Distr.: General 6 October 2020 Original: English

Committee of Experts on International Cooperation in Tax Matters Twenty-first session Online meeting of 20-29 October 2020 Item 3(h) of the provisional agenda Environmental tax issues Chapter 5: Revenue Use Carbon Taxation Handbook

Note by the Secretariat

Summary

Chapter 5: Revenue Use of the Handbook on Carbon Taxation is presented to the Committee FOR DISCUSSION at the Committee's 21st Session, with a view to finalize it and submit for approval at the 22nd Session.

This chapter is intended to provide a guide to everyone involved in the implementation of a carbon tax, from policymakers to technical levels, to understand the complexities related to the use of revenues from carbon taxation, and what are issues to be further investigated in their specific national framework.

The chapter starts by outlining how revenues from a carbon tax can fund the overall State budget, or finance specific items, and what are some of the mechanisms that countries can use to commit revenues from carbon taxation to a specific purpose (including earmarking and political commitments). Revenue raising is put in perspective with an overview of the current amounts raised by carbon taxes around the world, and their potential in different scenarios.

Finally, the chapter discusses some of the main destinations that countries can choose for revenues from a carbon tax, including compensation for affected households or industries, environmental spending and tax shifts; and some policy considerations that policymakers may want to take into account when designing policy packages, including the role that revenues can play in the acceptability of a carbon tax.

The Subcommittee seeks views from the Committee in particular on the overall structure of the chapter and on section 5.3 (*Destinations of revenue use and considerations for designing policy packages*).

Chapter 5: Revenue use

Last updated on 30 September 2020.

Please note that citations are included in non-final format, but rather in a way to make final editing (and alignment with rest of the Handbook) easier.

Table of Contents

5.1.	Introduction
5.2.	Carbon tax revenue in perspective4
5.	2.1. Current carbon tax revenue4
5.	2.2. Potential carbon tax revenue 5
5.3.	Destinations of revenue use and considerations for designing policy packages 6
5.	3.1. Compensation for affected industries7
5.	3.2. Compensation for low-income households 8
5.	3.3. Environmental spending
5.	3.4. Tax shifts 10
5.	3.5. Communication of revenue use11
<i>5.4</i> .	Conclusions

5.1. Introduction

1. As a general rule, proceeds from taxes become part of general government revenue and are used to fund the public budget. Considering the potentially significant amount of revenues to be generated from carbon taxes, governments, particularly in developing countries with typically low tax-to-GDP ratios in comparison with developed countries,¹ may want to look to carbon taxes as a source for domestic resource mobilization and not just as an instrument for environmental protection.

2. Given the specific political economy of carbon taxes there are strong arguments for using parts of the revenue for compensating affected industries and low-income households. Also, reflecting the particular nature of carbon taxes as both tax and environmental policy instrument, governments may choose to use (part of the) revenues for environmental spending, either for the reduction of carbon emissions, or (more rarely) for other environmental purpose altogether. Finally, some countries, particularly in the OECD, have used revenues from carbon and energy excise taxes to finance changes in overall tax policy, lowering other taxes simultaneously (tax shifts).

3. Practically, using revenue from carbon taxes for specific, pre-determined uses may come in the form of earmarking or political commitments.

4. Earmarking revenues entails legal prescriptions assigning revenues to specific spending purposes; these provisions can be included in primary or secondary legislation, depending on the country. However, it should be noted that, while earmarking is standard practice in some jurisdictions, it is constitutionally prohibited in others;² the latter may still allow for the creation of destination funds, where revenues are directed for specific purposes.

