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Taxation, Welfare and Environment

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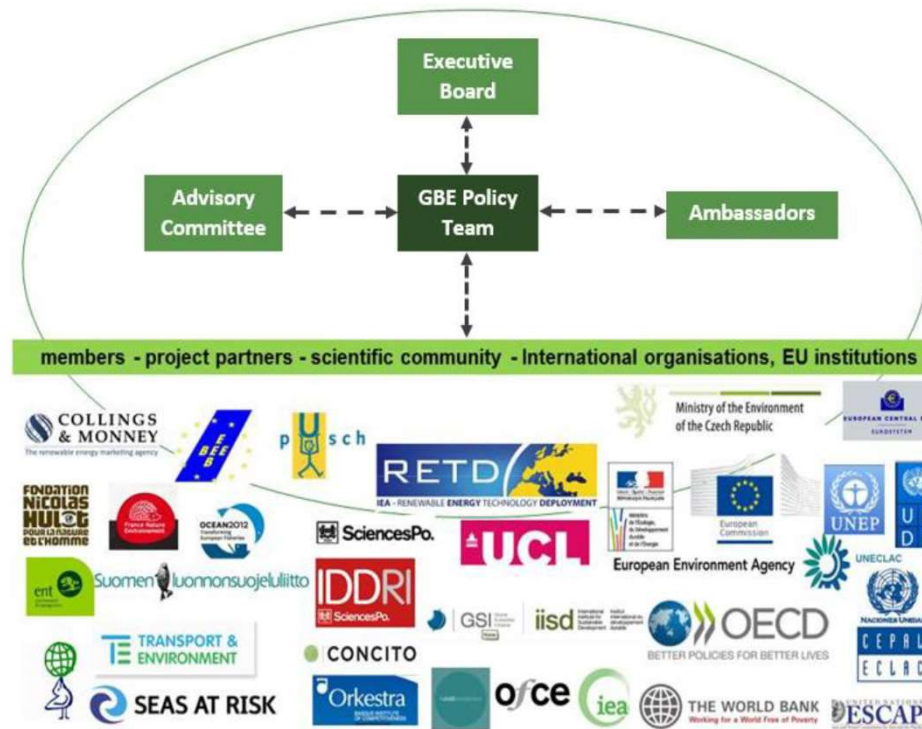
Presentation



GREEN BUDGET EUROPE



Brussels-based EU-wide experts platform promoting market-based instruments for environmental policy, focusing on EU institutions and national ministries for finance: ecotaxes, greening budgets, ecological tax reform, reform of environmentally harmful subsidies, etc.



Justification of environmental taxation



ECONOMIC RATIONALE FOR ENVIRONMENTAL TAXES

Very often transactions between market agents have consequences which are not limited to them, but affect third parties. They are known as externalities.

Examples: Industry polluting a river, atmospheric emissions, etc.

Externalities occur because they fit within the logics of the economic system:

Reducing costs allows to be more competitive and a way to reduce costs is to externalise them as much as possible.

NEGATIVE EXTERNALITIES



COST SHIFTING SUCCESS

BUT, WHAT IF EXTERNALITIES ARE GENERALISED?

ENVIRONMENTAL PROBLEMS

ECONOMIC INEFFICIENCY

CONDITIONS FOR AN EFFICIENT ALLOCATION OF RESOURCES

1. Existence of competence
2. Rationality by all actors
3. No presence of externalities

IF THERE ARE EXTERNALITIES...
THERE IS NO EFFICIENCY

PUBLIC INTERVENTION

To prevent and correct externalities it is necessary to develop policies from outside the market, to guarantee the environmental goals that it cannot achieve on its own.

➔ PUBLIC INTERVENTION

Public intervention can either aim to:

- | Limit externalities: command-and-control (limits, bans, etc.), planning, etc.
- | Internalise them: extended producer responsibility, fiscalidad environmental taxation, etc.

WHAT IS AN ENVIRONMENTAL TAX?



A tax whose tax base is a physical unit (or a proxy of it) that has a proven specific negative impact on the environment.

This definition is objective. Not related to the name or declared intentionality of the tax.

