STUDY SUPPORTING THE PHASING OUT OF ENVIRONMENTALLY HARMFUL SUBSIDIES

Final Report

October 2012

Project Number: *07.0307/2011/611259/ENV.F.1*

The Institute for European Environmental Policy (IEEP)
Institute for Environmental Studies - Vrije Universiteit (IVM)
Ecologic Institute
VITO

Disclaimer: The arguments expressed in this report are solely those of the authors, and do not reflect the opinion of any other party.

The report should be cited as follows: Withana, S., ten Brink, P., Franckx, L., Hirschnitz-Garbers, M., Mayeres, I., Oosterhuis, F., and Porsch, L. (2012). *Study supporting the phasing out of environmentally harmful subsidies.* A report by the Institute for European Environmental Policy (IEEP), Institute for Environmental Studies - Vrije Universiteit (IVM), Ecologic Institute and VITO for the European Commission – DG Environment. Final Report. Brussels. 2012.

Supporting authors: Tomas Badura (IEEP), Allan Buckwell (IEEP), Bettina Kretschmer (IEEP), Leonardo Mazza (IEEP), Stephanie Newman (IEEP), Daniela Russi (IEEP), Emma Watkins (IEEP), Holger Gerdes (Ecologic Institute), Leah Germer (Ecologic Institute), Anne Lambert (Ecologic Institute), Marlene Lange (Ecologic Institute), Ruta Landgrebe-Trinkunaite (Ecologic Institute), Johanna von der Weppen (Ecologic Institute), Elissaios Papyrakis (IVM).

Acknowledgements:
The authors would like to thank the following for their contributions to the study: Constanze Adolf (Green Budget Europe); Miguel Aymerich (Ministry of Agriculture, Food and Environment, Spain); Kris Bachus (University of Leuven – KU Leuven); Martijn Blom (CE Delft); Jean-Philippe Barde (ex OECD); Samuela Bassi (Grantham Research Institute); Frank Convery (University College Dublin); Pieter DePous (European Environment Bureau - EEB); Pauline de Wouters (Fédération Inter-Environnement Wallonie); Frauke Eckermann (Federal Environment Agency, Germany); Christian Ege (The Ecological Council); Beate Ellingsen (Ministry of Environment, Norway); Roberto Ferrigno (Novamont); Ivetta Gerasimchuk (International Institute for Sustainable Development - IISD); Kerstin Grönman (Ministry of the Environment, Sweden); Jennie Hokander (Environment Protection Agency, Sweden); Miroslav Hajek (Ministry of Environment, Czech Republic); Pieter Jong (Court of Auditors in the Netherlands); Malgorzata Kicia (CEC-DGENV), Doug Koplow (Earth Track); Markus Knigge (PEW Environment Group); Timo Lehtomaki (CEC-DGENV),, Liana Sandra Ardiles Lopez (Ministry of Environment, Spain); Diane Muscat (Ministry of Finance, the Economy and Investment, Malta); Magnus Nilsson (Transport and Environment); Sara Ochelen (Department of Environment, Nature and Energy, Flemish Government, Belgium); Viveka Palm (Swedish Statistics); Rosalina Petrova (CEC-DGENV), Jan Pieters (ex-VROM, Ministry of the Environment in the Netherlands); Aldo Ravazzi (Ministry of Environment, Territory and Sea, Italy); Vladislav Rezek (Ministry of Finance, Czech Republic); Guillaume Sainteny (Le Centre d'analyse stratégique, France); Norbert Sedlacek (Herry Consult); Claudia Dias Soares (Catholic University of Portugal); Manfred Rosenstock (CEC-DGENV), Stefan Speck (European Environment Agency - EEA); Kalina Stoyanova (Ministry of Environment and Water, Bulgaria); Jagoda Sumicka **(**OECD); Martin Švolba (Ministry of Environment, Czech Republic); Kristof Rubens (Department of Environment, Nature and Energy, Flemish Government, Belgium); Cees van Beers (Delft University of Technology); Jos van Ommeren (Free University of Amsterdam); Ignasi Puig Ventosa (ENT Environment and Management), Paul Westin (Swedish Energy Agency).

The contents and views contained in this report are those of the authors, and do not represent those of the European Commission or any of the experts mentioned above.

Institute for European Environmental Policy (IEEP)

London Office
15 Queen Anne's Gate
London, SW1H 9BU
Tel: +44 (0) 20 7799 2244
Fax: +44 (0) 20 7799 2600

Brussels Office
Quai au Foin, 55
B- 1000 Brussels
Tel: +32 (0) 2738 7482
Fax: +32 (0) 2732 4004

The Institute for European Environmental Policy (IEEP) is an independent not-for-profit institute dedicated to advancing an environmentally sustainable Europe through policy analysis, development and dissemination. For further information see our website: http://www.ieep.eu

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF BOXES

EXECUTIVE SUMMARY

The need to reform ineffective or harmful public subsidies has long been recognised and has been a contentious point of discussion for several years. 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'[1] 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 been adopted at the global level, for example in the context of the Convention on Biological Diversity (CBD) and the G20, while some existing commitments were reiterated at the Rio+20 Conference. Commitments have also been adopted at the national, local and regional level.

Despite these commitments, progress has been slow and subsidies remain an issue in most EU countries. The on-going Eurozone crisis and stagnating economic performance in many EU Member States provide an opportunity to put new momentum behind this agenda.

The aim of this study has been to support the European Commission (DG Environment) in implementing the call in the Resource Efficiency Roadmap to phase out EHS by 2020. The study focuses specifically on EHS at the level of EU Member States; it identifies key types of EHS and examines cases of existing EHS across a range of environmental sectors and issues, including subsidies from non-action. The study also analyses examples of good practices in the reform of EHS in EU Member States and the lessons that can be learnt from these cases. Finally, based on this analysis, it develops practical recommendations on phasing out and reforming EHS to support the objectives of the Europe 2020 Strategy and the resource efficiency agenda.

This study was carried out by a consortium led by the Institute for European Environmental Policy (IEEP) which included the Institute for Environmental Studies (IVM), Ecologic Institute and VITO. The study was carried out between January and October 2012 and is based on an analysis of literature and consultation with experts and policy makers.

EHS remain an issue across the EU

A number of EHS exist in EU Member States. These subsidies occur across different sectors and economic types and vary in impact (environmental, social, and economic). Through research and consultation with experts, the study team identified 30 cases of EHS in EU Member States which are examined as case examples in the study. There are multiple reasons for reforming an EHS, for example when the subsidy's objectives are no longer valid, where there are problems with the design of the subsidy, or where the subsidy results in negative social, environmental, economic and financial impacts. Table E1 below provides a summary assessment of the cases examined in this study, highlighting through colour tabs where concerns have been identified with a particular aspect of the subsidy.

[1] EC (2011) Roadmap to a Resource Efficient Europe (COM(2011)571), http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0571:FIN:EN:PDF

Table E1: Overview of EHS cases in EU Member States

Sector	EHS case	Objectives	Design	Social impacts	Enviro. impacts	Eco. & financial impacts	Other MS where a similar subsidy exists
Agriculture	Eligibility criteria for CAP Pillar 1 payments in **UK**						BG, EE, SE, RO, SI
	Reduced excise fuel duty in **several MS**						BE, CZ, DE, EE, ES, FR, IE, CY, LV, LT, LU, HU, NL, PT, FI, SE, UK
	Unsustainable land use and soil sealing in **FR**						Several MS including AT, BE
Climate change & energy	Nuclear energy in **DE**						BE, NL, CZ, FI, FR, BG, IT, LT
	Hard coal mining in **PL**						Other MS, e.g. UK, FR, LU
	Support for biofuels in **SE**						Several MS
	Cogeneration in **EE**						BE
Fisheries	Vessel modernisation in **DK**						ES, PT, FR, IT, BE, CY, EE, PL, SE, NL, DE, FI, BG
	Vessel scrapping in **ES**						Several MS
Food	Reduced VAT for food in **LU**						Most other MS *except* BG, DK, EE, LT, RO
Forestry	*Peatland drainage in **FI***						SE, UK (now reformed)
	Wetland conversion in **FR**						IE
Materials	Rock extraction in **MT**						Several MS
Transport	Commuter subsidies in **AT**						Several MS *except* EL, IE, IT, PT, ES and UK
	Road pricing in **NL**						Several MS
	Company car taxation in **BE, NL**						Several MS
	Company car taxation in **UK**						Several MS
	Car fleet renewal schemes in **DE**						BE-Wa, FR
Waste	Waste incineration charges in **BE (Fl)**						NL, AT, DK, UK, IT, IE, ES (Catalan region), FR, EE, PL, LV
	Producer responsibility for WEEE in **SI**						BG, DK, FI, FR, GR, LT, UK
	Energy from waste incineration & landfill gas in **CZ, HU**						Several MS, e.g. AT, BE, BG, CY, EE, ES, FI, IE, IT, LU, NL, UK
	Energy from waste incineration & landfill gas in **PT**						Several MS, e.g. AT, BE, BG, CY, EE, ES, FI, IE, IT, LU, NL, UK
	Construction of waste incinerators in **PL**						CZ and LT
Water	Reduced VAT for drinking water in **EL**						Several MS *except* BG, DK, EE, LV, LT, HU, RO, SK, FI, SE
	Irrigation subsidies in **CY, ES, IT**						Several MS
	Nitrogen-rich fertilisers in **FR**						Potentially also NL, SL, DE, BE, LU

Key:

	There are no particular concerns relating to this aspect of the subsidy.
	There are some concerns with this particular aspect of the subsidy and further attention is useful. It is not however an over-riding problem suggesting a pressing need for reform.
	There are significant concerns with this particular aspect of the subsidy and further attention or reform is needed.

Notes:

- *Member States highlighted in bold are those covered in case studies.*
- *The colour tabs highlight areas where concerns relating to a particular aspect of a subsidy have been identified in our analysis. The decision as to whether a subsidy merits reform should build on the complete picture across the different aspects of the subsidy and a careful analysis of the pros and cons of potential reform options. For additional detail on the analysis of each case study see Annex I.*
- *In the biofuels case the colour tabs are split to reflect the complexity of the case. For additional detail see case study in Annex I.*
- *For cases where the subsidy is related to cases of non-action (e.g. lack of resource pricing), the categories of 'objectives' and 'design' are noted as 'red' if there is a major conflict with other objectives and 'orange' if it is sub-optimal from a signalling perspective.*

There are many examples in Member States of **cases of foregone government revenue** through various tax exemptions and rebates (e.g. fuel duty reliefs or exemptions for agriculture in several EU Member States, excise tax exemptions for coal used for heating purposes by households and public entities, the favourable treatment of company cars in several countries, and tax deductions for commuters), as well as cases of lack of full cost pricing, which again imply cases of foregone government revenue (e.g. lack of charges for rock extraction and irrigation subsidies in several southern Member States).

In many of the cases examined, the **objective** of the subsidy or rationale remains at least partially valid with some exceptions. There are some cases where Member States are effectively making use of an existing opportunity, for example provisions in the VAT Directive (2006/112/EC, art. 98 and Annex III) which allow Member States to apply a reduced VAT rate to foodstuffs; or responding to commitments at the EU level for example promoting the use of biofuels to meet obligations under the renewable energy Directive 2009/28/EC. In cases where the rationale or objective remains (partially) valid, the subsidy in place may not be the most (cost) effective or efficient means of achieving the policy objective.

In some cases, our analysis identified a number of problems with the **design** of the subsidy; for example in cases where the subsidy has been in place for a long time and lacks an in-built review process. There are also some problems relating to the interpretation of rules at the national level and some issues arising due to unclear objectives of the subsidy. There are also cases where the way the subsidy is designed means that it goes against certain EU commitments, such as feed-in tariffs for the generation of energy from waste incineration and landfill gas being somewhat contradictory to the application of the waste hierarchy laid down in the Waste Framework Directive 2008/98/EC.

The unintended **social impacts** of the subsidies vary across the cases. Some subsidies reach their target beneficiaries (e.g. commercial fishermen, active farmers) and have little impacts on wider society; while others have unintended social impacts such as the negative health impacts related to extractive mining and risks related to potential nuclear accidents. Certain

subsidies may also mostly benefit certain groups, e.g. high income groups in the cases of reduced VAT for food and favourable taxation of company cars.

The nature and degree of **impacts on the environment** also vary. In some cases, the subsidy may affect consumption and production behaviours (e.g. the incentive to save energy or switch to less polluting fuels, incentives for waste prevention and recycling) while in others the subsidy may have quite significant environmental impacts such as the risk of nuclear accidents, water pollution and impacts related to increased car usage. There are also subsidies whose potentially negative environmental impacts are mitigated by 'policy filters' (e.g. regulations that put a cap on emissions or resource use).

In some cases the **economic and financial impacts** of subsidies are marginal in terms of the size of the subsidy (and associated impact on public budget) and unintended economic impacts. In other cases these impacts can be quite substantial in terms of foregone public revenues (e.g. related to commuter subsidies) or distortions of competition. Some subsidies also lead to additional public (and private) spending (e.g. economic costs of nitrogen pollution from the agriculture sector borne by households and local authorities).

The analysis shows that there are several cases of EHS in need of potential reform. Additional analysis would be useful to confirm this assessment, and to explore further the pros and cons of potential reform as well as the practical options for reform, taking into account the national socio-economic context.

There are multiple benefits of EHS reform

Reforming EHS can help to deliver economic, social and environmental benefits as set out below:

- The continued existence of EHS is one of the reasons behind the **inefficient use of energy and natural resources**. Correcting market signals in terms of getting the prices of resources and products right will be critical in this regard and EHS reform should be seen as a tool to achieve this. EHS reform will lead to resource efficiency gains, cost savings, improved resource availability and help address resource dependency and geo-political concerns.
- EHS reform can help to address the **negative impacts of subsidies on the environment** (e.g. on biodiversity, GHG emissions, water quality, air quality), avoid environmental damage and further losses of natural assets that provide essential services; as well as helping to **avoid negative social impacts** (e.g. on human health and household spending).
- There is a need, particularly in the current economic context, for **budget savings to help with fiscal consolidation efforts**. At the same time, there is a need to secure additional funding to finance the transition to a low carbon, resource efficient economy. The reform of EHS offers opportunities to release public funds and/or raise funds to support the transition to a green economy, allowing for a reallocation of resources to other policy objectives and needs.
- EHS reform provides **incentives for (eco-) innovation** and may lead to the development of new markets/niches, helping to increase competitiveness and support the transition to a green economy.

- Many EHS are badly targeted and in several cases have lost their initial purpose/rationale. Reforming EHS can lead to policies which are **better targeted on relevant objectives**.
- Many EHS undermine or contradict other policy objectives (environmental, social and economic) and wider principles (polluter pays, full cost recovery and user pays). EHS reform can **help address issues of policy (in)coherence**. More widely, EHS reform is integral to **good governance** and an essential element of better or smart regulation ambitions.
- A number of **commitments to EHS reform have been adopted** at the international, EU and Member State, regional and local level. Meeting these commitments is important for maintaining credibility and legitimacy of the public bodies that signed up to them.

Insights from successful reform efforts

EHS reform is possible and there are a number of examples of successful reform cases in EU Member States. Examining such cases can be useful to demonstrate that EHS reform can work and how. Progress in one sector or one country creates a precedent and may help generate momentum for change in other countries.

There are a number of different drivers behind EHS reform. These drivers vary from case to case and often a mix of different factors come together to create a window of opportunity for reform. Which success factors are more important, or rather which mix of success factors is most important, will of course be country and issue dependent. Some factors driving reform forward include:

- A **shift in political priorities** for example due to an election or an external event;
- **Problems with the subsidy itself** in that it does not reach its objective/target audience, that it is no longer valid, or that it has problems in its design;
- The current economic and financial crisis and related needs for **fiscal consolidation and budgetary discipline** is an important window of opportunity for reform;
- **Public or stakeholder pressure**;
- **Legislation and commitments at EU and national level;**
- The **approach taken to the reform** can be another important enabling factor helping to increase support for the reform and ensure a smooth transition;
- Opposition against reform may be easier to overcome if it is presented as **part of a large package** such as a major (tax) reform;
- The prospect of **compensatory measures** for the affected sector(s) may increase the political acceptance of the reform, even if this compensation is only partial; and
- The **message of reform needs to be carefully formulated and communicated clearly** to the wider public to generate support.

There are inevitably a number of obstacles that policy makers can meet when attempting to reform EHS. These can be overcome through efforts to:

- Increase **transparency** not only of the existing subsidy and its impacts, but also of the goals and objectives and the distribution of benefits and costs of the proposed reform;
- **Change the terms of the debate** by challenging misconceptions and 'debunking' popular beliefs about the role and indispensability of a subsidy;

- Reduce the **lobbying power of special interest groups** by making the voices heard of those disadvantaged by the *status quo* such as foreign competitors and other sectors;
- Recognise the **range of options available to meet societal objectives** which may deliver more cost-effective and efficient solutions to achieving policy goals;
- **Learn from successful examples of reform** not only across geographical borders, but also between policy areas and sectors;
- **Better target existing subsidies and improve subsidy design** in line with the principles of good governance;
- **Create and seize windows of opportunity** when they materialise such as the current need to reduce public budget deficits; and
- Introduce well-designed **transitional measures**.

Any reform effort needs to recognise that subsidies are part of a wider policy context and should contribute to clear policy objectives. Subsidy reform is also part of this wider policy context and needs to take into account the complex interconnections and interdependencies therein.

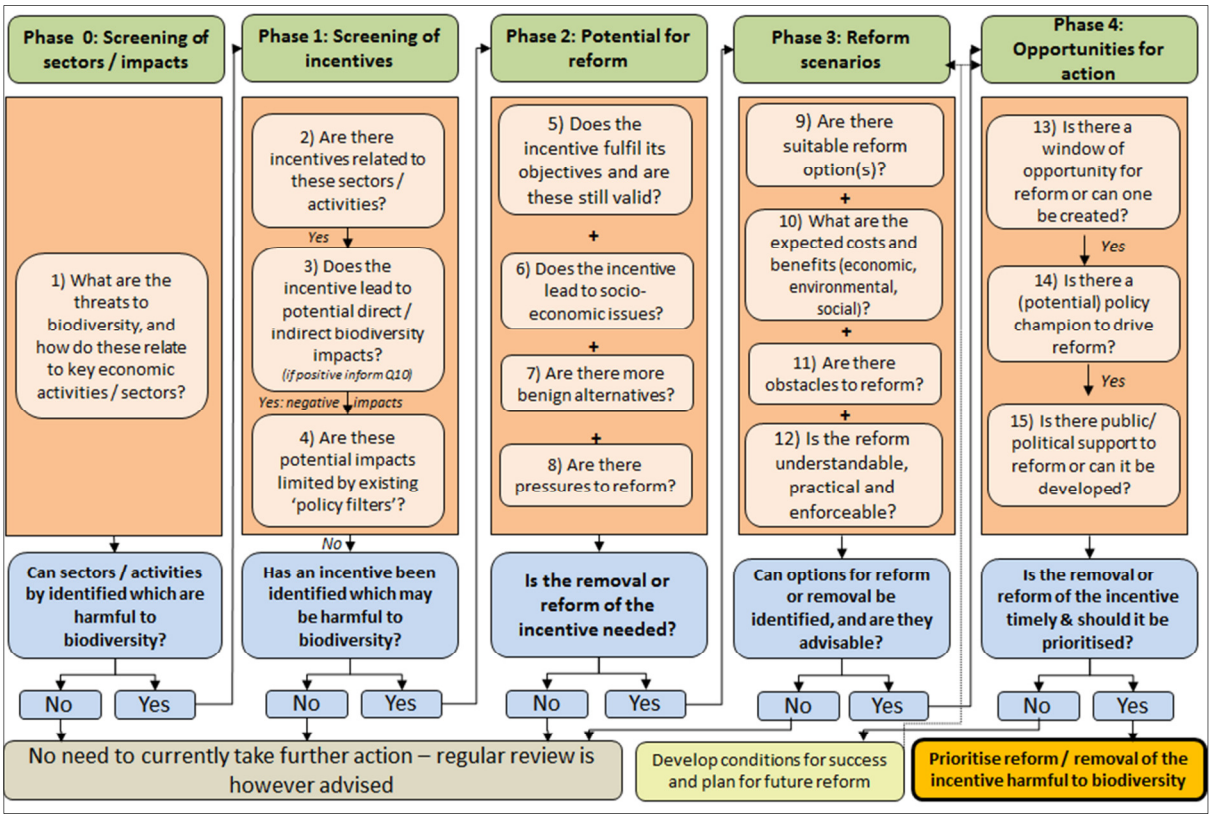
Taking reform forward – A roadmap for action

There is a need to build and maintain momentum behind EHS reform to 2020 and beyond. This will require significant investment and persistence by those promoting the reforms and may require a combination of systematic and opportunistic approaches. EHS reform requires actions at different levels (EU, Member State, regional and local). Ideally this action should be coordinated to maximize synergies and help to 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.

It is evident that there is a growing political response and commitment to action on EHS. The information base on EHS has developed further and there is growing awareness of the issue, including among the wider public. New tools have been developed for the assessment of subsidies and a number of EU Member States are taking forward interesting initiatives in this area. Subsidy reform is however still at an early stage and efforts need to be further strengthened and accelerated to achieve progress towards the EU commitment of phasing out EHS by 2020.

A critical first step in the process is the development of **transparent inventories of subsidies** to highlight their impacts and communicate the benefits of their reform. A bottom-up approach driven by Member States would be the most pragmatic way of taking this forward, initially focusing on a select number of priority subsidies. A subsidy reform flowchart to help identify subsidies needing reform in the context of meeting Target 3 under the Strategic Plan for Biodiversity for 2011-2020 is provided in Figure E1. Such a flowchart, adapted for key national priorities, could be used as part of an initial screening process to help identify where in-depth analysis is needed which may then make use of more detailed tools and models such as those developed by the OECD.

Figure E1: Subsidy reform flowchart to support implementation of Target 3 of the Strategic Plan for Biodiversity for 2011-2020



Source: ten Brink et al. (2012), Incentive Measures and Biodiversity – A Rapid Review and Guidance Development Volume 3 – Guidance to identify and address incentives which are harmful to biodiversity

Based on these assessments, **reform efforts can be prioritised** according to national interests and circumstance. The process needs to be carefully designed, managed and implemented with clear targets, transparent costs and benefits, stakeholder engagement, coordination among government bodies, etc. **Regular and transparent reporting on progress** on EHS reform should be carried out both within the context of reporting under the European Semester and separate national reporting. These national efforts can be aided by parallel or linked initiatives at the EU level and supporting activities by other actors such as the OECD, NGOs, academics etc.