5. On the other hand, political commitments can come in forms of public statements on how certain amounts of tax revenues will be used (e.g. as part of policy packages), but do not involve legal prescriptions. Politically committing revenue to specific spending purposes as part of policy packages can have much the same effect as earmarking, but with more flexibility and the possibility to change the allocation of funds as environmental or social priorities change. Political commitments can therefore be useful both in jurisdictions that allow earmarking, and in those that do not. However, such flexibility might also result in shifting of revenue use as a result of changing political priorities of different governments, and therefore in increased uncertainty for the industry or for citizens.³

¹ World Bank data, Tax Revenue (% GDP) <u>https://data.worldbank.org/indicator/GC.TAX.TOTL.GD.ZS</u>

² For example, in Chile earmarking revenues from any tax is prohibited by the Constitution, while British Columbia earmarked some revenues from their carbon tax to lower the energy costs of low-income households; and Denmark partially earmarked revenues for green spending, specifically for energy efficiency.

³ For example, in the case where revenues from carbon tax are politically committed to supporting renewable energy power plants, a change in political priorities that reallocates such revenues to lowering energy costs for low-income households would create uncertainty for power producers; they might therefore have less of an incentive to invest in the first place.

5.2. Carbon tax revenue in perspective

5.2.1. Current carbon tax revenue

6. The World Bank's annual State and Trends of Carbon Pricing reports track the adoption and continued application of carbon taxes and emissions trading systems across the world. In addition to key statistics on the price level and the base covered, the reports provide estimates of the total annual revenue and the total annual value of carbon pricing.

7. Table 1 collects revenue and value estimates from recent State and Trends reports.⁴

Table 1 Revenue from and value of carbon pricing through carbon taxes and emissions trading systems, billion USD⁵

	2015	2016	2017	2018
Revenue (carbon tax)	26	22	33	44
Value (ETS)	48	49	52	82

8. The table shows that revenue from carbon pricing – including both carbon taxes and emissions trading systems (ETS) – is considerably higher in 2018 than in 2015. The increase in recent years is mostly attributable to rising allowance prices in the European Union's ETS, but rising carbon taxes, notably in France and in Alberta, also contribute to the increase.

9. The 2015 State and Trends of Carbon Pricing report⁶ breaks down the 2015 *value* of carbon pricing. The value consists of 14 billion USD from carbon taxes (29%) and 34 billion USD from emissions trading systems (71%), suggesting that emissions trading systems dominate the global carbon pricing landscape.⁷

⁴ The table reports the revenues collected through carbon taxes and value of emission trading schemes (ETS), worldwide. While calculations for carbon tax revenue is straightforward (see chapter 3 for further guidance), the value of an emissions trading system is estimated by multiplying the number of allowances by the allowance price, whereas the value of carbon pricing is obtained from government budget documents. The value of an emissions trading is at least as large as the revenue that it generates, with the difference attributable to the allocation of free allowances and of permits below the auction price. ⁵ World Bank State and Trends of Carbon Pricing Reports 2015 – 2019;

https://www.worldbank.org/content/dam/Worldbank/document/Climate/State-and-Trend-Report-2015.pdf; https://openknowledge.worldbank.org/bitstream/handle/10986/25160/9781464810015.pdf?sequence=7&isAll owed=y; http://documents.worldbank.org/curated/en/468881509601753549/pdf/State-and-trends-of-carbonpricing-2017.pdf;

https://openknowledge.worldbank.org/bitstream/handle/10986/29687/9781464812927.pdf?sequence=5&isAll owed=y; https://openknowledge.worldbank.org/handle/10986/31755.

⁶ World Bank State and Trends of Carbon Pricing report 2015, footnote 15.

⁷ Considering 40 OECD and G20 countries, Marten and Van Dender (2019: Marten, M. and K. van Dender (2019), "The use of revenues from carbon pricing", OECD Taxation Working Papers, No. 43, OECD Publishing, Paris, <u>https://doi.org/10.1787/3cb265e4-en</u>) estimate the combined revenue from carbon taxes and emissions trading systems at 21 billion EUR in 2016, consisting of 14 billion EUR of carbon tax revenue (33.3%) and 7 billion revenue of auction revenue (66.7%). These revenue proportions are opposite the value proportions, indicating the widespread practice in emissions trading systems of allocating allowances for free.

