

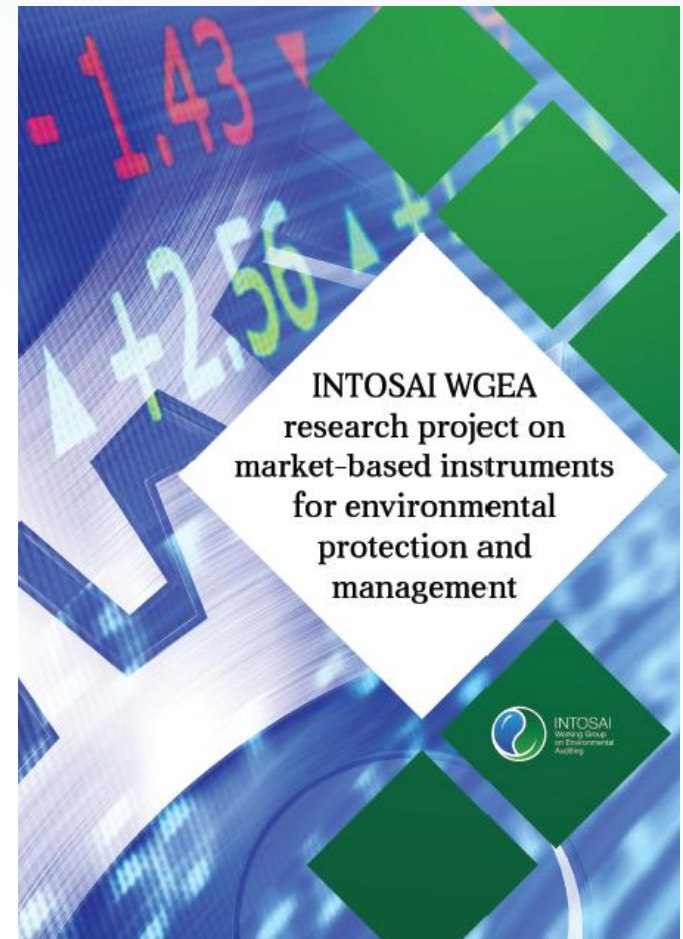
INTOSAI WGEA research project: Market based instruments in environmental management and protection

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Content of the presentation

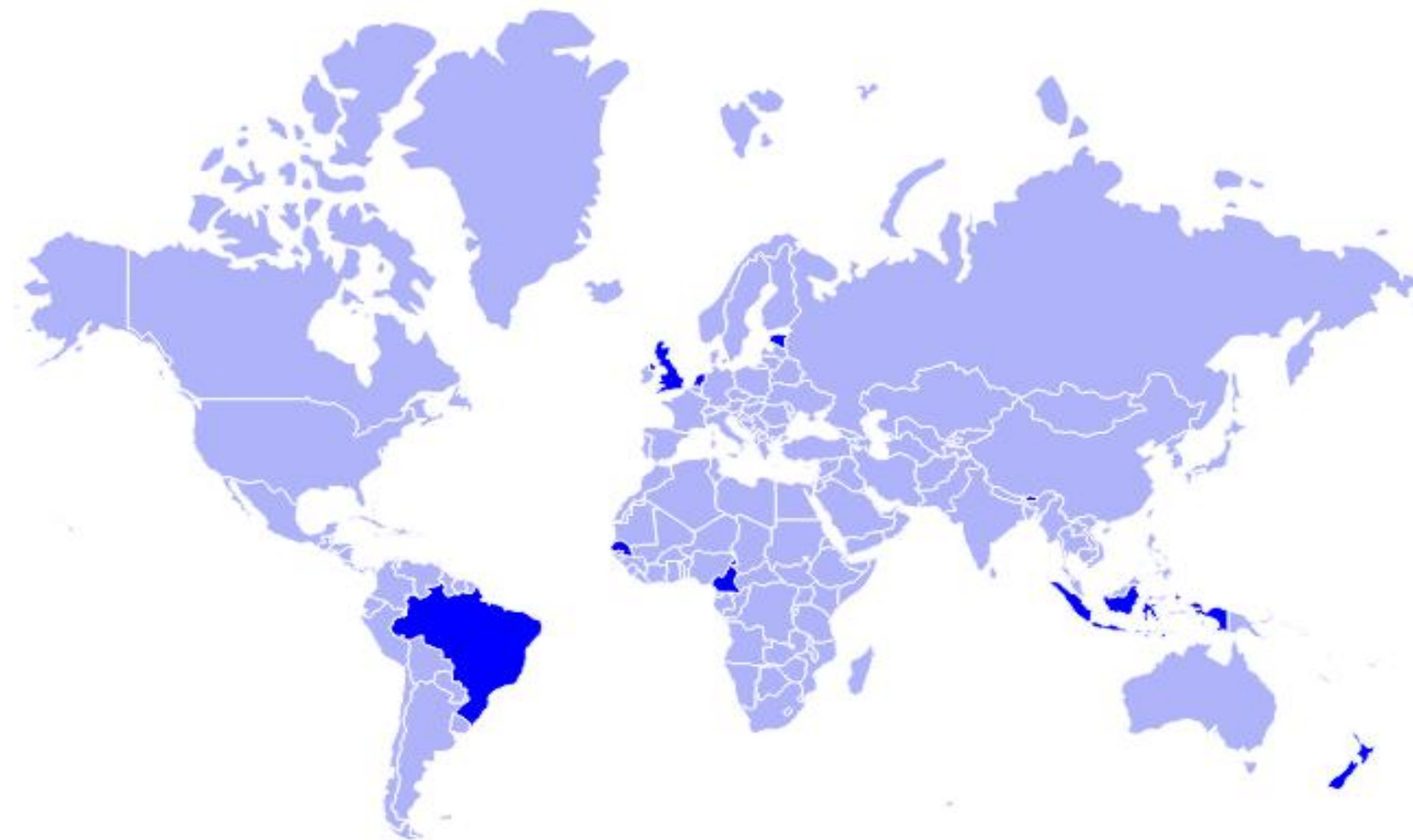
- Why this research project?
- Structure of the report
- Main risks/ obstacles and opportunities while auditing market based environmental policy instruments



