GREEN economy
GREEN FISCAL POLICY NETWORK

Fiscal Policy Reforms for Climate Change

Now more than ever, climate change has taken centre stage. The need for urgent action is being stressed by scientists, businesses, civil society groups and religious leaders. The landmark Paris Agreement adopted at the 21st Conference of Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in December 2015 provides a good foundation for moving forward. Over 180 countries have set out their climate targets and commitments in 'Intended Nationally Determined Contributions' (INDCs) which are to be regularly assessed and revised. Policy-makers are now turning to the challenging task of putting in place concrete actions to meet the agreed commitments.

Given the nature and scale of the challenge, it is evident that a portfolio of instruments including regulatory measures, economic instruments, technological improvements, voluntary approaches and information tools are needed to mitigate rising global greenhouse gas (GHG) emissions and adapt to the already occurring impacts of climate change. Increased innovation, development and deployment of low-carbon technologies are also essential to meet climate change objectives. In addition, a major and sustained increase in public and private investment is needed for both climate mitigation and adaptation. For example, the IEA (2014) estimates that some USD53 trillion of cumulative investments in energy supply and in energy efficiency is required by 2035.

Fiscal instruments are an essential element of this policy mix and can contribute to investment needs, support clean technologies, shift private investment decisions and consumer behavior. Fiscal instruments raise public revenues, which can be used for different purposes, for example supporting broader fiscal reform, contributing to climate financing pledges under the UNFCCC, and supporting green investments in sustainable energy, clean technologies and adaptation capacities. In addition, by reflecting externalities in prices, fiscal instruments can help to shift investment decisions and consumer behavior towards low-carbon activities.

The role of fiscal instruments in supporting action on climate change is increasingly recognized. A number of climate related fiscal instruments have been adopted across the world including taxes or charges on fossil fuel energy, carbon pricing mechanisms, fossil fuel subsidy reforms, fiscal incentives and subsidies for renewable energy. Some form of carbon pricing or other fiscal policies are included in the INDCs of over 90 countries. The Paris Agreement provides a foundation for the further development of such market-based mechanisms and their potential linkages. Such efforts should be supported and further action encouraged to ensure effective and efficient action on climate change.

Given the important role of fiscal policy reforms in supporting climate change objectives, this has been a topic of focus for the Green Fiscal Policy Network. In the lead-up to the COP21, the Network issued a series of newsletters on fiscal approaches to support climate change. This note brings together key issues discussed in this special series of newsletters and reflections from Network members on how fiscal policy reforms can support action on climate change.