E/C.18/2020/CRP.46

10. To put the revenues from carbon taxes and emissions trading in perspective, Marten and Van Dender $(2019)^8$ also calculate the revenues from excise taxes on energy use. They argue this comparison is particularly meaningful because excise taxes on energy use implicitly price carbon. Even if the excise taxes were introduced for reasons unrelated to climate change, and even if the rates do not translate into uniform carbon prices, they effectively do result in a sort of price on carbon (see OECD, 2018, and World Bank, 2019, for an elaborate discussion)⁹. Across the 40 OECD and G20 countries analysed, the revenue from excise taxes on energy use amounts to 420 billion EUR in 2016 – this is twenty times larger than the revenue from carbon taxes and emissions trading systems combined. Otherwise said, if the sum of excise taxes, carbon taxes, and emission permit prices is taken to be an effective price on carbon (an "effective carbon rate"), then the revenue from effective carbon rates consists for 95.2% of excise tax revenue, 3.2% of carbon tax revenue, and 1.6% of revenues from emission allowances.

5.2.2. Potential carbon tax revenue

11. Although carbon tax revenues currently account for less than 30% of total carbon pricing revenues worldwide, the instrument's potential for revenue-raising is much larger. Currently, low revenues from carbon taxes are mainly attributable to low tax rates and narrow bases; several studies have tried to estimate what is the potential increase in revenue collection, should those rates be set higher.¹⁰

12. For example, Marten and Van Dender (2019) take into account the potential increase in revenues from carbon taxes in 40 OECD and G20 economies. Their estimate is short-run, meaning that they consider an increase in tax rates, but not the reduction in tax base caused by behavioural responses (i.e. they do not take into account that polluters reduce emissions to the extent that it is more convenient than paying the tax). According to their study, increasing the effective carbon rate to EUR 30/tCO2 (i.e. implement a minimum carbon price of EUR 30/tCO2, where pre-existing excise taxes, carbon taxes and emission permit prices are taken into account) would raise additional revenue worth 1.32% of GDP across the 40 OECD and G20 countries analyzed (0.72% for OECD only).

https://openknowledge.worldbank.org/handle/10986/31755

Whereas in the textbook case of a perfectly competitive economy where there are no lumpy assets, free allocation would not hamper the environmental effectiveness of emissions trading, there are strong reasons to believe that in reality free allocation does blunt abatement incentives (Flues and Van Dender, 2017: Flues, F. and K. van Dender (2017), "Permit allocation rules and investment incentives in emissions trading systems", OECD Taxation Working Papers, No. 33, OECD Publishing, Paris, <u>https://doi.org/10.1787/c3acf05e-en.</u>)⁸ Marten, M. and K. van Dender (2019), "The use of revenues from carbon pricing", OECD Taxation Working Papers, No. 43, OECD Publishing, Paris, <u>https://doi.org/10.1787/3cb265e4-en</u>.

⁹ OECD, Effective Carbon Rates 2018: <u>http://www.oecd.org/tax/tax-policy/effective-carbon-rates-2018-brochure.pdf</u> and WB State and Trends 2019 (chapter 5):

¹⁰ The studies quoted below take into account the potential increase in revenues based on an increase in tax rate, that would also result in a smaller tax base as polluters reduce emissions to the extent that it is more convenient than paying the tax.

13. The IMF Fiscal Monitor,¹¹ on the other hand, takes into account behavioral responses (sectorelasticities). Table 2 summarizes the estimated impact on revenues of introducing a carbon tax of USD 25, 50 or 75/tCO2, in addition to existing taxes on energy use introduced for fiscal or domestic environmental reasons. The IMF estimates that a carbon tax of USD 75/tCO2 would reduce emissions by 35% in 2030 compared to 1990, which is sufficient to be on track for the Paris Agreement targets of limiting global average temperature increases to 2 degrees Celsius at most.