Why this research project?

- Research project conducted under INTOSAI WGEA Working Plan 2014–2016
- Goal 1: Up-date existing and develop new guidance materials available to SAIs, conduct research studies on emerging topics in environmental auditing
- Objective: to give an overview of market based environmental policy instruments (MBI); collect the experience of SAIs on auditing MBIs
- Final approval by INTOSAI XXII Congress in December 2016

Project sub-committee members



Scope?

Taxes and charges: Air/energy – CO₂, SO₂, NO_x, other air pollutants, fuels, sulphur in fuels, other GHGs, Transport – car registration, annual circulation, air transport (noise charge, landing fee), vehicle scrapping, toll roads, company cars, congestion, **Water – pollutants**, effluent, abstraction, user charges, Waste – landfill, waste removal, incineration, hazardous waste, electronic/electric waste, nuclear waste management, user charges, **Product charges** – tyres, beverage/disposable containers, packaging, plastic bags, pesticides, products with CFCs, batteries, light bulbs, PVCs/phthalates, lubrication oil, fertilizers (N, P), paper/board, disposable tableware, junk mail, refrigerators, growth promoters (agriculture), **Resources** – mining, raw materials, recreational fishing, aggregates (sand, gravel, rock). **Deposit-refund schemes** – require paying a deposit on the purchase of potentially polluting products (cans, bottles, car hulks, batteries) which is refunded when the products or their residues are returned for recycling or disposal, Administrative charges – charges that raise revenue for covering the administrative costs of environmental programs. **Tradable permits:** Emissions trading (EUETS, national systems; CO₂, NO_x, SO₂, lead, water pollutants), Certificate trading for green electricity, Packaging recovery notes' trading, Trading allowances for land-filling waste, Individual transferable quotas. **Subsidies:** Direct payments to support renewable energy production, low-emission vehicles, pollution treatment infrastructure, nature conservation etc., Agriculture subsidies, **Green purchasing/procurement**, Grants and vouchers, **Low/zero-interest loans** (“soft loans”), Loans on special terms (Property-Assessed Clean Energy financing in U.S. – repayment on a basis of special assessment on the owner’s property), Feed-in tariffs – government support of developing renewable energy projects by offering long-term purchase agreements for the sale of renewable electricity, Tax/charge differentiation, **Tax/charge deduction**, Tax/charge rebate – refund on taxes when the tax liability is less than taxes paid (e.g. certain energy upgrades), Payment for Environmental Services/ Environmental Conservation Scheme – incentives offered to landowners/farmers in exchange for managing their land to provide some sort of ecological service. Reduction/waiver on permit fees (e.g. green buildings). **Liability and compensation schemes:** Liability payments, Non-compliance fees (not fines), Performance bonds for potential hazards, Environmental guarantee fund, Zero net impact requirements (offsets). **Eco-labelling/product differentiation**, Standards (ISO, efficiency, energy codes, equipment, interconnection), Disclosure requirements (e.g. waste generation, electricity production components), **Blacklist of polluters**, Environmental City Zones/Eco-Neighbourhood, Green Accounting System etc