The main goals of environmental taxation are:

✓ To internalise costs

✓ To induce changes in behaviour

The relative increase in the price of pollutant products/activities increases its price and fosters the use of alternatives:

| To disincentivise (e.g. taxes on environmental harmful activities)

> Revenue.

| To incentivise good practices (e.g. deductions for environmental investments or conservation activities)

> Loss of revenue.

Environmental taxation:

- ✓ Can potentially imply all levels of Public Administration:
 - | National
 - | Regional
 - | Local

- ✓ It can be articulated through new taxes or reforming the existing ones

MAIN CHARACTERISTICS



1. EFFECTIVENESS

- | Uncertainty

- | Elasticity

2. EFFICIENCY

3. INCENTIVES AND INNOVATION

4. INCOME

- | Earmarked?

Limitations



LIMITATIONS

1. The “polluter pays principle” and risk to become “if you can pay, you can pollute”

➡ Delimitation of the scope of environmental taxation

2. Effects on competitiveness

3. Distributional effects

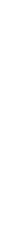
DISTRIBUTIONAL EFFECTS



Ecotaxes are indirect taxes, and therefore they are regressive in general, but:

1. There are some exceptions.
2. There are options to correct undesired social effects.
3. Distributional effects also depend on the use of the revenue, or on the effects of the possible reduction of other taxes.
4. Distributional effects depend on who is benefited by the environmental improvements derived from the tax.

The concept of ecological tax reform



ECOLOGICAL TAX REFORM

The idea of Ecological tax reform is a comprehensive approach consisting in raising revenue from environmental taxes (specially on energy) and reduce other taxes with higher economic impact (specially social contributions).

It can potentially be revenue neutral.

Double dividend:

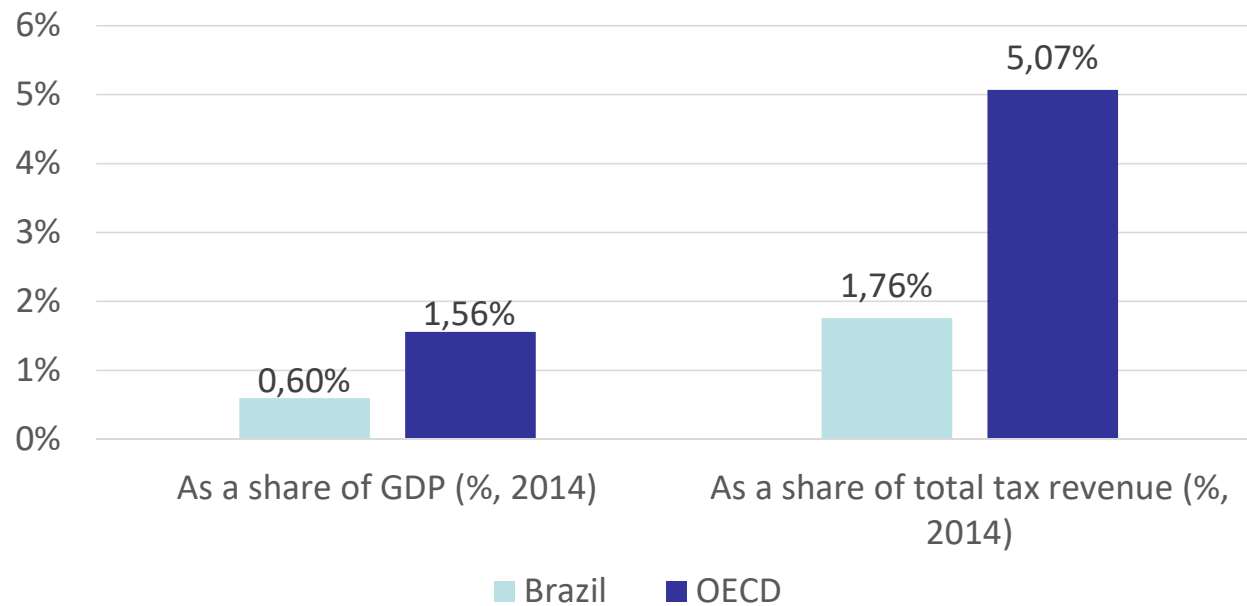
- | Environmental improvements
- | Economic improvements
- | Job creation