Table E2 summarises some of the key actions by relevant actors over the period to 2020. Subsidies will remain a part of the policy landscape even after 2020 given legitimate policy interests. In this case, the objective should be to ensure any **remaining or new subsidies follow good governance principles**, i.e. have a sound basis, are targeted, efficient, and practical, are limited in time and transparent, with sufficient monitoring reporting and evaluation provisions and associated review clauses. Establishing clear and rigorous good governance practices for new or reformed subsidies will not only be important for the next generation of subsidies, but will also provide an important signal for existing subsidies, helping to set the standard and hence facilitate political buy-in for future reform efforts.

Table E2: Roadmap for EHS reform – A synthesis of key elements

Actor	2012 – 2013 Mapping the subsidies landscape, understanding impacts and planning reform	2014 - 2019 Implementation of EHS reform: Transition to good governance	2020 and beyond Reaching objectives
Member States	- Identify the most significant EHS and develop inventories of subsidies to increase transparency, - Develop road maps for reform of subsidies of national interest, - Report on subsidies and reform efforts and plans, including in National Reform Programmes.	- Phasing out of EHS and annual reporting on progress, - Adopt good governance principles for remaining or new subsidies, - Establish cross-departmental working groups/task forces to guide the process.	- EHS phased out, - CBD commitments on incentives harmful to biodiversity met, - EU climate and energy targets met, - Good governance principles for subsidies the norm.
EU	- Engage and support Member State efforts (e.g. by open method of coordination), - Make use of European Semester (annual reports and country recommendations), - Lead by example – identify and develop an inventory of EU-level subsidies, e.g. in context of MFF 2014-2020, CAP, CP, EMFF etc., - Revise criteria for EU investment decisions, - Identify restrictions and loopholes (e.g. exemption clauses) at the EU level that may prevent EHS reform, - Support capacity building and knowledge development.	- Develop roadmaps for reform in key sectors (e.g. agriculture, fisheries) and set up inter-DG working groups to take reform forward, - Review decision-making procedures and explore possibilities for making increased use of the enhanced cooperation procedure, - Amend or revise restrictions and loopholes at the EU level that prevent action at the national level and may hinder EHS reform, - Explore options to support reform efforts, e.g. through an extension to the environmental accounts Regulation, - Develop guidance to support implementation, e.g. of cost recovery principle under Water Framework Directive, - Promote green public procurement, - Introduce concrete requirements obliging Member States to report and act on EHS, - Develop a common template to facilitate subsidy reporting to the G20, the WTO, OECD etc., - Work with international partners and organisations to take reform forward at international level where relevant.	- Meet CBD commitments, - Meet EU commitments, - Good governance principles for subsidies the norm.

Other actors (e.g. OECD, NGOs, private sector, academia, Court of Auditors, etc.)	- Increase transparency and information on EHS, - Exchange information on EHS and best practices in reform, - Disseminate information on EHS to the public.	- Keep the spotlight on the issue and maintain pressure on EU and Member States to reform EHS, - Develop partnerships or platforms bringing together all stakeholders (including industry), - Engage the public to increase support for subsidy reform, - Monitor and assess compliance on reform and assess quality of data released on EHS and reform efforts.	- Continue with monitoring and assessment of compliance, - Keep up pressure for reform, - Continue to engage with stakeholders including wider public.
Windows of opportunity	- European Semester, - Fiscal consolidation (EU and MS), - Rio+20 Conference and follow-up, - Hyderabad CBD COP11, Doha UNFCCC COP18, - EU State Aid Modernisation initiative, - Review of CAP, Cohesion Policy and EMFF for the 2014 – 2020 period, - EU review of existing legislation on reduced VAT rates, - EU proposals relating to the sustainability of biofuels.	- Other CBD and UNFCCC COPs, - G20 meetings, - G77, - National and EU budgets, - EU Regulation on National Environmental Economic Accounts, - UN System of Environmental and Economic Accounting (SEEA).	- Target date for CBD commitment (subsidy reform, pricing, accounting), - Target date for milestone in resource efficiency Roadmap, - Target date for EU 20-20-20 climate and energy objectives.

1. INTRODUCTION

1.1 Background

The need to reform ineffective or harmful public subsidies has long been recognised and has been a contentious point of discussion for several years. 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'[2] which includes a milestone that '*by 2020 EHS will be phased out, with due regard to the impact on people in need'.* The Roadmap also notes that Member States should: identify the most significant EHS pursuant to established methodologies by 2012; and prepare plans and timetables to phase out EHS and report on these as part of their National Reform Programmes by 2012/2013. Commitments to reform have also been adopted at the **global level**, for example in the context of the Convention on Biological Diversity (CBD)[3] and the G20[4], while some existing commitments to EHS reform (specifically in relation to inefficient fossil fuel subsidies and fisheries subsidies) were reiterated at the Rio+20 Conference[5]. Relevant commitments have also been adopted at the **national, local and regional level,** for example in France in the context of the Grenelle I Act[6].

Despite this recognition and a number of political declarations in this regard, progress has been slow and the **overall level of global subsidies remains substantial**. For example, agricultural subsidies in Organisation for Economic Cooperation and Development (OECD) countries averaged USD 261 billion/year (approx. EUR 192.5 billion[7]) in 2006-8[8], while global fisheries subsidies are estimated at USD 15-35 billion/year (approx. EUR 11-26 billion)[9]. The IEA's estimates indicate that fossil fuel consumption subsidies worldwide amounted to USD 409 billion in 2010 (approx. EUR 306 billion), which is an increase from USD 300 billion (approx. EUR 215 billion) in 2009[10]. The value of budgetary support and tax expenditures for fossil fuel production and consumption in 24 OECD countries is estimated to be between USD 45 billion and USD 75 billion (approx. between EUR 34 billion and EUR 56 billion) per year during 2005-2010[11]. According to the latest figures from the World Watch Institute, the total value of global fossil fuel subsidies in 2012 is estimated to be between USD 775 billion and more than USD 1 trillion in 2012 (approx. between EUR 605 and EUR 780 billion); in

[2] EC (2011) Roadmap to a Resource Efficient Europe (COM(2011)571), http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0571:FIN:EN:PDF

[3] Global CBD Aichi Accord, CBD Strategic Plan 2011-2020. Dec. X/44 on Incentive Measures / CBD Strategic Plan 2011-2020: Target 3

[4] G20 leaders statement: The Pittsburgh Summit, 24-25 September 2009, http://ec.europa.eu/commission_2010-2014/president/pdf/statement_20090826_en_2.pdf

[5] Outcome document of the United Nations Conference on Sustainable Development – 'The future we want', A66/L.56, http://daccess-dds-ny.un.org/doc/UNDOC/LTD/N12/436/88/PDF/N1243688.pdf?OpenElement

[6] Articles 26 and 48 of Law No. 2009-967, the so-called "Grenelle 1 Act

[7] Exchange rates calculated based on average exchange rates for respective years, source: http://www.oanda.com/currency/average

[8] OECD (2009) Agricultural Policies in OECD Countries. Monitoring and Evaluation. OECD, Paris

[9] UNEP (2008) Fisheries Subsidies: A Critical Issue for Trade and Sustainable Development at the WTO: An Introductory Guide. UNEP, Geneva

[10] IEA (2011) World Energy Outlook 2011. OECD Publications, Paris

[11] OECD (2012) Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels, Paris

comparison, total subsidies for renewable energy stood at USD 66 billion in 2010 (approx. EUR 50 billion).[12]

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**. Reform can have a number of benefits, both for the environment (sending signals about the true cost of pollution and the value of natural assets) and the economy - including public budgets in particular (through financial savings on sub-optimal investment decisions)[13].

1.2 Objective, scope and approach of the study

The aim of this study has been to support the European Commission (DG Environment) in implementing the call in the Resource Efficiency Roadmap to phase out EHS by 2020. This study identifies key types of EHS and examines 30 cases of existing EHS in EU Member States across a number of different sectors and environmental issues. It also analyses examples of good practices in the reform of EHS in EU Member States and the lessons that can be learnt from these cases. Finally, based on this analysis, it develops practical recommendations on phasing out and reforming EHS to support the objectives of the Europe 2020 Strategy and the resource efficiency agenda. This study focuses specifically on EHS at the level of EU Member States. While EHS at EU level are an important aspect of the overall debate on EHS, they are beyond the scope of this report[14].

This study was carried out by a consortium led by the Institute for European Environmental Policy (IEEP) which included the Institute for Environmental Studies (IVM), Ecologic Institute and VITO. The study was carried out between January and October 2012. The study is based on analysis of relevant literature and consultation with experts and policy makers.

Approach to EHS

There are many definitions of EHS which depend on a particular context. One possible definition, which draws on the OECD's 1998[15] and 2005[16] definition of a 'subsidy', might define an EHS as:

> *'a result of a government action that confers an advantage on consumers or producers, in order to supplement their income or lower*

[12] World Watch Institute (2012), Fossil Fuel and Renewable Energy Subsidies on the Rise, http://www.worldwatch.org/fossil-fuel-and-renewable-energy-subsidies-rise [accessed 27/8/2012]

[13] OECD (2012), *OECD Environmental Outlook to 2050*, OECD Publishing. *http://dx.doi.org/10.1787/9789264122246-en*

[14] There are a number of studies that explore the issue of EHS at EU level, see for example Hjerp, P., Medarova-Bergstrom, K., Cachia, F., Evers, D., Grubbe, M., Hausemer, P., Kalinka, P., Kettunen, M., Medhurst, J., Peterlongo, G., Skinner, I. and ten Brink, P., (2011) Cohesion Policy and Sustainable Development, A report for DG Regio, October 2011; and Usubiaga, A., Schepelmann, P., Bahn-Walkowiak, B., Altmann, M., Landgrebe, R., and Piotrowski, R., (2011) EU subsidies for polluting and unsustainable practices, Report for the European Parliament's Committee on Environment, Public Health and Food Safety

[15] OECD (1998), *Improving the environment through reducing subsidies*, OECD, Paris

[16] OECD (2005), *Environmentally Harmful Subsidies: Challenges for Reform*, OECD, Paris

> *their costs, but in doing so, discriminates against sound environmental practices.'* [Adapted from OECD (1998 and 2005) in IEEP et al. 2007][17]

The above definition however only encompasses *action*. In some cases non-action, e.g. not applying road pricing to cover costs of roads, not applying VAT on food or excise taxes on certain fuels, or not internalising externalities, leads to prices not reflecting environmental and social costs and hence creates implicit subsidies. While a broad definition (including both full cost pricing and internalisation of externalities) is operationally difficult, it is important to recognise that such implicit subsidies exist and can be quite significant in several sectors. In this study, we apply a broader definition of subsidies including where possible subsidies resulting from non-action.

In order to structure the research in a way that is useful and easy to interpret for Member States, the study examines EHS across the following nine **sectors and environmental issues**: agriculture and land, climate change and energy, fisheries, food, forestry, materials, transport, waste and water. The study also looks at seven different **'economic types'** of subsidies which refer to the specific economic or financial form of a subsidy[18]. The types of EHS examined in the study are: direct transfer of funds; provision of goods or services (including specific infrastructure); provision of general infrastructure; income or price support; foregone government revenues; preferential treatment; and lack of full cost pricing.

Approach to the study

A preliminary scoping analysis of examples of EHS was carried out to identify examples of potential EHS in EU Member States. A questionnaire was disseminated in March-April 2012 to over 170 experts across Europe including relevant authorities, experts, academics, NGOs and the private sector. The questionnaire was also circulated by the European Environment Bureau (EEB) and Green Budget Europe to their respective networks of experts across Europe. The questionnaire sought to gather information on examples of good practice in reforming or phasing out EHS in EU Member States, existing EHS in EU Member States that may merit reform, insights on the main obstacles to reforming EHS and how they can be overcome.

On the basis of the scoping analysis, stakeholder consultation, and additional literature reviews carried out by the study team, a short list of cases to be developed was identified. Cases were selected based on their environmental harmfulness; loss of purpose; economic and financial relevance; social relevance; impacts on policy coherence; relevance to Member States; data availability; geographic coverage; and balance across the identified sectors and economic types of EHS. The final selection of cases were informed by discussions with selected experts and made in consultation with the European Commission. The study examines 30 short cases of existing EHS in EU Member States and 10 cases of reform which offer insights on successful EHS reform.

[17] IEEP et al (2007) *Reforming environmentally harmful subsidies* Final report to the European Commission's DG Environment, March 2007.

[18] This builds on the classifications used by the OECD, WTO, ESA and Pieters (2003), as mapped in IEEP et al (2007) Reforming environmentally harmful subsidies Final report to the European Commission's DG Environment, March 2007

The preliminary results of the study were discussed at the second Market-Based Instruments Forum organised by the European Commission (DG Environment and DG Taxation and Customs Union) in June 2012 and at a workshop on 'Reforming Environmentally Harmful Subsidies for a Resource Efficient Europe', organised by the study team in June 2012 and attended by a select group of EHS experts and policy makers. The results of these discussions have been used to further refine the analysis and recommendations of the study.

1.3 Structure of the report

This remainder of this report is structured as follows:

- ***Chapter 2*** sets out working definitions of the different types of EHS examined in the study;
- ***Chapter 3*** provides an overview of the findings of the 30 cases of existing EHS in EU Member States;
- ***Chapter 4*** provides a summary of the 10 EHS reform cases examined in the study and the lessons learnt from these cases in particular the drivers of reform;
- ***Chapter 5*** examines the relationship between EHS reform and EU policies and legislation;
- ***Chapter 6*** discusses some of the obstacles to EHS reform and how they can be overcome;
- ***Chapter 7*** discusses how EHS reform contributes to the resource efficiency agenda, and examines some of the needs of and benefits from EHS reform;
- ***Chapter 8*** sets out practical recommendations on EHS reform, outlining a step-by-step approach on how to take reform forward and the role of different actors (Member States, EU, and other actors) in this process.

2. IDENTIFYING DIFFERENT TYPES OF EHS

2.1 Categorising EHS

As noted by the OECD[19], there are several definitions of what a subsidy is and the one that a particular report uses is dependent on the perspective from which it is written and on the purpose of the analysis. For example EU state aid, World Trade Organisation (WTO) disputes, and the CBD target on perverse incentives harmful to biodiversity all take differing approaches. Ultimately the definition chosen is both a practical and political choice and reflects specific economic, social and political interests. The key issue is to ensure that what is being discussed is appropriate for the context and that all parties are aware of this in discussions so as to avoid any confusion.

In order to structure the research in a way that is useful and easy to interpret for Member States, this study examines EHS across nine **sectors and environmental issues**:

- Agriculture and land,
- Climate change and energy,
- Fisheries,
- Food,
- Forestry,
- Materials,
- Transport,
- Waste, and
- Water.

The study also looks at different **'economic types'** of subsidies which refer to the specific economic or financial form of a subsidy. These categories refer to the specific type of economic/financial form of subsidy used (i.e. on-budget or off-budget subsidies), building on the classifications used by the OECD, the WTO, the European System of Accounts (ESA) and Pieters (2003), as mapped in IEEP et al (2007)[20] (see Table 1). The economic types of EHS examined in this study are as follows:

- Direct transfers of funds (e.g. coal mining subsidies);
- Potential direct transfers of funds (e.g. limited liability for nuclear accidents and oil spills);
- Provision of goods or services including specific infrastructure (e.g. a road servicing a single mine or factory);
- Provision of general infrastructure (e.g. a highway);
- Income or price support (e.g. price premiums for electricity from waste incineration);
- Foregone government revenues from tax credits, exemptions and rebates (e.g. from excise duty for fuels, favourable tax treatment of company cars);
- Preferential market access, regulatory support mechanisms and selective exemptions from government standards (e.g. feed-in tariffs),

[19] OECD (2006a), *Subsidy Reform and Sustainable Development: Economic, environmental and social aspects*, OECD, Paris

[20] IEEP et al (2007) *Reforming environmentally harmful subsidies* Final report to the European Commission's DG Environment, March 2007.

- Implicit income transfers from the lack of full cost pricing (e.g. under-pricing leading to incomplete coverage of drinking water costs, charging for road infrastructure),
- Lack of full resource pricing (e.g. absence of charges or fees on rock extraction), and
- Non-internalisation of externalities (e.g. damage to ecosystems from bottom-trawling and dredging).

Table 1: Mapping different types of subsidies to definitions

Type of Subsidy	Definitions of a subsidy			
	ESA	WTO	OECD	Pieters
(a) Direct transfer of funds, e.g. grants	X	X	X	X
(b)Potential direct transfers of funds, e.g. covering liabilities		X	X	X
(c)Government provides goods or services other than general infrastructure		X	X	X
(d)Government directs other bodies to do any of the above		X	X	X
(e)Income or price support		X	X	X
(f)Government revenues due are foregone or not collected		X	X	X
(g)Tax exemptions and rebates		X	X	X
(h)Preferential market access		X	X	X
(i)Accelerated depreciation allowances			X	X
(j)Regulatory support mechanisms, e.g. feed-in tariffs, demand quotas			X	X
(k)Selective exemptions from government standards			X	X
(l)Resource rent for foregone natural resources			X	X
(m)Implicit subsidies, e.g. resulting from the provision of infrastructure				X
(n)Implicit income transfers resulting from a lack of full cost pricing				X
(o)Implicit income transfers resulting from non-internalisation of externalities				X

Source: IEEP et al. 2007 and references therein

2.2 Definitions of EHS used in this study

Working definitions for each of the seven economic types of EHS analysed in this study are provided in Table 2. The table includes illustrative examples to elaborate each category. These definitions draw on relevant literature sources (OECD, GSI, EEA, and other literature).

What 'defines' a subsidy (and its level) in practice is what one chooses as the **baseline** (or counterfactual) and whether it is considered to be the **market price or cost or the social cost (i.e. externality):**

- **Market prices or costs:** Most definitions of subsidies used by economists are based on the diversion from market prices or costs. Thus, if a government intervention causes market prices or costs to change this is considered a subsidy. One example would be fuel subsidies. In some countries retail prices of fuel are lower than prices

on the world market as the government provides subsidies to the merchants of fuel. It is standard practice to compare world market prices with prices in the local market to determine whether there is a subsidy and what the level of that subsidy is. Note that there are however some exceptions to this, for example if the country in question is a fuel producing country and the costs in the domestic market are higher than the production costs (i.e. there is full cost recovery of production costs), then some could argue that there is no explicit subsidy. This example highlights the importance of setting your baseline carefully.

- **Externalities:** Some activities cause external costs which are not taken into account in market prices. It is therefore often argued that the counterfactual should not be the market price but the full economic costs including those externalities. For example the use of fuel causes external effects like greenhouse gas emissions, congestion and air pollution which are not reflected in market prices. Using such a baseline would mean that a subsidy exists when taxes levied on the fuel are lower than the external costs caused by the production/use of the fuel. The same argument goes for resource use – as water, rock, trees, land each has a value to society (known as its shadow price), the non-integration of this in market prices can be considered a type of implicit subsidy. In practice this benchmark is ambiguous as in many cases reliable estimates of external costs are not available.

The definition of the baseline or counterfactual is required to quantify the size of the subsidy, to determine whether the subsidy can be considered as being 'environmentally harmful' and even whether a certain policy measure/instrument can be seen as a subsidy in the first place. In practice, the baseline used varies from sector to sector. In the energy sector for example, the baseline is widely considered to be equal to market prices or costs, whereas it is thought to be the marginal social cost in the transport sector[21]. The choice of the counterfactual includes a number of normative elements, including considerations of distributional equity and interpretations of policy principles such as the 'polluter pays' principle. 'Objective' benchmarks, such as EU state aid guidelines and standard tax rates may be helpful in defining counterfactuals[22]. Whatever the baseline chosen, transparency is critical. The counterfactual scenario that has been used should be explicitly described and supported by clear arguments so as to make them more convincing and help to increase their acceptance[23].

[21] IEEP et al (2009), *Environmentally Harmful Subsidies: Identification and Assessment*, Final report for the European Commission's DG Environment, November 2009.

[22] IEEP et al (2007) *Reforming environmentally harmful subsidies* Final report to the European Commission's DG Environment, March 2007.

[23] IEEP et al (2009), *Environmentally Harmful Subsidies: Identification and Assessment*, Final report for the European Commission's DG Environment, November 2009.

Table 2: Working definitions of different types of EHS

Working definitions of the economic types of EHS examined in this study are presented below. The categories of EHS builds on the classification described above and can broadly be characterised as those subsidies that are 'on-budget' and those that are 'off-budget', which are described in EEA 2004[24] as below:

- **On-budget subsidies** are payments that appear on national balance sheets as government expenditure and include cash transfers paid directly to producers, consumers and other related bodies. They also include low interest or reduced-rate loans administered by governments or directly by banks with state interest rate subsidy.
- **Off-budget subsidies** are transfers that typically do not appear on national accounts as government expenditure. Such transfers include tax exemptions, credits, deferrals, rebates and other forms of preferential tax treatment. Additionally, they may include market access restrictions, regulatory support mechanisms, border measures, preferential planning consent and access to natural resources.

In practice, the below categories of subsidies have a certain degree of overlap and there are divergent judgments as to whether a particular subsidy would best fit in one category or the other. For example, the provision of general infrastructure such as a highway could also be seen as an issue of lack of full cost pricing; liability issues for oil spills could come under the category of potential direct transfer of funds as well as the non-internalisation of externalities; low interest or reduced-rate loans could be considered a direct transfer as well as a case of foregone government revenue; and, in some cases, a lack of resource pricing can also be a case of foregone government revenue depending on the property rights regime. Some examples have been presented in the table to illustrate the different categories of EHS.

