This OCP/ecbi Discussion Note looks at how the use of a ‘share of proceeds’ – referred to in the Clean Development Mechanism (CDM) of the Kyoto Protocol and the Article 6 Mechanism of the Paris Agreement, – could as innovative funding source be extended to market mechanisms at the regional, national, and sub-national level.

1. The ‘Paris Predictability Problem’
   1. International Innovative Finance
   2. Earmarking Domestic Revenue
   3. The Bigger Picture

2. North American Initiatives
   2. Sub-national/Regional-level: Western Climate Initiative

3. European Initiatives
   1. To Earmark or Not to Earmark?
   2. National Initiatives
   3. Regional Initiatives

4. Conclusions

---

1 The views expressed in this Note do not necessarily reflect the views of the affiliated institutions of the authors.
2 Managing Director OCP, Director ecbi: director@oxfordclimatepolicy.org.
3 Art. 12.8. The Conference of the Parties serving as the meeting of the Parties to this Protocol [CMA] shall ensure that a share of the proceeds from certified project activities is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.
4 Art. 6.6. The [CMA] shall ensure that a share of the proceeds from activities under the mechanism referred to in paragraph 4 of this Article is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.
1. The ‘Paris Predictability Problem’

In May 2015, seven months before the Paris climate conference, the author of this Note published an OCP/ecbi Think Piece entitled: ‘The Paris Predictability Problem: What to do about Climate Finance for the 2020 Climate Agreement?’ Based on an analysis of the draft negotiating text that eventually led to the Paris Agreement, the Think Piece concluded that “funding predictability is of paramount importance, particularly to developing countries, and that the current multilateral funding regime fails to provide it”. It argued that this failure is due to multilateral funding being dependent, almost exclusively, on (national) budgetary processes which are not only notoriously complex and highly political, but which also face what has been dubbed the ‘domestic revenue problem’, with domestic requirements as a rule prevailing over foreign needs. To address this, it looked at ways in which this situation could be remedied, namely through international innovative finance or through earmarking domestic revenue.

1. International Innovative Finance

By far the best way to avoid the domestic revenue problem, the Think Piece argued, would be to follow the example of the CDM’s ‘share of proceeds’ for contributions to the Adaptation Fund, not just by extending the concept to cover all the KP market mechanisms – as happened five years later in December 2020 with the entry into force of the Doha Amendment of the Kyoto Protocol (see Art. 1.J, Doha Amendment) – but also by introducing new innovative international sources for multilateral climate finance, such as the International Air Passenger Adaptation Levy (IAPAL) proposed in December 2008 at COP 14 in Poznan by the Least Developed Countries Group. Under the IAPAL proposal, a small passenger charge would have been collected supra-nationally on international air travel and was expected in the first five years of operation to raise between $8 bn and $10 bn annually for adaptation, and considerably more in the longer term. “Since the levy was to be internationally collected and dependent only on the evolution of air travel demand, the funds raised would be truly new and additional, as well as significantly more predictable than traditional funding mechanisms.” An Oxfam Briefing Paper published simultaneously likewise proposed that “new financing mechanisms linked to emissions reduction regimes could be the way forward in the post-2012 climate negotiations and yield the minimum of $50 billion per year necessary for adaptation needs in developing countries,” but sadly, like the IAPAL proposal, this was to no avail.

2. Earmarking Domestic Revenue

The Think Piece then proposes, as second-best idea, the earmarking of a share of domestic revenue sources as contributions to multilateral climate finance. Budgetary contributions are, by and large, politically determined on a short-term (annual) basis. Contributions based on earmarked sources of revenue, however, are co-determined by other, usually market-based, parameters, with the magnitude of the earmarking share politically determined, generally on a multi-year basis.

The Think Piece discusses this sort of earmarking both at the national and the sub-national

5 Re-published a month later as the first Climate Strategies Policy Brief entitled ‘Finance for the Paris Climate Compact: The role of earmarked (sub-) national contributions.’
level. At the national level, it looks at the proposal by the European Commission of a Financial Transaction Tax which, at the time, was meant to raise an estimated €37 billion annually, a portion of which, according to French President Hollande, was to “be allocated to the fight against inequality, to the battle against global warming and the major pandemics.”

After discussing the earmarking of a share of national aviation taxes as solidarity contribution to multilateral climate finance, the Think Piece discusses the idea of earmarking sub-national shares of proceeds in the context of the Western Climate Initiative, a regional emission trading scheme involving both Canadian and US sub-national jurisdictions.

