



# Environmental Fiscal Reform – the Key to Achieving a Green Economy

## WHAT IS A GREEN ECONOMY?

In the run-up to the UN Conference on Sustainable Development in Rio in 2012, "Green Economy" has become the new buzzword in sustainable development. However, neither the requirement to fundamentally reform the way our economies work, nor the urgency of making such changes to prevent dangerous climate change and irreversible environmental deterioration and their social implications are reflected in most of the current policy discourse. For the concept not to become a meaningless mantra or, worse, to be misused as a fig-leaf for uncontrolled markets stripped of the social and ecological objectives of sustainable development, concrete principles and objectives for a green economy must be agreed upon at the Rio+20 summit.

Our objective is clear:

- to guide humankind onto a sustainable development path,
- to avoid catastrophic environmental change followed by destruction of the bases of livelihood.

To achieve this, human economic activity must stay within defined planetary boundaries for a range of earth-system processes, and provide fair chances for those with biggest needs. Only an economy that respects planetary boundaries and leads towards poverty reduction can be called green and inclusive.

Planetary boundaries have already been overstepped in relation to CO<sub>2</sub>-concentrations in the atmosphere, radiative forcing, rate of biodiversity loss, and the amount of nitrogen removed from the atmosphere for human use. Consumption of natural resources is also rapidly reaching unsustainable levels for a population heading towards nine billion in 2050.<sup>1</sup>

## WHAT IS AN ENVIRONMENTAL FISCAL REFORM AND WHAT CAN IT CONTRIBUTE TO THE GREEN ECONOMY?

The realization of a green economy will require a number of policy measures. One fundamental objective must be to ensure that prices tell the truth and provide

### VOLUME BASED MUNICIPAL WASTE CHARGING IN SOUTH KOREA

This charge was introduced in 1995 to reduce waste production. It required households to purchase official plastic trash bags, which were priced according to volume. Failure to use official bags is subject to a fine. Households are also required to separate and recycle their waste. After the adoption of this unit-pricing system, waste dropped from 58,118 tons per day to 47,774 tons per day—a decline of 17.8% that year—and recyclables increased from 8,927 tons per day to 11,322 tons per day—an increase of 26.8%.<sup>5</sup>



### ECOLOGICAL TAX REFORM IN GERMANY

In Germany, the ecological tax reform—a tax on energy, including electricity and transport fuels—resulted in a 2–3% reduction of overall CO<sub>2</sub> emissions between 1999–2003. Most of the revenues were used to reduce employer's pension contributions. On the environmental side, the reform contributed to a reduction of transport fuel consumption by 17% between 1999 and 2008. During the same period, public transport passengers increased by 3–5% per annum. At the same time, the reduction of labour costs and booming green industries led to the creation of an estimated 250,000 new jobs.<sup>4</sup>

steady incentives for environmental and social improvements. Current framework conditions of our economies often create market distortions that encourage pollution and the depletion of natural resources or are designed in favour of those who can afford to pay to move into areas with a less polluted environment, or with access to natural resources and basic services. Externalized environmental costs, for example, often lead to situations, where market prices of goods and services with negative impact on the environment do not reflect their total cost. Until all costs are included in the price, they are paid for by somebody else — e.g. populations affected by air or water pollution, the taxpayer, or future generations—but not the polluter. Additionally, polluting and resource intensive economic activities are still subsidised by governments around the world with billions of Dollars.

Environmental Fiscal Reform (EFR) is an essential tool for the realisation of a green economy. EFR redistributes the burden of taxation, and reforms mechanisms within the fiscal system so that appropriate price signals for producers and consumers are created to reduce pollution and inefficient energy and resource use. EFR can therefore correct market failures, because it includes the costs of environmental and social damage or resource use in the price of a particular pollutant or resource.

Typical policy instruments for this end are environmental taxes, fees and charges, the removal of environmentally harmful subsidies, certificate trading schemes or green subsidy schemes.