[24] EEA (2004) Energy subsidies in the European Union: a brief overview EEA Technical report No 1/2004, European Environment Agency, Copenhagen, http://reports.eea.eu.int/technical_report_2004_1/en

Economic type	Specific subsidy type covered	Description	Examples *(which may or may not be an EHS, depending on design, policy filters etc.)*	Derived from
On-budget subsidies				
Direct transfer of funds	Direct transfer of funds	The government provides direct payments or grants to third parties which enhance the revenue of recipients. These are usually (though not exclusively) time-limited payments and are given either in connection to a specific investment or to enable an individual/company/organisation to cover some or all of its general costs or costs related to a specific activity. Certain direct payments may be linked to the volume of production/sales or to prices. This includes low-interest or preferential loans provided by the government to producers.	e.g. grants and subsidies to fossil fuels; subsidies for fishing vessel scrapping; subsidies for the modernisation of fishing vessels; aid for competitiveness of agriculture under CAP Rural development Regulation; direct financing for the hard coal mining industry; support to airports; car fleet renewal schemes; subsidies for waste incinerators; subsidies for borehole drilling; low interest loans to forest for conversion of peatlands.	Steenblik (2007), EEA (2004)
	Potential direct transfers of funds, e.g. covering liabilities, guarantees	The government covers (either partially or fully) a companies' liabilities or provides a guarantee on debts hence taking on the risk of default. Such support decreases, in many cases substantially, the risk-related costs of the company and contributes to the viability of sectors/companies.	e.g. nuclear energy producers face partial/limited liability for accidents.	
Provision of goods or services – including specific infrastructure	Government provides goods or services other than general infrastructure	Governments provide in-kind (i.e. non-monetary) support through the provision of goods (i.e. housing), services required to maintain that infrastructure, other services (e.g. help exporters); and specific infrastructure for specific purpose.	e.g.; export promotion for food; 'free' cleaning services from littering at large scale events; a road servicing a single mine or factory.	Steenblik (2007)
Provision of general infrastructure	Implicit subsidies from the provision of general infrastructure	General infrastructures (e.g. highways and ports) are frequently regarded as public goods, and therefore provided by the government. This is often excluded from the definition of a subsidy), as is the case in the WTO's general agreement on subsidies, the Agreement on Subsidies and Countervailing Measures.	e.g. road infrastructure provided by the government used by multiple users and not (fully) paid by vehicle users (absence of km based road tolling); provision of free parking.	EEA, 2005; EEA, 2007; Steenblik 2007

		However, although not explicitly designed as a subsidy, some benefit accrues from the provision of this general infrastructure and thus can be considered a subsidy. For example, the EEA includes the government payments for transport infrastructure as a subsidy due to the critical importance of transport infrastructure costs to the level playing field and given that the cost of infrastructure provision is not always fully covered in excise taxes on fuel / road charging etc.		
Off-budget subsidies				
Income or price support	Income or price support	**Price support** for producers or consumers (e.g. guaranteeing higher prices than market prices to producers or guaranteeing lower prices to consumers) generally results from domestic price interventions (e.g. minimum-price policy) and is usually supported by foreign trade barriers (e.g. tariffs or quantitative restriction on imports). The OECD defines market price support (for agriculture) as 'an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers arising from policy measures creating a gap between domestic producer prices and reference prices of a specific agricultural commodity measured at the farm-gate level.' Indirect **income support** covers those measures that reduce costs paid by producers, mainly for their inputs used in current production.	e.g. provision of cheap food in public canteens; feed-in tariffs and price premiums for renewable electricity from waste incineration and/or landfill gas.	Steenblik (2007); Cox and Schmidt (2002); OECD (2003)
Foregone government revenues	Government revenues due are foregone or not collected, e.g. tax credits tax	Preferential tax treatments include tax credits (which reduce a tax otherwise due), tax deferrals (which delay the payment of a tax and serve to	e.g. reduced fuel excise duty for diesel used in agricultural machinery and fisheries; reduced VAT rates on energy products in the	Steenblik (2007)

	deferrals; tax exemptions and rebates; low interest loans See also category of lack of full cost recovery and lack of resource pricing below that could lead to foregone government revenues due to inaction.	reduce a particular companies' tax burden), tax exemptions (when a tax is not paid), and rebates (refund of taxes) which serve to reduce companies' or consumers' tax burdens, thus acting as a form of subsidy. Once incorporated into the tax code, tax breaks need an active decision by lawmakers to eliminate it, in contrast with a grant or similar subsidy, which has to be re-approved with each budget cycle. As a result, although often time-limited, tax exemptions may continue indefinitely. A tax credit is worth more to a corporate recipient (and costs the government more) than a direct payment of an equivalent nominal value given that a direct payment raises a company's taxable income and therefore is itself taxable. Low interest loans to certain sectors could also be considered a form of foregone government revenue as interest due is less than it would be at market prices.	household sector; reduced VAT rate for food; reduced taxes for employer-provided meals and meal vouchers; under-taxation of company cars; lower excise on diesel than on gasoline; tax deduction of commuting; reduced VAT rate for drinking water; tax exemption for certain energy-intensive processes; tax exemption on biofuel production; low interest loans to forest for conversion of peatlands.	
	Accelerated depreciation allowances	A provision in country's tax code that allows businesses to allocate the costs of past expenditures on fixed assets over a shorter accounting period than using straight-line depreciation. By allowing the cost of capital to be deducted more quickly than they would under the benchmark system, such provisions allow for higher deductions and lower taxes in the early years of an assessment and lower deductions and higher taxes in later years.	e.g. accelerated depreciation rates for buildings used in the mining and quarrying sector; accelerated depreciation for physical assets in mines, for natural gas pipelines and for successful oil, gas and mineral exploration expenses.	OECD (1998); OECD (2012)
Preferential treatment	Preferential market access	When governmental actions create a situation where only certain groups/subjects have access to the market or have advantageous access over	e.g. regulated market access for taxis.	

		others.		
	Regulatory support mechanisms	The government sets up regulatory mechanisms to support the production of particular good/service, i.e. by encouraging the purchase and demand of the concerned good/service thus supporting companies supplying the good/service, such as renewable electricity producers.	e.g. feed-in tariffs and price premiums for electricity from waste incineration and/or landfill gas; biofuels/renewables obligation schemes create preferential treatment and increase demand beyond that which the market acting on its own would provide.	
	Selective exemptions from government standards	The government exempts certain subjects or groups from specific regulations/standards.	e.g. GHG emissions from landfill and incineration not included in EU ETS.	
Lack of full cost pricing	Implicit income transfers resulting from a lack of full cost pricing for goods and services	This category comprises goods and services whose prices do not reflect their full costs. Normally this focuses on the costs of provision of the good / service (e.g. the abstraction, treatment, distribution costs of water) rather than the cost of the resource itself (e.g. water) which falls under the next category.	e.g. under-pricing leading to incomplete coverage of drinking water costs (abstraction, treatment, distribution costs etc.); (over)allocation of free ETS allowances; uncovered costs related to operation and reclamation of landfills; absence of (differentiated) municipal waste collection fees; lack of full cost recovery for waste water treatment; below-cost water pricing for irrigation.	
	Lack of resource pricing /resource rent for foregone natural resources	This covers situations where certain primary industries enjoy privileged access to a government-owned or controlled natural resource, e.g. to public lands for mining or grazing livestock, to state forests for logging, to rivers for irrigation, and to foreign seas (through so-called 'access agreements') for fishing - for free or at a below-market price. This category also includes non-payment for finite resources such as water from aquifers, which have a societal value (shadow price) which is not taken into account.	e.g. access to fisheries; absence of charges on a range of commercially extracted or imported raw materials including stones, clay, aggregate materials, sand, metals, high quality mineral ores, peat and similar deposits; absence of charge or fee on rock extraction/ free access to rock.	Steenblik (2007)

	Implicit income transfers resulting from non-internalisation of externalities	Non-internalisation of externalities refers to situations when the effect of production or consumption of goods and services imposes costs or benefits on others which are not reflected in the prices charged for the goods and services being provided. This creates a situation where the full costs of production of particular goods are not borne by producers but are often passed onto a third party (e.g. local pollution) or to society at large (e.g. climate change).	e.g. lack of or partial liability for oil spills, damage to ecosystems (e.g. nitrate run-off and eutrophication; plastic bags, batteries etc.), damage to ecosystems from bottom-trawling and dredging; incomplete producer responsibility for Waste Electrical and Electronic Equipment (WEEE).	

Sources:

Cox, A, Schmidt, C (2002) Subsidies in the OECD fisheries sector: A review of recent analysis and future direction, Background paper for the FAO Expert Consultation on Identifying, Assessing and Reporting on Subsidies in the Fishing Industry held in Rome, 3-6 December 2002, http://www.oecd.org/dataoecd/43/40/2507604.pdf

EEA (2004) Energy subsidies in the European Union: a brief overview EEA Technical report No 1/2004, European Environment Agency, Copenhagen, http://reports.eea.eu.int/technical_report_2004_1/en

EEA (2006) Economic Instruments in Environmental Policy in Europe EEA Technical Report, Copenhagen (available at www.eea.eu.int)

EEA (2005) Market-based instruments for environmental policy in Europe. EEA Technical report No 8/2005

EEA (2005) The Use of Subsidies , Taxes and Charges in the EU Transport Sectors

IEEP, Ecologic, FEEM, IVM (2007) *Reforming environmentally harmful subsidies* Final report to the European Commission's DG Environment, March 2007.

IEEP, Ecologic, IVM, and C Dias Soares (2009), *Environmentally Harmful Subsidies: Identification and Assessment*, Final report for the European Commission's DG Environment, November 2009.

OECD (1998) Improving the environment through reducing subsidies, Part I: Summary and Conclusions Paris

OECD (2003) Glossary of statistical terms – Market price support (MPS), http://stats.oecd.org/glossary/detail.asp?ID=1600

OECD (2005) Environmentally Harmful Subsidies – Challenges for reform OECD, Paris.

OECD (2006), *Subsidy Reform and Sustainable Development: Economic, environmental and social aspects*, OECD, Paris.

OECD (2012) Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels – Glossary, http://www.oecd.org/document/41/0,3746,en_2649_37431_48813609_1_1_1_37431,00.html

Steenblik, R., (2007), A subsidy primer, Global Subsidies Initiative of the International Institute for Sustainable Development, Geneva, Switzerland, http://www.iisd.org/gsi/sites/default/files/primer.pdf

3. EHS IN EU MEMBER STATES

A number of EHS exist in EU Member States. These subsidies occur across different sectors and economic types and vary in impact (environmental, social, and economic). A **working inventory of potential environmentally harmful subsidies in EU Member States** is provided in Table 3. This is not intended as a comprehensive inventory of all potential EHS in EU Member States, but rather aims to provide a summary overview of those cases identified through the research and stakeholder consultation undertaken for this study.

The extent to which the subsidies in Table 3 can be considered EHS needs further assessment. In the study, 30 such cases have been examined (see Annex I). In some instances a subsidy can have both positive and negative impacts, for example a renewables obligation, subsidies to aquaculture etc. Even in cases where a subsidy can be considered 'environmentally friendly', there may nonetheless be arguments for their further improvement. The decision as to whether a particular subsidy is an EHS and merits reform should build on a comprehensive assessment across the different aspects of the subsidy including a careful analysis of the pros and cons of potential reform and practical options for reform.

Table 3: Overview of existing (potential) environmentally harmful subsidies in EU Member States

Notes:

- This is not intended as a comprehensive inventory of all potential EHS in EU Member States, but rather aims to provide a summary overview of the cases identified through the research and stakeholder consultation undertaken for this study.
- For definitions of the economic types of subsidies, see chapter 2

Sectors and environmental issues	Economic types						
	On budget subsidies			Off budget subsidies			
	Direct and potential transfer of funds	Provision of goods or services including specific infrastructure	Provision of general infrastructure	Income or price support	Foregone government revenues	Preferential treatment	Lack of full cost pricing
Agriculture and land	Aid for competitiveness of agriculture under rural development Regulation of CAP (all MS)		Provision of roads (all MS)	Animal Health Fund (NL)	Reduced VAT rate for agricultural inputs such as fertilisers and pesticides (e.g. DE, ES, FR, NL, SI)		Implicit subsidy to use of nitrogen rich fertilisers in agriculture sector (e.g. FR) *(see water)*
	Export promotion and development aid for industrial livestock farming (e.g. NL)				Reduced fuel excise duty for diesel used in agricultural machinery (e.g. BE, CZ, DE, EE, ES, FR, IE, CY, LV, LT, LU, HU, NL, PT, FI, SE, UK)		Irrigation subsidies (several MS) *(see water)*
	Eligibility criteria for CAP Pillar 1 direct payments (e.g. UK, BG, EE, SE, RO, and SL)				Tax exemptions that promote urban sprawl, e.g. for buildings scattered in the countryside (e.g. FR, DE, BE)		Impacts of palm oil production (for food and fuel) for EU imports in third countries (all MS)

Sectors and environmental issues	Economic types						
	On budget subsidies			Off budget subsidies			
	Direct and potential transfer of funds	**Provision of goods or services including specific infrastructure**	**Provision of general infrastructure**	**Income or price support**	**Foregone government revenues**	**Preferential treatment**	**Lack of full cost pricing**
	Low-interest or preferential loans that contribute to land sealing and urban sprawl (e.g. FR)						
Climate change and energy	Direct financing for the hard coal mining, being phased out under state aid rules (e.g. DE, ES, PL and historically UK)		Subsidy for airports *(see transport)*	Heat fund (e.g. FR)	Reduced VAT rates on energy products in the household sector (e.g. EL, IT, LU, UK)	Preferential treatment for the hard coal mining industry (e.g. PL, UK, FR, LU)	Costs of mining damage - reclamation of mining areas not recovered in coal price (e.g. PL)
				(Over)allocation of free ETS allowances (EU-wide)	Energy tax reductions for the manufacturing, agriculture and forestry sectors (e.g. DE)	Preferential treatment for RES producers e.g. via renewables obligations (e.g. UK, BE)	
					Tax exemption for certain energy-intensive processes (e.g. DE)	Preferential treatment (quota obligation and/or tax exemptions) of biofuels	
	Support for the lignite industry (e.g. DE)				Compensation to cover eco-tax for the manufacturing sector (e.g. DE)		

Sectors and environmental issues	Economic types						
	On budget subsidies			Off budget subsidies			
	Direct and potential transfer of funds	Provision of goods or services including specific infrastructure	Provision of general infrastructure	Income or price support	Foregone government revenues	Preferential treatment	Lack of full cost pricing
						production (almost all MS, e.g. biofuels obligation scheme in IE)	
	Potential direct transfer of funds, covering liabilities of nuclear plants (e.g. DE, BE, NL, CZ, FI, BG, IT, LT)					Feed-in tariff for electricity generated by cogeneration (e.g. EE, BE - FI)	
Fisheries	Financial aid for firms in difficulty - 'De minimis' aid (all MS)	Support for the expansion or construction of aquaculture facilities (e.g. IT, PT, ES)	Provision of port infrastructure (most MS)		Reduced excise tax on fuel for ships (most MS)		No charge for access to fisheries resources (e.g. LT + several other MS)
	Subsidies for vessel scrapping (e.g. ES + several other MS).						Non-internalisation of externalities arising from damage to ecosystems from bottom-trawling and dredging (all MS)

Sectors and environmental issues	Economic types						
	On budget subsidies			Off budget subsidies			
	Direct and potential transfer of funds	Provision of goods or services including specific infrastructure	Provision of general infrastructure	Income or price support	Foregone government revenues	Preferential treatment	Lack of full cost pricing
	Subsidies for modernisation of the fishing fleet (e.g. DK, ES, PT, FR, IT, BE, CY, EE, PL, SE, NL, DE, FI, BG) Subsidies towards the cost of a second fishing vessel for young fishers (all MS)						
Food				Cheap food in public canteens (most MS)	Reduced VAT rate for food (most MS *except* BG, DK, EE, LT, RO) Reduced taxes for employer-provided meals and meal vouchers (e.g. CZ)	Export promotion for food (e.g. IE)	Third country impacts from EU food imports (all MS)
Forestry	Subsidies to ensure competitiveness of forest-wood chain (e.g. FR) *Subsidies to improve forestry on peat lands (e.g. FI, SE, UK – all*	Creation and maintenance of forest roads (e.g. FR)			Tax exemptions and rebates to promote silviculture investments (e.g. FI, FR) Concession payments or stumpage costs not collected (e.g. BE)		

Sectors and environmental issues	Economic types						
	On budget subsidies			Off budget subsidies			
	Direct and potential transfer of funds	Provision of goods or services including specific infrastructure	Provision of general infrastructure	Income or price support	Foregone government revenues	Preferential treatment	Lack of full cost pricing
	reformed)						
					Exemption from land taxes for reforestation and afforestation on biodiversity-rich lands i.e. wetlands (e.g. FR, IE)		
Materials	Limited liabilities for materials extraction / production in relation to accidents (e.g. RO, HU)						Indirect subsidy to aggregate materials extraction (e.g. CZ)
							Indirect subsidy to raw materials extraction/ import (e.g. DK)
							Indirect subsidy to sand, gravel and rock extraction (e.g. IT)
							Absence of charges on rock extraction (e.g. MT)

Sectors and environmental issues	Economic types						
	On budget subsidies			Off budget subsidies			
	Direct and potential transfer of funds	Provision of goods or services including specific infrastructure	Provision of general infrastructure	Income or price support	Foregone government revenues	Preferential treatment	Lack of full cost pricing
Transport	Support to airports (e.g. ES, NL, BE, FR, EL)		Provision of free parking (e.g. NL, BE, ES, DK, DE, FR, SE, FR)		Aviation fuel tax exemption (e.g. NL + others)	Regulated access to the taxi market supporting private rather than public transport (e.g. BE, CZ, DK, FR, DE, HU, IE, IT - reform, NL, SE, UK)	Absence of km based road tolling (e.g. AU, DE, CZ have schemes that address this at least in part; ES, NL, FI LV do not)
	Car fleet renewal schemes (e.g. FR, DE, BE- Wa, UK – some no longer in place)				Reduced company car taxation (e.g. NL, BE, UK, IE + several other MS)		
					Fuel tax differentiation diesel vs. gasoline (e.g. BE)		
					VAT exemption for international flights (all MS)		
					Restrictions on registration of diesel cars (e.g. EL)		
					Tax deduction of commuting (e.g. AU, BE, NL, DE + several other MS)		
Waste	Subsidies for construction of waste incinerators (e.g. PL, CZ, HU, LT, PL, SK)	Free provision of cleaning services from littering at large			Tax reductions and exemptions for waste incineration (BE- Flanders, NL, AT, DK, UK, IT, IE, ES -Catalan	GHG emissions from landfill and incineration not in ETS (all MS)	Uncovered costs related to operation and reclamation of

Sectors and environmental issues	Economic types						
	On budget subsidies			Off budget subsidies			
	Direct and potential transfer of funds	Provision of goods or services including specific infrastructure	Provision of general infrastructure	Income or price support	Foregone government revenues	Preferential treatment	Lack of full cost pricing
		scale events (e.g. NL)			region, FR, EE, PL, LV)		landfills (several MS, e.g. PL)
							Non internalisation of externalities of marine litter (many MS)
						Feed-in tariffs & price premiums for electricity from waste incineration / landfill gas (e.g. CZ, HU, PT, AU, BE, BG, CY, EE, ES, FI, IE, IT, LU, NL, UK)	Incomplete producer responsibility for WEEE (e.g. SI, BG, DK, FI, FR, LT, UK)
							Absence of (differentiated) municipal waste collection fees (e.g. UK, EE, SE, NL, DK)
Water	Subsidies for borehole drilling (e.g. CY)	Desalination plants to deliver water for agriculture (e.g. ES)	Linked to irrigation subsidies where government funds		Reduced VAT rate for drinking water (most MS *except:* BG, DK, EE, LV, LT, HU, RO, SK, FI, SE)	Different costs of water supply for industry, households and agriculture (e.g.	Lack of full cost recovery for waste water treatment (several MS)

Sectors and environmental issues	Economic types						
	On budget subsidies			Off budget subsidies			
	Direct and potential transfer of funds	Provision of goods or services including specific infrastructure	Provision of general infrastructure	Income or price support	Foregone government revenues	Preferential treatment	Lack of full cost pricing
			construction of irrigation infrastructures (e.g. CY)		Exemption from water pollution taxes/charges (e.g. NL) Exemption from water tax (e.g. DK)	EE, EL)	Absence of fees on groundwater extraction (e.g. MT) Irrigation subsidies (e.g. ES, IT, PT, EL, CY) Implicit subsidy for nitrogen rich fertilisers (e.g. FR)

Table 4 provides an overview of the 30 short case studies of existing EHS in EU Member States that were developed in the study. See Annex I for the complete analysis of each case study. The list of cases includes examples of partial reform of EHS (in the case of company car taxation in Belgium, the Netherlands, and the United Kingdom and the case of the tax exemption for biofuels in Sweden); a case of an EHS that has now been reformed (the provision of low interest loans for peatland drainage to improve forestry and silviculture investments in Finland); and one that is no longer in place (the car fleet renewal scheme in Germany).

Table 4: EHS cases examined in the study

Sectors and environmental issues	Case
Agriculture and land	1. Interpretation of eligibility criteria for CAP Pillar 1 direct payments in the UK (Direct transfer of funds); 2. Fuel duty reliefs or exemptions for agriculture, horticulture, pesciculture and forestry in several EU MS (Foregone government revenues: tax reduction); 3. Subsidies contributing to unsustainable land-use and soil sealing in France (Foregone government revenues: tax reduction);
Climate change and energy	4. Support for nuclear energy producers - limited liability, accumulation of accruals, research support in Germany (Potential direct transfers of funds, direct transfer of funds); 5. Preferential treatment of the hard coal mining industry (exemptions from excise duties and social support) in Poland (Foregone government income, direct transfer of funds); 6. Tax exemption for biofuels in Sweden – partial reform (Foregone government revenue: tax exemption; Preferential treatment: Regulatory support mechanism); 7. Feed-in tariff for electricity generated by cogeneration in Estonia (Preferential treatment: Regulatory support mechanisms);
Fisheries	8. Investments for the modernisation of fishing vessels in Denmark (Direct transfer of funds); 9. Subsidies for vessel scrapping in Spain (Direct transfer of funds);
Food	10. Reduced VAT rate for food in Luxembourg (Foregone government revenues: Tax exemptions and rebates);
Forestry	11. *Provision of low interest loans for peatland drainage to improve forestry and silviculture investments in Finland (now reformed) (Direct transfer of funds);* 12. Exemption from land tax for reforestation and afforestation on wetlands in France (Foregone government revenues: Tax exemptions);
Materials	13. Indirect subsidy to rock extraction in Malta (Lack of full cost pricing);
Transport	14. Tax deductions for commuters in Austria (Foregone government revenues: tax rebates); 15. Absence of road pricing for freight and passenger transport in the Netherlands (Provision of general infrastructure and lack of full cost pricing); 16. Company car taxation in Belgium – partial reform (Foregone government revenues); 17. Company car taxation in the Netherlands – partial reform (Foregone government revenues); 18. Company car taxation in the UK (Foregone government revenues); 19. *Car fleet renewal scheme in Germany (no longer in place) (Direct transfer of funds);*
Waste	20. Reduced environmental charge rate for waste incineration in Belgium (Flanders) (Foregone government revenues: tax reduction); 21. Incomplete producer responsibility for Waste Electrical and Electronic

	Equipment (WEEE) in Slovenia (Lack of full cost pricing); 22. Feed-in tariffs for the generation of energy from waste incineration and landfill gas in the Czech Republic (Regulatory support mechanisms); 23. Feed-in tariffs for the generation of energy from waste incineration and landfill gas in Hungary (Regulatory support mechanisms); 24. Feed-in tariffs for the generation of energy from waste incineration and landfill gas in Portugal (Regulatory support mechanisms); 25. Subsidies for the construction of waste incineration plants in Poland (Direct transfer of funds);
Water	26. Reduced VAT rate for drinking water in Greece (Foregone government revenues: tax exemptions); 27. Irrigation subsidies in Cyprus (Lack of full cost pricing); 28. Irrigation subsidies in Spain (Lack of full cost pricing); 29. Irrigation subsidies in Italy (Lack of full cost pricing); 30. Implicit subsidy to the use of nitrogen-rich fertilizers in agriculture in France (Lack of full cost pricing).

