



**REFORMING ENVIRONMENTAL TAXES AND HARMFUL SUBSIDIES:
CHALLENGES AND OPPORTUNITIES**

**Background paper under the IEEP project on 'Charting Europe's
environmental policy future'**

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Key Messages

Environmental fiscal reform (EFR) offers major potential for improving economic incentives to address resource efficiency concerns and implement the polluter pays principle. Such reform can also raise additional tax revenues, help balance budgets and meet the ambitions for sustainability in times of austerity. Where well designed and implemented, it can not only avoid negative competitiveness impacts, but also help catalyse the transition to a resource efficient, green economy that supports jobs and fosters growth and innovation.

The ETR agenda has progressed well in some Member States and recently the financial crisis has drawn new attention to efforts in this area. However, progress across the EU remains very variable, and opportunities for improving economic incentives remain. A 7th EAP that includes a focus on EFR would further stimulate progress in this area. Specific measures could include:

- Efforts to improve **implementation** of relevant EU policies that include MBIs (e.g. WFD, Eurovignette, Energy taxation, liability directive).
- **Open method of coordination (OMC)** type approaches to encourage progress with ETR across Member States.
- Scoping the need for **new MBIs and determine where there is EU added value** (e.g. carbon tax, waste policy).
- Exploring where **enhanced cooperation** could be a promising way forward for new instruments, where unanimity is impossible.
- Encouraging the development of roadmaps for **harmful subsidy reform and structured reporting on progress in the context of the European semester**.

1 Introduction

The current Eurozone crisis, stagnating economic performance in EU Member States and associated budgetary challenges, provide an opportunity to create new momentum in support of environmental fiscal reform (EFR), particularly the reform of (environmentally harmful) subsidies (EHS) and environmental tax reform (ETR) at Member State level. The decarbonisation and resource efficiency agendas can also make a timely contribution to broader fiscal reform policies (Volkery et al., 2012).

Environmental tax reform (ETR) is a 'reform of the national tax system where there is a shift in the burden of taxation, for example from labour to environmentally damaging activities, such as unsustainable resource use or pollution' (EEA, 2005). **Environmental fiscal reform** is a broader approach which includes reforming subsidies which have outlived their purpose, are ineffective or harmful to the environment.

2 Environmental taxes: definitions and practice

One of the most widely used definitions of environmental (or 'green') taxes is 'A tax whose tax base is a physical unit (or a proxy of it) of something that has a proven, specific negative impact on the environment.' (Eurostat 2001, p.9). In other words, the base on which the tax is raised is considered to be the only objective basis for identifying those taxes which can be classified as environmental. The name and the purpose of the tax, as well as the motivation for implementing, it are not

considered decisive in this definition. Statistical estimates of the share of environmental taxes will generally build on this broad definition.

The economic theory behind environmental taxation is to incorporate the costs of environmental damage into the prices of the goods, services and activities which give rise to them by internalising negative environmental impacts/externalities and thus environmental (social) costs. This in turn creates incentives for producers and consumers to shift away from environmentally damaging behaviour, thus reducing environmental degradation and the costs of repairing damage that would otherwise have accrued.

In practice it is often not always possible to identify the appropriate tax rates to internalise externalities. Furthermore, where it is possible to identify a suitable tax rate, these may not be politically acceptable. In practice environmental rates tend to be low, sometimes with a vision for scaling these up over time.

In parallel, environmental taxation may also serve to implement the user pays principle – a variation of the polluter-pays principle that calls upon the user of a natural resource to bear the cost of provision of the service and the social cost of running down natural capital (e.g. reducing aquifer levels or degrading biodiversity).

In the context of resource and pollution pricing, taxation is only one of the market related policy instruments available. Others include charges, (auctioning) permits to pollute or exploit a resource, and fines for environmentally damaging activities. Which instrument (or combination) is best suited to given objectives will depend, inter alia, on economic, environmental, and political contexts and administrative capacity.