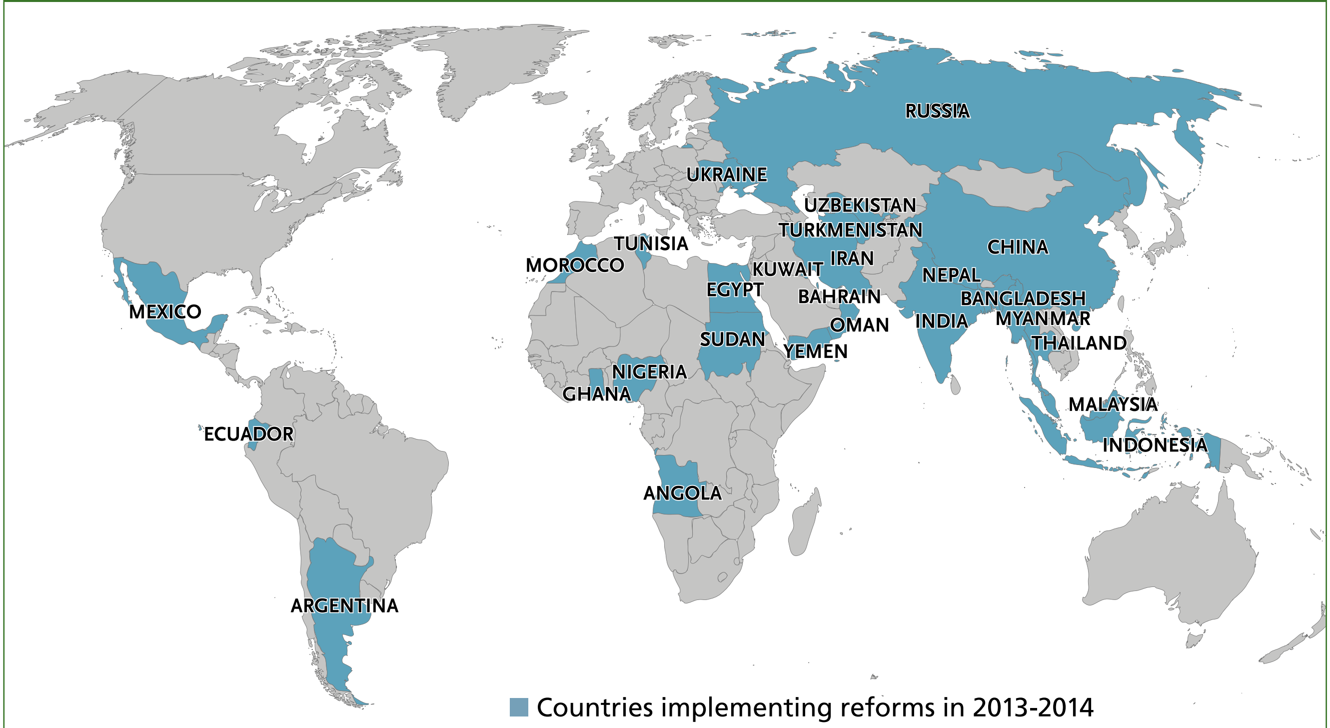
Reforming perverse subsidies

Globally consumer subsidies to fossil fuels stood at USD 493 billion in 2014 (IEA, 2015). When undercharging for the negative externalities from energy consumption, most importantly air pollution, but also other costs like traffic congestion and accidents, are taken into account, these subsidies are much higher – amounting to USD 5.3 trillion in 2015 (Coady et al., 2015). At the same time, the low oil price has pushed producers and state-owned companies to seek further subsidies in addition to generous tax breaks and other benefits many already enjoy. For example, governments across the G20 countries are estimated to spend USD 88 billion every year subsidizing the exploration of fossil fuels (ODI and OCI, 2014).

There is growing recognition that fossil fuel subsidies have a negative impact on the environment, absorb substantial fiscal resources, are poorly targeted for helping low-income households, and encourage excessive energy consumption (UNEP, 2014). For example, it has been estimated that global carbon emissions over the 1980-2010 period would have been 20.7 per cent lower if countries had not subsidized fossil fuels (Stefanski, 2014). Calls for reform are growing and a number of countries are taking steps in this area. In 2013-2014, around 30 countries underwent some form of fossil fuel subsidy reform, taking advantage of low oil prices (see Figure 1). Notable recent examples of reforms include Egypt, India, Indonesia and Morocco. Whilst some countries have made progress, many others such as countries in the Middle East and North Africa have far to go.

Perverse incentives through subsidies in other sectors also undermine action to address climate change. For example, forests perform key ecological services such as protecting biodiversity, soils and watersheds, and absorbing carbon from the atmosphere, while also providing sources of employment and livelihood in many countries. In recognition of this role, significant amounts of international public financing have been mobilized through the Reducing Emissions from Deforestation and Forest Degradation (REDD+) initiative. However, agriculture subsidies

Figure 1 Countries partially increasing subsidized fossil fuel prices in 2013–2014