	Carbon tax	Carbon tax	Carbon tax
	\$25/tCO2	\$50/tCO2	\$75/tCO2
G20 weighted average	0.7	0.5	0.4
Russia (largest increase)	1.7	1.4	1.3
France, UK (smallest increase)	0.3	0.2	0.2
India	1.1	0.7	0.6
Indonesia	0.7	0.6	0.5

Table 2 Estimated revenue from carbon taxes, % of GDP, 2030¹²

14. The two studies above lead to the conclusion that there is potential for considerable revenue increase over the next decades, particularly where carbon prices and energy taxes are currently low, and the base is narrow. However, they also suggest that higher carbon tax rates would likely not result in a deep structural impact on the composition of overall tax revenues of countries. While a green tax shift can, to some extent, help countries relax their fiscal constraints, carbon pricing shows a modest revenue potential if compared to the total budget of most countries; therefore, it is unlikely that countries will be able to adopt fundamentally different domestic revenue mobilization strategies following the interaction of a carbon tax.

5.3. Destinations of revenue use and considerations for designing policy packages

15. Given the specific political economy of carbon taxes, there are strong arguments for reserving and using parts of the revenue from the introduction of a carbon tax to provide (temporary and targeted) compensation to affected industries and low-income households. Also, reflecting the particular nature of carbon taxes as both tax and environmental policy instrument, governments may choose to use (part of the) revenues for environmental spending. Finally, some countries, particularly in the OECD world, have used revenues from carbon and energy excise taxes to finance changes in overall tax policy, lowering other taxes simultaneously (tax shifts).

16. Klenert (2018), following a very comprehensive literature review on revenue use from carbon pricing, gives an overview of how governments might want to decide on carbon tax revenue use based on their main concerns (an interesting shift in perspective, rather than looking at priorities), and addressing these concerns with an appropriate mechanism. Quoting Klenert, "[...] when distributional

¹¹ IMF Fiscal Monitor October 2019 <u>https://www.imf.org/en/Publications/FM/Issues/2019/09/12/fiscal-monitor-october-2019</u>

¹² Source: IMF Fiscal Monitor October 2019, Figure 1.3

E/C.18/2020/CRP.46

concerns are the greatest obstacle to higher carbon prices, transfers directed to the poor outperform other recycling mechanisms. When efficiency and competitiveness concerns are the greatest obstacle and trust in the government is high, reimbursing firms through transfers or tax cuts can be superior. Earmarking the revenue for green spending might be the option of choice if the main obstacle is that citizens are unconvinced of the environmental benefits of higher carbon prices. Uniform lump-sum recycling is favourable in more general circumstances, as it may ensure broad public support through its salience and progressivity and due to its properties regarding the stability of carbon pricing policy."¹³

5.3.1. Compensation for affected industries

[Section will be expanded to touch upon some issues related to carbon leakage and border carbon adjustments]

17. In order to avoid unwanted effects on industry competitiveness and carbon leakage, it may be necessary to use part of the revenue to compensate trade-exposed industries after the introduction of a carbon tax or other carbon pricing instrument (industry competitiveness concerns are discussed in chapter 2.4.4).

18. Different mechanisms are possible to address competitiveness concerns:

- Revenue-recycling measures: direct financial transfers to companies based on output or financial support for efficiency improvements;
- Measures that imply some loss of environmental effectiveness and of revenue: reduced tax rates and tax exemptions.

19. In order not to compromise the environmental objective of the carbon tax, two principles of designing mechanisms to address competitiveness concerns should be followed:

- 1. Compensations should only benefit companies (or industrial installations) which are highly exposed to international trade.
- 2. Compensations should be designed in a way that maintains the incentive to reduce carbon emissions.