3 Potential benefits of ETR in the EU

Where the burden of taxation falls matters. According to the proponents of ETR, making taxation more “growth friendly” would likely involve shifting the tax burden from income tax and social contributions to natural resources (e.g. energy), polluting products (e.g. pesticides, plastic bags and batteries) or pollution (e.g. SO₂, NO_x). Depending on the design of the ETR, this may support employment and competitiveness while at the same time reducing pressures on the environment (GBE, 2012).

By proposing to shift taxes from labour to pollution, ETR has the potential to result in a ‘double dividend’, i.e. an improvement in both the environment - by properly pricing externalities and resources - and the economy as a whole - by making the cost of labour cheaper and therefore encouraging employment (also a social dividend). The concept of revenue or fiscal neutrality is also often associated with ETR, as the tax shift can be designed in a way that the increase in environmental (or ‘green’) taxes is compensated by an equivalent decrease in labour taxes, resulting in no overall change in the tax burden. Revenue neutrality, however, is only one choice and ETR can also form part of overall tax reduction or revenue raising policies where taxes are raised to help address budget concerns in times of austerity (Bassi et al, 2010). That said, the social acceptability of new environmental taxes can be facilitated by the announcement of a tangible reduction in direct taxation elsewhere.

These arguments in support of ETR have recently been corroborated by results of a range of ex-post assessments of existing environmental tax reform as well as ex-ante modelling exercises. A whole range of these assessment focus in particular on carbon and energy taxes reflecting the progress in carbon pricing and carbon taxation made in the last few years, with carbon pricing being now in place in over 30 countries worldwide (GBE, 2012).

EU-wide ex-post assessments of experiences and competitiveness impacts of using carbon-energy taxes as an instrument of ETR showed the role that shifting the tax burden can have in reducing carbon emissions while at the same time leading to GDP growth. Experience of ETR in EU Member States (Denmark, Finland, Germany, the Netherlands, Slovenia, Sweden and UK) suggests that ETR can help reduce fuel use and hence improve fuel security, contribute to reducing GHG emissions, help mitigate climate change, and can increase GDP. As a general rule, the effects of the ETR will also be positive on economic activity, depending on how the revenues from the environmental taxes are recycled. However, transition costs mean that gains will in most cases not be immediate (Andersen et al., 2009). In the context of the current budgetary crises it may also be worthwhile pointing to the potential of carbon fiscal measures to raise significant revenues while having a less detrimental macro-economic impact than other tax options (Vivid Economics, 2012). Long-term macro-economic modelling of the introduction of a CO₂ tax for both households and companies in France with concomitant reduction of social contributions and/or redistribution of the revenues suggested macro-economic gains could be equivalent to 0.5% of GDP (DG Tresor, 2010).

Furthermore, the reduction of energy consumption of households leaves them with more disposable income, translating into benefits in terms of an increase in consumption of nationally produced products (as opposed to spending on energy that tends to be largely imported). This also highlights the potential advantages there might be in terms of energy independence and, more generally, improvements in the balance of trade through a reduction in the import of fossil fuels (DG Tresor, 2010).

In addition, a recent OECD study came to the conclusion that 'Environmental taxation can spur innovation' (OECD, 2010). Environmental taxation, rather than hindering economic activity, may serve as a catalyst for the creativity that underpins thriving economies, thus boosting efficiency and competitiveness (EEA, 2011b).

In view of these findings a growing range of organisations have recognised the potential role of fiscal policy in mitigating climate change. For example the International Monetary Fund recently published practical guidelines for the design of fiscal policies (carbon taxes and emissions trading systems with allowance auctions) to reduce greenhouse gas emissions (IMF, 2012). Finally, while ETR may have implications for income distribution, tailored flanking measures can help avoid its mild regressive impacts (EEA, 2011a).

Thus, where carefully designed and implemented, an ETR has the potential to offer an attractive mix for policy makers. It deters environmentally damaging activities by making them more costly, while incentivising positive economic changes - such as the creation of jobs and the diffusion of new technologies through a careful use of the tax revenues. The use of revenues is of course an important aspect both from the practical implementation point of view and from the perspective of political feasibility. Earmarking environmental taxes (i.e. dedicating a share or the totality of the environmental tax revenues to environmental items in the expenditure), is quite common. Such revenues could for example be used to support research, development and diffusion of low-carbon, resource efficient technologies, improve adaptation to a changing climate, or even leverage additional private investment in emerging sectors of the green economy.