Structure of the report

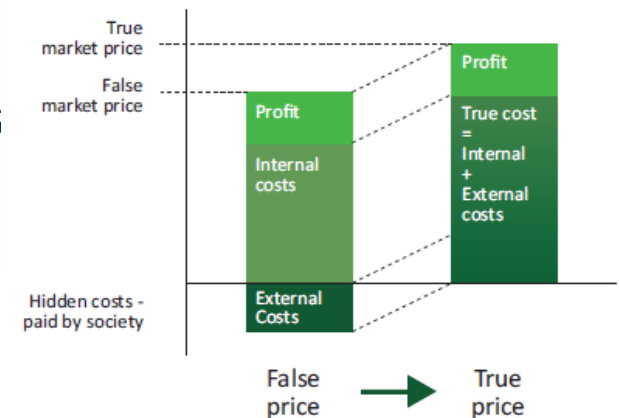
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Chapter 1. Introduction

- WHY governments intervene in markets?
 - To achieve wider policy objectives
 - To overcome market failure (externalities)
- HOW governments participate in markets?

Figure 1. True market price formulation (externalities)



Social costs = private costs (internal costs: labour, raw materials, machinery, energy, etc.) + external (environmental) costs

Chapter 2. Environmental policy design and the instruments

Policy evaluation

- Monitoring
- Evaluating based on monitoring results

Agenda setting

- Identifying issues
- Setting policy objectives

Policy implementation

- Developing implementation strategy
- Allocating resources
- Enforcement
- Distribution of revenues

Policy design

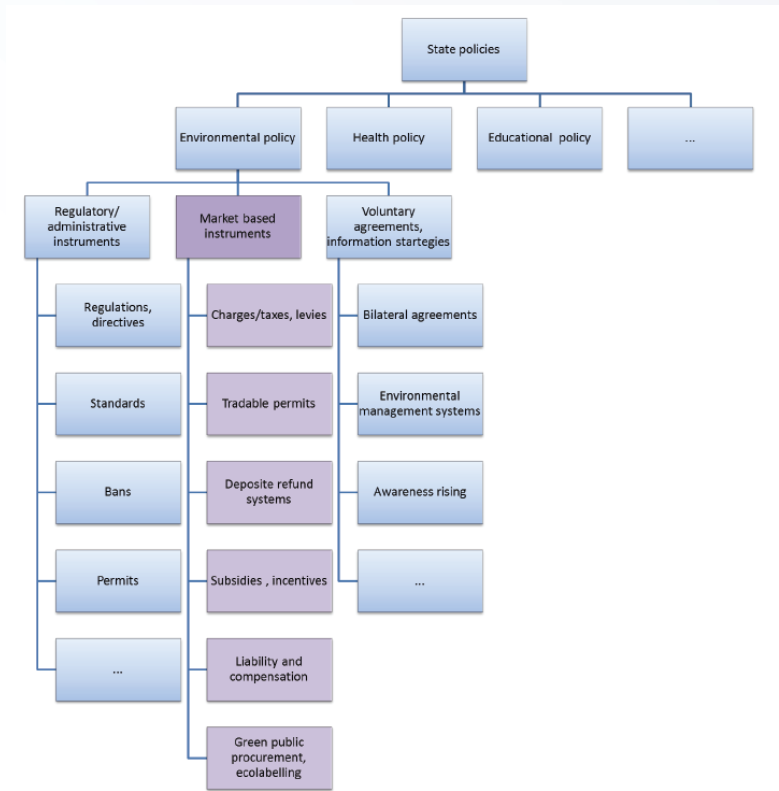
- Cost-benefit analysis
- Modelling
- Selling performance indicators
- Choosing policy instruments
- Coordinating with other policies



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Environmental policy instruments

- Regulatory/ administrative (“command-and-control”)
- Market-based instruments (incentive based flexible instruments)
- Voluntary agreements and information strategies



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- What are market-based environmental policy instruments? Main principles.
- How do MBIs compare with regulatory instruments?
- Main concerns about using MBIs

Chapter 3. Main types of market based instruments

- Environmental taxes and charges
- Tradable permits
- Deposit refund systems
- Environmental subsidies
- Other instruments
- Instrument mixes
- Environmental tax/fiscal reform
- Market-based instruments used in different environmental areas