20. To satisfy the second principle, having companies pay the full tax rate and recycling (parts of the) revenues to those companies based on their output or for supporting efficiency improvements are better options in comparison with tax reductions or exemptions. If revenue recycling is not feasible, tax reductions or exemptions can be an alternative but should be limited in time and phased out. Additionally, these measures should be granted only in combination with a conditionality for companies to achieve efficiency improvements.

¹³ Klenert, David. 'Making carbon pricing work for citizens.' Nature Climate Change, Vol. 8, August 2018, 669–677

21. When designing compensation schemes for affected industries, governments will inevitably be confronted with significant industry lobbying for expanding the circle of companies or installations and for more generous compensation. While it is important in principle to limit the circle of benefiting companies or installations to those exposed to international trade and to maintain the incentive for reducing emissions, it will also be necessary to strike a balance between principles and the political feasibility of the carbon tax in light of industry pushback.

22. Instead of using tax exemptions or transfers, governments could also address the competitiveness concerns of industries through measures such as tariffs on imports of highly traded emission-intensive commodities.

5.3.2. Compensation for low-income households

23. Carbon taxes, particularly if they include transport or heating fuels or fuels for electricity generation, result in a different relative burdens on households depending on their income.¹⁴ A disproportionate burden on low-income households, or a reduction in energy affordability (irrespective of how the burden differs by income) may be unacceptable from a social perspective and reduce public acceptability of the tax.

24. To mitigate unwanted negative effects of carbon taxes on low-income households, governments may choose to use parts of the revenue for compensating these households for the price increase. Country experience with compensation mechanisms in the context of a carbon tax is scarce, but there is ample experience in the context of reforming energy subsidies and energy taxes, which can be built upon.¹⁵

25. Similar to compensations for affected industries, mechanisms for compensating low-income households should be limited to the households that actually need compensation and they should ideally deliver compensation without compromising the incentive of the tax to change consumption. Also similarly, low-income households can be shielded from rising energy prices either through targeted transfers (revenue recycling) or through reduced rates or exemptions (forgone revenue).

26. On the other hand, it is sometimes more difficult to design compensation mechanisms for lowincome households which actually reach the targeted households. This might be due to two factors: the first one is that, simply, it might be difficult to understand which households are most affected by higher energy prices. Secondly, typical measures such as tax deductions or tax credits might not be appropriate for low-income households, as they might not pay tax in the first place. For this reason, when their beneficiaries are known and already part of the system, governments can choose to implement redistributive mechanisms such as direct transfers.

¹⁴ Potential distributive implications of carbon taxes are discussed in chapter 2.5.3

¹⁵ Coady et al. 2015: <u>https://www.imf.org/en/Publications/WP/Issues/2016/12/31/The-Unequal-Benefits-of-</u> Fuel-Subsidies-Revisited-Evidence-for-Developing-Countries-43422

E/C.18/2020/CRP.46

27. Targeted transfers can take the form of cash transfers or near-cash transfers.¹⁶ If a system to give direct cash transfers already exists, transfers from carbon tax revenues can be distributed by piggybacking on these systems. Cash transfers can also be handed out conditional on specific behavior of the household (e.g. children going to school). In the case of carbon tax revenues, conditionality can be kept or removed; and existing beneficiaries can be reduced or kept the same size.

28. Cash transfers are more effective when provided at regular intervals, for example as monthly dividends, to truly offset impacts on household income. The question remains on whether cash transfers would somewhat counter the efforts to change societal behavior on environmental issues; on the other hand, near cash or in-kind transfers might be more effective in encouraging low-carbon behavior.

29. Sometimes, universal cash transfers are used to compensate households after the removal of fuel subsidies (e.g. India). This is a delicate issue; while subsidies usually have some impact on low-income households, they favor middle- and high-income households much more. Therefore, the removal of subsidies would be per-se progressive. In the context of a carbon tax, revenues from the tax should be used to compensate for subsidies removal only if it is possible to target low-income households that were highly affected – for example, commuters that were dependent on private transport.