There are arguments for and against earmarking. Earmarking runs the risk of leading to inefficient use of revenues, as it may limit the spending choices of government. Furthermore, setting a requirement for systematic earmarking may lead to political opposition to environmental taxation and act as an obstacle to more holistic reforms such as an EFR. Earmarking revenues can, however, help ensure the financing of projects that compensate those facing environmental externalities, reduce these externalities, and offer incentives to reward good performance, and more widely encourage innovation and research. Earmarking can also help meet environmental targets where the

environmental tax alone is insufficient (Pirttilä, 1998). Similarly, distributional concerns may justify that part of the tax revenue is earmarked to investments that help those most hardily hit by the introduction of a tax adjust to its impact on prices (e.g. energy prices).

4 ETR developments in the EU

Discussions on ETR have been underway for over 30 years in Europe and good examples of reforms exist. However, to date, only few EU countries have taken a strategic and conscious approach to implementing an ETR. The first EU Member States to embrace ETR were Finland (1990), Sweden (1991) and Denmark (1993). They were followed by the Netherlands (1996, 2001), Germany (1999), the United Kingdom (1996, 2001 and 2002) (EEA, 2005). The first country in central and eastern Europe to introduce a CO₂ tax was Slovenia (1996), followed by Estonia (2000). While the scale of the tax shifts differs between Member States, altogether these tax reforms are assessed to have shifted tax revenues by more than €25 billion annually in Europe. It is mainly labour which has experienced the lighter tax burden. Other Member States have adopted environmental taxes, but generally not fully fledged ETR strategies.

According to Eurostat environmental taxes in the EU-27 raised around €292 billion in 2010 which is equivalent to 2.4% of GDP and 6.2% of overall taxes and social contributions (Eurostat 2012; EC, 2012). Most of the taxes are energy taxes and only a small share is environmentally motivated. The financial crisis in the EU has created a new momentum for ETR in some Member States. For example, as part of its response to the crisis, Ireland which had already introduced a carbon tax on fuels including petrol, diesel and natural gas in 2010 raised this tax rate raised to €20 per tonne of CO₂ in 2012. The tax will also cover solid fuels such as coal and peat at a lower level of €10 per tonne of CO₂ from May 2013 (GBE, 2012). In addition, water charges will be introduced in 2014. Ireland was already a vanguard country with its introduction of a plastic bag tax in 2002 (Convery et al., 2007).

A 2007 Commission Green Paper (COM(2007)140) suggested that the possible adverse competitiveness effects of environmental taxes on specific sectors can be mitigated provided that action is closely co-ordinated at Community level. This Green Paper has however not been followed by any holistic initiative at EU level, despite a growing evidence base on the potentially positive effects of ETR. EU countries have broad freedom to design their direct tax systems so as to meet their domestic policy objectives. While Member States must exercise that competence consistently with community law, the EU itself has only limited competence in the area of taxation (direct taxation falls within the competence of the Member States according to the principle of subsidiarity). Where harmonisation of taxation is however needed to ensure a good functioning of the internal market, there is some scope for EU initiatives. Still, due to a unanimity requirement for the adoption of such legislation, only a few legislative acts regarding direct taxation have been adopted to date.

The introduction of new environmental taxes at EU level is therefore non trivial and so far only few examples of tax-related Directives exist. In the area of environmental taxation, these include the Energy Taxation Directive (Directive 2003/96/EC), the Eurovignette Directive (1999/62/EC) and elements of the Water Framework Directive relating to cost recovery. A proposal to reform the Energy Taxation Directive (COM/2011/169) has received mixed reaction with some Member States are keen to revamp an otherwise out-dated Directive and others resisting any EU attempt to regulate what are considered strictly national matters. Given the unanimity requirement, the possibility of a veto of any proposal relating to direct taxation is very likely. This is unfortunate, as the revision of the Energy Taxation Directive is much needed in order to update legislation that is now almost 10 years old and to ensure that there is a coordinated effort at EU level to achieve the EU's climate change and energy targets. A recently released IMF working paper suggests that existing environmental tax systems in selected countries reveals much scope for policy reforms in terms of levelling taxes across

emission sources causing the same damage, better aligning taxes with external damages, and scaling back redundant energy taxes (Heine et al. 2012).