As it happens, the idea of earmarking domestic auction revenue for international climate funding was also put forward in a Technical Paper published by the UNFCCC Secretariat in October 2008 on the eve of COP 14 in Poznan. Unfortunately, as with the international innovative funding ideas proposed on the same occasion (see 1.1), this was also to no avail.

3. The Bigger Picture

A recent OECD Taxation Working Paper provides an analysis of the use of revenue from different carbon pricing instruments in 40 OECD and G20 economies. The Paper “notes that constraints – which can take the form of political commitments or legal earmarks – on revenue use differ between carbon taxes, emissions trading systems, and excise taxes [on energy use]. Constraints are less common for excise taxes, which also raise the most revenue. Carbon tax revenues are relatively often associated with environmental tax reforms, involving reductions in personal or corporate income taxes. Revenues from emissions trading systems are frequently directed towards green spending.”

### Total carbon pricing revenues, share of constrained revenues [Table 2, p.16].

<table>
<thead>
<tr>
<th>Generated Revenue</th>
<th>Generated Revenue</th>
<th>Constrained</th>
<th>Unconstrained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>€ bn</td>
<td>Legal earmarking</td>
<td>Political commitment</td>
</tr>
<tr>
<td>Excise taxes on fuels</td>
<td>419</td>
<td>36%</td>
<td>2%</td>
</tr>
<tr>
<td>Carbon taxes</td>
<td>14</td>
<td>43%</td>
<td>22%</td>
</tr>
<tr>
<td>ETS permit auctions</td>
<td>7</td>
<td>78%</td>
<td>8%</td>
</tr>
</tbody>
</table>

9 ‘Funding adaptation in developing countries: extending the share of proceeds used to assist in meeting the costs of adaptation; and options related to assigned amount units of Parties included in Annex I to the Convention’. [UNFCCC, 2008]
2. North American Initiatives


Title XIII (Sec. 1331) of the Boxer Amendment to the Lieberman-Warner Climate Security Act of 2008 proposed an ‘International Climate Change Adaptation and National Security Fund’ (‘the Fund’) to be established in the US Treasury, with the aim of financing an International Climate Change Adaptation and National Security Program (Sec. 1332) from 2012 to 2050.

The purpose of that Program was to protect the economic and national security of the United States where such interest can be advanced by minimizing, averting, or increasing resilience to potentially destabilizing global climate change impacts. To this end, the Program was, *inter alia*, intended to support investments, capacity-building activities, and other assistance to reduce vulnerability and promote community-level resilience relating to climate change and its impacts on the most vulnerable developing countries that, *inter alia*, affect economic livelihoods, result in increases in refugees and internally displaced persons, or otherwise increase social, economic, political, cultural, or environmental vulnerability (Sec. 1332.b).

To raise revenue for the Fund, the US Environmental Protection Agency was to auction a percentage of the annual emission allowances associated with the proposed US emission trading scheme, starting with 1 per cent in 2012, and raising gradually to 7 per cent in 2050 (Sec. 1331). This was estimated at the time to amount to about $1 billion in 2012, increasing to around $2 billion by 2020 and $6 billion by 2030.

Up to 60 per cent of the funding was permitted to go to international funds, provided they were created pursuant to the United Nations Framework Convention on Climate Change, or to an agreement negotiated under it. Unfortunately, the Lieberman-Warner Climate Security Act failed to muster enough votes in the US Senate to move forward and was withdrawn in June 2008.

2. Sub-national/Regional-level: Western Climate Initiative

a. The Quebec LDCF contribution and WCI auctions

On 5 December 2015 (Action Day at COP 21 in Paris) Premier Philippe Couillard of Quebec, announced a (one-off) contribution of C$6 million from the auction revenue of Quebec’s emission trading scheme to the Least Developed Countries Fund (LDCF), one of the funds serving the multilateral climate change regime.

At the announcement, former US Vice President Al Gore expressed “deep gratitude, admiration and congratulations” for Quebec’s initiative. He stressed he “could not find adequate words to describe how significant this [initiative] is” as it illustrates how the wealthy regions of the world are able to reach out in partnership especially to the least developed countries to enable them to participate fully in solving the global climate crisis. He ended by saying that the people of Quebec were “becoming known as true heroes in the world’s effort to solve the climate crisis” and that their gesture “will reverberate with other regions and nations around the world”.

