade/)
- Masanet, E., Shehabi, A., Lei, N. Smith, S. and Koomey, J. Recalibrating global data center energy-use estimates.  
[www.science.org/doi/10.1126/science.aba3758](http://www.science.org/doi/10.1126/science.aba3758)
- McKinsey 2020: Climate change hits the poor hardest. Here's how to protect them.  
[www.mckinsey.com/business-functions/sustainability/our-insights/sustainability-blog/climate-change-hits-the-poor-hardest-heres-how-to-protect-them#](http://www.mckinsey.com/business-functions/sustainability/our-insights/sustainability-blog/climate-change-hits-the-poor-hardest-heres-how-to-protect-them#)

- Mellemfolkeligt Samvirke 2019. MS NOTAT DE RIGESTE 100 DANSKE FAMILIER ER OP TIL 7 GANGE RIGERE END SKATTEMINISTERIET OPGØR.  
[www.ms.dk/sites/default/files/filarkiv/formueopgoelser\\_i\\_danmark-ms10105.pdf](http://www.ms.dk/sites/default/files/filarkiv/formueopgoelser_i_danmark-ms10105.pdf)
- Mercy Corps 2021. The facts: How climate change affects people living in poverty.  
[www.mercycorps.org/blog/climate-change-poverty](http://www.mercycorps.org/blog/climate-change-poverty)
- Ministry of Finance, 2019. Green Bonds are bonds of which the proceeds will be allocated to green, or climate-related, expenditures and investments.  
<https://english.dsti.nl/subjects/green-bonds>
- Ministry of Foreign Affairs, 2016. Private Capital for Sustainable Development.  
[www.convergence.finance/resource/5zik8CqnWEMCAgOOeQiY0k/view](http://www.convergence.finance/resource/5zik8CqnWEMCAgOOeQiY0k/view)
- Ministry of Foreign Affairs, 2017. The Ministry of Foreign Affairs' Strategy for the Investment Fund for Developing Countries (IFU) (2017-2021).  
[www.ifu.dk/wp-content/uploads/2019/07/UM-strategy-for-IFU.pdf](http://www.ifu.dk/wp-content/uploads/2019/07/UM-strategy-for-IFU.pdf)
- Ministry of Foreign Affairs 2019. Meeting in the Council for Development Policy 29 October 2019.  
[www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewj18PaYu6LyAhWBKewKHZ32BXIQFnoECACQAw&url=https%3A%2F%2Fum.dk%2F~%2Fmedia%2Fum%2Fenglish-site%2Fdocuments%2Fdanida%2Fabout-danida%2Fdanida%2520transparency%2Fdocuments%2Fcouncil%2520for%2520development%2520policy%2F2019%2F06%2520ifu%2520high%2520risk%2520%2520high%2520impact%2520investment%2520in%2520africa%2520samlet.pdf%3F%3Den&usq=AOvVaw1-EOINzEqP6KdT2unXeu2k](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewj18PaYu6LyAhWBKewKHZ32BXIQFnoECACQAw&url=https%3A%2F%2Fum.dk%2F~%2Fmedia%2Fum%2Fenglish-site%2Fdocuments%2Fdanida%2Fabout-danida%2Fdanida%2520transparency%2Fdocuments%2Fcouncil%2520for%2520development%2520policy%2F2019%2F06%2520ifu%2520high%2520risk%2520%2520high%2520impact%2520investment%2520in%2520africa%2520samlet.pdf%3F%3Den&usq=AOvVaw1-EOINzEqP6KdT2unXeu2k)
- MMR Danish reporting 2019. 1\_MMR\_Danish\_reporting\_-\_commitments\_2019\_\_14-10-20\_.  
[https://cdr.eionet.europa.eu/dk/eu/mmr/art16\\_finance/envx4he4g/1\\_MMR\\_Danish\\_reporting\\_-\\_commitments\\_2019\\_\\_14-10-20\\_.xlsx/manage\\_document](https://cdr.eionet.europa.eu/dk/eu/mmr/art16_finance/envx4he4g/1_MMR_Danish_reporting_-_commitments_2019__14-10-20_.xlsx/manage_document)
- Nature 2018. Curbing global warming could save US\$20 trillion.  
[www.nature.com/articles/d41586-018-05219-5?utm\\_source=briefing-wk&utm\\_medium=email&utm\\_campaign=briefing&utm\\_content=20180525](http://www.nature.com/articles/d41586-018-05219-5?utm_source=briefing-wk&utm_medium=email&utm_campaign=briefing&utm_content=20180525)
- Nationalbanken 2019, Nationalbanken optaget som medlem af Network for Greening the Financial System.  
[www.nationalbanken.dk/da/presse/Sider/2019/04/DNN201904007.aspx](http://www.nationalbanken.dk/da/presse/Sider/2019/04/DNN201904007.aspx)
- Nationalbanken, 2021. Nationalbankens formål.  
[www.nationalbanken.dk/da/om\\_nationalbanken/formaal/Sider/default.aspx](http://www.nationalbanken.dk/da/om_nationalbanken/formaal/Sider/default.aspx)
- Network for Greening the Financial System, 2019a. First comprehensive report, A call for action - Climate change as a source of financial risk.  