30. An alternative to cash-transfers can be the expansion of existing programs targeting lowincome households (e.g. school meals, public works, reductions in education and health user fees, subsidized mass urban transport, subsidies for water and electricity connection costs). If transfers are not possible, alternative policy choices can be the granting of life-line tariffs, reduced rates for lowincome households, or to provide vouchers.

31. Finally, pro-poor reinvestment of additional revenue can be an alternative, albeit not very targeted way of compensating low-income households.¹⁷

5.3.3. Environmental spending

32. Carbon taxes are a revenue-raising instrument and an environmental policy instrument at the same time. While the environmental objective of the carbon tax is achieved primarily through changing the relative price of carbon fuel consumption, governments may choose to use (parts of) the revenues to further additional environmental objectives.

33. In practice, there are examples of governments using revenue to finance environmentally related programs and projects, including promoting or subsidizing the use of renewable energies and low-carbon technologies, the conservation and protection of biodiversity, waste and water

¹⁶ An example is the National Fuel Allowance Scheme, a weekly cash payment to low- and fixed-income households which recycles carbon tax revenues in Ireland.

¹⁷ For example, British Columbia uses part of the carbon tax revenue to grant non-energy related tax credits to low-income households, including a "children's fitness and arts" tax credit

management, and other green programmes. Carbon tax revenues can also be used to fund energy efficiency and savings measures.¹⁸

34. Directing part of revenues towards promotion of low-carbon technologies and R&D can help address the issue of hard-to-eliminate emissions.

35. To reduce emissions, countries should aim at "filling-the-gap" policies, i.e. direct revenues to address emissions that the tax would miss, and not to reinforce behaviours that are incentivized by the tax anyway. For example, carbon tax revenues are often used to incentivize businesses to install solar panels; since many of those businesses would have likely installed the panels as a result of the tax, it is not necessary to spend revenues to encourage them to change their behaviour. With this approach, more revenues would potentially be available to spend to reduce emissions that would otherwise have been missed, i.e. small businesses that might not have the necessary capital to install solar panels.

36. For developing countries, investing in R&D might not be a priority in general; to further environmental protection, they might opt for measures that directly impact citizens instead, such as expanding low-carbon public transport infrastructure; or expand the public electric grid with renewable energy.

37. These direct measures would also contribute to increasing political acceptance of the carbon tax, as citizens would be able to appreciate the visible results of the policy.

5.3.4. Tax shifts

38. Revenues from carbon taxes can be used to finance changes in the overall tax policy, e.g. by lowering other taxes simultaneously with the introduction or increase of carbon taxes. Typical examples include the simultaneous reduction in taxes on personal or corporate income (including social security contributions) or capital. In principle, also reductions on other taxes can be financed.

39. The rationale for such tax shifts is to avoid an increase in the overall tax burden in the country and to improve the overall efficiency of the tax system.¹⁹ However, policymakers should consider to what extent the tax system is already "optimal" before the introduction of the carbon tax in terms of overall economic efficiency, and whether the tax can provide an opportunity to correct some of the inefficiencies of the tax system.

40. In designing tax shifts, policymakers may face a tradeoff between economic efficiency and equity considerations. To encourage economic growth, revenue would have to be used to reduce most distortionary taxes. For example, taxes on capital are considered very distortionary; however, using carbon tax revenues to lower these taxes would not improve progressivity of the tax system. On the other hand, lump-sum transfers would improve equity, but not the efficiency of the tax system..

¹⁸ Some examples include the carbon dioxide tax in Denmark, which uses part of revenues to fund business energy efficiency subsidies; the Slovenia emissions tax, where 1/3 of revenues are used for emissions mitigation; ¹⁹ The Swedish carbon tax is a notable example of this mechanism. Due to relatively high revenues from carbon taxes, the country has been able to lower other taxes, including personal income taxes, labor taxes and social security contributions, operating a green tax shift.