---

Quebec’s emission trading scheme is part of the Western Climate Initiative (WCI). The WCI was launched in February 2007, when the Governors of Arizona, California, New Mexico, Oregon, and Washington signed an agreement directing their respective states to develop a regional target for reducing greenhouse gas emissions, participate in a multi-state registry to track and manage greenhouse gas emissions in the region, and develop a market-based programme to reach the target. During 2007 and 2008, the Premiers of British Columbia, Manitoba, Ontario, and Quebec, together with the Governors of Montana and Utah, joined the original five states in committing to tackle climate change at a regional level. All 11 jurisdictions collaborated in the development of the Design for the WCI Regional Program, which was released in July 2010.

In November 2011, Western Climate Initiative, Inc. (WCI Inc.), a non-profit corporation, was set up to provide administrative and technical services to support the implementation of state and provincial greenhouse gas emissions trading programmes. At present, WCI Inc. organizes (joint-) auctions for three sub-national jurisdictions: California (initiated in 2012), Quebec (2013), and Nova Scotia (2019). These programmes, according to the WCI Inc. Overview, with just under 1,000 participants, represent the largest carbon market in North America and have, to date, raised US$34 billion in auction revenue, most of which is earmarked for domestic climate purposes.

b. The Western Climate Fund and Global Climate Solidarity proposals

The Concept

In 2018, a group of people led by the author put together a Concept Note for a Western Climate Fund as an innovative mechanism for North American sub-nationals to contribute to multilateral climate finance under the Paris Agreement.

Following Quebec’s lead in using part of its emission trading auction revenue to fund its Paris contribution to the LDCF, the idea was to focus the mechanism around the regional ‘home’ of the Quebec emission trading system (the WCI), with the WCF to collect contributions from the participating sub-nationals for the multilateral funds of the Paris Agreement.

The trans-national character of this ‘catchment area’ was seen to be important as it would ensure that the WCF would not be perceived as competing with national support, but as genuinely complementary (‘new and additional’) to it. To assure predictability, the primary income was meant come through three innovative ‘Source Options’ (SO), namely:

[SO.1] an earmarked share of cap-and-trade auction revenue (as in the case of Germany’s Energy and Climate Fund, see 3.2.a below);
[SO.2] an earmarked share of emission allowances to be monetized by an intermediary (as in the case of the share of CDM proceeds monetized by the Adaptation Fund, or the Allowance Allocation to Electrical Distribution Utilities on Behalf of Ratepayers under the California Cap-and-Trade Scheme);
[SO.3] an earmarked share of a carbon tax.

With regard to institutional arrangements, it was recognized that the type of revenue source chosen is likely to have implications on the management of the collection of the resources and their distribution to the multilateral funds.

Auction proceeds [SO.1] or tax revenue [SO.3] could be collected by each participating jurisdiction in dedicated treasury accounts, following the model of the proposed Massachusetts Least Developed Countries Fund. Or, they could be collected in a single ‘joint account’, managed by a dedicated joint financial intermediary.
If a participating government decides to allocate emission allowances \([SO.2]\), then these allowances need to be ‘monetized’ before they can be collected by the WCF for transfer to the multilateral funds of the Paris Agreement. This could be done by the sub-national government through auctions, or by a **trading intermediary**, that is an organization eligible to trade in the relevant WCI Inc. scheme.

The collection of the revenue from the monetization of these allowances can again be made through individual sovereign (treasury) accounts, or through a joint account managed by an intermediary. Figure 1 illustrates a hypothetical example, in which Quebec chooses to use an earmarked share of cap-and-trade auction revenue \([SO.1]\), California to have a share of earmarked allowances monetized by a trading intermediary \([SO.2]\), while British Columbia joins in with an earmarked share of its carbon tax \([SO.3]\), with WCI Inc. serving as WCF joint financial intermediary.

---

**Figure 1. Sample WCF governance**

- **WCF Financial Intermediary**
- **WCF Joint Account**
- **Sovereign Account**
- **Trading Intermediary**

---

**The Global Climate Solidarity California pilot scheme**

Following the publication of the WCF Concept Note, work focused on implementing the concept in California, as part of a broader ‘Global Climate Solidarity’ (GCS) initiative to assist (sub-national) governments in providing predictable innovative funding for the poorest and most vulnerable across the globe, in support of the Paris Agreement.

In May 2021, OCP/ecbi published a [Technical Options Paper for a California Pilot Scheme](#), which considers, in some detail, the ways in which a GCS pilot could be set up along the lines suggested in Fig. 1 in the context of California’s Cap-and-Trade Program, managed by the California Air Resources Board. A small share of allowances would be earmarked as ‘Global Solidarity Allowances’ (GSAs), to be monetized by a third party on behalf of the multilateral...
climate funds of the Paris Agreement and designated CSO programmes, for the benefit of vulnerable communities in California.