[www.banque-france.fr/search-es?term=ngfs+first+compre+hensive+report+++17042019+0](http://www.banque-france.fr/search-es?term=ngfs+first+compre+hensive+report+++17042019+0)
- Network for Greening the Financial System, 2019b. A call for action Climate change as a source of financial risk.  
<https://www.ngfs.net/en/first-comprehensive-report-call-action>
- OECD (2008), Growing Unequal?: Income Distribution and Poverty in OECD Countries,  
[www.oecd-ilibrary.org/social-issues-migration-health/growing-unequal\\_9789264044197-en](http://www.oecd-ilibrary.org/social-issues-migration-health/growing-unequal_9789264044197-en)
- OECD (2011), Divided We Stand: Why Inequality Keeps Rising, OECD Publishing, Paris.  
[www.oecd-ilibrary.org/social-issues-migration-health/the-causes-of-growing-inequalities-in-oecd-countries\\_9789264119536-en](http://www.oecd-ilibrary.org/social-issues-migration-health/the-causes-of-growing-inequalities-in-oecd-countries_9789264119536-en)
- OECD 2015. In It Together - Why Less Inequality Benefits All.  
[www.oecd.org/els/soc/OECD2015-In-It-Together-Chapter1-Overview-Inequality.pdf](http://www.oecd.org/els/soc/OECD2015-In-It-Together-Chapter1-Overview-Inequality.pdf)
- OECD (2015), All on Board: Making Inclusive Growth Happen, OECD Publishing, Paris.  
[www.oecd-ilibrary.org/development/all-on-board\\_9789264218512-en](http://www.oecd-ilibrary.org/development/all-on-board_9789264218512-en)
- OECD (2018), A Broken Social Elevator? How to Promote Social Mobility, OECD Publishing, Paris.  
[www.oecd-ilibrary.org/social-issues-migration-health/broken-elevator-how-to-promote-social-mobility\\_9789264301085-en](http://www.oecd-ilibrary.org/social-issues-migration-health/broken-elevator-how-to-promote-social-mobility_9789264301085-en)
- OECD (2019), Under Pressure: The Squeezed Middle Class, OECD Publishing, Paris.  
[www.oecd-ilibrary.org/social-issues-migration-health/under-pressure-the-squeezed-middle-class\\_689afed1-en](http://www.oecd-ilibrary.org/social-issues-migration-health/under-pressure-the-squeezed-middle-class_689afed1-en)
- OECD 2020a. Climate Finance Provided and Mobilised by Developed Countries in 2013-18' infographic (cross-cutting ligeligt fordelt på adaptation og mitigation).  
[www.oecd.org/environment/climate-finance-provided-and-mobilised-by-developed-countries-in-2013-18-f0773d55-en.htm](http://www.oecd.org/environment/climate-finance-provided-and-mobilised-by-developed-countries-in-2013-18-f0773d55-en.htm)
- OECD, 2020b. Blended finance in the LDCs 2020.  
[www.oecd-ilibrary.org/sites/57620d04-en/index.html?itemId=/content/publication/57620d04-en](http://www.oecd-ilibrary.org/sites/57620d04-en/index.html?itemId=/content/publication/57620d04-en)
- OECD 2021a. Climate Finance Provided and Mobilised by Developed Countries: Aggregate Trends Updated with 2019 Data.  
[www.oecd.org/env/climate-finance-provided-and-mobilised-by-developed-countries-aggregate-trends-updated-with-2019-data-03590fb7-en.htm](http://www.oecd.org/env/climate-finance-provided-and-mobilised-by-developed-countries-aggregate-trends-updated-with-2019-data-03590fb7-en.htm)
- OECD 2021b. Inheritance taxation in OECD countries.  
[www.oecd.org/tax/tax-policy/inheritance-taxation-in-oecd-countries-brochure.pdf](http://www.oecd.org/tax/tax-policy/inheritance-taxation-in-oecd-countries-brochure.pdf)
- OECD 2021c. Review of the arguments for and against inheritance taxation.  
<https://www.oecd-ilibrary.org/sites/6315055c-en/index.html?itemId=/content/component/6315055c-en>
- OECD 2021d. Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy.  
[www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2021.pdf](http://www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2021.pdf)
- Oxfam 2020. Climate Finance Shadow Report 2020.  
[www.oxfam.org/en/research/climate-finance-shadow-report-2020](http://www.oxfam.org/en/research/climate-finance-shadow-report-2020)
- Oxfam 2020b. Confronting Carbon Inequality.  
[www.oxfam.org/en/research/confronting-carbon-inequality](http://www.oxfam.org/en/research/confronting-carbon-inequality)