Brazil in context



BRAZIL IN CONTEXT

Environmentally related taxes



Country	Per capita (USD, 2014)
Brazil	89,9
OECD	571,1

Thematic approaches



THEMATIC APPROACH

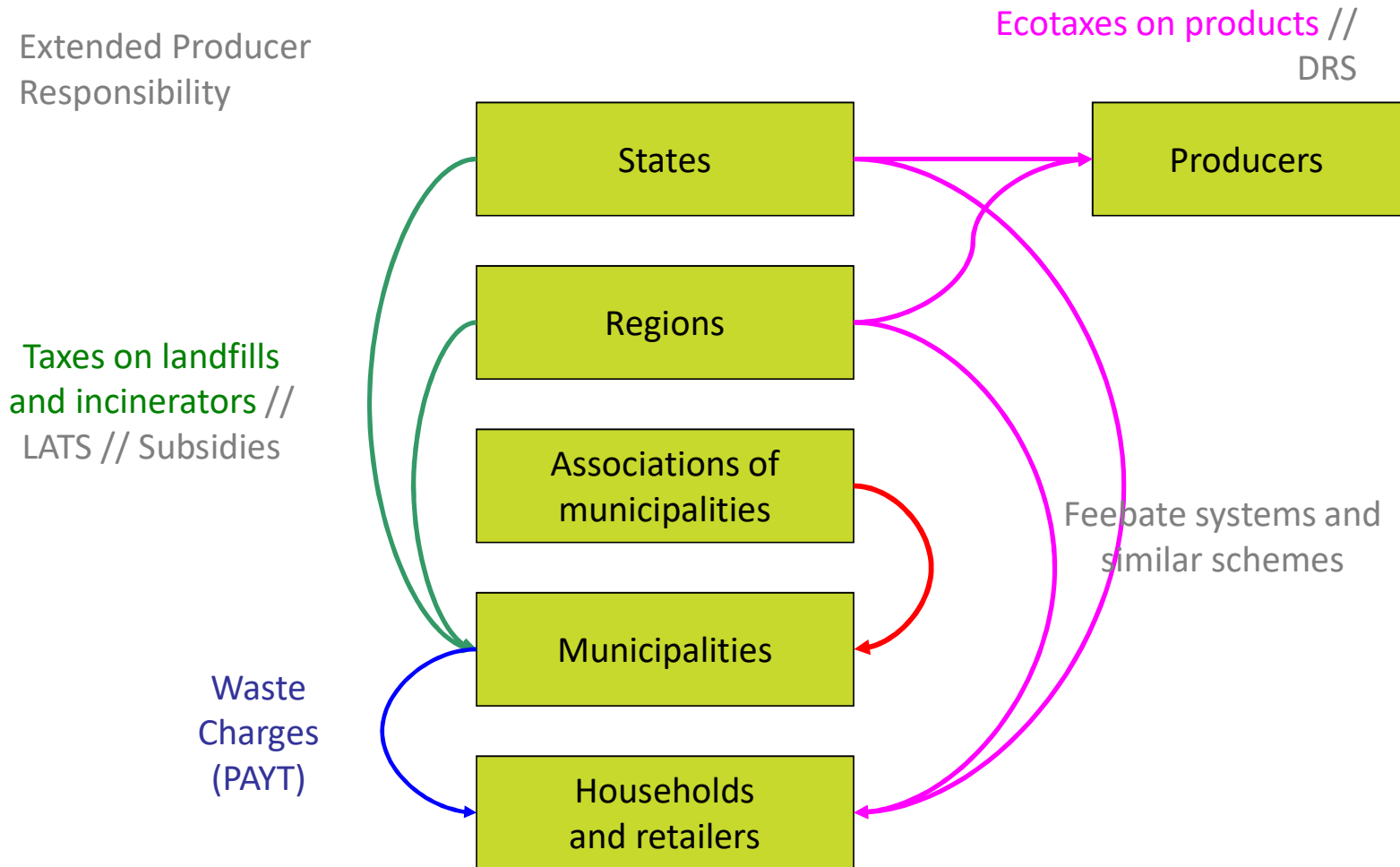
Environmental taxation has been applied to a number of areas:

- | Energy: fuel taxes, electricity taxes, tax credits for renewables, etc.
- | Transport: registration taxes, circulation taxes, road pricing, tax on flight tickets, etc.
- | Air: taxes on air pollution, CO2 tax, tax credits for green investments, etc.
- | Nature conservation: land use change, taxes on extraction of aggregates, hunting, tax credits on activities in protected areas, etc.
- | Etc.

Example:
Focus on waste



OVERVIEW OF POSSIBLE TAXATION/ECONOMIC TOOLS



Landfill and incineration taxes



LANDFILL AND INCINERATION TAXES

- | Landfill and incineration are at the bottom of the 'waste hierarchy'
- | A number of environmental problems are associated to these treatments (CH₄ emissions, leachate, pests, etc. // loss of materials, dioxin emissions, etc.)
- | Most countries with advanced waste management systems have landfill taxes in place (and in a number of cases also incineration taxes).
- | Either at national or regional level.
- | These can be earmarked or not.

CATALAN LANDFILL AND INCINERATION TAX ON MSW

- | Introduced in 2004.

- | Now regulated by Law 8/2008, although tax rates updated repeatedly.

- | Tax rates:

 - | Landfill: 47.10 €/t

 - | Incineration: 23.6 €/t (Introduced in 2009).

- | Taxable person: Users handling waste to landfills and incinerators (Local Authorities, industries).

- | Substitute of the taxpayer: Operators of landfills and incinerators.

- | Earmarked to a waste fund.

- | A minimum of 50% of the revenue must be dedicated to treatment of separately collected biowaste, and to treatments to reduce the quantity or improve the quality of refuse from treatment plants with destination to landfills and incinerators.

CATALAN LANDFILL AND INCINERATION TAX ON MSW

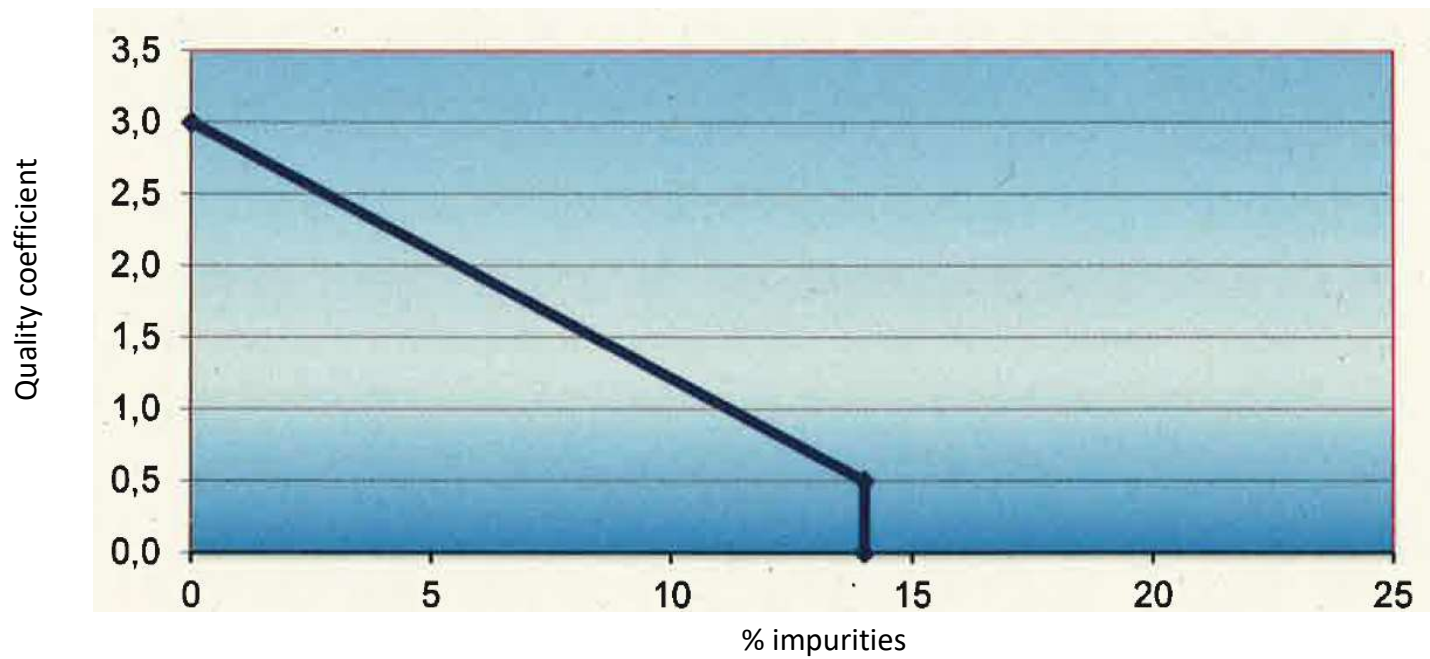
DISTRIBUTION OF REVENUE (2018)