As concerns the size and origin of the proposed GSA set-aside, the Paper refers to the Clean Development Mechanism which sets aside 2 per cent of the generated credits to be monetized for supporting adaptation projects in developing countries, and suggests setting aside allowances from the \textit{(not state-owned)} Price Containment Reserve allowances, equivalent to 2 per cent of the state-owned ones, for the benefit of the multilateral funds, with an additional 1 per cent for local beneficiaries. It estimates an annual revenue of US$48 million and US$24 million respectively, which would tally with the respective percentages of the average annual \textit{proceeds of the sale of state-owned allowances} over the last five financial years (US$2.2 billion).

3. European Initiatives

1. To Earmark or Not to Earmark?

The concept of a ‘share of proceeds’, as used in the multilateral climate regime, involves the setting aside of a share of emission credits/allowances for sale (‘monetization’) with the proceeds going to a pre-specified purpose. This sort of earmarking of a source of revenue is a well-known, and sometimes controversial, tool in public sector funding, and has been discussed in some detail also in the context of emission trading schemes.

For example, in 2008, three years after the launch of the EU \textit{Emission Trading System} (ETS), the question of whether revenue from auctioning EU ETS allowances should be earmarked for funding climate change activities, particularly in developing countries, exercised EU decision-makers considerably, with the EU Commission and Parliament in favour, while some Member States were strongly opposed. The Commission proposed that 20 per cent of the auction revenue should be used for climate change, while a parliamentary amendment would have mandated all the revenue to be used for climate change, half of which would be earmarked for developing countries.

As discussed in some detail in Müller (2008),\textsuperscript{12} there were three main member state objections to the Commission and Parliament proposals:

(i) Some new members objected particularly to earmarking revenue for developing countries on grounds of being ‘economies in transition’ and as such not expected under the Kyoto Protocol to provide funding for developing countries in Annex II.

(ii) The proposals were seen to contravene the principle of subsidiarity by transferring tax competence from the member states to the EU.

(iii) Last but not least, earmarking was said to be contrary to ‘sound fiscal management’, and hence not permissible.

Müller (2008) concludes that while (i) and (ii) “seem to be justifiable but can easily be addressed”, (iii) is not tenable and suggests, with reference to the UK Renewables Obligation,\textsuperscript{13} establishing an EU ETS regulator, “charged with carrying out the auctioning on behalf of the Member States, with the revenue flowing into domestic \textit{off-budget ETS Trust}.


2. National Initiatives

At the national level, there are (at least) two European examples of innovative finance for developing countries, one in Germany, and one in Portugal.

a. Germany: Energy and Climate Fund

Germany separates its EU ETS auction revenue entirely from budgetary appropriations and allocates them to the off-budget (‘Sondervermögen’) Energy and Climate Fund (EKF). The EKF was established in 2010 to receive 80 per cent of its resources from ETS auction revenues, and 20 per cent from the nuclear power sector. However, the funding plan was revised following the German *Energiewende* (energy transition): from 2012 onwards, almost all the auction revenues were allocated to EKF. In 2012 the EKF had €780 million at its disposal, in 2013 €3.3 billion, and in 2019 €4.5 billion.

Today, the EKF is only used to fund activities in Germany. However, between 2010 and 2014, it was also used as an (interim) funding mechanism for Germany’s International Climate Initiative (IKI), and the contribution was considerable: in 2013, for example IKI received €281 million – almost 20 per cent of the EKF funding. A 2013 evaluation highlighted IKI as “the only instrument worldwide earmarking revenue due to international climate policy (emission trading) for international climate policy” which was seen as a unique selling point (*Alleinstellungsmerkmal*).

Yet, “due to earmarking programming commitments in absolute figures as opposed to a percentage share and the collapse of the carbon price, the international finance component was moved in 2014 from the EKF to that of Ministries of Economic Cooperation and Development (BMZ) and German Environment Ministry (BMUB).” [Müller et al. (2016), p.7]

b. Portugal: Carbon Fund

In 2013 Portugal passed a national law (Decree Law 38/2013), earmarking all its auction revenues for the Portuguese Carbon Fund (FPC), established in 2006, to support domestic climate policies and cooperation with developing countries.

The total Portuguese auction revenue in 2013 was €72.8 million, with €2.4 million (3.3 per cent) used in support of climate change activities in Mozambique and Cabo Verde. In its second *Biennial Report* (2015), Portugal rightly emphasizes that “the financial flows provided by this Fund are additional to previous sources, meaning that previously existing flows were not redirected. The financial contribution of the FPC counts as ODA but is an independent and new source that relies entirely on the Fund’s independent and autonomous income/revenues.” [p.39]

In 2017, the FPC, together with three other environment-related funds, was terminated and merged into a new national Environmental Fund.