- Oxenløwe, L. K. 2020. Skal vi enerigmærke it-services og software? <https://infinet.dk/forretningsudvikling/webinar-skal-vi-energi-maerke-it-services-og-software/>
- Piketty, T. and G. Zucman 2015. Wealth and Inheritance in the Long Run, Elsevier. Politikken 2019. Efter rekordår på stribe flyver danskerne nu lidt mindre. <https://politiken.dk/rejser/art7507338/Efter-rekord%C3%A5r-p%C3%A5-stribe-flyver-danskerne-nu-lidt-mindre>
- Possible 2021. Elite Status. <https://static1.squarespace.com/static/5d30896202a18c0001b49180/t/605a0951f9b7543b55bb003b/1616513362894/Elite+Status+Global+inequalities+in+flyng.pdf>
- PwC 2017. Unequal taxation in a digital world – a challenge for the Nordic media industry. [https://tu.se/wp-content/uploads/2017/05/PwC\\_rapport\\_mediebedriftene.pdf](https://tu.se/wp-content/uploads/2017/05/PwC_rapport_mediebedriftene.pdf)
- Retsinformation 2020. Lov om klima. [www.retsinformation.dk/eli/lta/2020/965](http://www.retsinformation.dk/eli/lta/2020/965)
- Reuters 2019. Debut Dutch green bond lures more than 20 bln euros of orders. [www.reuters.com/article/us-netherlands-bonds-green/debut-dutch-green-bond-lures-more-than-20-bln-euros-of-orders-idUSKCN1SR16W](http://www.reuters.com/article/us-netherlands-bonds-green/debut-dutch-green-bond-lures-more-than-20-bln-euros-of-orders-idUSKCN1SR16W)
- Reuters 2021: EU carbon price hits record high above 45 euros a tonne. [www.reuters.com/business/energy/eu-carbon-price-hits-record-high-above-45-euros-tonne-2021-04-20/](http://www.reuters.com/business/energy/eu-carbon-price-hits-record-high-above-45-euros-tonne-2021-04-20/)
- Schulze, E. 2021. Taxing Digital Services – Compensating for the Loss of Competitiveness. [https://ecipe.org/publications/taxing-digital-services/#\\_ftn1](https://ecipe.org/publications/taxing-digital-services/#_ftn1)
- Siri-kommissionen 4.0. 2021. DIGITALISERING AF KLIMAKAMPEN. <https://ida.dk/media/8271/klima-og-it-2021-09-opslag.pdf>
- Skatteministeriet 2017. Skråt skatteloft - en historisk oversigt. [www.skm.dk/skattetal/satser/skattehistorik/skraat-skatteloft-en-historisk-oversigt](http://www.skm.dk/skattetal/satser/skattehistorik/skraat-skatteloft-en-historisk-oversigt)
- Skatteministeriet 2019a. Hermed sendes svar på spørgsmål nr. 9 af 7. oktober 2019 (alm. del). Spørgsmålet er stillet efter ønske fra Kathrine Olldag (RV). [www.ft.dk/samling/20191/almdel/sau/spm/9/svar/1601277/2095357.pdf](http://www.ft.dk/samling/20191/almdel/sau/spm/9/svar/1601277/2095357.pdf)
- Skatteministeriet 2019b. SAU Alm.del - endeligt svar på spørgsmål 9. [www.ft.dk/samling/20191/almdel/sau/spm/9/svar/1601277/2095357.pdf](http://www.ft.dk/samling/20191/almdel/sau/spm/9/svar/1601277/2095357.pdf)
- Skatteministeriet 2019c. Skatteøkonomisk redegørelse 2019. [www.skm.dk/media/5010/skatteoekonomisk-redegoerelse-2019.pdf](http://www.skm.dk/media/5010/skatteoekonomisk-redegoerelse-2019.pdf)
- Skatteministeriet 2020a. Aftale mellem regeringen, Radikale Venstre, Socialistisk Folkeparti og Enhedslisten om: Grøn omstilling af vejtransporten (4. december 2020). [www.skm.dk/media/7753/aftaletekst-aftale-om-groen-omstilling-af-vejtransporten.pdf](http://www.skm.dk/media/7753/aftaletekst-aftale-om-groen-omstilling-af-vejtransporten.pdf)