5 Reforming harmful subsidies in the EU

The EU has a long-standing commitment to removing or phasing out environmentally harmful subsidies (EHS). Most recently, the need to phase out EHS is reiterated in the 'Roadmap for a resource efficient Europe', which includes a milestone that 'by 2020 EHS will be phased out, with due regard to the impact on people in need'. Commitments to reform have also been adopted at the global level, for example in the context of the Convention on Biological Diversity (CBD), the G20 and the Rio+20 Conference; as well as at the national, local and regional level (Withana et al, 2012).

While there are controversies about whether EU expenditure includes substantive EHS, many EHS primarily operated by Member States still occur across different sectors and economic types (Withana et al., 2012). Despite the commitments progress has been slow and a number of EHS remain across all EU Member States. There are many examples in Member States of cases of foregone government revenue through various tax exemptions and rebates, as well as cases of lack of full cost pricing, which again imply cases of foregone government revenue. Reforming such subsidies would bring benefits to the environment (e.g. by encouraging the more efficient use of energy and natural resources) and the economy (e.g. contributing to fiscal consolidation efforts, providing incentives for (eco) innovation), avoiding of negative social impacts resulting in policies that are better targeted on relevant objectives and help address issues of policy (in)coherence (Withana et al, 2012).

A report for the European Parliament in 2011 which analysed existing EU harmful subsidies stressed the need for better assessment and monitoring of subsidies and the reform of EHS across various policy areas, such as agriculture, fisheries, energy and transport (European Parliament, 2011). The European Commission is also further exploring opportunities and best practices for the phasing out of EHS. Similarly a range of EU Member States (including Germany, Sweden, France, the UK, and Flanders) have started developing inventories of (harmful) subsidies and road maps for reform (Withana et al. 2012).

6 Policy gaps and remaining challenges

ETR can be an important tool for facing current and future environmental challenges related to climate change, water scarcity, energy security and general resource limits (i.e. living within the planet's regeneration capacity). Even a modest tax shift can help to provide positive signs to the economy by putting the right price on resources, making polluters pay, and alleviating pressure on more 'benign' goods like labour (Bassi, et al, 2010). The intensity and typology of environmental taxes in Europe is however still very uneven and only few Member States have adopted some form of ETR to date.

The challenges of climate change, resource constraints, need for innovation, energy security, environmental impacts, an aging population, and, most notably, the current economic and fiscal crisis, may together create the conditions for a new momentum for a broader adoption of ETR. As EU Member States seek stronger and more coordinated fiscal policy, the role that green taxes and ETR can play should be more fully recognised and responded to.

However, ETR mechanisms can only be implemented if they are acceptable to the public and policy-makers. There is increasing evidence that unwanted competitiveness and distributional impacts from the introduction of environmental taxes can be addressed through more careful design based on sound analysis (EEA, 2011a). Responding to these concerns in the design of the tax is key to avoiding

obstacles to reform and ensuring long-term acceptability of the environmental taxes. As highlighted in a recently published IMF working paper (Heine et al, 2012) there are a variety of options for compensating adversely affected (low income) households and (trade-exposed) firms for higher energy prices, which are preferable to setting environmental taxes below Pigouvian levels (i.e. where tax rates equal externalities), or exempting sectors from environmental taxes.

With unanimity voting on tax issues, EU wide progress on fiscal reform will remain difficult beyond the few areas already the focus of community rules (energy taxation, Eurovignette, water pricing). The introduction and/or streamlining of a form of ETR at EU level therefore is likely to encounter some resistance, and it may be unlikely to achieve significant harmonisation on green taxes at EU level in a near future, even if a two-speed Europe develops. An ambitious fiscal reform will not be feasible without a paradigm shift at the highest level of government. As the recent Irish experience underlined, government recognition that ETR makes economic sense is a prerequisite, as are political will and windows of opportunity.