Table 5 below provides a summary assessment of the 30 cases examined in the study, highlighting through colour tabs where concerns have been identified with a particular aspect of the subsidy. See Annex I for the complete analysis of the case studies. The analysis confirms that a number of EHS exist in several EU Member States. These subsidies occur across different sectors and environmental issues and are of a variety of economic types of EHS.

There are many examples in Member States of cases of **foregone government revenue** through various tax exemptions and rebates (e.g. fuel duty reliefs or exemptions for agriculture in several EU Member States; excise tax exemptions for coal used for heating purposes by households and public entities in Poland; reduced VAT rate for food in Luxembourg; reductions or exemptions in taxes for economic activities outside urban areas in France; favourable treatment of company cars in Belgium, the Netherlands and the UK; and tax deductions for commuters in Austria). There are also a number of cases of **lack of full cost pricing**, which again imply cases of foregone government revenue (e.g. rock extraction in Malta, irrigation subsidies in several southern Member States and the absence of road pricing for freight and passenger transport in the Netherlands). Other cases include the **direct transfer of funds**, for example in the fisheries sector (e.g. investments for the modernisation of fishing vessels in Denmark and subsidies for vessel scrapping in Spain); in the transport sector (e.g. the car fleet renewal scheme in Germany); and in the waste sector (e.g. for the construction of waste incineration plants in Poland). The study also identified cases of **regulatory support mechanisms** in the climate change and energy sector (e.g. feed-in tariffs for electricity generated by cogeneration in Estonia and for biofuels production in Sweden) and in the waste sector (e.g. feed-in tariffs for the generation of energy from waste incineration and landfill gas in the Czech Republic, Hungary and Portugal).

In many of the cases examined, the **objective of the subsidy or rationale remains at least partially valid** (e.g. providing support to low income households in the cases of reduced VAT on food and drinking water, facilitating home ownership by low income households, to improve the efficiency of the fishing fleet, or to provide partial compensation for high labour taxes in the case of company car taxation). In some cases, subsidies have been introduced as a means of **responding to commitments at the EU level**, for example promoting the use of biofuels in Sweden to meet obligations under the renewable energy Directive 2009/28/EC,

the use of feed-in tariffs for electricity generated by cogeneration in Estonia to support implementation of Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources and Directive 2004/8/EC on the promotion of cogeneration. In some cases Member States are merely taking advantage of an opportunity provided for by EU legislation, e.g. the VAT Directive (2006/112/EC, art. 98 and Annex III) gives Member States the opportunity to apply a reduced VAT rate to foodstuffs.

However, our analysis indicates that in some cases the **rationale or objective of the subsidy may no longer be valid**. For example in the case of reduced VAT rate for food, given the declining share of food (including non-alcoholic beverages) in total household expenditure over the years and in particular in Luxembourg which has the highest per capita average income in the EU, whereas the two Member States with the lowest per capita income (Bulgaria and Romania) do not apply the reduced VAT rate to food. Other cases where the rationale or objective of the subsidy may no longer be valid include subsidies for vessel scrapping in Spain and the lack of full cost pricing of the use of nitrogen-rich fertilisers in agriculture in France.

In cases where the rationale or objective remains (partially) valid, **the subsidy in place may not be the most (cost) effective or efficient means of achieving the policy objective.** For example although the need to reduce emissions from the transport sector persists, the tax exemption for biofuels production in Sweden was found to have a high abatement cost, particularly when taking into account expected GHG emission reductions, and moreover was not successful in supporting the development of advanced biofuels. Another case is of reduced VAT rate for drinking water in Greece, which is motivated on social grounds of protecting low-income households, but mainly benefits high-income households and contributes to the environmental problems related to the (over-)exploitation of water resources. This is recognised in a recent consultation paper by the European Commission which questions whether a reduced VAT rate on water is compatible with resource efficiency objectives and whether social objectives could be better achieved by national social policies targeted to vulnerable social groups.[25]

In some cases, our analysis identified a number of problems with the **design of the subsidy:** for example, in cases where the subsidy has been in place for a long time and lacks an in-built review process (e.g. reduced VAT rate for drinking water in Greece or the reduced environmental charge rate for waste incineration in Flanders (Belgium)). We also identified problems relating to the **interpretation of rules at the national level** (e.g. eligibility criteria for CAP Pillar 1 direct payments in the UK and criteria for selecting vessels for decommissioning in Spain) and some issues arising due to **unclear objectives of the subsidy** (e.g. the potential contradiction in providing funding for investments on board fishing vessels and at the same time requiring that these investments do not increase the ability to catch fish). There are also some cases where the way the **subsidy is designed means that it goes against certain EU commitments**, e.g. feed-in tariffs for the generation of energy from waste incineration and landfill gas being somewhat contradictory to the application of the waste hierarchy laid down in the Waste Framework Directive. In the case of tax deductions

[25] European Commission (2012) Consultation paper - Review of existing legislation on VAT reduced rates, TAXUD/C1

for Austrian commuters, no distinction is made between modes of transport used for commuting and therefore no incentive to use less polluting modes is provided.

The **social impacts** of the subsidies vary across the cases. Some subsidies reach their target beneficiaries (e.g. commercial fisherman, active farmers, operators of incineration plants) and have little impacts on wider society, while others may have major unintended social impacts such as the negative health impacts related to extractive mining, risks related to potential nuclear accidents, health impacts of transport emissions. In certain cases, given the way subsidies are designed, they may reach target beneficiaries (e.g. low income households), but end up benefiting other groups more, e.g. high income households benefit more (in absolute amount) from the VAT reduction applied to food in Luxembourg and to drinking water in Greece. Some subsidies mainly benefit the highest income groups, for example tax deductions for commuters in Austria have a bias in favour of people traveling by car and people with full time jobs, as do certain benefits-in-kind such as favourable tax treatment of company cars and fuel cards in Belgium and the Netherlands.

The nature and degree of **impacts on the environment** also vary across the cases examined. In some cases, the subsidy may affect consumption and production behaviour and thus have an **indirect impact on the environment** e.g. by providing a (dis)incentive to save energy/ switch to less polluting fuels through the preferential treatment of the hard coal mining industry in Poland; contributing to 'urban sprawl' through the provision of commuter subsidies in Austria; creating additional demand for water through a reduced VAT rate on drinking water which adds to the pressure on water resources and associated environmental impacts. A number of subsidies influence the behaviour of producers, e.g. reducing incentives for waste prevention and recycling through a reduced environmental charge rate for waste incineration in Flanders and reducing producers' incentives to increase recyclability of EEE through incomplete producer responsibility for WEEE in Slovenia.

In other cases, the subsidy may have quite **significant direct environmental impacts** such as the impacts of uranium mining and risk of nuclear accidents in the case of support for the nuclear industry in Germany; the depletion of fisheries resources and damage to ecosystems through subsidies for vessel scrapping in Spain; water pollution, falling aquifers and erosion from irrigation subsidies in Cyprus, Spain and Italy; increased soil sealing through urban sprawl in France which affects the availability of fertile soils, groundwater reservoirs, leads to habitat fragmentation, and increases the risk of flooding; and impacts related to increased car usage through the favourable tax treatment of company cars in Belgium and the Netherlands. In some cases, the environmental impact may to a certain extent be mitigated by 'policy filters', either built-in in the subsidy itself (e.g. in the case of vessel scrapping) or in the form of environmental regulations (e.g. emission standards for cars; environmental permits for quarrying).

In some cases the **financial impacts** of subsidies are marginal in terms of the absolute size of the subsidy and associated impact on public budget (e.g. investments for the modernisation of fishing vessels in Denmark and the feed-in tariffs for the generation of energy from waste incineration and landfill gas in Czech Republic, Hungary and Portugal), while in others they can be quite significant (e.g. the German government granted EUR 5,000 million to the car fleet renewal scheme). There are also some cases which lead to substantial amounts of

foregone public revenues (e.g. it is estimated that the abolition of the commuter subsidy in Austria would lead to an increase of public revenues of EUR 250-260 million; a study by Copenhagen Economics (2010) estimated the direct fiscal losses associated with the favourable treatment of company cars in 2008 to be EUR 4.1 billion in Belgium and EUR 1.5 billion in the Netherlands - see case studies in Annex I for subsequent changes to both systems). Some subsidies also lead to additional public (and private) spending (e.g. direct economic costs from nitrogen pollution in France has been estimated to range between EUR 840 and 1310 million a year, of which EUR 740 to 1160 million is borne by households and 100 to 150 million are borne by local authorities).

The unintended **economic impacts** vary across the cases examined and can be quite significant. For example, the implicit subsidy to the use of nitrogen-rich fertilizers in France leads to eutrophication and green algae along parts of the French coast which are estimated to lead to tourism losses and cleaning costs to coastal municipalities in the range of €100-150 million a year. Incomplete producer responsibility for WEEE in Slovenia leads to a distortion of competition within the internal market as producers in Slovenia are not obliged to individually finance WEEE management which may act as a disincentive to innovation and to setting up individual schemes. The reduced environmental charge rate for waste incineration in Flanders and subsidies for the construction of waste incineration plants in Poland both encourage the 'lock-in' of waste incineration processes and may reduce opportunities for other options such as advanced recycling technologies. Also, higher private car mileage from the favourable treatment of company cars exacerbates congestion and accident costs in several EU Member States.

The analysis shows that there are a number of cases where the EHS identified is in need of potential reform. Additional analysis would be useful to confirm this assessment, to explore further the multiple benefits of potential reform and practical options for reform.

Table 5: Overview of EHS cases in EU Member States

Key:

	There are no particular problems relating to the criteria.
	There are some concerns with this particular criteria and further attention is useful. It is not, however, an over-riding problem suggesting a pressing need for reform.
	There are significant concerns with respect to the criteria and further attention or reform is needed.

Sector	No.	MS(s)	Objectives	Design	Social impacts	Env. impacts	Eco. & financial impacts	Other MS where a similar subsidy exists
Agriculture	1	**UK**						BG, EE, SE, RO, SI
	2	Several MS						BE, CZ, DE, EE, ES, FR, IE, CY, LV, LT, LU, HU, NL, PT, FI, SE, UK
	3	**FR**						Several other MS including AT, BE
Climate change and energy	4	**DE**						BE, NL, CZ, FI, FR, BG, IT, LT
	5	**PL**						Several other MS, e.g. UK, FR, LU
	6	**SE**						Several other MS
	7	**EE**						BE
Fisheries	8	**DK**						ES, PT, FR, IT, BE, CY, EE, PL, SE, NL, DE, FI, BG
	9	**ES**						other EU MS
Food	10	**LU**						Most other MS *except* BG, DK, EE, LT, RO
Forestry	11	***FI***						SE, UK (now reformed)
	12	**FR**						IE
Materials	13	**MT**						Several MS
Transport	14	**AT**						Several MS *except* EL, IE, IT, PT, ES and UK
	15	**NL**						Several MS
	16	**BE**						Several MS
	17	**NL**						Several MS
	18	**UK**						Several MS
	19	**DE**						BE-Wa, FR
Waste	20	**BE (Fl)**						NL, AT, DK, UK, IT, IE, ES (Catalan region), FR, EE, PL, LV

	21	**SI**						BG, DK, FI, FR, GR, LT, UK
	22	**CZ**						Several MS, e.g. AT, BE, BG, CY, EE, ES, FI, IE, IT, LU, NL, UK
	23	**HU**						Several MS, e.g. AT, BE, BG, CY, EE, ES, FI, IE, IT, LU, NL, UK
	24	**PT**						Several MS, e.g. AT, BE, BG, CY, EE, ES, FI, IE, IT, LU, NL, UK
	25	**PL**						CZ, LT
Water	26	**EL**						Several MS *except* BG, DK, EE, LV, LT, HU, RO, SK, FI, SE
	27	**CY**						Several MS
	28	**ES**						Several MS
	29	**IT**						Several MS
	30	**FR**						Potentially also NL, SL, DE, BE, LU

Notes:

- *Case numbers refer to Table 4 above.*
- *Member States highlighted in bold are those covered in case studies.*
- *The colour tabs highlight areas where concerns relating to a particular aspect of a subsidy have been identified in our analysis. The decision as to whether a subsidy merits reform should build on the complete picture across the different aspects of the subsidy and a careful analysis of the pros and cons of potential reform options. For additional detail on the analysis of each case study see Annex I.*
- *In the biofuels case the colour tabs are split to reflect the complexity of the case. For additional detail see case study in Annex I.*
- *For cases where the subsidy is related to cases of non-action (e.g. lack of resource pricing), the categories of 'objectives' and 'design' are noted as 'red' if there is a major conflict with other objectives and 'orange' if it is sub-optimal from a signalling perspective.*

4. EHS REFORM AND LESSONS FROM PRACTICAL EXPERIENCES

EHS reform is possible and there are a number of examples of successful reform cases in EU Member States. Some such cases are discussed in the section below. Looking beyond the EU, there are also a number of successful subsidy reform cases which can provide inspiration for EU and Member State efforts, for example successful reforms have taken place in Norway (fisheries subsidies)[26], Switzerland (road infrastructure charging)[27] and New Zealand (fisheries and agriculture subsidies)[28]. Examining such cases can be useful to demonstrate that EHS reform can work and how. Progress in one sector or country creates a precedent and may help generate momentum for change in other countries.

4.1 Experiences with EHS reform in EU Member States

This study examines 10 in-depth cases of EHS reform in EU Member States. Table 6 sets out a brief description of each case. See Annex II for further details of each case.

Table 6: Overview of cases of EHS reform examined in the study

Sectors and environmental issues	Case	Brief description
Agriculture and land	Elimination of reduced excise tax rate for diesel used in agricultural machinery in the Netherlands	The Netherlands applies two distinct excise tax rates to diesel. Diesel used as a propellant for motor vehicles that use public roads ('white' diesel) is taxed at a rate of EUR 0.43 per litre while diesel used for other purposes ('red' diesel) is charged at EUR 0.26 per litre. Within the framework of recently agreed proposals for the 2013 budget, this distinction will disappear - all diesel will be taxed at the 'white' rate as of 1 January 2013.
Climate change and energy	Reduction of energy tax exemptions for companies in Germany	In 2011 the energy tax refund granted to companies was reduced from 95% to 90% (peak equalization scheme) and from 40% to 25% (for all companies). In 2012 a number of conditions were introduced on organisations applying for the tax reduction including: the requirement for major enterprises to introduce an energy management system; for small and medium-sized enterprises to use energy audits; and for the manufacturing sector as a whole to increase its energy efficiency by 1.3% in 2013-2015 and 1.35% in 2016.

[26] See OECD (2006) Financial Support To Fisheries: Implications for Sustainable Development, OECD, Paris in Lehmann M., P. ten Brink, S. Bassi, D. Cooper, A. Kenny, S. Kuppler, A von Moltke, and S. Withana (2011). Reforming Subsidies. In The Economics of Ecosystems and Biodiversity (TEEB) in National and International Policy Making An output of TEEB, edited by Patrick ten Brink, IEEP. Earthscan, London

[27] RDW, EReg (2012) Road pricing in Europe – Second version, April 2012

[28] See for example Vangelis in OECD (2005) *Environmentally Harmful Subsidies: Challenges for Reform*, OECD, Paris; and Cox in OECD (2007) *Subsidy Reform and Sustainable Development: Political Economy Aspects*, OECD, Paris

	Reduction of exemptions from energy and CO2 taxes for certain fossil fuels in Sweden	A CO_2 tax was introduced in Sweden in 1991, making it the first country in the world with a carbon tax. In October 2009, the Swedish Government proposed a number of tax changes. Measures entering into force in 2013 and in 2015 include a further raise of the CO_2 tax on natural gas and LPG as motor fuels (to 80% of the general CO_2 tax in 2013 and to the full CO_2 tax in 2015). The amount of reimbursement of the CO_2 tax on diesel used in agriculture will be further reduced. The reduced CO_2 tax rate for industry and certain other sectors outside the EU ETS will in 2015 be subject to an increase to 60% of the general CO_2 tax. The special provisions, giving a limited number of industrial and horticultural companies an additional tax relief are also phased out. The scheme was made stricter in 2011 and will be fully abolished in 2015. The various tax measures in the 2009 package are estimated to reduce greenhouse gas emissions and contribute to reach goals for renewable energy and energy efficiency.
Materials	Aggregates levy and landfill tax on construction and demolition waste in the UK	An aggregates levy was introduced in 2002 to compensate for environmental externalities, reduce demand for primary aggregates, encourage more efficient use of aggregates and maximise the use of alternatives such as recycled construction, demolition waste, and secondary materials. Together with the landfill tax which had been introduced in 1996, it seeks to address the adverse impacts of the use of aggregates over their whole lifecycle, thus addressing the previous implicit subsidy of non-internalisation of externalities.
Transport	Reform of commuter subsidies in the Netherlands	A partial reform of the fiscal subsidization of commuting by car was introduced from 1990. The subsidy was eventually abolished all together within the framework of a major income tax reform in 2001. Commuters using public transport remain eligible for the subsidy up to a maximum amount (presently this is EUR 2000 per year for commuters traveling 2x80 km or more on at least 4 days per week).
	Reform of car registration tax in Flanders (Belgium)	In 2012 the car registration tax ("Belasting op de inverkeerstelling" or BIV) for new and second-hand cars in Flanders was reformed to take into account the environmental performance of vehicles. Under the new system, the tax is a function of the CO_2 emissions (in g/km), the fuel type, Euro standard, age and registration year of the vehicle.
	Road charging in Austria	The Lkw-Maut is a distance based toll that applies to vehicles with a maximum gross vehicle weight of more than 3.5 t. The toll is differentiated according to the number of axles and the environmental performance (EURO emission classes) of the vehicles.

Waste	Pay-as-you-throw (PAYT) schemes in Italy	PAYT schemes charge households based on the actual amount of waste generated, thus encouraging them to take steps to reduce their waste and improve separation of waste generated. The introduction of these schemes in certain municipalities in Italy led to a significant increase in the amount of selective waste collection (i.e. waste sorted by households at home).
Water	Reform of water pricing in the Czech Republic	Water prices were reformed according to the cost recovery principle, increasing between 1990 and 2004 from 0.02 to 0.71 EUR/m3, covering an increasing fraction of the extraction, treatment and distribution costs related to the provision of water. Fees for the extraction of both surface and ground water, as well as for the discharge of waste water were also increased.
	Water abstraction charges in North Rhine Westphalia (Germany)	The charge on water abstraction from ground and surface waters is designed to address and internalise the environmental impacts associated with water abstraction. It aims to reduce water use and finance measures for water body conservation.

The level of success of EHS reform varies across the 10 cases examined. The reform process is very much an on-going exercise and further progress may be possible in those cases that have only been partially reformed to date. Moreover, while the cases examined are encouraging, they account for only a small share of EHS. Overall, progress in EHS reform remains slow, as seen in the limited reporting by Member States on plans to identify and phase out EHS as part of their National Reform Programmes under the European Semester.[29]

4.2 Key lessons learnt

The reform cases examined indicate a number of enabling factors help to drive reform forward. These drivers vary from case to case and often a mix of different factors come together to create a window of opportunity for reform. Some of the key drivers of reform in the cases examined are set out below:

- A **shift in political priorities** can trigger reform. For example due to an **election** (e.g. in 1990, the new Dutch government (Christian-Democrats, CDA, and Social Democrats, PvdA) was determined to proceed with the commuter tax reform that had led to the fall of its predecessor (the CDA-VVD cabinet) in 1989. The fact that this measure would release a substantial amount of public money, which could be used for public transport and other 'green' purposes, was probably also helpful. When the Labour government came to power in the UK in 1997 it set out a 'statement of intent on environmental taxation' to shift the burden of taxation from 'goods' to 'bads' reflecting a commitment to implementing the polluter pays

[29] See Member State National Reform Programmes 2012: http://ec.europa.eu/europe2020/reaching-the-goals/monitoring-progress/national-programmes-2012/index_en.htm [accessed 8/6/2012]

principle and laying the basis for the introduction of the Aggregates Levy in 2002. The reform of the car registration tax system in Flanders was triggered by the **transfer of the legal competence** for the registration tax to the separate regions in 2011. Political priorities could also be influenced by an **external event** for example in the aftermath of the Fukushima accident in Japan in March 2011, political support for the phase out of nuclear energy in Germany was successfully fostered through NGO work, public resistance and media coverage, and led to a political agreement to phase-out nuclear energy in Germany by 2022.

- In some cases EHS reform may be triggered by **problems with the subsidy itself** in that it was found to not reach its objective/target audience; that it was no longer be valid; or that it had problems in its design. For example, in the case of the reduced excise tax rate for diesel used in agricultural machinery in the Netherlands, awareness of the high administrative cost and susceptibility to fraud of the excise tax differentiation has been a key factor behind the reform. The original rationale for introducing a commuter subsidy in the Netherlands was to address the housing shortage in the 1960s - this was no longer valid by the 1990s. The original car registration tax in Belgium did not take into account the environmental performance of the cars. Under the reformed system, the tax is a function of the CO_2 emissions (in g/km), the fuel type, Euro standard, age and registration year of the vehicle.

- The current economic and financial crisis and related needs for **fiscal consolidation and budgetary discipline** can be viewed as an **important** window of opportunity for EHS reform. Removing EHS can provide an important source of revenue to governments. For example, recent (partial) reforms of company car taxation in Belgium have been driven by budgetary considerations. The financial crisis has stimulated environmental fiscal reform in Ireland including the introduction of water charges for households to cover local authorities' operational costs which are expected to raise EUR 500 million[30]. Recently proposals in the Netherlands and the Czech Republic to abolish fuel duty reliefs in the agriculture sector have also been driven by needs for fiscal consolidation. The abolition of 'red' diesel in the Netherlands, for example, is estimated to lead to an increase in tax revenues of EUR 250 million per year. The main reason for the introduction of the Lkw-Maut in Austria was financial with its principal objective being to collect funds for the maintenance, operation, upgrading and further development of the Austrian motorway network.