- Skatteministeriet 2020b. Prisændring for konventionelle biler ved Aftale om grøn omlægning af vejtransporten. [www.skm.dk/media/7756/faktaark-prisaendring-for-konventionelle-biler-ved-aftale-om-groen-omlaegning-af-vejtransporten.pdf](http://www.skm.dk/media/7756/faktaark-prisaendring-for-konventionelle-biler-ved-aftale-om-groen-omlaegning-af-vejtransporten.pdf)
- Skatteministeriet 2020c. Skatteudvalget 2019-20 SAU Alm. del - endeligt svar på spørgsmål 603. [www.ft.dk/samling/20191/almdel/sau/spm/603/svar/1687278/2240631.pdf](http://www.ft.dk/samling/20191/almdel/sau/spm/603/svar/1687278/2240631.pdf)
- Slots- og Kulturstyrelsen 2017. GLOBALISERINGEN AF DEN DANSKE MEDIEBRANCHE [https://journalistforbundet.dk/sites/default/files/inline-files/Final%20report%20Globalisering%20af%20den%20danske%20mediebranche\\_1.pdf](https://journalistforbundet.dk/sites/default/files/inline-files/Final%20report%20Globalisering%20af%20den%20danske%20mediebranche_1.pdf)
- Sørensen, P.B. 2020. Optimal CO<sub>2</sub>-beskatning i en lille åben økonomi med kulstoflækage og international handel med CO<sub>2</sub>-kvoter. Working paper, November 2020.
- The Guardian 2020. World's richest 1% cause double CO<sub>2</sub> emissions of poorest 50%, says Oxfam \_ Greenhouse gas emissions. [www.theguardian.com/environment/2020/sep/21/worlds-richest-1-cause-double-co2-emissions-of-poorest-50-says-oxfam](http://www.theguardian.com/environment/2020/sep/21/worlds-richest-1-cause-double-co2-emissions-of-poorest-50-says-oxfam)
- The World Bank 2019. Report of the High-Level Commission on Carbon Pricing and Competitiveness. World Bank Group, Washington, D.C. <https://documents1.worldbank.org/curated/en/486921568877882882/pdf/Report-of-the-High-Level-Commission-on-Carbon-Pricing-and-Competitiveness.pdf>
- The World Bank 2021a. Gini Index. <https://data.worldbank.org/indicator/SI.POV.GINI/>
- The World Bank 2021b. Digital Development Overview. [www.worldbank.org/en/topic/digitaldevelopment/overview](http://www.worldbank.org/en/topic/digitaldevelopment/overview)
- UN General Assembly 1970. International Development Strategy for the Second United Nations Development Decade”, UN General Assembly Resolution 2626 (XXV), 24 October 1970, paragraph 43 <https://digitallibrary.un.org/record/201726?ln=en>
- UNEP 2020. Emission GAP report. [www.unep.org/emissions-gap-report-2020](http://www.unep.org/emissions-gap-report-2020)
- UNFCCC, 2015. The Paris Agreement. [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf)
- UNFCCC 2018. Denmark's Third Biennial Report. <https://unfccc.int/documents/198837>
- United Nations 2021a. The trillion dollar climate finance challenge (and opportunity). <https://news.un.org/en/story/2021/06/1094762>
- United Nations 2021b. State of Finance for Nature. [www.unep.org/resources/state-finance-nature](http://www.unep.org/resources/state-finance-nature)
- Wolff, E. 2015. *Inheriting Wealth in America. Future Boom or Bust?*, Oxford University Press.