Implementing comprehensive EFR means that a country's spending and annual budgeting, its taxation policy, and the markets within and beyond its borders, are designed and act in such a way that they protect the environment, stimulate efficient use of resources and inclusiveness. Thus, EFR uses the power of the market — one of the most influential mechanisms policy makers can use to change behaviour, particularly that of diverse and diffuse actors — to reduce environmental damage. Markets and price signals which consistently act in favour of environmental protection and greener economic development will change the way we produce and consume goods and enhance energy and resource efficiency.

### WHAT GOOD CAN EFR DO IN DIFFERENT DEVELOPMENT CONTEXTS?

EFR is not only a policy instrument for industrialized countries with strong governance capacities, but has also great potential in the context of industrialising and developing countries. In rapidly industrializing countries — for example the BRICS states — EFR has the

### FOSSIL FUELS SUBSIDY REFORM IN COSTA RICA

Costa Rica initiated the process of fossil fuel subsidy reform in the early 1990s as part of an initiative to introduce taxes on fuel. Two thirds of revenues were used to pay the costs of maintaining and extending road infrastructure. One third of revenues were paid into a national fund that makes payments to owners of forests and forest resources for environmental services—protection of aquifers, biodiversity, carbon sequestration, and scenic beauty. Since 1997, the fund has been paid to 860,000 hectares of forest—or 16.8% of the territory of Costa Rica—and 10,000 families have benefited. Those responsible for forests near indigenous populations have also received payments equivalent to an investment of US\$21 million in those areas.<sup>3</sup>



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### ENVIRONMENTAL TAXES IN VIETNAM

In Vietnam a framework environmental tax law entered into force in 2012. Taxes are levied not only on energy in terms of refined fuels and coal, but also on environmentally harmful substances such as Hydrochloro-fluorocarbons, selected pesticides and soft plastic bags. According to an ex-ante impact assessment, the environmental taxes will contribute to the state budget with up to EUR 1.5 billion in additional tax revenues expected for 2012. Environmental taxation is also expected to contribute largely to reducing greenhouse gas emissions with a reduction of between 2.3% and 7.5% in 2012. With regard to socio-economic impacts, simulation results show that poorer households will not be adversely affected by the environmental taxes.<sup>2</sup>

## EFR INSTRUMENTS—A BRIEF OVERVIEW

### ENVIRONMENTAL TAXES

Taxes, whose tax base is a physical unit (or a proxy of it) that has a proven specific negative impact on the environment. The tax base should be determined according to the respective policy objective and feasibility. For example, if emissions (e.g. CO<sub>2</sub>) cannot be taxed directly due to monitoring problems, an input tax (e.g. on the carbon content of fuels) can be a substitute.

### CHARGES AND FEES

Charges and fees are payments for specific services delivered to the payer. In the context of EFR, charges and fees can be implemented to cover the costs associated with the provision of a service e.g. clean water or the treatment, disposal or clean-up of pollution, thus realizing the polluter-pays-principle and creating incentives for pollution reduction.

### REFORMING ENVIRONMENTALLY HARMFUL SUBSIDIES

Environmentally harmful subsidies (EHS) are “all kinds of financial support and regulations that are put in place to enhance the competitiveness of certain products, processes or regions, and that, together with prevailing taxation jurisdiction, (unintentionally) discriminate against sound environmental practices”.<sup>7</sup> Reforming EHS implies the identification of the respective regulations and a careful analysis of its effect on different sectors of the economy, as well as potential distributional effects.

### CERTIFICATE TRADING SCHEMES (CAP AND TRADE)

In certificate trading systems, governments establish a maximum quantity of allowances (e.g. on absolute amount of emissions) and issue certificates (or permits) allowing certifi-

cate holders to emit or consume a defined fraction of the maximum quantity. Allowances can then be traded among participants so that a market price of allowances is established.

### GREEN SUBSIDY SCHEMES

Green subsidy schemes comprise, for example, green public procurement, environmental funds, feed-in-tariffs for renewable energies, low-interest loans, investment grants, or accelerated depreciation. Often these are required for the introduction of new technologies in order to compensate for the non-internalisation of external costs of competing conventional technologies. To avoid subsidy dependency, even green subsidies should be targeted, limited in time, and subject to regular review.