Concept	Amount
1. Biowaste treatment	34 €/t
2. Treatment to reduce the quantity or improve the quality of refuse (landfill)	7 €/t
3. Treatment to reduce the quantity or improve the quality of refuse (incineration)	8.9 €/t
4. Methanization of biowaste	0.1 €/Nm ³
5. Support and commercialization of high quality compost	10 €/t
6. Separate collection of biowaste	10 €/t
7. Special waste in small quantities in recycling centres	500 €/t
8. Home composting Community composting	20/5 €/u 60/15 €/u

CATALAN LANDFILL AND INCINERATION TAX ON MSW

DISTRIBUTION OF REVENUE (2018)

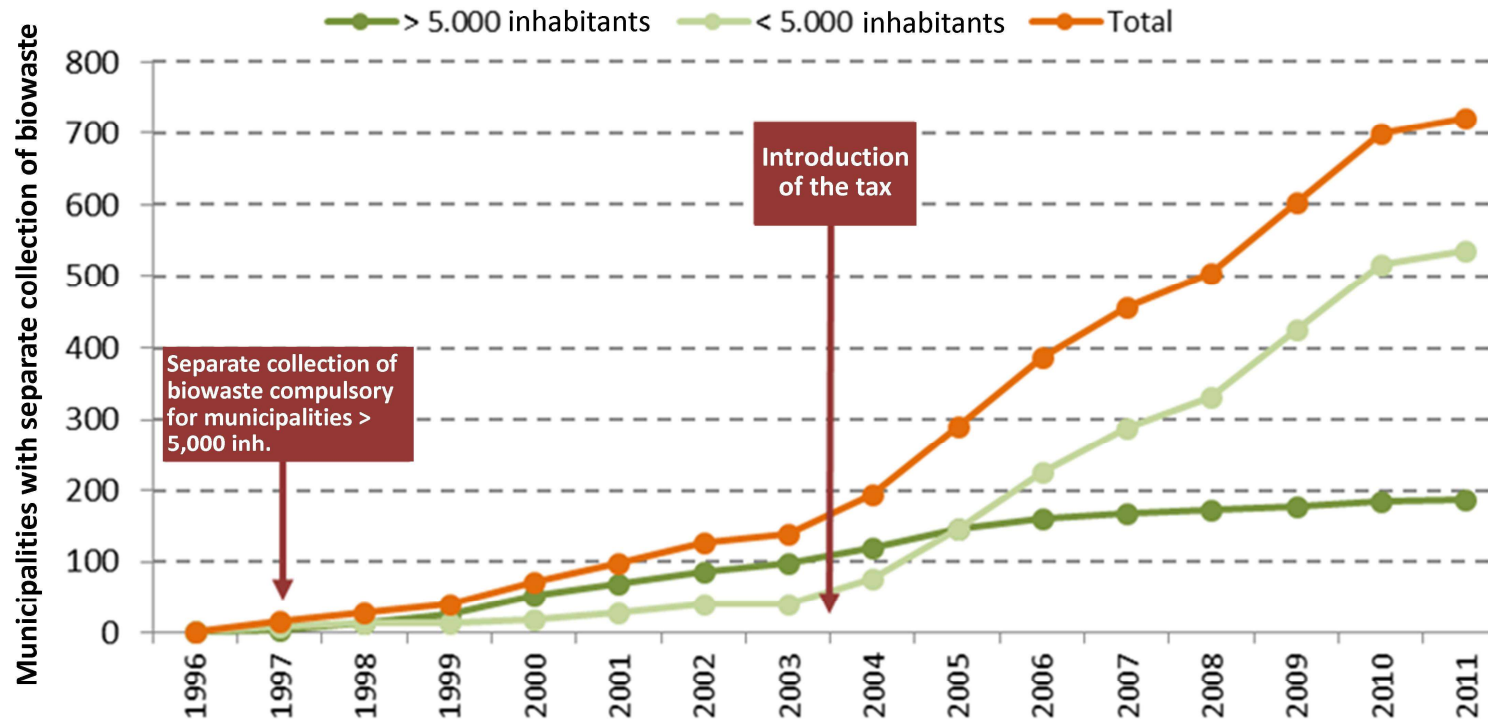
Coefficient applied to the concept of separate collection of biowaste according to level of impurities in this fraction