World Future Council 2018.  
FINANCING 100% RENEWABLE ENERGY FOR ALL IN TANZANIA  
[www.worldfuturecouncil.org/wp-content/uploads/2018/07/Financing-100RE-For-All-In-Tanzania\\_Matthias-Kroll\\_06-2018.pdf](http://www.worldfuturecouncil.org/wp-content/uploads/2018/07/Financing-100RE-For-All-In-Tanzania_Matthias-Kroll_06-2018.pdf)

World Future Council 2020. TACKLING THE CLIMATE CRISIS AND THE CORONA PANDEMIC RECESSION.  
[www.worldfuturecouncil.org/wp-content/uploads/2020/05/Tackling-the-climate-crises-and-the-corona-pandemic-recession-2-1.pdf](http://www.worldfuturecouncil.org/wp-content/uploads/2020/05/Tackling-the-climate-crises-and-the-corona-pandemic-recession-2-1.pdf)

92-gruppen, 2021. Position fra 92-gruppen og Globalt Fokus om den danske klimafinansiering.  
[www.92grp.dk/vi-mener-kategorien/vi-mener-miljo-og-bistand/622-position-fra-92-gruppen-og-globalt-fokus-om-den-danske-klimafinansiering.html](http://www.92grp.dk/vi-mener-kategorien/vi-mener-miljo-og-bistand/622-position-fra-92-gruppen-og-globalt-fokus-om-den-danske-klimafinansiering.html)

Økonomisk Ugebrev 2021. Danmarks 100 rigeste.  
<https://ugebrev.dk/kampagne/danmarks-100-rigeste-2021/#:~:text=Nu%20er%20den%20her%20%E2%80%93%20hent,som%20interesserer%20de%20fleste%20danskere>