Box xx. Carbon taxes and economic efficiency

If implemented in isolation, a carbon tax can have negative impacts on macroeconomic variables (including labour markets and growth). In fact, one of the main criticisms of environmental taxation is that it can lead to an overall reduction in welfare, which is particularly problematic for developing countries and LDCs struggling with poverty reduction. However, a carbon tax can improve the efficiency of the tax system, as it lowers distortion and usually raises revenue at relatively low administrative costs; usually, carbon tax is also harder to evade than other taxes (especially positive for countries with high evasion). This instrument might also encourage the formalization of the economy by reducing the difference in tax burden between the informal and formal sector.

Therefore, it is possible that the introduction of a carbon tax will not pose significant overall efficiency concerns, and that the effects will offset each other (e.g. employment concerns will be offset by formalization of the economy). In this respect, options for revenue use should be considered taking into account the overall design of the carbon tax (i.e. tax base/point of taxation, tax rate etc.), as different design options affect the efficiency and regressivity of the tax.

While each country should consider their own tradeoffs and revenue recycling options, as well as their own administrative capacity, it is interesting to look at some of the conclusions of a Tax Foundation study (<u>https://taxfoundation.org/carbon-tax/</u>), based on evidence from the United States:

- A carbon tax paired with a lump-sum rebate would increase the tax code's progressivity significantly, but impact employment and output negatively.
- A carbon tax paired with a cut in the employee-side payroll tax increases progressivity, output, and employment.
- A carbon tax paired with a cut in the corporate income tax, permanent 100 percent bonus depreciation, and R&D expensing boosts output and pretax wages while decreasing progressivity and lowering employment.

41. Carbon taxes have typically been combined with tax shifts in high-income countries with relatively high tax-to-GDP ratios. Using carbon tax revenues for financing tax shifts is less relevant for developing countries with typically comparatively low tax-to-GDP ratios, and generally not recommended.

5.3.5. Communication of revenue use

42. Trust in government is a relevant context variable for choosing and communicating revenue use. The lower the trust in government, the more important the salience of compensation measures becomes, when the policy objective of using revenues for compensating affected households is to increase public acceptability. In countries with high distrust, uniform lump-sum or other cash transfers are the use of revenues that generates more public support for a carbon tax.

43. Labelling/naming the carbon tax is oftentimes quite important for political acceptability. A 'fee-and-dividend' renaming (with lump-sum payments) has been found to be the most popular labelling.

44. A way to increase public acceptance is to make the results of the tax visible, as discussed above; and to center the communication strategy on these highly visible effects.²⁰ The direct environmental effects of a carbon tax may not be evident in the short term. However, revenue recycling mechanisms can be evident, and should be communicated appropriately.

45. Finally, the findings of Klenert (2018) suggest that lump-sum transfers can be a more politically acceptable and more stable mechanism than tax cuts or direct transfers,²¹ especially in countries with high inequality and low political trust.

5.4. Conclusions

46. Carbon taxes have the double objective of raising revenues while protecting the environment; while their primary purpose is to reduce carbon emissions, many countries also consider revenue raising an important feature of this instrument.

47. Currently, carbon taxes account for less than 30% of revenues from carbon pricing; however, studies show that their contributions to national budgets have potential for considerable increase and could make up for non-insignificant shares of public revenues in the future.

48. Revenues from carbon taxes can be used for a variety of purposes, based on the priorities of each country. Destinations analysed in this chapter include the following:

- Compensation for affected industries
- Compensation for low-income households
- Environmental spending
- Tax shifts

49. Even when earmarking is not possible, political commitments or concurrent measures can be used to direct revenues towards a specific priority. Finally, revenue use can be a way to make the tax very visible to citizens, and therefore to increase public acceptance.

²⁰ For example, British Columbia issues a public report outlining the intended use of revenues each year.

²¹ Klenert, David. 'Making carbon pricing work for citizens.' Nature Climate Change, Vol. 8, August 2018, 669–677