CATALAN LANDFILL AND INCINERATION TAX ON MSW

RESULTS

Cumulative number of municipalities with separate collection of biowaste in Catalonia, 1996-2011.



Taxes on certain
products



TAXES ON CERTAIN PRODUCTS



- | Certain products cause specific environmental problems.
- | One possible form of extended producer responsibility is levying an environmental tax on them.
- | Many examples throughout the world: on disposable tableware, disposable razors, plastic bags, single use packaging, paper, pesticides, fertilizers, batteries, light-bulbs, etc.
- | The can be charged on production or on consumption, with different consequences.
- | These taxes aim at curving demand, not at raising revenue.

EXAMPLE:

THE IRISH PLASTIC BAG TAX

- | Goal: to reduce street sweeping and littering (including marine littering) caused by plastic bags.
- | Introduction: 2002
- | Initial tax rate: 0.15 €/bag, which pays the final consumer.
- | Exemption of reusable bags, but not of biodegradable bags.
- | Revenue from the tax goes to a fund, which is dedicated to waste prevention.
- | Starting level: 328 bags/person/year. Just 21 after one year! Reduction above 90%!
- | After slight recovery to 31, in 2007 the tax rate was increased to 0.22 €/bag.

Pay-as-you-throw waste
charges



WASTE CHARGES

- | Waste charges are levied to get revenue to run the collection and treatment of municipal waste.
- | Most countries use, but not all of them.
- | When used, they typically are flat rates or depend on parameters such as: m², water consumption, number of residents, value of the real state, etc.
- | None of them are able to foster prevention/recycling.
- | The only way to create an incentive towards reduction and recycling is linking the tax rate with the actual waste generation:

TAX BASE: { Kg
litres } generated per household

PAY-AS-YOU-THROW SCHEMES

PAYT BASED ON DtD

I. VOLUME BASED

- Pay-per-bag
- Pay-per-can

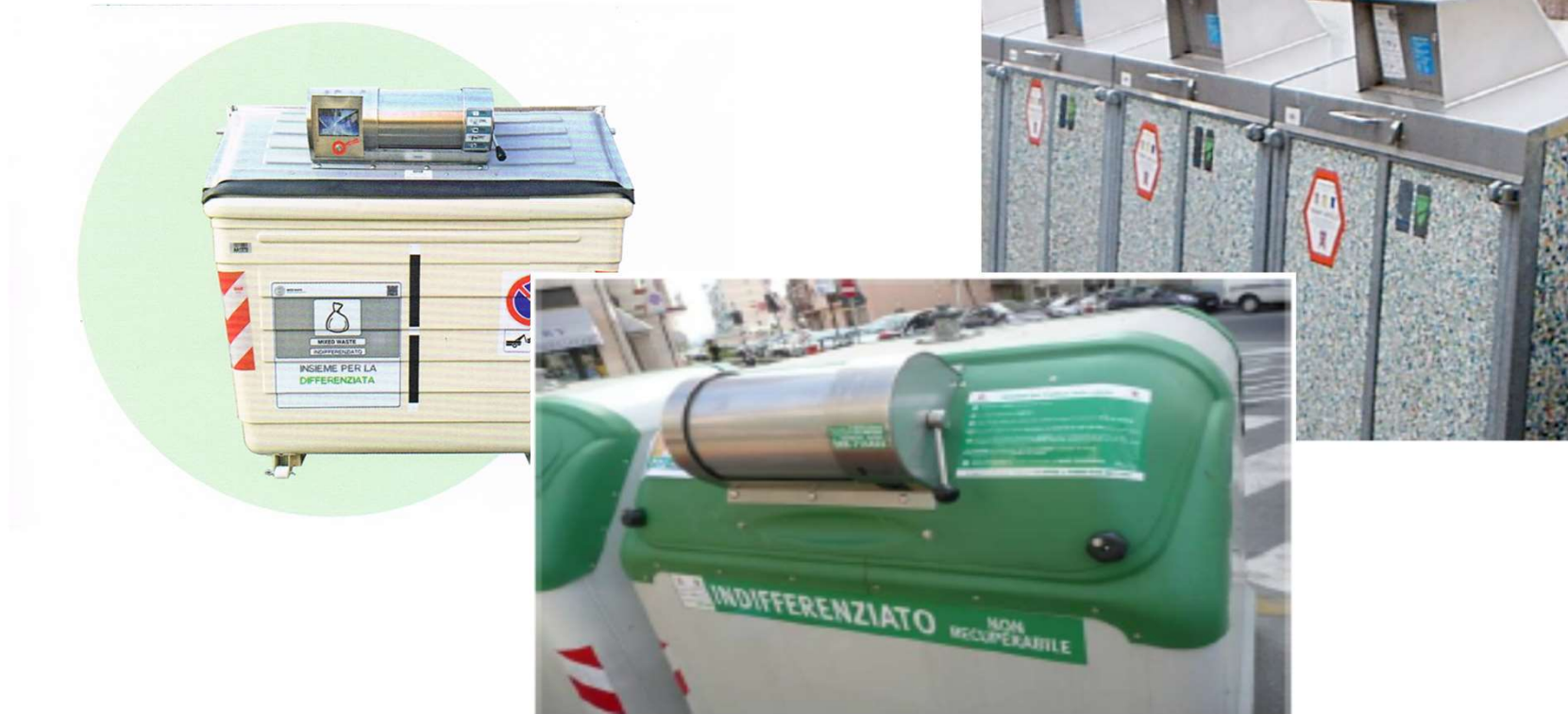


II. WEIGHT BASED

- Pay-per-can

Volume based system have been more widely implemented. Leads to some compaction, and to collect bags and cans that tend to be full. Weight based are more modern and technologically complex.

PAYT BASED ON CONTAINERS



Road containers (used with personal cards)

PROS

- HIGHER RECYCLING LEVELS.
- SOURCE REDUCTION.
- BETTER DISTRIBUTION OF COSTS.

CONS

- Slightly more costly and complex.
- Risk *waste tourism* or some forms of illegal dumping.

PAYT schemes are very unevenly distributed throughout the World. In countries where PAYT is basically not in place, it could be easily implemented in the short term for commercial waste and in municipalities with low population density (along with door to door collection)

Conclusions



CONCLUSIONS

- | The international framework points to a transition towards a green economy, correcting some fundamental flaws of our economic model.
- | Public policies have to play a crucial role.
- | Environmental taxation is justified from economic and environmental reasons, and ecotaxes can be effective and efficient in changing the behaviours.
- | Some tax reforms can be neutral from the point of view of revenue, other would increase it.
- | Environmental taxes should be part of a policy mix.
- | The idea of ecological tax reform is a comprehensive approach that can deliver positive results in terms of environment, economics and job creation.

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Thanks for your
attention!