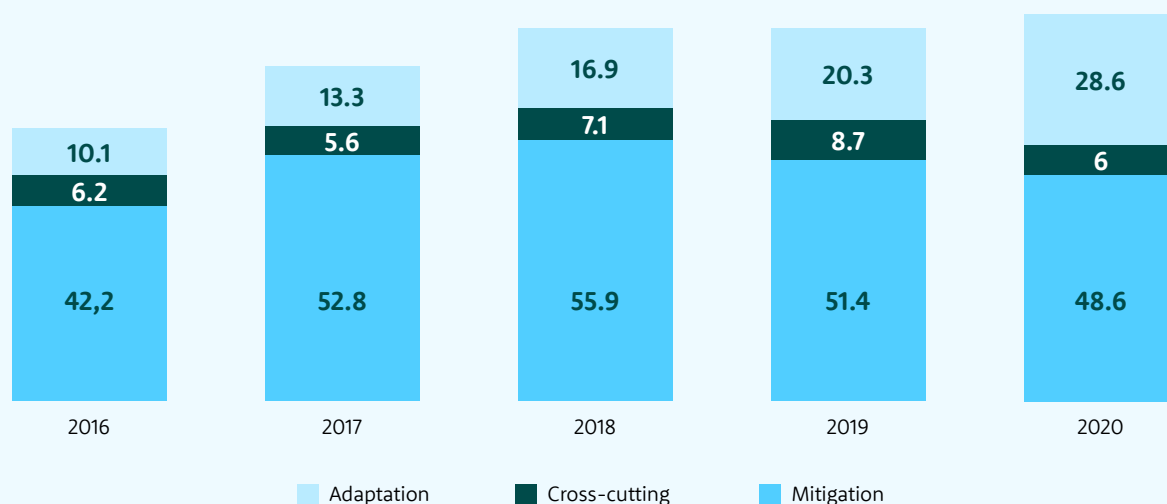


# ENDNOTES

- 1 The fair share of 5 billion DKK is calculated based on relative GDP amongst the signees of the Paris Agreement. See CARE Denmark's Policy Brief about fair share for Denmark (March 2022) at this link: <https://care.dk/media/2201/danmark-betaler-ikke-sin-klimabistand.pdf>
- 2 In 2020, mitigation represented the majority (58%) of total climate finance provided and mobilized by developed countries. Mitigation finance focused on activities in the energy and transport sectors. In contrast, adaptation finance focused on activities in the water supply and sanitation sector; and agriculture, forestry and fishing, which together accounted for 34% of total climate finance provided and mobilised. Source OECD report "Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020."
- 3 USD 83.3 billion was in 2020 provided and mobilised jointly by developed countries for climate action in developing countries (this was 78.3 billion USD in 2018). Mitigation finance remained the majority, but adaptation finance continued to grow, in both relative and absolute terms. Loans continued to be the main instrument used to provide public climate finance. Climate finance mainly targeted Asia and middle-income countries. Source OECD report "Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020".

**Figure 2.** Climate theme and sectoral split of climate finance provided and mobilised in 2016-2020

## Thematic split of finance provided and mobilised (USD billion)



- 4 See endnote 1 above.
- 5 The UN Environment Programme (UNEP) estimates that the climate adaptation costs of developing countries alone will be in a range of 880 bn to 1,890 bn DKK per year by 2030, and 1,770 bn DKK to 3,150 bn DKK annually by 2050. It is worth noting that climate adaptation costs are only one part of the complicated climate puzzle. Climate mitigation efforts must be factored in as well (United Nations, 2021a). UNEP estimates that current mitigation efforts need to be tripled to limit global warming to 2°C and increase fivefold to limit it to 1.5°C (UNEP, 2020).
- 6 To join the group of 10% richest persons globally, you need a personal fortune of 610,000 DKK or more. Around half of all adults in Denmark have a personal fortune larger than this. Moreover, Denmark's average wealth per person is 1.4 million DKK, i.e. more than twice the wealth needed to belong to the richest 10% in the world (*Denmark Statistical Bureau, 2021*).
- 7 When we talk about climate change, we often tend to focus on carbon dioxide emissions (CO<sub>2</sub>), which is the most dominant greenhouse gas that comes from burning fossil fuels, industrial production, and land use. However, CO<sub>2</sub> is not the only greenhouse gas that is driving climate change. There are a number of other gases that significantly contribute to global warming, all of which together are quantified in one single metric called GHG. As an example the climate effect of one kilo a greenhouse gas like methane (CH<sub>4</sub>) is equal to 84 kg of CO<sub>2</sub> (Climate Change Connection, 2021). GHG is more accurate when



- it comes to calculating emissions and has the advantage that it allows “bundles” of greenhouse gases to be expressed as a single number.
- 8 A *progressive* tax takes into account people’s ability to pay. That is, as income (or general wealth) goes up, so does the tax rate; as a percentage of income, poorer individuals tend to pay less, and wealthier or higher-earning individuals pay more.
 