## INTERESTED IN IMPLEMENTING EFR IN YOUR COUNTRY?

GIZ and Green Budget Germany (GBG) on behalf of the German Ministry of Economic Cooperation and Development (BMZ) have designed an interactive training seminar that focuses on the different conceptual and thematic dimensions of EFR. The training is based on the OECD Development Assistance Committee (DAC) Guidelines on "EFR for Poverty Reduction". Target groups are representatives of relevant ministries, administration officials and NGO representatives of developing and emerging economies as well as staff of development programs and projects.

### OBJECTIVES OF THE EFR TRAINING SEMINAR

- Understanding of EFR basic concepts and definitions
- In-depth knowledge of EFR approaches in various sectors and countries
- Detailed knowledge of the potential benefits and limits of EFR
- Increased capacity

### METHODOLOGY

The seminar employs innovative methods and uses all available opportunities for interactive group work. Based on the casework methodology of the Harvard Business School, it takes a practical approach to EFR. This method incorporates discussions about nationally appropriate EFR approaches (based on insights put forward by the participants). Conclusions are developed through joint debate rather than on the basis of "ready-made" teaching messages. Case studies cover various aspects of EFR. Using a range of materials, participants design and "test" EFR elements in a number of different contexts.

### FURTHER INFORMATION

- [www.giz.de](http://www.giz.de)
- [www.foes.de](http://www.foes.de)

potential to make even rapid economic development compatible with environmental and sustainability goals and at the same time to strengthen the government's tax base. In much the same way, EFR can play an important role in low-income countries to address urgent environmental problems while simultaneously generating revenues urgently needed for pro-poor investments—e.g. in the health or education sector.

Environmental taxes in particular have a great appeal in the context of developing and industrialising economies, as they are usually easy to implement, difficult to evade and have low administrative costs. A tax on transport fuels, for example, can use collection mechanisms already in place for excise duties and target a small number of taxpayers, thus keeping evasion to a minimum.

Additionally, most environmental taxes are designed to be progressive. This is the case for transport taxes, for example, particularly in lower income countries where

motorisation rates are low. Where regressive impacts are a concern, flanking measures can be implemented—e.g. compensation mechanisms or support in switching to alternative technologies or behaviours—to protect the socially vulnerable from the impact of increased energy or resource prices.

### REFERENCES

1. Rockström, J. *et al.* 2009: A safe operating space for humanity. [www.nature.com](http://www.nature.com)
2. Johannes S. and A. Olearius 2011: Environmental Taxation in Viet Nam. [www.giz.de](http://www.giz.de)
3. International Institute for Sustainable Development 2012: Fossil-Fuel Subsidy Reform: Building momentum at Rio and beyond. [www.iisd.org](http://www.iisd.org)
4. Green Budget Germany: The Ecological Tax Reform in Germany. [www.green-budget.eu](http://www.green-budget.eu)
5. Hong, S. 1999. The Effects of Unit Pricing System upon Household Solid Waste Management: The Korean Experience. *Journal of Environmental Management*, 57, 1
6. Organisation for Economic Cooperation and Development 1998: Improving the Environment through Reducing Subsidies. [www.oecd.org](http://www.oecd.org)

### PARTNERS

- Green Budget Europe (GBE); [www.green-budget.de](http://www.green-budget.de); [foes@foes.de](mailto:foes@foes.de)
- Umweltbundesamt/Federal Environment Agency (UBA); [www.uba.de](http://www.uba.de); [andreas.burger@uba.de](mailto:andreas.burger@uba.de)
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ); [www.giz.de](http://www.giz.de); [rioplus@giz.de](mailto:rioplus@giz.de)
- German NGO Forum on Environment and Development; [www.forumue.de](http://www.forumue.de); [info@forumue.de](mailto:info@forumue.de)
- European Environmental Bureau (EEB); [www.eeb.org](http://www.eeb.org); [eeb@eeb.org](mailto:eeb@eeb.org)