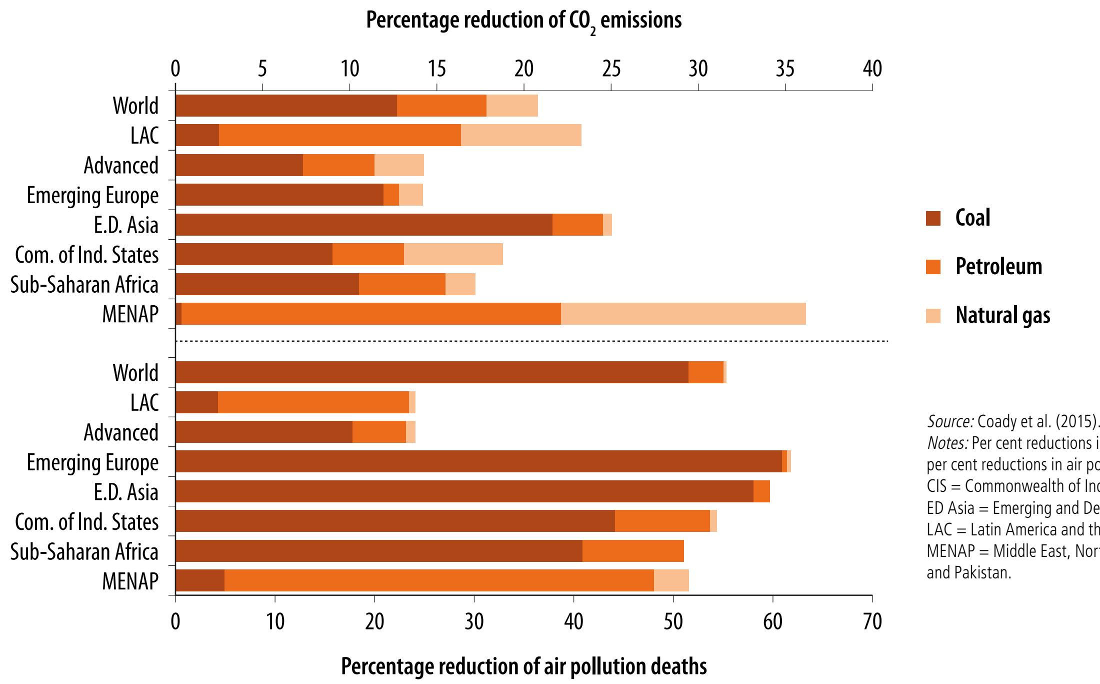


Source: IISD (2015) based on IEA (2014).

in some countries continue to drive the expansion of agricultural commodities such as palm oil and timber that are associated with deforestation, and thus undermine the efficiency and coherence of public financing for forests (ODI, 2015).

Reforming environmentally harmful subsidies is by no means an easy task and often faces numerous obstacles and political challenges. Reform requires a comprehensive, integrated and consultative approach, which helps to get the prices right, builds support and mitigates negative impacts on vulnerable groups (IISD, 2013). Concerns of economic and social impacts should not hold up reform though as they can be addressed through careful design and targeted compensation measures (Withana, 2015). Moreover, subsidy reform can produce substantial fiscal, environmental and health benefits (UNEP, 2011). For example, according to Coady et al. (2015), eliminating energy subsidies (which arise from undercharging for supply and broader environmental costs of fossil fuel energy) would raise government revenue by USD 2.9 trillion, reduce global CO_2 emissions by more than 20 per cent, and reduce premature air pollution related deaths by 55 per cent (see Figure 2).

Figure 2 Environment and health gains from removing energy subsidies for 2013



Source: Coady et al. (2015).
Notes: Per cent reductions in CO_2 emissions on top axis; per cent reductions in air pollution deaths on bottom axis.
CIS = Commonwealth of Independent States;
ED Asia = Emerging and Developing Asia,
LAC = Latin America and the Caribbean;
MENAP = Middle East, North Africa, Afghanistan, and Pakistan.

Pricing carbon

Carbon pricing instruments are among the most efficient approaches to reducing CO_2 emissions as they exploit, and strike the right balance between, the full range of mitigation opportunities, while raising substantial new revenues. Carbon pricing can be implemented through carbon taxes or emissions trading systems (ETS). A growing number of countries and regions are adopting such pricing mechanisms (see Figure 3). In principle, either instrument is fine so long as it is well-designed, establishes a stable emissions price in line with environmental objectives (e.g. INDC mitigation targets), exploits fiscal opportunities from revenues generated, comprehensively prices all sources of CO_2 emissions (insofar as practical), and is administratively simple. In practice, achieving these objectives is somewhat more convoluted under ETS, for example, allowances must be auctioned, price stability measures are needed, and trading systems usually exclude small-scale emission sources such as vehicles and buildings.