A *regressive* tax does not take into account an individual’s income level or ability to pay. Frequently, this is seen when the tax is applied to transactions, for instance a sales tax like the Danish MOMS, which increases the total cost of something. Because that same uniform fee represents a larger proportion of net wealth or income for poor people, and a smaller share of the total wealth or income for richer individuals, the impact is felt differently. It places a larger burden in terms of percentage for poor people and thus is regressive.
  - 9 It is only intra-EU-flights that are included in the EU’s ETS and of these the flight companies received free ETS allocations covering 82% of their emissions (*Energistyrelsen 2021*)
  - 10 The data from the Danish Energy Agency also disclose what Danish flight are refueling in foreign airports. This amounts to 2 million tons GHG-emissions. These are not included in this report due to the risk of doubled counting, and because a Danish tax on air-transport can only cover departures from Danish airports (*Energistyrelsen 2021*).
  - 11 In case *Mechanism 1* is implemented, domestic flights will already be (indirectly) taxed 1,500 DKK per ton GHG. Domestic flights represent 4% of kilometers flown by Danes and less than 4% of the revenue presented in *Mechanism 2*.
  - 12 Researchers from Chalmers University of Technology in Gothenburg have calculated the GHG-emissions from air transport per kilometer per passenger. It shows that a passenger on economy class emits 133 grams of GHG per kilometer and a passenger on business class emits 298 grams GHG per kilometer. The researchers uses a GWP factor of 1,9 together with many other elements to calculate the CO<sub>2</sub>-emissions per person per kilometer (*Jørgen Larsson and Anneli Kamb 2021*)
  - 13 The central authority on Danish statistics publishes data on the number of international flights to and from Danish commercial airports and divide these into categories of different length of journey (*Danmarks Statistik 2021*).
  - 14 As the data does not disclose the apportionment of passengers within the length-categories, the middle value for each category is applied, i.e. 500 km for the category “1-1000 km” and so forth. For the last category of “5001 or more” the length 7.500 km is selected arbitrarily. 7.500 km is enough to go from Copenhagen to New York but not to go from Copenhagen to Bangkok.
 

These lengths are then multiplied by the Chalmers University emissions estimate per kilometer of 133 grams for a person on economy class.
  - 15 The Danish Ministry of Taxation was requested to calculate the revenue potential for a similar tax on aviation. By directly assigning a fee on travel within Europe of 80 DKK on economy class and 250 DKK on business class and outside Europe a fee of 500 DKK for economy class and 1,250 DKK for business class. The resulting revenue potential was 2.8 billion DKK after taking into consideration changing consumer behaviour (*Skatteministeriet 2020*).
  - 16 This portrait does nevertheless hide the fact that income inequality in Denmark has been significantly increasing the last decades with an increase in GINI coefficient from 22 to 29 over the three decades from 1987 to 2017. Income inequality has risen globally but income inequality has risen even faster in Denmark and thus Denmark is no longer in the top 5 of most equal countries measured on income inequality.
  - 17 This means that on average, these 60% households have liabilities exceeding the value of their assets. This means that large part of the population is paying interest on a net-debt. These payments go to owners of real estate and financial assets. And these owners are concentrated among the minority of the wealthiest persons who enjoy receiving passive incomes arising from having significant positive net wealth. Therefore, it comes as no surprise that the wealthiest people also tend to have the highest incomes.
  - 18 OECD (2019), *Under Pressure: The Squeezed Middle Class*, OECD Publishing, Paris, , OECD (2015), *In It Together: Why Less Inequality Benefits All*, OECD Publishing, Paris, OECD (2015), *All on Board: Making Inclusive Growth Happen*, OECD Publishing, Paris, OECD (2018), *A Broken Social Elevator? How to Promote Social Mobility*, OECD Publishing, OECD (2018), *A Broken Social Elevator? How to Promote Social Mobility*, OECD Publishing, OECD (2008), *Growing Unequal?: Income Distribution and Poverty in OECD Countries*, OECD (2011), *Divided We Stand: Why Inequality Keeps Rising*, OECD Publishing, Paris.
  - 19 A family of course comprise more than one person but even if we base the comparison on the 1.000 richest persons, the Danish Ministry of Taxation only estimate a fortune of 188 billion DKK – only one third of the estimate for the richest 100 families when unquoted shares are included.
  - 20 Assuming that the top top1% wealthiest Danes have the same asset composition (real estate asset and financial assets) as the top10% wealthiest Danes makes Mechanism3’s estimate conservative as it can be expected that the top1% hold much more of their wealth in financial assets and thus the true revenue potential of *Mechanism3* can only be considerably higher.