---

15 Benito Müller with Alexandra Kornilova, Ritika Tewari, and Carsten Warnecke, ‘Two Unconventional Options to Enhance Multilateral Climate Finance: Shares of Proceeds and Crowdfunding’, *echt Policy Brief*, October 2016. [Müller et al., 2016]
3. Regional Initiatives

While auctioning is meant to be the default allocation method in phase 3 (2013–20) of the EU ETS, “about 43% of the total quantity of available allowances is allocated for free, while the share of allowances to be auctioned by Member States amounts to some 57%.” [COM (2020): p.13]

An EU-wide New Entrants' Reserve (NER) of 780 million allowances (equivalent to 5 per cent of the Phase 3 total) was established, with 300 million earmarked for a new NER300 programme, and the rest for free allocation to new industrial installations and installations that significantly increase capacity.

The EU ETS Directive for phase 4 (2021-30), promulgated by the Commission and adopted by the Parliament and Council, included the establishment of two new ‘low-carbon funds’: an Innovation Fund, and a Modernisation Fund to fund climate-related activities in EU member states.

a. The NER 300 programme

The NER 300 is a large-scale funding programme for innovative low-carbon energy demonstration projects. It is aimed at demonstrating environmentally safe carbon capture and storage (CCS) and innovative renewable energy (RES) technologies on a commercial scale within the EU. The NER 300 was funded from the monetization of 300 million emission allowances from the NER. The funds were awarded to projects selected through two rounds of calls for proposals (in December 2012 and July 2014), as a result of which 38 RES projects and 1 CCS project were awarded in 20 EU Member States, amounting to EUR 2.1 billion.

b. The Innovation Fund

The Innovation Fund is one of the two low-carbon funds created by the EU ETS Directive for 2021-30. Its function is to support first-time market development and commercial-scale demonstration of innovative technologies and breakthrough innovation in sectors covered by the EU ETS, including:

- innovative renewables,
- energy intensive industries, carbon capture, utilization and storage (CCUS), and
- energy storage.

It will be funded by the auctioning of 450 million allowances and undisbursed revenues from the second call of the NER 300 programme. The first call for proposals was launched in July 2020. The call is open for projects in eligible sectors from EU Member States, Norway and Iceland. It will provide grant funding of EUR 1 billion in total to large-scale clean technology projects with capital costs of above EUR 7.5 million.

c. The Modernisation Fund

The Modernisation Fund (MF) is the other low-carbon fund created by the EU ETS phase 4 Directive, supporting investments in modernizing the power sector and wider energy systems in ten lower-income member states as part of the European Green Deal investment plan. The MF receives revenue from the auctioning of 2 per cent of the total allowances for 2021-30 under the EU ETS, together with additional allowances transferred by beneficiary Member

---

States, presently amounting to almost 650 million earmarked allowances worth €39 billion at the current market price.\textsuperscript{17} The European Investment Bank (EIB) will monetize the allowances. According to the implementing act, the beneficiary member states are responsible for the selection, financing, and reporting of investments, while the Commission is responsible for the disbursement decisions, following an EIB assessment.

4. Conclusions

There is, no doubt, considerable funding potential in the idea of allocating a share of proceeds of emission trading schemes beyond the CDM and Art. 6 to the multilateral funds of the Financial Mechanism of the Paris Agreement.

For example, the EU could establish a ‘Global Solidarity Fund’ – along the lines of its Modernisation Fund (3.3.c) – earmarking 2 per cent of proceeds for the multilateral climate funds, annually raising between €2 and €3 billion of genuinely ‘new and additional’ funding (in other words not from national budgets), which has been, and is, of key importance to developing countries, as witnessed in Art. 4.3 of the UNFCCC and mandated in the Paris Agreement.

Setting up such a fund would likely prove to be politically complex and benefit from encouragement by a global trendsetter. This is where California could step into the breech by setting a ‘Gold Development Standard’ for emission trading schemes in working together with Quebec and Nova Scotia, as suggested in 2.2.b. Indeed, this could have a positive impact much closer to home – say to prepare the way for a revival of the US International Climate Change Adaptation and National Security Fund proposal (2.1) under a new American Climate Security Act.

\textsuperscript{17} 27 August 2021: €60/EUA, Source: \url{https://sandbag.be/index.php/carbon-price-viewer/}