In the area of **EHS reform**, despite recent commitments and political declarations, progress has been slow and the overall level of global subsidies remains substantial. The urgent need for subsidy reform remains and the on-going Eurozone crisis and stagnating economic performance in many EU Member States may provide an opportunity for new momentum behind this agenda. Similarly, the increased recognition of resource scarcity, competition for resources and planetary boundaries are starting to driver interest in EHS reform.

There clearly is a need to build and maintain momentum behind EHS reform to 2020 and beyond, which will require significant investment and persistence by those promoting the reforms and may well require a combination of systematic and opportunistic approaches. The action required for EHS reform should ideally be coordinated among Member States to maximise synergies and help speed up the pace of reform (by reducing perceptions of competitive disadvantage that may arise from reform efforts that occur at different paces) and build support and buy-in for the process from as wide a range of actors as possible - including the wider public (Withana et al., 2012).

7 Role of the 7th EAP in helping to deliver the ETR and EHS reform agendas

The economic and financial crisis, as well as the increasing ambition of EU environmental targets, offer new arguments to explore how market-based instruments and other economic tools can help achieve the challenge of raising financial resources and achieving environmental objectives. The needs and ambitions for the development of a resource efficient EU and a transition to a green economy require that economic signals encourage innovation, efficiency and a move away from “bads” (societally inappropriate trade-offs) to “goods” (low impact production and products and policy synergies).

The authors of this paper welcome recognition in the Commission’s proposal for a 7th EAP that both the “Union and Member States will need to put in place the right conditions to ensure that environmental externalities are adequately addressed and that the right market signals are sent to the private sector” by “applying the polluter-pays principle more systematically, through phasing out of EHS and shifting taxation away from labour towards pollution”. It is also useful that it makes the case for “public intervention to ensure that economic rents from natural resources are not excessive and that externalities are taken into account to ensure the more efficient use of resources and help avoid market distortions”.

The **7th EAP could however do more to guide those Member States willing to move towards an EFR**. While it is unlikely that definite new targets or milestones on green taxes or harmful subsidy reform can be accepted by all Member States, the 7th EAP could support the introduction of ‘soft’ policy

tools. For example, the open **method of coordination (OMC)** could foster the debate on ETR and EHS and increase harmonisation at EU level by helping ensure that leaders are followed by other countries, as soon as possible. It could also encourage national governments to play their parts in making the benefits of ETR and EFR known to their citizens and stakeholders and hence generate public support for reform.

The 7th EAP could also usefully **provide an inventory of areas where there is scope for new market based instruments** (introducing minimum environmental levies on resources, products or emissions, e.g. landfill taxes, pollution taxes, product taxes, materials taxes) or indeed support the **reform of existing** EU market based instruments (e.g. energy taxation directive, environmental liability directive). The 7th EAP could also support **accelerated implementation** of existing instruments such as requirements for cost recovery under the WFD, encouragement for road pricing to make use of the Eurovignette, and encouragement for accelerated update of EU-ETS auctioning. The development of guidelines by 2017 to ensure that pricing strategies under different areas of the *acquis* are fully implemented.

The 7th EAP could also have a priority focus on **EHS reform** by initiating the development of an EU roadmap for reform and encouraging (via OMC) Member State progress. This could be part of the 7th EAP contribution to budgetary adjustment reform and could (Volkery et al., 2012) and could:

- Push for the development of transparent inventories of subsidies in Member States to highlight their impacts and communicate the benefits of their reform. Based on these assessments, reform efforts can be prioritised according to national interests and circumstance. (Withana et al. 2012).
- Strengthen reporting on progress on EHS reform within the context of the European Semester and encourage separate national reporting (Withana et al. 2012). Recommendations relating to ETR and EHS should be part of the recommendations to Member States under the European Semester.
- Announce further steps to support harmful subsidy reform within the EU's regional, agriculture and fisheries policies and spending programmes, by, inter alia, committing to climate and biodiversity proofing, identifying and discouraging inappropriate trade-offs and encouraging positive synergies.
- Envisage more radical approaches for a wider fiscal reform (such as enhanced cooperation) to prepare the ground for when there is sufficient political support for action.

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