- 21 Danish Ministry of Finance 2020. Ulighedsredegørelsen page 75: "Til sammenligning skønnes værdien af unoterede aktier i gennemsnit at udgøre ca. 6,4 mio. kr. blandt de godt 100.000 personer..."
- 22 One percent of adult Danes equals 47,000 individuals. They own 18% of Denmark's private wealth: 6,443 billion DKK \* 18% = 1,159 billion DKK.
- The first 10.6 million DKK of personal wealth should not be taxed, thus the tax base becomes: 1,160bn - (47,000 \* 10,6mio) = 661 billion DKK.
- Real estate wealth should not be taxed thus 47% is excluded, the tax base becomes: 661 bn DKK \* 53% = 350,3 bn DKK
- Taxing 350,3 bn DKK at 2.7% generates a revenue of: 350,3 bn DKK \* 2.7% = 9,5 bn DKK.
- Data is collected from the following sources:**
- Finansministeriet 2020. *Ulighedsredegørelsen*. [https://fm.dk/media/18359/ulighedsredegørelsen-2020\\_web.pdf](https://fm.dk/media/18359/ulighedsredegørelsen-2020_web.pdf)
- Danmarks Statistik 2021: *FORMUE8A: Nettoformue pr. person på mindst 18 år efter formuens størrelse*.
- Danmarks Statistik 2021. *FORMUE3: Familiefordelt nettoformue efter deciler af ækvivalensvejet disponibel indkomst og komponenttype*.
- CEPOS 2020. *Formueredegørelse 2020*.
- 23 The effects of a FTT are many and complex, some effecting the economy positively, some negatively. Economists' views vary according to political standpoints.
- Examples of economists emphasizing the positive effects of an FTT are *Lenore Palladino* and *James S. Henry*.
- In the other end of the political spectrum, we find the Danish Ministry of Finance which in several answers to the Danish parliament presented only the negative theoretical arguments against introducing a FTT in Denmark, see [www.ft.dk/samling/20161/almindel/fiu/spm/317/svar/1421176/1782740.pdf](http://www.ft.dk/samling/20161/almindel/fiu/spm/317/svar/1421176/1782740.pdf) and [www.ft.dk/samling/20181/almindel/fiu/spm/579/svar/1576666/2049772/index.htm](http://www.ft.dk/samling/20181/almindel/fiu/spm/579/svar/1576666/2049772/index.htm)
- 24 The revenue is calculated by multiplying the ETS quotas purchased by Danish companies in 2019 with the price of 2021 (50 EUR): 12,6 mio ton \* 55Euro \* 7,44 DKK/Euro \* 50% = 2,6 billion DKK.
- 25 Technically the Danish tax ceiling on tax of capital gains (Skatteloft II) also needs to be increase correspondingly to 52.06% (Skat, 2021b).
- 26 AAA is the highest possible rating that may be assigned to an issuer's bonds by any of the major credit rating agencies. AAA-rated bonds have a high degree of creditworthiness because their issuers are easily able to meet financial commitments and have the lowest risk of default. Rating agencies Standard & Poor's (S&P) and Fitch Ratings use the letters "AAA" to identify bonds with the highest credit quality, while Moody's uses the similar "AAA" to signify a bond's top-tier credit rating (*Investopedia, 2020*).
- 27 As long as a central bank keeps enough stocks and bonds with short terms, it can again reduce the newly created money at any time and therefore still be able to adjust the money supply (*World Future Council, 2018*).
- 28 The effect of the endogeneity of the money supply is especially important when Central Banks buy more SGCBs (for a short period of time as start up financing) than needed for actual money creation. This process contributes to the money creation and the resultant money supply reduction offsetting each other, so that the money supply grows as much as the economy requires expanding to full potential (*World Future Council, 2018*).
- 29 Global Commission on Adaptation have calculated return-rates of adaptation investments with benefit-cost ratios ranging from 2:1 to 10:1. It is concluded that climate adaptation action has a strong economic imperative (*Global Commission on Adaptation, 2019*). The OECD further concludes, that climate mitigation inaction is directly linked to huge economic costs, while limiting GHG emissions are comparatively inexpensive (*OECD, 2015*).
- 30 Since 2010 Denmark has enjoyed a balance of payments surplus of more than 6 pct. of GDP (*Finansministeriet, 2020*)
- 31 Dr Matthias Kroll (*World Future Council, 2020*) was consulted directly on this question in relation to Denmark and answered that up to one percent of the Danish GDP could be used for climate finance obligations without serious problems.





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