- **Public or stakeholder pressure** can drive reform in certain contexts. For example as seen in the commitment to phase out of nuclear energy in Germany by 2022. Pressure to reform inefficient public spending was one of the factors behind a recently approved General Tax Reform in Italy which for the first time includes an element of Green Fiscal Reform. The reform of the system of energy tax exemptions for companies in Germany has been supported by public concerns about high energy

[30] Green Budget Europe (2010) Green Budget News: European Newsletter on Environmental Fiscal Reform, no 27, December, www.foes.de/pdf/GreenBudgetNews27.pdf, [accessed 11 February 2011] in TEEB (2011), The Economics of Ecosystems and Biodiversity in National and International Policy Making. Edited by Patrick ten Brink. Earthscan, London

prices paid by private consumers. Public concern with the growth in transit transport on the Austrian road network and the associated externalities was a factor behind the introduction of the Lkw-Maut.

- **Legislation and commitments at EU and national level** can be a powerful driver of reform. At EU level, reforms of relevant measures such as the CAP, CFP or the Energy Taxation Directive are particularly important in this regard. State aid rules have also driven efforts to reform subsidies for example in the case of direct subsidies to the (hard) coal mining industry in Germany and Spain. When Austria became a member of the EU in 1995, the Directive 93/89/EEC specifying which costs can be taken into account in the calculation of road tolls and which sections can be charged became relevant and led to a call for the revision of existing tolls and vignettes. Article 9 of the Water Framework Directive which requires implementation of the user-pays principle and cost recovery principle in water pricing supported the introduction of the water abstraction charge in North Rhine-Westphalia.

- At the **national level, legislation** can also stimulate reform for example the provision in national legislation in Italy which granted municipalities more latitude in their approach to waste management and waste collection systems led to the introduction of PAYT schemes in certain municipalities. The **opening of markets and privatization processes** in the early 1990s in the transition from a centrally planned to free market economy offered a unique opportunity for reforming water prices in the Czech Republic. The **development of an inventory of subsidies in Flanders** (Belgium) has been driven by EU commitments (in the resource efficiency Roadmap), regional environmental priorities (set out in the Environmental Policy Plan for 2011-2015), the need for **budget savings**, and **public pressure**.

- The **approach taken to the reform** can be another important enabling factor helping to increase support for the reform and ensure a smooth transition. For example, in the Czech Republic the fact that water prices were gradually increased in a step-by-step manner before full liberalisation may have improved their acceptability among the public. Prospects for EHS reform can be strengthened when it also entails simplification. This may reduce administrative costs and the risk of fraud. Adding new detailed and specific rules, e.g. to make the reform acceptable to certain groups, may be attractive to enhance feasibility, but will also neutralize some of the gains of reform. A number of measures helped increase the acceptability of the Lkw-Maut in Austria including the reduction of vehicle tax, the abolition of the previously existing vignette on heavy trucks, the earmarking of the toll revenues for financing road infrastructure, the set-up of a free flow toll collection system that is clear and well organized and the use of complementary measures to reduce traffic diversion to un-tolled routes.

- Opposition against a subsidy reform measure may be easier to overcome if it is presented as **part of a large package,** such as a major (tax) reform, although such occasions are likely to be exceptional. For example the Dutch commuter subsidy for travel by car was abolished within the framework of a major income tax reform in 2001 (previous efforts had only led to partial reform of the subsidy). Public and

political support for this entire reform package was secured by designing the reform to the effect that it would not lead to larger differences in income distribution and no short term losses for any of the affected socio-economic groups.

- The prospect of **compensatory measures** for the affected sector(s) may increase the political acceptance of the reform, even if this compensation is only partial. For example in the Netherlands, part of the additional tax revenues (EUR 20 million) from the abolition of 'red' diesel is to be recycled to the agricultural sector through 'green' subsidies, e.g. as subsidies for animal housing systems with low emissions. The fact that revenues raised from the aggregate tax in the UK are recycled back to business through a 0.1 per cent age point cut in employer NICs (National Insurance Contribution) and that 10 per cent of the revenues are also recycled through an Aggregates Levy Sustainability Fund (ALSF)[31] to fund research aimed at delivering local environmental benefits may also have helped increase support for the measure. One should however be aware that beneficiaries will look for related schemes that would mitigate the 'damage' rather than changing their behaviour. For example, in the case of the reform of commuter subsidies in the Netherlands, the relatively 'friendly' fiscal treatment of company cars and commuting costs covered by employers lessened the impact of the reform.

- The **message of reform needs to be carefully formulated and communicated clearly** to the wider public in order to generate support. In certain cases, it may be difficult to 'sell' an EHS reform by highlighting expected environmental improvements alone as these improvements may be small and politically irrelevant (even if they are real and undisputable). Thus, one should highlight the multiple benefits of reform; for example, higher public revenues (or lower public spending) and other side benefits that can enhance its acceptance (for instance reducing congestion in the case of reforming commuter subsidies). The benefits to the environment can then be put in the wider context of overall benefits. An important factor behind the reform of the car registration tax system in Flanders was that it was presented to be budget-neutral and supported by the generally accepted notion that the tax should be based on environmental considerations. Although the Flemish government managed to introduce the reform relatively quickly, the process was rather difficult and not always transparent. Such problems should be avoided by better management of the process and clear communication.

The above lessons are both specific to a country context and at the same time generic in that they could apply across issues and countries. Which success factors are more important or rather which mix of success factors is most important will of course be country and issue dependent.

[31] Following the Spending Review completed by the new Coalition Government in October 2010, the Fund was discontinued from March 2011.

5. EHS AND EU POLICIES – OPPORTUNITIES AND BARRIERS

5.1 Existing EHS and commitments under EU policies and legislation

The cases of existing EHS in EU Member States examined in Chapter 2 do not represent legal infringements of EU legislation per se. Rather, a number of the cases provide examples of Member States' support mechanisms which undermine or contradict wider EU policy objectives and commitments. The cases indicate that many existing European policy initiatives can be used to support the move away from certain EHS. These existing commitments and obligations could be used as additional leverage or driving factors to encourage reform in Member States. There are also cases where EU policy objectives and commitments have led to the introduction of certain subsidies at national level which have unintended consequences and may thus warrant attention. A summary of such cases in the sectors or environmental issue areas covered in the study is set out below.

Climate change and energy

The EU has several targets and legislative commitments in the area of climate change and energy. In certain cases subsidies have been introduced by Member States as a means of responding to these EU level commitments. For example, in Sweden the use of biofuels are promoted to meet obligations under the renewable energy Directive 2009/28/EC. In Estonia feed-in tariffs for electricity generated by cogeneration are in place to support implementation of Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources and Directive 2004/8/EC on the promotion of cogeneration. Although these subsides are a response to EU level commitments, they may lead to unintended consequences, such as potentially harmful environmental and social impacts associated with the use of biofuels, including indirect land use change (ILUC) impacts - although, as noted in the case study, it is difficult to pin down any such effects to one country. In the Estonian case, as the feed-in tariff also applies to cogeneration using oil shale retort gas, it may support the use of oil shale and hence associated environmental impacts while the feed-in tariff for firewood-based CHP energy production may encourage overharvesting and the use of agricultural products as biomass for CHP plants.

In certain cases support mechanisms undermine wider EU objectives. For example numerous exemptions to excise tax on coal in Poland together with social support for heating costs reduce the incentive for households and public entities to save energy and to switch to less polluting fuels. Although these support schemes have a strong socio-economic rational, more effective mechanisms could be introduced to achieve the intended objectives - such as improved targeting of the exemption, removing the exemption and using the extra income to improve support to poor households, or providing additional support schemes for the modernisation of housing to incentivise the use of less CO_2 intensive fuels. Another example is the support provided for nuclear energy in Germany which results in a privileged position of nuclear power plant operators compared to other energy producers as support for nuclear energy research favours nuclear power generation over renewable energy and energy efficiency measures.

Fisheries

The EU's fisheries policy is aimed at bringing the catching capacity of the fleet in line with the sustainable yield of European fish stocks. The Spanish subsidy for vessel scrapping and the Danish support for the modernisation of fishing vessels do not support these overall objectives effectively. In the case of modernisation of fishing vessels, there is a potential contradiction in providing funding for investments on board fishing vessels and at the same time requiring that these investments do not increase the ability to catch fish. In practice some eligible investments on board a vessel could increase its ability to catch fish. In the case of the Spanish subsidy for vessel scrapping, there are issues relating to the fact that the schemes are not properly targeted so 'deadweight' vessels are being scrapped with EU money when they are not actually active anymore. Furthermore, reallocation of fishing rights of decommissioned vessels means that the quota is concentrated in fewer hands and is still available to those to catch it, thus the reduced capacity does not necessarily lead to lower fish landings.

Forestry

European forests are important for the preservation of European biodiversity. Although forestry policy falls within the responsibility of Member States, the EU has adopted certain measures in this area such as *inter alia* the EU Forest Action Plan (FAP)[32], a Regulation laying down the obligations of operators who place timber and timber products on the market[33], and provides funding for forest-environment measures and for the protection of Natura 2000 forest areas. The EU also has a commitment to halt biodiversity loss and the degradation of ecosystem services in Europe by 2020. Certain subsidies to the forestry sector reduce the probability of reaching this target. For example, previous subsidies to improve forestry on peat land in Finland aimed at increasing the economic yields of forestry, could lead to significant impacts on biodiversity and ecosystem services due to associated peatland drainage. This subsidy has subsequently been reformed. Support for reforestation and afforestation in France through exemption from property land taxes on non-built land may favour the establishment of plantations in biodiversity-rich lands such as wetlands. The Water Framework Directive, Habitats Directive and Birds Directive at the European level and commitments under the Convention of Biological Diversity (CBD) provide a favourable environment for wetland protection and could be used as further justification for reform of such subsidies.

Materials

Generally mining operations in Europe do not fully pay the external costs of the mining operation and thus do not follow the polluter pays or user pays principles. These principles are set out in the Treaty and form an important part of the Roadmap to a resource efficient Europe. One example is from Malta where quarrying activities have been on the rise in recent years as have the adverse environmental impacts associated with these activities, especially given the proximity of the quarries to human settlements. The stones (a limited resource of national heritage value) are extracted for free, i.e. there is no charge or tax on

---

[32] CEC (2006): Communication from the Commission to the European Parliament and the Council on an EU Forest Action Plan (COM(2006)302), 15/06/2006.

[33] European Parliament (EP), (2010): Position of the European Parliament adopted at second reading on 7 July 2010 with a view to the adoption of Regulation (EU) No .../2010 of the European Parliament and of the Council laying down the obligations of operators who place timber and timber products on the market (T7-0268/2010).

stone extraction that would account for the fact that this resource is finite and internalise the environmental externalities (and costs imposed on the community) associated with these activities. This also runs counter to certain some EU commitments in relation to environmental impact assessments, as well as biodiversity and health related objectives.

Transport

A number of subsidies in the transport sector go against the European polluter pays and user pays principles as well as overall objectives to internalise external costs of transport (an EU commitment recently reiterated in the 2011 Transport White Paper). For example, the Austrian system of commuter subsidies does not make a distinction between the modes of transport actually used for commuting and therefore does not include an incentive to use less polluting modes (such as trains or bicycles). In fact, it rewards commuters living in areas with bad public transport connections by offering them substantially higher tax rebates. It also rewards long travel distances by offering rebates that increase with commuting distance.

The absence of kilometre based road pricing for freight and passenger transport in the Netherlands does not entail an infringement of the recently revised Eurovignette Directive 2011/76/EU. The Directive allows Member States to charge heavy lorries, not only for infrastructure costs, but also for the costs of air and noise pollution and enables Member States to better manage congestion problems with the possibility to vary charges for heavy lorries according to the time of the day. Nonetheless, the introduction of a kilometer-based road pricing scheme would allow the move in the direction of the internalisation of external costs as put forward in the 2011 White Paper. It would be in line with wider EU objectives of 'polluter-pays' and 'user-pays' principles and the long-term goal to have user charges applied to all vehicles and on the whole network to reflect at least the maintenance cost of infrastructure, congestion, air and noise pollution.

In the case of favourable taxation of company cars, in both Belgium and the Netherlands, the tax treatment in the current system depends on the catalogue price, the CO_2 emissions, the fuel type and the age of the car, thus it can be expected to affect the composition (in terms of these characteristics) of the company car stock. Moreover, employers are encouraged to increase the fuel efficiency of the cars they offer to their employees. However, the Belgian system only takes into account CO_2 emissions per km, thus wider environmental costs related to air pollution and noise are only addressed indirectly by the fact that the tax depends on the age of the vehicle. In the Netherlands, the environmental costs related to air pollution are affected only indirectly by the fact that different rates apply to diesel cars (this differentiation will disappear with the new scheme that is about to enter into force). In the case of the United Kingdom, the current system provides only limited incentives (the diesel surcharge) for reducing local pollution, and this incentive will disappear in the future. Moreover incentives for reducing CO2 are only indirectly linked to actual CO2 emissions.

Waste

A number of EHS cases we examined in the waste sector are not in line with the general principles of the waste hierarchy as enshrined in the Waste Framework Directive 2008/98/EC. For example, the lower environmental charge rate for waste incineration than

for landfilling in Flanders reduces the incentives for waste prevention and recycling, implying that some of the associated environmental benefits (e.g. resource saving) are foregone. The subsidy also increases the environmental impacts related to incineration (several kinds of emissions to air and discharges to water with potential impact on human health and nature; dis-amenities for the population living close to the incineration plant). Similarly, subsidies for the construction of waste incineration plants in Poland favour waste incineration over waste prevention and recycling thus running counter to the waste hierarchy of the Waste Framework Directive 2008/98/EC and related targets e.g. the 50% municipal waste recycling target for plastic, paper and glass.

The payment of feed-in tariffs (FIT) for landfill gas in Czech Republic, Hungary and Portugal could be seen as contradicting efforts to meet the targets of the Landfill Directive to reduce the amount of biodegradable waste sent to landfill (biowaste produces the most gas as it degrades, therefore paying FIT for this gas may perversely encourage – or at least not discourage – the placing of biowaste in landfill, rather than treating it by composting or anaerobic digestion). The FIT may promote the burning/landfilling of waste that could otherwise be prevented, reused, recycled or composted/treated through anaerobic digestion. However, when waste cannot be avoided, recycled or composted, it remains preferable for landfill gas to be collected and used for energy rather than simply releasing it into the atmosphere, so the FIT could also be argued to be providing an environmental benefit in certain cases. In Portugal however the FIT is paid for energy from unsorted urban waste. In order to meet the requirements of the waste hierarchy, as much waste as possible should be sorted to remove reusable/recyclable/compostable fractions, therefore the use of unsorted waste to generate energy should not be encouraged**.**

The case of exempting producers from their individual financial responsibility for management of new WEEE in Slovenia means that a considerable part of the costs of managing WEEE is borne by general taxpayers and environmental costs associated with WEEE are not internalised. This is a result of partially faulty transposition of the WEEE Directive 2002/96/EC which obliges producers to individually finance the management of new WEEE and collectively finance the management of historical WEEE and provides a financial guarantee showing that management of all WEEE will be financed (see Art. 8 of Directive 2002/96/EC).

Water

Many subsidies examined are not in line with the requirement for cost recovery set out under Article 9 of the Water Framework Directive (WFD). This is particularly an issue in the cases of irrigation subsidies in many southern European Member States. For example, according to the government in Cyprus, the current tariff meets the 'cost recovery' requirements of the WFD. However given the 72% subsidy rate this seems questionable, and in any case the cost recovery does not include environmental and resource costs. In Spain and in Italy, even though most of operation and maintenance costs are recovered in many areas, capital cost and the externalities are by and large not recovered. Modifying tariffs for irrigation water may be possible in the context of the River Basin Management Plans (RBMP). For example, Cyprus adopted its RBMP on 9 June 2011, including a Drought Management Plan which acknowledges that pricing of irrigation water is based not on the principle of full cost recovery but on the purchasing capacity of farmers and proposes a

number of changes to the pricing structure and the imposition of penalties on illegal water drilling.

The implicit subsidy to the use of nitrogen-rich fertilisers in agriculture in France is one which contributes to increasing nitrates concentrations in several parts of the country which exceed the thresholds set in EU legislation for drinking water (50 mg NO3/l) in the Nitrates Directive 91/676/EEC. The subsidy also contravenes the polluter pays principle as the costs of pollution are passed from farmers onto households and general tax payers. It has been estimated that additional household spending related to water treatment of nitrate pollution are between EUR 1,000 million and EUR 1,500 million, of which between EUR 640 million and EUR 1,140 million are charged through water bills, representing 7 to 12% of average water and wastewater bills. Eutrophication costs and green algae invasion along parts of the French coast are estimated to lead to tourism losses and costs for cleaning up to coastal municipalities in the range of EUR 100 to 150 million a year.

5.2 The effect of EU policies on EHS reform

EU policies can influence EHS reform in two ways:

1. Ease and encourage EHS reform (e.g. provisions relating to cost recovery under the Water Framework Directive).
2. Impede EHS reform by allowing the introduction or continued existence of EHS (e.g. provisions that allow energy tax rebates for certain sectors).

These two aspects are described in further detail below.

- ***Encouraging EHS reform***

Legislation and commitments at the EU level can create the basis or even set out explicit demands (or opportunities) for the reform of EHS. As noted above, this includes the requirement for cost recovery of water provision under the Water Framework Directive (see reform case concerning water abstraction rates in the German federal state of North Rhine-Westphalia where the requirement for cost recovery under Art. 9 of the Directive was an important driver for reform). Another example is the opportunity to cover costs related to road infrastructure, including pollution and noise, under the revised Eurovignette Directive 2011/76/EU (Art. 7c (1) and 7c (3)). The revised Directive supports implementation of the 'polluter-pays' principle and the internalisation of external costs by allowing Member States to introduce kilometer-based road pricing for heavy lorries to cover infrastructure costs and the costs of air and noise pollution. This can be seen in the Austrian case study on reforming road charging for lorries. Directive 93/89/EC on taxes on certain vehicles used for the carriage of goods by road and tolls and charges for the use of certain infrastructures came into force when Austria became a member of the EU in 1995 and led to the revision of existing tolls and vignettes in the country.

EU state aid rules have also driven efforts to reform subsidies, as has been in the case of direct subsidies to the (hard) coal mining industry in Germany and Spain. The Commission's recent Communication on the modernisation of state aid notes that public spending should become more efficient, effective and targeted. The Communication recognises that this would imply the phasing out of subsidies that lead to inefficient use of resources or

environmental damage in line with the resource efficiency Roadmap.[34] Making use of such linkages with EU level legislation and commitments could be a useful lever to drive forward EHS reform efforts at the national or indeed regional or local level.

Ensuring that EU state aid policy contributes to environmental protection would imply expanding the criteria for evaluating the negative effects of the aid measure beyond economic criteria to include the environmental impacts of the supported activities.[35] Another option could be to develop a checklist to be completed by state aid applicants which could for example require applicants to *inter alia*: identify potential environmental impacts associated with the projects and activities to be funded under the state aid and how environmental considerations/impacts will be managed and/or mitigated e.g. through the use of environmental permits, ex ante conditionalities or other policy filters.[36] Such considerations could be taken up in the context of the on-going modernisation of the EU state aid framework.

Reforms of EU policies - most notably the CAP, CFP, Cohesion Policy or the Energy Taxation Directive - can also act as important drivers of EHS reform. Several important reform processes are currently underway at EU level that aim at eliminating different types of EHS across various sectors; these include on-going negotiations on the EU multi-annual financial framework (MFF) for the 2014-2020 period and important elements within this framework including the Common Agriculture Policy (CAP), Cohesion Policy, Common Fisheries Policy (CFP), and financing for transport and energy infrastructure under the future TEN-T and TEN-E frameworks. These areas account for a large share of spending under the EU budget and also have implications for national subsidies (the case study on subsidies for waste incineration plants in Poland reflects the potentially environmentally harmful effects of national co-financing of projects supported under the Cohesion Fund).

- ***Impeding EHS reform***

There are also several cases of EU legislation undermining or hampering EHS reform as well as cases where subsidies have been introduced as a means of responding to commitments at the EU level. Some examples of such cases are highlighted below:

- The revised Eurovignette Directive 2011/76/EU allows Member States to include the costs of air and noise pollution into road charging, but does not allow impacts on biodiversity, landscape, forestry, water etc. to be taken into account.[37]

[34] EC (2012) Communication from the Commission - EU State Aid Modernisation (SAM), (COM(2012)209), 8.5.2012, Brussels

[35] IEEP et al (2007) Reforming environmentally harmful subsidies Final report to the European Commission's DG Environment, March 2007

[36] For further information, see forthcoming study for DG ENV on 'Integrating resource efficiency and EU State aid' to be presented in autumn 2012

[37] The revised Eurovignette Directive in its provisions does not make any reference to external costs from environmental impacts other than from air and noise pollution – though it neither explicitly excludes them. This lacking reference is seen to prohibit Member States from internalising the costs of e.g. climate change, land-use and biodiversity impacts - See for example: European Federation for Transport and Environment (2008). 'Background briefing - European Commission proposal on the 'Greening Transport' Package', http://www.transportenvironment.org/sites/te/files/media/2008_08_background_briefing_eurovignette_0.pdf; Chevassus-au-Louis, B., Salles, J-M., Pujol, J-L., et al. (2009) An economic approach to biodiversity and

- Article 8(2) of the Energy Tax Directive 2003/96/EC contains provisions which exclude certain sectors, such as agriculture or horticulture, from full taxation. For example the Directive allows Member States to tax gas oil used as motor fuels for certain 'off-road' purposes (including agriculture and construction) at a (substantially) lower rate than for road vehicles (minimum rates resp. EUR 21 and EUR 330 per 1000 litres) - for agriculture a zero rate is allowed (Art. 15(3)). This is illustrated in the case on reduced fuel excise duty for diesel used in agricultural machinery in several EU Member States.
- The VAT Directive (2006/112/EC, Art. 98 and Annex III) gives Member States the opportunity to apply a reduced VAT rate to foodstuffs and water supplies. Furthermore, Art. 110 of the Directive allows MS which, at 1 January 1991, were applying reduced rates lower than the minimum (of 5%) to continue to apply those reduced rates (see case on reduced VAT rate for food in Luxembourg). On the issue of reduced VAT rates, the on-going EU review of existing legislation on reduced VAT rates could offer an opportunity to take forward action in this area.[38]
- The EU ETS Directive 2003/87/EC, amended by Directive 2009/29/EC, exempts commercial airlines from the ETS under certain conditions, e.g. when the total emission of the flight amounts to less than 10,000 tonnes per year. In addition, the so-called 'grandfathering' (free allocation) of emissions allowances or the generous allocation of allowances has been challenged by scientists and environmental groups alike as it does not take into account the level of emissions of different sectors and thus allows the continuation of subsidies.[39]
- The renewable energy Directive 2009/28/EC stipulates that all EU Member States must meet a target of 10% renewable energy in transport and put policy measures in place to meet this target. Member States have subsequently introduced support mechanisms for renewable energy in transport, most notably biofuels (around 90% of RE in transport in 2020 is anticipated from conventional biofuels)[40], with most Member States using a combination of an obligation with tax exemptions.[41] The

---

ecosystems services: Contribution to public decision-making. Centre d'analyses Strategiques report, www.strategie.gouv.fr/IMG/pdf/BIODIV_GB_19_02_2010pdf.pdf; EurActiv News "EU to start taxing road freight to contain pollution", updated 15 June 2011, http://www.euractiv.com/transport/eu-start-taxing-road-freight-con-news-505407.