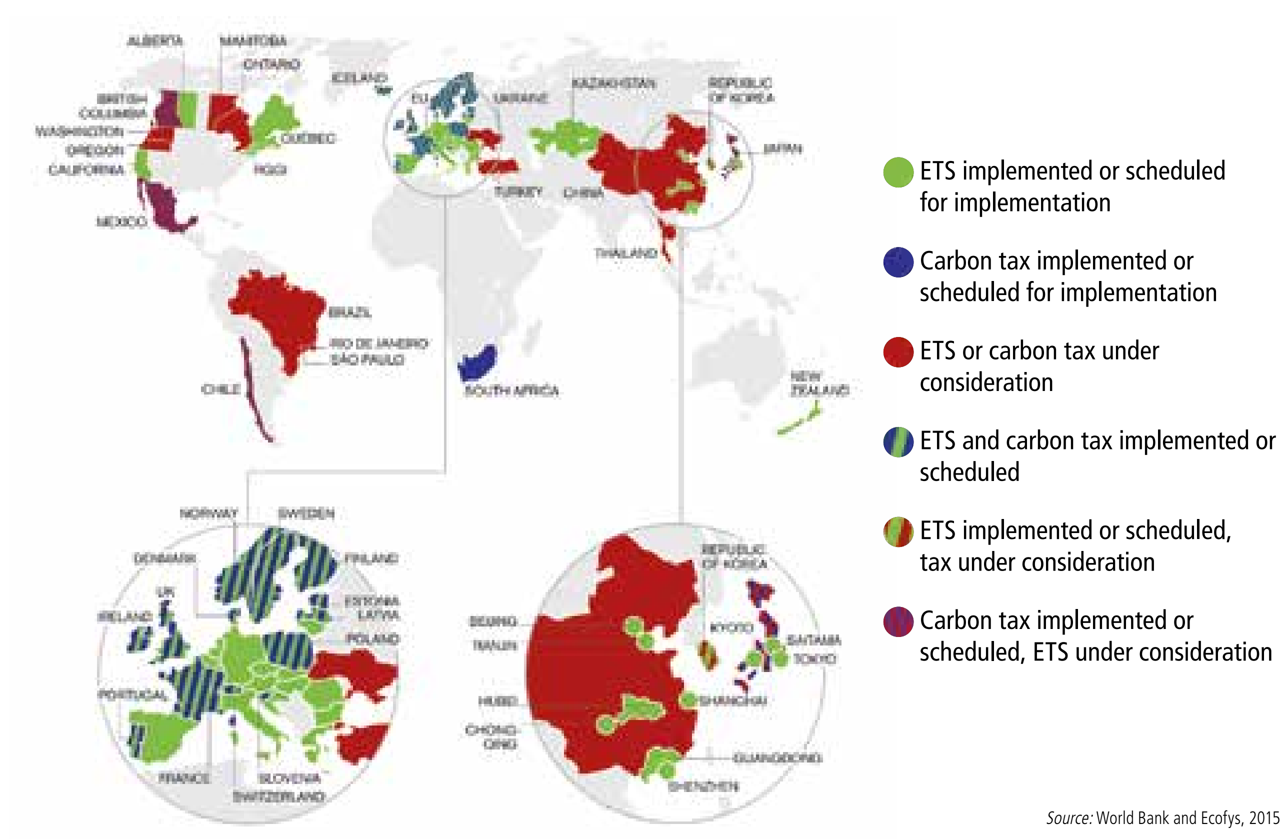
Despite efforts to date, only 12 per cent of annual global GHG emissions are formally priced and typically at levels below USD10 per ton (World Bank and Ecofys, 2015). While new carbon pricing measures, such as those planned in China, will help to improve this situation, there is still a long way to go. Concerns about impacts on competitiveness and distribution can be addressed through careful design and targeted compensation measures. Other multilateral approaches should also be explored including the possibility of an international carbon price floor arrangement among high emitters which would provide some degree of protection against tax competition, while allowing individual countries flexibility to go beyond the floor depending on national circumstances (Farid et al., 2016). Finally, multiple benefits of carbon pricing must be communicated to legislators and the public. Domestic co-benefits for human health (e.g. from reductions in air pollution-related deaths) is a particularly compelling argument which indicates how carbon pricing is in many countries own national interest (Parry et al., 2014).

The time for action on fiscal policies

The time for action is now. The 60 per cent decline in oil prices over the last three years, continuing fiscal pressures to reduce high debt-to-GDP ratios, and the need for countries to take forward domestic actions to support global climate change commitments, provide a particularly favourable environment to launch carbon pricing mechanisms and reform fossil fuel subsidies. Support for the use of such instruments is galvanizing with calls for action from key actors including international institutions, national governments, private actors[1] and academics to name a few.

A number of countries have introduced initiatives in this area and included references to specific fiscal instruments in their INDCs. This growing momentum needs to be translated into further action. Countries should consider adopting more ambitious green fiscal policies and other instruments as they start to review and update their INDCs. A key challenge going forward is to ensure that these instruments are well-designed to reflect good governance principles, with regular monitoring and review mechanisms to ensure commitments are fulfilled even when times change (i.e. oil prices start to rise). Such concerted efforts will help to ensure that fiscal measures are an integral element of actions to take forward the Paris Climate Agreement and can better contribute towards ambitions for a low-carbon, climate-resilient future.

Figure 3 Overview of existing, emerging and potential carbon pricing instruments in 2015



Source: World Bank and Ecofys, 2015

References

Coady, D., Parry, I., Sears, L. and Shang, B. (2015), "How Large Are Global Energy Subsidies?" Working Paper15/105, International Monetary Fund, Washington, DC.

Farid, M., Keen, M., Papaioannou, M., Parry, I., Pattillo, C., Ter-Martirosyan, A., and other IMF Staff (2016), After Paris: Fiscal, Macroeconomic, and Financial Implications of Climate Change, IMF Staff Discussion Note SDN/16/01, International Monetary Fund, Washington, DC.