[38] See consultation on the 'Review of existing legislation on VAT reduced rates' launched by the European Commission on 8/10/2012 , http://ec.europa.eu/taxation_customs/common/consultations/tax/2012_vat_rates_en.htm

[39] See e.g. Clò, Stefano (2009) 'Grandfathering, auctioning and Carbon Leakage: Assessing the inconsistencies of the new ETS Directive' Energy Policy 38 (5): 2420–2430 or Anger, Niels, Christoph Böhringer and Ulrich Oberndorfer (2008), Public Interest vs. Interest Groups: Allowance Allocation in the EU Emissions Trading Scheme, ZEW Discussion Paper No. 08-023, Mannheim, URL ftp://ftp.zew.de/pub/zew-docs/dp/dp08023.pdf or Clò, Stefano (2010) 'Economic Analysis of the European Climate Policy: the European Emissions Trading Scheme' Doctoral thesis Erasmus University Rotterdam, URL http://repub.eur.nl/res/pub/20717/Proefschrift%2520Stefano%2520Clo%2520BW%5Blr%5D.pdf.

[40] See for example Beurskens, L W M, Hekkenberg, M and Vethman, P (2011) *Renewable Energy Projections as Published in the National Renewable Energy Action Plans of the European Member States - Covering all 27 EU Member States with updates for 20 Member States*. ECN-E--10-069, Energy Research Centre of the Netherlands: Petten

[41] Ragwitz, M, Rathmann, M, Resch, G *et al* (2011) *D8 Report:*

Commission proposals relating to the sustainability of biofuels may lead to future reforms in this area[42].

These partially contradictory provisions reflect the complexity and ever-changing nature of political priorities. Furthermore, decisions on taxation issues at the EU level require unanimity within the Council which reduces the speed and nature of decision-making in this area. This is evident in current discussions on the revised Energy Taxation Directive. The Commission's proposal seeks to *inter alia* introduce a single minimum rate for CO_2 emissions for all sectors not covered by the EU ETS and for minimum tax rates for energy to be based on the energy content of a fuel rather than volume[43]. The proposal has however been met with significant resistance and there are concerns that it will be diluted in the course of negotiations[44].

Review report on support schemes for renewable electricity and heating in Europe. A report compiled within the European research project RE-Shaping (work package 3), accessed 25.05.2012, http://www.reshaping-res-policy.eu/downloads/D8%20Review%20Report_final%20%28RE-Shaping%29.pdf.

[42] EC (2012) Proposal for a Directive of the European Parliament and of the Council amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources, (COM(2012)595), Brussels, 17.10.2012

[43] EC (2011) Proposal for a Council Directive amending Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity, (COM(2011)169), Brussels, 13.4.2011

[44] See for example Statement by Commissioner Šemeta following the vote on the Energy Taxation Directive in the EP Plenary, 19 April 2012, http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/12/262

6. OBSTACLES TO EHS REFORM AND HOW THEY CAN BE OVERCOME

This section deals with the obstacles that policy makers can meet when attempting to reform EHS and addresses possible ways to overcome these obstacles. We will use categories of obstacles as distinguished by the OECD[45] to structure the evidence on obstacles emerging from the case studies examined, relevant literature, and stakeholder consultation. The categories of obstacles to EHS reform are as follows:

- Strength of special interests and rent-seeking behaviour;
- False perceptions and fear of change;
- Competitiveness and distributional concerns;
- Lack of transparency;
- Legal, administrative and technological constraints; and
- Establishment of a culture of 'entitlement' to subsidies.

This section will also discuss the main elements of possible ways to overcome these obstacles as mentioned in the 2005 report by the OECD[46]:

- Increased transparency;
- Changing the terms of the policy debate by challenging misconceptions;
- Reducing the lobbying power of special interest groups;
- Recognition that a range of options is available to meet societal objectives and that subsidies are generally inefficient tools for achieving policy goals;
- Diffusion of innovative schemes;
- Better targeting of existing subsidies and improved subsidy design;
- Seizing windows of opportunity when they materialise; and
- Transitional measures.

6.1 Obstacles to reform

Strength of special interests and rent-seeking behaviour

Benefits of subsidies tend to be highly concentrated in the hands of specific groups, while their costs are spread widely across taxpayers (and sometimes consumers). This divergence in the concentration of benefits and costs increases the expected returns to specific groups and the incentive to lobby to attain and retain subsidies. Empirical evidence suggests that older and declining industries, which are more environmentally damaging, tend to secure most support and trade protection[47]. According to Victor 2009[48], for many governments, subsidies are the only readily available mechanisms for satisfying important interest groups.

[45] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

[46] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

[47] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

[48] Victor, D. (2009), *The Politics of Fossil-Fuel Subsidies.* Global Subsidies Initiative, International Institute for Sustainable Development (IISD), Geneva, October 2009

This type of obstacle was found to be relevant in several of our case studies. The special interest groups concerned are diverse: for instance nuclear power producers, transport organizations, rock mining companies, fishermen and farmers.

In contrast with the OECD[49] statement above, our cases highlighted quite a number of subsidies (especially tax reliefs) that do not mainly accrue to relative small interest groups with strong lobbying power. Our case studies contain a number of EHS benefitting relatively large groups (commuters) and even the population at large (consumers of food and drinking water). While these beneficiaries may be less well-organised in terms of lobbying, they can (and do) exert their influence through the 'regular' political processes.

False perceptions and fear of change

Special interests have successfully invoked 'mythologies and mantras' to gain popular and political support for the subsidies they receive[50]. This is illustrated by a number of our case studies. A typical kind of myth is the argument that, while the subsidy may stimulate an environmentally harmful practice, the counterfactual situation (without the subsidy) would be even worse, either from an environmental point of view (natural gas is subsidized so as to discourage people to use coal; if irrigation water had a higher price, farmers would start drilling illegal boreholes); or from some other point of view (scrapping premiums for fishing vessels is said to prevent old and unsafe vessels from being kept in use). This kind of argument fails to acknowledge that there are usually other, more effective and efficient ways to prevent the worse situation materializing in the absence of the subsidy.

Lack of political will and concerns related to competitiveness and social impacts

Policy makers are often reluctant to undertake (unilateral) subsidy reforms unless forced to by either economic or environmental crisis, or in response to external pressures. This is confirmed by a number of our case studies and stakeholder consultations. Competitiveness concerns play an important role as an argument to maintaining subsidies to specific sectors (nuclear power, irrigated agriculture, rock extraction). The distributional argument plays a key role in the defence of reduced VAT rates for food and drinking water. In the case of company cars, the favourable fiscal treatment can be seen as a tool to deal with high fiscal and parafiscal pressure on labour income - in some countries, labour taxation cannot be reformed because of its symbolic value for left-of-center parties as a tool to redistribute income.

The validity of these arguments is, in some cases at least, doubtful. For example, the impact of introducing a tax on rock extraction on the competitiveness of the quarrying industry would probably be negligible (certainly in Malta, being an island), the distributional impacts of reduced VAT rates on water and food are opposite to those intended (i.e. high income groups benefit most in absolute terms), and income tax deduction schemes, such as those for commuters, tend to bring the most advantages to high income groups.

[49] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

[50] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

Lack of transparency, information and awareness

There is often a lack of clear information on the size, beneficiaries, impacts, effectiveness/efficiency of a subsidy[51]. Where such information is available, it may be distributed asymmetrically among actors. Sometimes, the real objectives of a subsidy are not clear e.g. a subsidy for housing may officially be meant to help low income groups own a good quality house, but other drivers may be to stimulate employment in the building sector or for political reasons.

This category of obstacles can be expanded to include ignorance and indifference: people often are not aware of the existence of 'implicit' subsidies (such as the lack of internalisation of environmental and resource costs), are not that bothered by negative impacts even if they are aware of them (e.g. if these impacts occur at a long distance in space or time), or are discouraged by the perceived complexity of the issue. Information on the limited effectiveness/efficiency of a subsidy and on successful experiences with subsidy reform may also be lacking. With respect to road pricing, De Borger and Proost 2012[52] have shown that uncertainty may imply the presence of a majority that is ex-ante against road pricing and ex-post in favor. Moreover, the results of an EHS evaluation are rarely clear cut, e.g. subsidies to promote the consumption of local meat could be considered an EHS (because of the environmental impacts of intensive livestock farming), but this meat may have a lower overall environmental impact than imported meat from a third country, for example South America.

Legal, administrative and technological constraints

Such constraints can result from structural or institutional rigidities that restrict the ability of society to adapt to subsidy reforms. For example, the long guarantee period for feed-in-tariffs (FIT) for the generation of energy from waste (typically 15-20 years) which seeks to ensure market/technology stability, makes it difficult to remove the FIT before this date. Another example would be restrictions on the sale, amalgamation or sub-division of farming land in some countries that may restrict the ability of farmers to alter their farming practices in response to changes in subsidy policy.

Constraints can also result from technological factors, such as the lack of available alternative facilities to deal with waste higher up the waste hierarchy (i.e. recycling plants or reuse chains) or in the transport sector where the introduction of electronic charges based on marginal costs for passenger cars is impeded by the huge cost and technological challenges involved[53]. The latter was confirmed by our case study on road pricing in the Netherlands, although one should add that in recent years significant experience has been gained in monitoring and enforcement technology.

The legal framework may also be a constraint for subsidy reform in the sense that it sometimes leaves ample room for the continued existence of the harmful subsidy. This is

[51] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

[52] De Borger, B., and S. Proost (2012), A political economy model of road pricing. *Journal of Urban Economics* 71, pp. 79-92

[53] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

illustrated by the fact that in most of the cases examined in this study there was little or no evidence that the subsidy represents an infringement of existing EU legislation. EU law often leaves much scope for interpretation of its provisions by the Member States (e.g. what does the 'cost recovery' requirement in the Water Framework Directive cover? Does it cover the capital cost of irrigation infrastructure? Etc.), or explicitly allows for exemptions and special conditions that could be seen as an EHS (e.g. reduced rates and exemptions in energy taxes and VAT). See Chapter 5 for further discussion on how EU policies can both encourage and hinder EHS reform.

Establishment of a culture of 'entitlement' to subsidies

The long-term provision of subsidies generates perceptions of 'entitlement' that may be hard to break, particularly as they become capitalised into the prices of factors of production (for example, in the value of land, fishing vessels and catch quotas). The expectation that subsidy programmes will continue can also become embedded in the expectations of producers and consumers, leading to resistance to change and incentives to lobby for the retention of subsidy programmes[54].

The findings from our case studies and stakeholder consultation suggest that this is an important obstacle category. Citizens and companies 'get used' to the existence of a subsidy, which easily becomes an 'established right'. Any interference with this right is then seen as unjust, even if it is evident that there is no rationale for the continuation of a particular subsidy. The favorable tax treatment of company cars is a case in point. On top of this, there may be a general sense of distrust of any government initiative affecting the *status quo* (even if it is a subsidy reform with a full recycling of the savings in public spending or the increase in public revenues) as well as a general aversion to additional taxes.

6.2 Overcoming obstacles to reform

Possible ways to **overcome these obstacles** as mentioned in the 2005 OECD report[55] are elaborated below:

Increased transparency

A major factor in the push for reform of EHS is increased transparency. Transparency can stimulate voter opposition to subsidies and make subsidy reform less politically damaging for governments. In this regard, identifying who benefits from subsidies and highlighting their relative 'bargaining power' can provide a powerful motivating force for change[56]. Another aspect of transparency is highlighting the real impact of an existing subsidy, both in terms of its (lack of) effectiveness/efficiency and its negative social, economic and environmental effects. A basic requirement to achieve transparency would be for every subsidy scheme in place to have a time schedule for regular evaluations and reviews.

[54] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

[55] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

[56] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

Transparency should not only relate to the present situation, but also to the goals and objectives and the distribution of benefits and costs of the proposed reform. That means, ideally, laying bare the full gamut of costs and benefits, winners and losers, and intended and unintended effects in the environmental, economic and social spheres thus highlighting where the trade-offs exist[57]. Telling stories about the 'winners' of reform could also be helpful in generating support for reform. Presenting the subsidy reform as an attractive policy option can also be seen as a matter of transparency (albeit at a less impartial level). One element could be to show how other countries have succeeded in reforming comparable subsidies, or have managed to do without the subsidy in the first place. Implementing a pilot scheme or a test programme can enhance transparency and certainty on the impacts of the reform and lead to greater acceptance (see e.g. De Borger and Proost, 2012 on the Stockholm congestion charge[58]).

The terminology used can also be important. Some experts consulted in the context of this study suggested using more neutral terms so as to generate more discussion and collaboration with other institutions, ministries and actors. For example, the term 'subsidies' could be used rather than EHS so as to better sell the message, starting with all subsidies and then looking at those which are environmentally harmful, e.g. a similar approach to that taken by the OECD in developing the inventory on fossil fuel subsidies. Others, however, disagreed with this and maintained it is better to send out a strong, explicit message with the use of terms such as 'eliminate' or 'phase out' EHS rather than weaker terminology. Keeping with the EHS term is arguably still valuable at the level of making an explicit call for policy attention, while it may be more suitable when cooperating across ministries in developing inventories of subsidies and developing road maps for action to make use of the less charged terms of subsidies or incentives rather than EHS. In the end, the terminology used should be clear and may need to be tailored for particular user needs.

Changing the terms of the policy debate by challenging misconceptions

'Debunking' popular beliefs about the role and indispensability of a subsidy may be an essential part of its reform. If most people think that reduced VAT rates mainly benefit the poorest households or that road pricing is just another way of tormenting and squeezing car drivers, it may take time to convince them that this is not the case. Likewise, subsidizing waste incineration by taxing it at a lower rate than landfilling may be based on a false conception of the external costs of each of these options. Facts and figures, presented in a neutral and easily understandable way, are likely to play a major role in this process.

Reducing the lobbying power of special interest groups

In a democracy, every group has the right to advance and defend its interests. Restricting these rights (beyond their legal limitations, e.g. imposed by competition and anti-corruption law) is therefore not a policy option. However, advocates of subsidy reform can reduce the relative power of vested interests by making the voices heard of those who are disadvantaged by the *status quo*, such as foreign competitors and (in case of sector specific

[57] OECD (2007), *Subsidy Reform and Sustainable Development. Political Economy Aspects.* Organisation for Economic Co-operation and Development, Paris

[58] De Borger, B., and S. Proost (2012), A political economy model of road pricing. *Journal of Urban Economics* 71, pp. 79-92

subsidies) other sectors. Among our cases, an example of this is the growing opposition in France among consumers who become aware that they are subsidizing agriculture by paying high water bills due to excessive nitrate concentrations in surface and ground water.

Recognition that a range of options is available to meet societal objectives

Existing subsidies are often defended by pointing at the public benefits that they are supposed to bring about. However, even if the subsidy is an effective instrument to achieve the envisaged objectives (which is not always the case), it is usually not the most *efficient* one. Other measures (single instruments or policy mixes) may deliver more cost-effective solutions, especially if they contain incentives to make behavioural changes that are better for the environment and comply with the 'polluter pays' principle. Using the argument of efficiency (i.e. the need for efficient public expenditure) to support reform rather than relying solely on environmental arguments could be one approach to take, at least in the beginning stages of reform given that the environmental impacts of EHS may be difficult to quantify. As the reform starts to take shape, one can then bring in arguments concerning the environmental harmfulness of the subsidy to further support the case.

Diffusion of innovative schemes

Successful examples of reform are major drivers for change. Policy makers aiming at subsidy reforms should therefore be on the alert for successful experiments that have taken place elsewhere. In doing so, they should not only look across geographical borders, but also across borders between policy areas and between sectors. The (so far rather limited) collection of subsidy reform cases should therefore be expanded and their experiences and lessons disseminated widely.

Better targeting of existing subsidies and improved subsidy design

Even if it is concluded that an existing subsidy has a useful role to play and should be continued, its specific features and design should be evaluated and reviewed regularly. Changing its conditions may make the subsidy better targeted towards the objective, reduce the amount of public money wasted, and avoid at least some of the negative social, economic and environmental impacts.

An example of a subsidy redesign that may bring about cost savings is to group spending on the existing subsidies that support a given policy objective and forcing all potential recipients to compete against each other for the funding. The bidders able to achieve a given objective at the lowest per-unit taxpayer cost would be the winners. This approach is routinely used in meeting renewable portfolio standards (RPS)[59].

Our case studies contain numerous hints at better targeting and improved subsidy design. For example, it was suggested that the exemption from excise tax for households using hard coal in Poland could be removed and the extra income could be used to improve the support to poor households. Incentives to the development of housing, commercial areas and warehouses could be revised so as to channel such developments to areas which would

[59] OECD (2007), *Subsidy Reform and Sustainable Development. Political Economy Aspects.* Organisation for Economic Co-operation and Development, Paris, p. 101

ensure the most efficient use of existing infrastructure, limit the loss of fertile agricultural land, fragmentation of ecosystems and urban sprawl.
Establishing clear and rigorous good governance practices for new subsidies or reformed subsidies, e.g. review periods, sunset clauses, proof of effectiveness, will not only be important for the next generation of subsidies (and there will inevitably be some given legitimate policy interests), but will also provide an important signal for existing subsidies, helping to set the standard and hence facilitate political buy-in for future reform efforts.

In certain cases, **conditional subsidies** could be effective; for example linking the granting of a subsidy to a particular condition such as reducing energy usage. This can be seen in the case of energy tax reductions granted to companies in Germany where in 2012 a number of conditions were introduced on organisations applying for the tax reduction including: the requirement for major enterprises to introduce an energy management system; for small and medium-sized enterprises to use energy audits; and for the manufacturing sector as a whole to increase its energy efficiency by 1.3% in 2013-2015 and 1.35% in 2016.

Seizing and creating windows of opportunity
In some countries, reforms have been driven by the need to respond to a fiscal or environmental crisis (e.g. reforms of fisheries subsidies in Canada) while in others they have been part of wider economic reforms (e.g. reform of agricultural subsidies in New Zealand), and in yet others, enlightened self-interest and a confluence of political forces agreeing on the need for change were the major factors in driving policy reforms (e.g. Sweden)[60].

Sometimes, peer pressure, international organisations, and civil society can increase interest in subsidy reform processes[61]. The need to comply with EU legislation and international treaties (e.g. in the framework of the WTO) could be a powerful argument in specific situations. Other windows of opportunity include commitments at the EU level (e.g. under the resource efficiency Roadmap) and international level (e.g. the G20 commitment to phase out inefficient fossil fuel subsidies); taking advantage of the overlapping interests of different government departments to work on EHS (e.g. for budget savings purposes, to encourage innovation, address climate change concerns etc.); specific political interests (e.g. the technocratic government in Italy concerned with reducing public debt); and wider economic reforms (e.g. tax reform in Sweden) etc. Theoretical and empirical work (e.g. by the OECD and others) as well as robust evidence on EHS need to be ready when the window of opportunity arrives so as to support the reform process.

Among our case studies, we also have some examples where external circumstances created a window of opportunity for subsidy reform. For example, eliminating the tax relief for car commuters in the Netherlands could initially not be (fully) achieved when presented as an environmental measure, but was later accepted without much resistance as part of a major tax reform at a time when congestion was high on the agenda. The Fukushima nuclear accident in 2011 provoked the decision in Germany to phase out nuclear power and thus also the subsidies associated with its use.

[60] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris
[61] OECD (2007), *Subsidy Reform and Sustainable Development. Political Economy Aspects.* Organisation for Economic Co-operation and Development, Paris

In many Member States, the current need to reduce public budget deficits provides an obvious occasion to look for possible spending reductions or tax increases (examples include rock extraction in Malta, commuting costs in Austria , company cars in Belgium, irrigation subsidies in Cyprus, Italy and Spain, and the reduced diesel excise tax rate in the Netherlands). Such budget concerns also occur at lower levels of governance (for example the WEEE producer responsibility case in Slovenia). Some Member States have already started taking action in this area. For example in Italy, the government approved a General Tax Reform which includes for the first time an element of Green Fiscal Reform (and explicitly mentions the phasing out of EHS, particularly excise tax exemptions). Efforts are also underway in other Member States.

Transitional measures

Transitional measures may be required when phasing out or reducing subsidies. Such measures involve not only payment or compensation to assist in structural change, but also the provision of information, advice and retraining for affected workers and businesses. The appropriate speed of adjustment will depend on the resilience of the community to change and external pressures and on the availability of alternative sources of employment and income. In some cases, a step-by-step reform or a phased approach to reform may be helpful rather than an immediate abolition. However, care needs to be taken to ensure that transitional measures do not become entrenched in the expectations of beneficiaries of the measures[62]. Transitional measures need to be carefully designed with clear review clauses and end dates.

The 2007 OECD report[63] discusses several types of or ***approaches to transition supports*** in the context of subsidy reform which are discussed below:

- ***Reliance on existing social assistance:*** This approach is especially relevant for the reform of those subsidies that aim at protecting low-income households (but often fail to do so efficiently), such as reduced VAT rates.

- ***"Fiddling" with the reform:*** If an 'optimum' subsidy reform is not feasible (at least not on short notice), policy-makers may take recourse to a 'second best' option. Several examples of (proposals for) such partial reform were encountered in the case studies examined, for example the option of a 'flat' (per km) fee in the Netherlands (instead of a road pricing scheme that takes externalities into account) and the introduction of environmental differentiations in the fiscal treatment of company cars in the Netherlands, Belgium and the UK.

[62] OECD (2005), *Environmentally Harmful Subsidies. Challenges for Reform.* Organisation for Economic Co-operation and Development, Paris

[63] OECD (2007), *Subsidy Reform and Sustainable Development. Political Economy Aspects.* Organisation for Economic Co-operation and Development, Paris

- ***Economic diversification:*** If the reform of a subsidy would have the consequence that a specific economic activity - or even en entire industry - loses its competitiveness, the blow may be softened by measures aiding people (employees and self-employed) to find other jobs or activities. Such programmes have for instance been applied in the framework of coal mining subsidy phase-out in several countries. In the present study, no concrete examples were identified; however one might expect that substantial increases in for instance irrigation water prices could undermine the profitability of certain crops, calling for public support to farmers in switching to other (less water intensive) crops.