IEA (2015), World Energy Outlook 2015, International Energy Agency, Paris.

IEA (2014), World Energy Investment Outlook, Special Report, International Energy Agency, Paris.

IPCC (2014), Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

IISD (2014), Fossil fuel subsidies – A change in direction?, International Institute for Sustainable Development: Global Subsidies Initiative.

IISD (2013), A Guidebook to Fossil Fuel Subsidy Reform for Policymakers, International Institute for Sustainable Development: Global Subsidies Initiative.

McFarland, W., Whitley, S., and Kissinger, G. (2015), 'Improving the efficiency of financing for REDD+: addressing the perverse effect of agricultural subsidies', Guest article in the Green Fiscal Policy Network Newsletter, Issue 3 – Fiscal Policy and Deforestation, July 2015.

Merrill, L. (2015), 'Fossil fuel subsidies and climate change', Guest article in the Green Fiscal Policy Network Newsletter, Issue 4 – Fiscal Policy and Climate Change, November 2015.

ODI (2015), Subsidies to Key Commodities Driving Forest Loss: Implications for Private Climate Finance, Overseas Development Institute, March 2015.

ODI and OCI (2014), The fossil fuel bailout: G20 subsidies for oil, gas and coal exploration, Report by E. Bast, S. Makhijani, S. Pickard and S. Whitley, Overseas Development Institute and Oil Change International, November 2014.

OECD (2015), OECD Companion to the Inventory of Support Measures for Fossil Fuels 2015, OECD Publishing, Paris.

Parry, I. (2015), 'Time to tax carbon', Guest article in the Green Fiscal Policy Network Newsletter, Issue 2 – Fiscal Policy and Climate Change, March 2015.

Parry, I., Veung, C., and Heine, D. (2014), «How Much Carbon Pricing is in Countries› Own Interests? The Critical Role of Co-Benefits.» Working paper 14174, International Monetary Fund, Washington, DC.

Parry, I. and Williams, R. (2012), «Moving US Climate Policy Forward: Are Carbon Tax Shifts the Only Good Alternative?» In Robert Hahn and Alistair Ulph (eds.), Climate Change and Common Sense: Essays in Honor of Tom Schelling, Oxford University Press, 173-202.

Stavins, R. (2016), 'The Paris Agreement – A Good Foundation for Meaningful Progress', Guest article in the Green Fiscal Policy Network Newsletter, Issue 4 – Fiscal Policy and Climate Change, March 2016.

Stefanski, R. (2014), Dirty little secrets: Inferring fossil-fuel Subsidies from patterns in emissions intensities, http://www.oxcarre.ox.ac.uk/files/OxCarreRP2014134(1).pdf

UNEP (2014), Fossil fuel subsides – Policy Brief.

UNEP (2011), Towards a green economy: Pathways to sustainable development and poverty eradication, Geneva, UNEP, 2011.

UNFCCC (2015), INDCs as communicated by Parties, http://www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx

UNFCCC (2015a), Adoption of the Paris Agreement, Conference of the Parties – Twenty-first session, Paris, 30 November to 11 December 2015, https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf

World Bank and Ecofys (2015), Carbon pricing watch 2015, Advance brief from the state and trends of carbon pricing 2015 report, World Bank Group and Ecofys.

Withana, S., (2015), Overcoming Obstacles to Green Fiscal Reform, Paper for the GGKP Research Committee on Fiscal Instruments, GGKP Working Paper 02|2015.

Notes

1 For instance, through the Carbon Pricing Leadership Coalition which brings together governments, private sector actors and civil society to share experiences and expand the use of carbon pricing systems and policies.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

UNEP

GREEN FISCAL POLICY NETWORK

The Green Fiscal Policy Network (www.greenfiscalpolicy.org) is a partnership between the United Nations Environment Programme (UNEP), the International Monetary Fund (IMF) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) which aims to facilitate knowledge sharing, learning and dialogue on fiscal policies to support the green economy. The Network is supported by the International Climate Initiative (IKI) and the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB). For enquiries and to subscribe to the newsletter, please email: greenfiscalpolicy@gmail.com

Supported by:

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

based on a decision of the German Bundestag

For information:

UNEP – DTIE/Economics and Trade Branch

11-13, chemin des Anémones – 1219 Châtelaine / Geneva – Switzerland

T: +41 (0)22 917 82 43 – E: gei@unep.org – www.unep.org/greeneconomy – www.greenfiscalpolicy.org