- ***Compensation:*** Compensating the 'victims' of subsidy reform will often be an indispensable part of the reform package. Full compensation (in the sense that no one is worse off) will neither be possible nor desirable: people and firms causing environmental harm (and continuing to do so after the reform) should experience a financial penalty. However, in some cases, reform will only be politically feasible if the public money saved or the additional tax revenues are fully (or at least partly) recycled to the sector or the group that used to benefit from the subsidy. This was, for instance, the case in the (failed) road pricing scheme in the Netherlands. On the other hand, if the subsidy reform is part of a policy package aiming at reducing public budget deficits, full recycling is not an option. In that case, acceptance may still be increased by recycling a (small) part of the money back to the sector/group affected (see for example the reform case on low diesel excise tax rates in the Netherlands and the aggregates levy in the UK).

  Earmarking the revenues for purposes that are related to those of the subsidy can also be a useful way of gathering support for the reform (for example the introduction of the Lkw-Maut in Austria aimed to collect funds for the maintenance, operation, upgrading and further development of the Austrian motorway network; or other cases where road pricing revenues have been used for improvements in public transport[64]). However, while this is generally found to improve the public's acceptance of road pricing schemes, it should be borne in mind that from an efficiency point of view it would be better to assign the revenues to the general budget. In some cases, subsidy reform appears to be possible without any compensation scheme; see for example the case of drinking water pricing in the Czech Republic.

- ***Packaging reforms:*** Our case studies contain some examples of subsidy reforms that became politically acceptable once they were part of a wider package, for example a major tax reform or budget cuts (e.g. commuting cost and diesel excise tax relief in the Netherlands).

[64] De Borger, B., and S. Proost (2012), A political economy model of road pricing. *Journal of Urban Economics* 71, pp. 79-92

7. EHS REFORM AND THE RESOURCE EFFICIENCY AGENDA

7.1 EHS and the Europe 2020 Strategy

As elaborated in Chapter 3, a number of EHS exist in several EU Member States. These subsidies occur across different sectors and economic types and vary in impact (environmental, social, and economic). The continued existence of EHS is one of the reasons behind the inefficient use of energy and natural resources. Reforming such EHS can help to deliver economic, social and environmental benefits and allow for improved competitiveness, thus contributing to the objectives of the Europe 2020 Strategy and the related **Resource Efficiency Flagship Initiative and Roadmap**. For example, the issue of materials scarcity and links to EHS reform can be made through taxes/charges on gravel, sand, aggregated and rock resources that go part of the way to ensure due resource costs are taken into consideration in decision-making. Similarly water and soil are limited resources of importance and show how EHS can undermine the efficient use of resources.

Successful EHS reform will likely benefit the achievement of the **climate and energy headline target** reiterated in the Europe 2020 Strategy. Reform will also support other Flagship Initiatives under the Europe 2020 Strategy. For example, successful EHS reform will back the **Flagship Initiative on Industrial Policy** by supporting necessary changes in industrial policy to achieve a transition to a green economy. EHS reform will also contribute to the **Innovation Union Flagship Initiative** given that EHS often create lock-in that holds back innovation/new technologies and markets. By helping to reform economic signals, it should also support the agenda for new **skills and jobs** (e.g. low carbon, resource efficient and natural capital linked jobs).

7.2 Multiple needs for and benefits of EHS reform

The need to reform ineffective public subsidies, including those which are environmentally harmful, is increasingly evident. There are multiple needs for EHS reform and associated benefits as elaborated below:

- **Address resource efficiency / resource scarcity concerns**
  The need to encourage the more efficient use of resources is a key priority of the EU, as reflected in the Europe 2020 Strategy and related Resource Efficiency Flagship Initiative and Roadmap. Correcting market signals in terms of getting the prices of resources and products right will be critical in this regard and EHS reform should be seen as a tool to achieve this. EHS reform will lead to resource efficiency gains, cost savings, and improved resource availability. It will also help to address resource dependency and geo-political concerns in a competitive global world with limited resources and avoid unnecessary resource extraction thus addressing concerns about reaching resource limits, needs for future generations, ethics and environmental damage.

- **Address environmental damage and impacts on human health**
  There is a need to address the negative impacts of subsidies on the environment (e.g. on biodiversity, GHG emissions, water quality, air quality) and avoid environmental

damage/ further losses of natural assets that provide essential services – e.g. ecosystem degradation leading to ecosystem service loss.

There is also a need to avoid negative social impacts (e.g. on human health, household spending). For example, the US National Academy of Sciences estimated that fossil fuel subsidies cost the US more than USD 120 billion in pollution and related health care costs in 2005. This is likely to be an underestimate given that the figure does not include damages that could not be quantified such as damages related to some pollutants, climate change, ecosystems, infrastructure, and national security[65].

- **Financial and budgetary considerations**
  There is a need, particularly in the current economic context, for budget savings to help with fiscal consolidation efforts. At the same time, there is a need to secure additional funding to finance the transition to a low carbon, resource efficient economy. Existing subsidies create opportunity costs as the funds could have been spent elsewhere and hence arguably subsidies represent an opportunity lost/missed. The reform of EHS offers possibilities to release public funds and/or raise funds to support the transition to a green economy, allowing for a reallocation of resources to other policy objectives and needs. The current Eurozone crisis offers an important momentum to make progress on EHS reform. Focusing on the argument that the reform of EHS offers an opportunity for governments to raise / free up revenues in times of fiscal restraint is likely to be met with a more favourable reception than in the past.

- **Increase competitiveness and stimulate (eco-)innovation**
  There is a need to overcome or avoid technological 'lock-in' (as more environmentally-friendly technologies/practices are unable to compete on an equal basis with the subsidised sector), stimulate (eco-) innovation and increase competitiveness by exposing subsidised sectors to competition. EHS reform provides incentives for innovation and may lead to the development of new markets/niches, helping to increase competitiveness and drive the transition to a green economy.

- **Meet objectives more effectively and efficiently**
  There is a need for (cost) effective and efficient policies. Many EHS are badly targeted and in several cases have lost their initial purpose/rationale. Reforming EHS can lead to improved policies which are better targeted on relevant objectives. This is linked to the issue of public accountability and legitimacy – if subsides are not seen as effective and having due purpose, their legitimacy (in terms of spending of taxpayers money) declines. This issue is core to EU level discussions on greening the CAP and the CFP and is also relevant in the national context.

- **Policy coherence, policy integration and good governance**

[65] National Academy of Sciences, (2010) Hidden Costs of Energy: Un-priced Consequences of Energy Production and Use, Committee on Health, Environmental, and Other External Costs and Benefits of Energy Production and Consumption; National Research Council

There is a need for coherent policies**.** Many EHS undermine or contradict other policy objectives (environmental, social and economic) and wider principles (polluter pays, full cost recovery and user pays). EHS reform can help address issues of policy (in)coherence, through for example promoting the climate and biodiversity proofing of EU spending programmes (Cohesion Policy and CAP) and legislation. More widely, EHS reform is integral to good governance and be an essential element of better regulation or smart regulations ambitions.

- **Meeting commitments to reform**
  There is a need to comply with EU and international commitments to reform. At the global level, this includes the CBD COP 10[66] target to eliminate or phase out 'incentives including subsidies harmful to biodiversity' by 2020 at the latest[67], the G20 commitment to rationalize and phase out 'inefficient fossil fuel subsidies' over the medium term[68], and the recitation of commitments in the Rio+20 outcome document[69]. At the EU level, the most recent commitment is set out in the Roadmap for a resource efficient Europe'[70] which includes a milestone that 'by 2020 EHS will be phased out, with due regard to the impact on people in need'. There are also a number of political commitments to reform EHS at the Member State, regional and local level. Meeting these commitments is critical for maintaining credibility and legitimacy of governments.

In general there is often a combination of reasons or needs for reform which work together to drive the process forward. There are also several obstacles to reform which need to be overcome (see Chapter 6). However, as elaborated in Chapter 4 of this report, EHS reform is possible and there are a number of examples of successful reform cases within the EU and beyond. These cases provide useful lessons on overcoming barriers, stimulating drivers and engaging champions of reform. Progress in one sector or one country creates a precedent and may help generate momentum for change in other countries. There have also been recent efforts to take reform forward through the development of inventories and reports on EHS which can be replicated in other countries (see Chapter 8 for further details). Any reform effort needs to recognise that subsidies are part of a wider policy (which includes other aspects such as social or fiscal issues) and should contribute to clear policy objectives. Subsidy reform is also part of this wider policy context and needs to take into account the complex interconnections and interdependencies therein. A step-by-step approach to EHS reform is outlined in Chapter 8.

[66] 10th meeting of the Conference of the Parties to the Convention on Biological Diversity

[67] Global CBD Aichi Accord, CBD Strategic Plan 2011-2020. Dec. X/44 on Incentive Measures / CBD Strategic Plan 2011-2020: Target 3

[68] G20 leaders statement: The Pittsburgh Summit, 24-25 September 2009, http://ec.europa.eu/commission_2010-2014/president/pdf/statement_20090826_en_2.pdf

[69] United Nations, 'The future we want', First draft of the Rio+20 negotiating text, 20 January 2012, http://www.uncsd2012.org/rio20/content/documents/370The%20Future%20We%20Want%2010Jan%20clean%20_no%20brackets.pdf [accessed 5/6/2012]

[70] EC (2011) Roadmap to a Resource Efficient Europe (COM(2011)571), http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0571:FIN:EN:PDF

8. TAKING EHS REFORM FORWARD

There is a need to build and maintain momentum behind EHS reform to 2020 and beyond. This will require significant investment and persistence by those promoting the reforms and may well require a combination of systematic and opportunistic approaches. EHS reform requires actions at different levels (EU, MS, regional and local). Ideally this action should be coordinated to maximize synergies and help to 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. This is important not just for progress in relation to EHS itself but also for wider progress of the Europe 2020 Strategy and related Flagship Initiatives and Roadmaps.

A critical factor in taking EHS reform forward is ***identifying, creating and seizing windows of opportunity for reform***. The current economic context and pressing needs for fiscal consolidation given high levels of public debt seems to be a particularly pertinent current window of opportunity and should be taken-up accordingly. There are also other opportunities including taking forward the resource efficiency agenda, G8 and G20 meetings, and international conventions/meetings - as seen in the successful outcome of the CBD COP 10. Also, the potential pressure for reform arising from actual and future infringement cases of existing EU legislation will help driving reform forward.

8.1 A step-wise approach to taking EHS reform forward

A step-wise approach to taking EHS reform forward is set out below. These steps seek to clarify what is needed for reform and how to take this forward in practice – building on the results from the analysis undertaken for the study, practical insights from the cases examined, and expert input. The role of different actors in the process and how synergies and coordination can be maximised is also set out in each step.

- **Step 1: Develop inventories to increase transparency**

The lack of transparency and information is a critical barrier to EHS reform. Transparency can stimulate voter opposition to subsidies and make subsidy reform more politically feasible for governments. Thus, a first critical step for EHS reform is the identification of who benefits from subsidies, and highlighting their relative 'bargaining power', assessing the scale and impact of an existing subsidy, both in terms of its (lack of) effectiveness/efficiency and its negative social, economic and environmental effects, to establish which subsidies are harmful and identify priorities for reform. This is by no means an easy task[71]. Different tools and approaches to support the identification and measurement of subsidies have been developed which use different indicators and methodologies.

[71] See Pieters, J (2003) When removing subsides benefits the environment: Developing a checklist based on the conditionality of subsidies in OECD (2003)

A subsidy reform flowchart[72] developed by IEEP for the UK Department for Environment and Rural Affairs (Defra) to help identify subsidies needing reform in the context of meeting Target 3 under the Strategic Plan for Biodiversity 2011-2020 is provided in Figure 1. This builds on previous work by IEEP within the TEEB initiative[73] and for the European Commission[74], which in turn builds on the OECD tools (the 'quick scan'[75] which *inter alia* shows that there is no direct linkage between the amount of and nature of support and the environmental impact; the 'checklist'[76] which enables the assessment of whether, given the circumstances, removal of a subsidy will benefit the environment and the 'integrated assessment framework'[77] which includes a sustainability perspective and ensures that social and economic trade-offs are included in the assessment). The flowchart can be adapted to national priorities and used to provide an initial screening process to help identify where more in-depth analysis is merited which may then make use of more detailed tools and models such as those developed by the OECD.

72 ten Brink, P. (IEEP), Bassi, S. (IEEP), Badura, T. (IEEP), Hart, K. (IEEP), Pieterse M. (GHK) (2012), Incentive Measures and Biodiversity – A Rapid Review and Guidance Development Volume 3 – Guidance to identify and address incentives which are harmful to biodiversity

73 TEEB (2011), The Economics of Ecosystems and Biodiversity in National and International Policy Making. Edited by Patrick ten Brink. Earthscan, London.

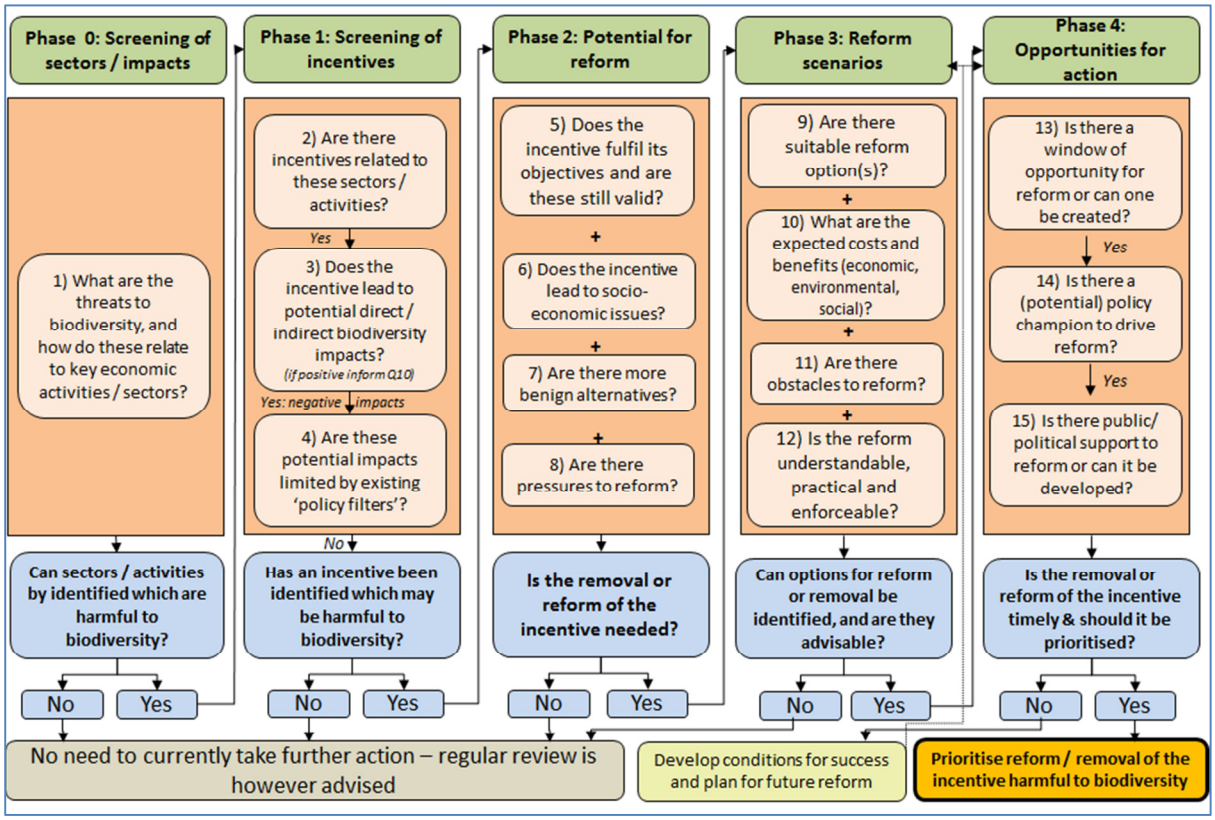
74 Valsecchi C., ten Brink P., Bassi S., Withana S., Lewis M., Best A., Oosterhuis F., Dias Soares C., Rogers-Ganter H., Kaphengst T. (2009), *Environmentally Harmful Subsidies: Identification and Assessment*, Final report for the European Commission's DG Environment, November 2009.

75 OECD (1998), Improving the environment through reducing subsidies, OECD, Paris.

76 OECD (2005), Environmentally Harmful Subsidies: Challenges for Reform, OECD, Paris

77 OECD (2007a), Subsidy Reform and Sustainable Development: Political economy aspects, OECD, Paris.

Figure 2: Subsidy reform flowchart to support implementation of Target 3 of the Strategic Plan for Biodiversity for 2011-2020 *(piloted in the UK)*



Source: ten Brink et al (2012), Incentive Measures and Biodiversity – A Rapid Review and Guidance Development Volume 3 – Guidance to identify and address incentives which are harmful to biodiversity

A commitment to develop inventories of EHS is a first step in the reform process. The OECD (or similar) tools should be used to establish transparent and comprehensive inventories of existing subsidies. This could for example involve developing an inventory systematically covering all areas or starting with one area (e.g. transport), focus on a particular environmental problem and see what the contributing factors are (e.g. biodiversity and within this focus on the specific problems of eutrophication, wetland loss), or focus specifically on responding to legislative requirements or specific commitments (e.g. better implementation of WFD or the Eurovignette Directive).

Some of the efforts already underway in EU Member States to identify and assess EHS are set out in Box 1. Such assessments help to determine the effectiveness, cost-efficiency and impacts of subsidies in place, and the benefits and costs of reform – environmental, money saved/freed, social impacts, innovation etc.

Box 1: Identifying EHS: Some examples in practice

A number of EU Member States have launched efforts to identify and assess EHS in their countries, for example:

- In 2011, **France** carried out work to identify and analyse EHS. This included a report by the Committee to Evaluate Tax Expenditures and Social Security Contribution Exemptions which stressed the environmentally harmful effects of tax exemptions on certain uses of fossil fuels and a report by the Strategic Analysis Centre on government subsidies harmful to biodiversity (Sainteny, G., et al 2011).
- In **Flanders** (Belgium), an inventory of subsidies is currently being developed. The inventory takes a

broader approach to greening government expenditure and will cover both environmentally harmful subsidies and environmentally friendly subsidies so as to identify best practices and to improve the environmental return of these subsidies. This approach could be helpful in increasing acceptance of the process.

- In **Sweden,** a recent report by the Swedish Environment Protection Agency examines government subsidies that have a potentially negative environmental impact and discusses how subsidies can be better handled in analyses of policy instruments. This follows a preliminary study on the topic in 2005 (NATURVÅRDSVERKET 2012).
- In **Germany,** the Federal Environment Agency regularly publishes a report on "Environmentally harmful subsidies in Germany". The latest update is from 2010 (UBA 2010), a new update is expected in 2012.

The approach taken to identify EHS, and hence the definition of an EHS, varies between Member States. For example, the German Federal Environment Agency uses a broad definition of EHS, which includes explicit and implicit subsidies but excludes negative externalities while the Swedish Environmental Protection Agency takes a broad approach which includes externalities but excludes infrastructure and regional support. Thus comparisons of EHS across countries should be undertaken with caution given different approaches taken. Moreover, the level of analysis is in most cases limited to the federal/national level. It is often difficult to assess subsidies at the local or regional level (given different approaches to measuring and accounting for subsidies at these levels).

Efforts have also been undertaken at the international level. For example the **OECD** inventory of budgetary support and tax expenditures for fossil fuels provides information on the tax codes of 24 member countries designed to encourage oil and gas production or relieve particular end-use sectors from excise taxes. The inventory identifies over 250 individual producer or consumer support mechanisms for fossil-fuels. The inventory does not assess the impact of these measures nor does it recommend whether they should be reformed or removed. It is rather meant as a starting point for further analysis about the objectives of particular measures, their impacts, and opportunities for reform (OECD 2012).

Sources:

Sainteny, G., et al (2011) Les aides publiques Dommageables à la biodiversité, Centre d'analyse stratégique
NATURVÅRDSVERKET (2012), Potentiellt miljöskadliga subventioner Förstudie från 2005 – uppdaterad 2011
UBA (2012) Environmentally Harmful Subsidies in Germany – update 2010
OECD (2012) Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels, Paris

A ***bottom-up, step-by-step approach*** driven by ***Member States*** would be the most pragmatic way of taking this forward. A common approach to definitions and methods to identifying and assessing EHS (e.g. based on the OECD approach) could be useful and would be important for comparisons between countries, for example with a possible expansion of the EU Regulation on national environmental economic accounts. However, there is a risk that this would delay action even further and may lead to protracted debates on definitions of EHS - how to measure environmental harmfulness etc. - and eventual deadlock. Taking a pragmatic, bottom-up approach according to the needs of each Member State will ensure progress by 2020. This would help to get the process underway and would be a practical way forward in the short-to-medium term. Member States could take inspiration from efforts in other countries (see Box 1) and learn from their experiences. The approach taken will however need to be tailored to the national context. It will be important that such bottom-up approaches are transparent in the methodology used.

To make the task more manageable, one approach would be to begin such an assessment ***focusing on a select number of priority subsidies*** which are recognised as having a significant harmful impact on the environment and/or for which data/methodology already exists. For example, areas to focus initial efforts on could be fossil fuels subsidies (given the

substantial level of subsidies provided) and could draw on existing information such as the OECD inventory on support for fossil fuels together with a forthcoming study for the European Commission on the six Member States not covered in the OECD inventory. Another area could be the favourable treatment of company cars drawing on the results of recent studies[78] and discussions in the OECD on this issue. These assessments / inventories could draw on existing information relating to certain on-budget EHS, for example in national budget bills which are publicly available and are usually published by national Ministries of Finance. Information can also be found in annual tax expenditure reports (e.g. the annual reports produced by the Ministry of Finance in Sweden) and state aid reports by the European Commission. However it is important to note that these documents exclude certain categories of subsidies, including several categories of implicit subsidies. They should thus be used as a starting point in the analysis.

Focusing on certain number of subsidies would help to translate the general message of subsidy reform into more specific action; for example, Member States could start by reporting on specific subsidies, e.g. fossil fuel subsidies and company car taxation, and then gradually expand to cover other areas as the methodology to tackle these areas is developed and the information base improved. Priority areas will of course differ across Member States, for example water pricing would be a significant issue in many southern EU Member States.

The ***role of the EU*** in this process would be to *inter alia*:

- ***Engage and support Member State efforts*** by giving renewed impetus to EU-level fiscal groups such as the Market-Based Instruments Forum and the Taxation Policy Group to advance Member State activities on EHS reform, providing a platform for exchange of good practices, developing guidelines on identifying and assessing EHS, and providing tools to support reform based on the OECD tools etc.
- Make use of ***annual reports and country recommendations*** under the European Semester cycle to keep the focus on the issue and provide further guidance for Member States action.
- ***Lead by example*** by creating an inventory of EU-level subsidies which are generally recognised as having a significant impact on the environment, for example under the CAP, CFP and Cohesion Policy; and reflect on how EU subsidies under the Structural and Cohesion Funds impact on national subsidies.
- ***Revise criteria for EU investment decisions and funding schemes***, e.g. for transport infrastructure in new Member States for impacts and link financing to specific conditions, or for projects in the context of the Cohesion Funding, such as for waste management. Review project selection criteria used by the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) so as to prevent supporting environmentally harmful activities.
- ***Identify restrictions or provisions at the EU level that may prevent or hinder EHS reform***. This will help to increase understanding of where Member State action is constrained and why. For example the Eurovignette Directive does not allow

[78] See for example Copenhagen Economics (2009) Company car taxation: Subsidies, welfare and environment, Study for DG TAXUD

Member States to take into account impacts on biodiversity, landscape, forestry, water etc. in road charging; state aid provisions restrict Member State action etc.

- ***Support capacity building and knowledge development*** of other actors (e.g. NGOs) on taxation and fiscal issues through financial and technical assistance.

The role of ***other actors*** would be to *inter alia*:

- ***Increase transparency and information on EHS***, e.g. the OECD inventory of fossil fuel subsidies, national statistics offices such as the Italian National Institute of Statistics and Swedish Statistics etc. Such reporting, where based on data provided by national governments should be subject to peer reviews or examination by an external body.
- ***Exchange information on EHS and best practices in reform*****,** for example the Court of Auditors in the Netherlands is currently preparing research on the impacts of Dutch subsidies (report is expected to be presented in 2013) and aims to cooperate with Courts of Auditors in other Member States to explore subsidies in the EU context in the future. Such exchanges of information should be encouraged.
- ***Disseminate information on EHS*** through an accessible and understandable media such as 'Wiki-subsidies', through online blogs such as the blog on subsidies by the Guardian newspaper in the UK[79], or through twitter[80].

➢ **Step 2: Develop roadmaps for reform**

Based on the assessments carried out in Step 1, Member States should prepare prioritised ***action plans and timetables (roadmaps)*** for the removal or reform of those subsidies identified as meriting reform. These roadmaps should set out concrete actions and deadlines over the medium-term (i.e. to 2020). A ***cross-departmental working group/task force*** should be set up within the government to carry the reform forward and ensure momentum is kept up. In some cases, the interests of different departments may be aligned, e.g. budget savings and environmental protection, while in others they may not be, e.g. when considering different sectoral departments such as agriculture and transport. There also needs to be wider consultation and engagement to secure public, cross-party and stakeholder support for the process.

Different approaches for EHS reform may be appropriate for different economic types of subsidies. Table 7 sets out possible reform approaches to the different types of EHS examined in this study. This will of course need to be tailored to the specific context in which the subsidies applies but could provide an indication of the possible options available.

[79] http://www.guardian.co.uk/sustainable-business/blog/transport-subsidies-heading-wrong-direction [accessed 26/8/2012]

[80] See for example: https://twitter.com/#!/search/%23endfossilfuelsubsidies?q=%23endfossilfuelsubsidies

Table 7: Reform options by EHS type

EHS type	Reform option	Examples
Direct and potential transfer of funds	Remove (e.g. by scaling down the level of support over time to give time to adapt) or reform (e.g. by adding conditionalities/ environmental filters, allowing the subsidy to stay in place but address unintended impacts)	e.g. remove subsidies for decommissioning fishing vessels; provide greater clarity in the CAP regulation, implementing rules and non-legislative technical guidance on eligibility criteria at the EU level; require nuclear power plant operators to insure a much greater part of the risk of a nuclear accident; issue guidelines to clarify which investments on board fishing vessels are eligible for public aid and which are not.
Government provides goods or services (including specific infrastructure)	Leave provision to the market and/or charge for the service	e.g. the provision of cleaning services from littering at large scale events or the building of roads to a specific mine or farm
Government provision of general infrastructure	Introduce payments for use of infrastructure, preferably differentiated so as to take into account external costs	e.g. introduce charges in accordance with the Eurovignette Directive or introduction of general road charging
Income or price support	Remove over time or reform / add conditionalities	e.g. by adding environmental conditionalities such as cross compliance in agriculture, technical measures for fisheries
Tax credits, exemptions and rebates, accelerated depreciation	Close tax loopholes, remove exemptions, add conditionalities, with due phasing for transition management and/or compensation for social hardship	e.g. remove fuel excise tax reductions for agricultural machinery; improve the targeting of the exemption from excise duties on coal used for heating purposes by households and public entities or remove the exemption and use the additional income to improve (targeted) support to poor households.; apply the standard VAT rate to water supplies and to food (in general, or to the categories of food causing the most environmental problems, i.e. meat and dairy products)
Preferential market access, regulatory support, selective exemptions	Remove or reconsider conditions/criteria	e.g. set FIT rates so that they correspond better with the waste hierarchy, i.e. so they do not promote the burning/landfilling of waste that could otherwise be prevented, reused, recycled or composted/treated through anaerobic digestion; redesign biofuel support policy so as to only support the use of biofuels from residues and wastes with no harmful environmental / social impacts
Lack of full cost recovery	Move to full cost charging (with due integration of social considerations in design) e.g. for water, waste management, transport	e.g. introduce a fully-fledged road pricing scheme; or use congestion charges in congested areas only; modify tariffs for irrigation water so that they respect the principle of full cost recovery
Lack of resource pricing and resource rent	Move to resource charging (e.g. water, materials). This will be critical in the context of scarce	Introduce taxes and charges on rock extraction which reflect the scarcity of the resource; due pricing for tree felling,

	resources, and also in times of budget needs, and generally for efficient operation of the market.	water pricing to also cover the use of the resource (e.g. groundwater aquifers)
Non-internalisation of externalities	Strengthen liability rules and implementation by courts (including pricing), charges on polluting products (e.g. pesticides, fertilizers), pollution charges (SO_2, NOx tax).	e.g. introduce a tax on fertilisers containing nitrogen and other nitrogen-containing products e.g. compensation payments for accidents such as oil spills, water pollution.

The reform process needs to be ***carefully designed, managed and implemented*** with clear targets, transparent costs and benefits, stakeholder engagement, and coordination among government bodies, etc. Many successful examples of EHS reform are seen in cases where EHS reform is introduced as part of a broader package of instruments including policies to mitigate adverse impacts of subsidy removal. It will also be necessary to manage the transition carefully through a phased approach which introduces relevant transition measures and processes, compensating those affected by the reform ('losers'), ensuring potential negative impacts are mitigated through appropriate measures (e.g. means-tested social safety net programmes) etc.[81] The IMF for example suggests a number of potential short-term support measures, including the maintenance of subsidies that are most important to the budgets of the poor mainly by replacing subsidies to producers with targeted consumption subsidies to poor households, and redirection of funds to priority areas such as healthcare or education[82]. Any ***compensation mechanisms*** introduced should include time limits or maximum levels of spending to avoid them becoming entrenched and enable the government to adapt them to changing circumstances.

Transparency of the goals and objectives and the distribution of benefits and costs of the proposed reform is critical. The full gamut of costs and benefits, winners and losers, and intended and unintended effects in the environmental, economic and social spheres, highlighting where the trade-offs exist should be laid-out[83]. Implementing a pilot scheme or a test programme can enhance transparency and certainty on the impacts of the reform and lead to greater acceptance. Given the ultimate importance of stakeholder buy-in, a strong communication strategy is needed to reassure affected groups that they will be supported[84].

Even if it is concluded that an existing subsidy has a useful role to play and should be continued, its specific features and design should be evaluated and reviewed regularly. Changing its conditions may make the subsidy better targeted towards the objective, reduce the amount of public money wasted, and avoid at least some of the negative social, economic and environmental impacts. Establishing clear and rigorous ***good governance practices for new subsidies or reformed subsidies*** (e.g. review periods, sunset clauses, proof of effectiveness) will not only be important for the next generation of subsidies (and there

[81] OECD (2012), *Environment Outlook to 2050*, Organisation for Economic Co-operation and Development, Paris

[82] Cited in: UNEP (2011) Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication, http://www.unep.org/greeneconomy/greeneconomyreport/tabid/29846/default.aspx

[83] OECD (2007), *Subsidy Reform and Sustainable Development. Political Economy Aspects*. Organisation for Economic Co-operation and Development, Paris

[84] UNEP (2011) Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication, http://www.unep.org/greeneconomy/greeneconomyreport/tabid/29846/default.aspx

will inevitably be some given legitimate policy interests), but will also provide an important signal for existing subsidies, helping to set the standard and hence facilitate political buy-in for future reform efforts. See Box 2 for some key criteria for the design of subsidy programmes as elaborated by UNEP.

Box 2: Key criteria for subsidy design

There are a number of basic principles that need to be applied when designing subsidies and implementing reforms to existing programmes. Subsidy programmes and their reform should meet the following key criteria:

- ***Well-targeted****:* Subsidies should go only to those who are meant and deserve to receive them.
- ***Efficient:*** Subsidies should not undermine incentives for suppliers or consumers to provide or use a service efficiently.
- ***Soundly based****:* Subsidies should be justified by a thorough analysis of associated costs and benefits.
- ***Practical:*** The amount of a subsidy should be affordable and should be administered in a low-cost way.
- ***Transparent:*** How much a subsidy programme costs and who benefits from it should be clear to the public.
- ***Limited in time****:* Subsidy programmes should have limited duration, preferably set at the outset, so that consumers and producers do not get 'hooked' on the subsidies and the cost of the programme does not spiral out of control.

Source: UNEP (2004) Energy subsidies: Lessons learned in assessing their impact and designing policy reforms, UNEP/ETB/2003/1, First edition 2003, Reprinted in September 2004

The ***role of the EU*** in this process would be to inter alia:

- ***Coordinate reform at the EU level*** where relevant, developing roadmaps for reform in key sectors (e.g. agriculture, fisheries), and setting up inter-DG working groups to take reform forward. In some cases reform efforts will need to be coordinated at EU level given concerns about competitiveness (e.g. when considering support for large energy users) and to avoid border issues because of differences between national regimes. By acting in these areas, e.g. in relation to the energy taxation Directive or the EU ETS, the EU would lead by example.
- In some cases, the requirement for unanimity in the Council to agree tax-related measures restricts progress, as seen in discussions on the revised energy tax Directive. The EU could set up a process to ***review the decision-making procedure*** and ***explore possibilities for making increased use of the enhanced cooperation procedure***.
- ***Amend or revise restrictions and loopholes at the EU level*** that prevent action at the national level and may hinder EHS reform, e.g. the Eurovignette Directive could be further revised to include wider external costs such as impacts on biodiversity, revise state aid rules, reconsider existing exemptions, for instance from the cost recovery provisions in the WFD and outdated special VAT rates.
- Explore ***options to support reform efforts***, e.g. through an extension to the environmental accounts Regulation (e.g. to include reporting on EHS or additional sectors).
- ***Develop guidance for implementation of certain commitments,*** e.g. formulation of the cost recovery principle under the Water Framework Directive.
- ***Promote green public procurement***, for example by setting (mandatory) targets at the EU level. This would support the reform of government activities in

procurement, tendering, investments etc. so they are more sustainable and can act as leaders to take forward the market.

- In certain cases, EHS reform needs to be coordinated at the ***international level*** e.g. in relation to international aviation. In such cases the EU should work with relevant international partners and organisations to take the agenda forward, for example supporting the development of information on existing EHS (e.g. through international bodies such as the IEA and the OECD) and setting up review mechanisms to monitor progress, for example within the G20 context.

The role of ***other actors*** would be to *inter alia*:

- ***Keep the spotlight on the issue and maintain pressure*** on the EU and Member States to reform EHS. Such actors, for example national NGOs, could make use of windows of opportunity as they arise, e.g. the Commission infringement case against Germany in May 2012 on the principle of cost recovery for water services could be an opportunity to focus on water pricing.
- Develop ***partnerships or platforms bringing together all stakeholders*** (including industry). For example, the agreement at the Rio+20 Conference between a group of business organisations, governments and the European Commission on environmental accounting is a good example of how to involve the private sector.
- ***Engage the public*** through the organisation of campaigns and petitions to increase support for subsidy reform, for example the campaign to end fossil fuel subsidies which gained significant attention in the lead up to the Rio+20 Conference[85].

➢ Step 3: Report on progress

Regular and transparent reporting on progress on EHS reform is essential to determine the effectiveness of the reform process as well as any unintended consequences of the reform. Reporting will also allow for an assessment of whether the compensation mechanism introduced are reaching their intended beneficiaries and achieving their objectives[86].

Such reporting should be done by ***Member States*** both within the context of reporting under the European Semester and separate national reporting. It will also help to facilitate mutual encouragement and learning along the way. The European Commission sees the phasing out of EHS as an opportunity for fiscal consolidation as noted in its Annual Growth Surveys in 2011 and 2012. The Commission's 2011 country recommendations (endorsed by the Council) include calls for 11 Member States to undertake some form of environmental tax reform (which would also contribute to EHS reform)[87]. Despite the Commission's call for Member States to report on EHS under the European Semester, only three Member States

[85] http://endfossilfuelsubsidies.org/

[86] UNEP (2011) Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication, http://www.unep.org/greeneconomy/greeneconomyreport/tabid/29846/default.aspx

[87] EC (2011), Country Specific Recommendations 2011, http://ec.europa.eu/europe2020/reaching-the-goals/monitoring-progress/recommendations-2011/index_en.htm [accessed 24/8/2012]

responded to this request in 2012[88]. This low response rate may reflect the fact that Member States are not obliged to report on EHS; the resource efficiency Roadmap is a Commission Communication and not a legal document.

Reporting could also become more important in the ***international context***; for example within the G20, the Leaders Declarations adopted in June 2012 acknowledges the relevance of accountability and transparency for rationalizing and phasing out of inefficient fossil fuel subsidies and calls on Finance Ministers to explore options for a voluntary peer review process for G20 members by their next meeting[89]. Commitments made at the Rio+20 Conference could also be used to support reform efforts and create necessary windows of opportunity, for example in relation to fisheries subsidies[90].

The ***role of the EU*** in this process would be to inter alia:

- Introduce ***concrete requirements obliging Member States to report and act on EHS***. Current reporting requirements under the European Semester are voluntary.
- The EU, in collaboration with Member States and relevant organisations, could help to develop a **common template to facilitate and encourage full subsidy reporting** to the G20, the WTO, OECD etc. This would support Member States with the preparation of progress reports for example to the G20 on the commitment to rationalize and phase out inefficient fossil fuel subsidies[91].
- Work with international partners to develop a ***voluntary peer review process*** under the G20. Take forward commitments made at the Rio+20 Conference (for example in relation to fisheries subsidies[92], the process to develop sustainable development goals (SDGs) etc.) as well as relevant voluntary commitments including those agreed at the Rio+20 Conference.

The role of ***other actors*** would be to *inter alia*:

- ***Monitor compliance by Member States*** and assess the quality of the released data on EHS and reform efforts, for example through watchdog initiatives such as online services, for example http://farmsubsidy.org/ and http://www.fishsubsidy.org/
- ***Assess Member State and EU efforts*** through formal reports or accounts by national bodies: for example regular reports on environmentally harmful subsidies in Germany by the Federal Environment Agency; and reports by independent think

[88] See Member State National Reform Programmes 2012: http://ec.europa.eu/europe2020/reaching-the-goals/monitoring-progress/national-programmes-2012/index_en.htm [accessed 8/6/2012]

[89] G20 (2012) Leaders Declaration, Summit 18-19 June 2012, Los Cabos, Mexico, http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/131069.pdf

[90] UNCSD (2012) United Nations Conference on Sustainable Development - Agenda item 10 Outcome of the Conference, The future we want, Rio de Janeiro, Brazil, 20-22 June 2012, http://www.uncsd2012.org/content/documents/774futurewewant_english.pdf [accessed on 22/6/2012]

[91] See latest reports submitted by G20 countries: http://www.g20mexico.org/images/stories/canalfinan/deliverables/energy_markets/Fossil_Fuel_Subsidy_Reduction_progress_report_compilation.pdf [accessed 26/8/2012]

[92] UNCSD (2012) United Nations Conference on Sustainable Development - Agenda item 10 Outcome of the Conference, The future we want, Rio de Janeiro, Brazil, 20-22 June 2012, http://www.uncsd2012.org/content/documents/774futurewewant_english.pdf [accessed on 22/6/2012]

tanks or research centers, such as reports reviewing progress by the G20 in phasing out inefficient fossil fuel subsidies by Earth Track[93] and the World Watch Institute[94].

8.2 A roadmap for EHS reform: A synthesis

There are a growing number of political responses and commitments to action on EHS. This is supported by the multiple benefits offered by reform - in particular for the economy and public budgets (through financial savings on sub-optimal investment decisions) as well as for the environment (sending signals about the true cost of pollution and the value of natural assets). Reform also contributes to social objectives (e.g. on human health, reducing household spending), encourages (eco-) innovation, helps to improve the efficiency and effectiveness of policies, strengthen policy coherence and good governance. The information base on existing EHS has been developed further and there is growing awareness of the issue including among the wider public. New tools have been developed for the assessment of subsidies and a number of EU Member States are taking forward interesting initiatives in this area. Subsidy reform is however still at an early stage and efforts needs to be further strengthened and accelerated to achieve progress toward the EU commitment of phasing out EHS by 2020.

A critical first step in the process is the development of transparent inventories of subsidies and their impacts and communicating the benefits of their reform. A bottom-up approach driven by Member States would be the most pragmatic way of taking this forward, initially focusing on a select number of priority subsidies. Based on these assessments, reform efforts can be prioritised according to national interests and circumstance. The process needs to be carefully designed, managed and implemented with clear targets, transparent costs and benefits, stakeholder engagement, coordination among government bodies, etc. Regular and transparent reporting on progress on EHS reform should be carried out both within the context of reporting under the European Semester and separate national reporting. These national efforts can be aided by parallel or linked initiatives at the EU level and supporting activities by other actors such as the OECD, NGOs, academics etc.

Table 8 summarises some of the key actions by relevant actors over the period to 2020. Subsidies will remain a part of the policy landscape even after 2020 given legitimate policy interests. In this case, the objective should be to ensure any remaining or new subsidies follow good governance principles, i.e. have a sound basis, are targeted, efficient, and practical, are limited in time and transparent, with sufficient monitoring reporting and evaluation provisions and associated review clauses to allow their continued evolution in changing contexts. Establishing clear and rigorous good governance practices for new or reformed subsidies will not only be important for the next generation of subsidies, but will also provide an important signal for existing subsidies, helping to set the standard and hence facilitate political buy-in for future reform efforts.

[93] Doug Koplow, (2012) Phasing out fossil fuel subsidies in the G20 – A progress update, Earth Track Inc., and Oil Change International, http://www.earthtrack.net/files/uploaded_files/FIN.OCI_Phasing_out_fossil-fuel_g20.pdf [accessed 26/8/2012]

[94] http://www.worldwatch.org/fossil-fuel-and-renewable-energy-subsidies-rise [accessed 26/8/2012]

Table 8: Roadmap for EHS reform – A synthesis of key elements

Actor	2012 – 2013 Mapping the subsidies landscape, understanding impacts and planning reform	2014 - 2019 Implementation of EHS reform: Transition to good governance	2020 and beyond Reaching objectives
Member States	- Identify the most significant EHS and develop inventories of subsidies to increase transparency, - Develop road maps for reform of subsidies of national interest, - Report on subsidies and reform efforts and plans, including in National Reform Programmes.	- Phasing out of EHS and annual reporting on progress, - Adopt good governance principles for remaining or new subsidies, - Establish cross-departmental working groups/task forces to guide the process.	- EHS phased out, - CBD commitments on incentives harmful to biodiversity met, - EU climate and energy targets met, - Good governance principles for subsidies the norm.
EU	- Engage and support Member State efforts (e.g. by open method of coordination), - Make use of European Semester (annual reports and country recommendations), - Lead by example – identify and develop an inventory of EU-level subsidies, e.g. in context of MFF 2014-2020, CAP, CP, EMFF etc., - Revise criteria for EU investment decisions, - Identify restrictions and loopholes (e.g. exemption clauses) at the EU level that may prevent EHS reform, - Support capacity building and knowledge development.	- Develop roadmaps for reform in key sectors (e.g. agriculture, fisheries) and set up inter-DG working groups to take reform forward, - Review decision-making procedures and explore possibilities for making increased use of the enhanced cooperation procedure, - Amend or revise restrictions and loopholes at the EU level that prevent action at the national level and may hinder EHS reform, - Explore options to support reform efforts, e.g. through an extension to the environmental accounts Regulation, - Develop guidance to support implementation, e.g. of cost recovery principle under Water Framework Directive, - Promote green public procurement, - Introduce concrete requirements obliging Member States to report and act on EHS, - Develop a common template to facilitate subsidy reporting to the G20, the WTO, OECD etc., - Work with international partners and organisations to take reform forward at international level where relevant.	- Meet CBD commitments, - Meet EU commitments, - Good governance principles for subsidies the norm.

Other actors (e.g. OECD, NGOs, private sector, academia, Court of Auditors, etc.)	- Increase transparency and information on EHS, - Exchange information on EHS and best practices in reform, - Disseminate information on EHS to the public.	- Keep the spotlight on the issue and maintain pressure on EU and Member States to reform EHS, - Develop partnerships or platforms bringing together all stakeholders (including industry), - Engage the public to increase support for subsidy reform, - Monitor and assess compliance on reform and assess quality of data released on EHS and reform efforts.	- Continue with monitoring and assessment of compliance, - Keep up pressure for reform, - Continue to engage with stakeholders including wider public.
Windows of opportunity	- European Semester, - Fiscal consolidation (EU and MS), - Rio+20 Conference and follow-up, - Hyderabad CBD COP11, Doha UNFCCC COP18, - EU State Aid Modernisation initiative, - Review of CAP, Cohesion Policy and EMFF for the 2014 – 2020 period, - EU review of existing legislation on reduced VAT rates, - EU proposals relating to the sustainability of biofuels.	- Other CBD and UNFCCC COPs, - G20 meetings, - G77, - National and EU budgets, - EU Regulation on National Environmental Economic Accounts, - UN System of Environmental and Economic Accounting (SEEA).	- Target date for CBD commitment (subsidy reform, pricing, accounting), - Target date for milestone in resource efficiency Roadmap, - Target date for EU 20-20-20 climate and energy objectives.

ANNEXES

Annex I: EHS cases in EU Member States

Annex II: EHS reform cases in EU Member States

See separate attachment