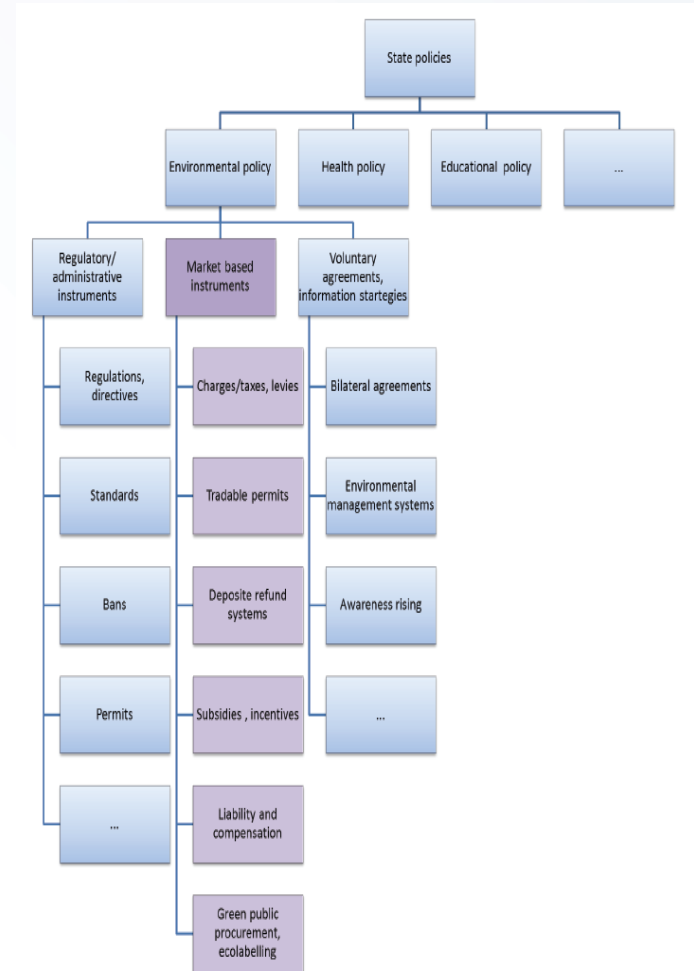
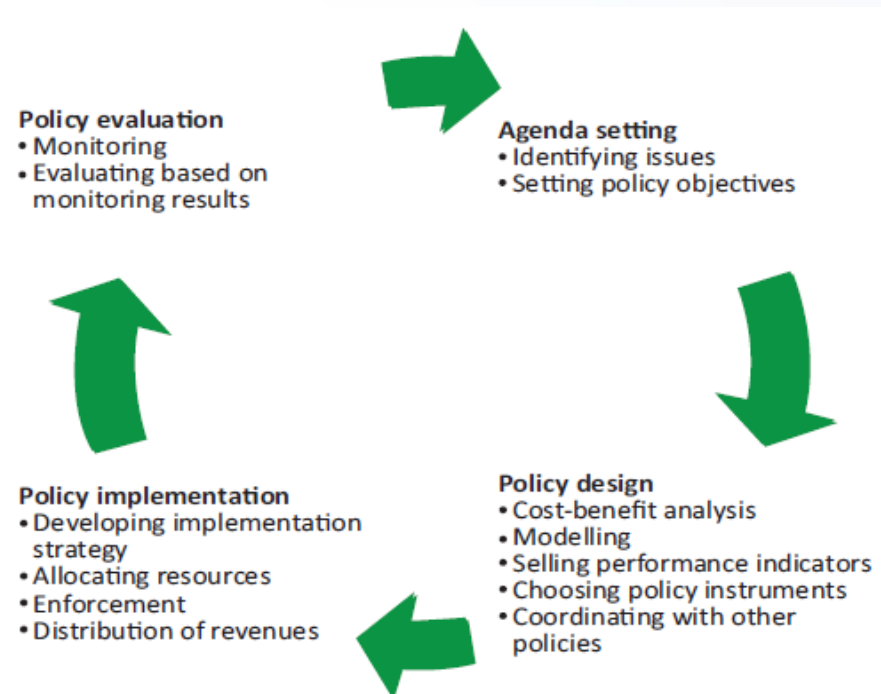


Table 2. Examples of market-based instruments by environmental area/sector

Area/sector	MBIs	Explanation	Country examples
Water management	Water resources taxes/charges	Water abstraction levies — a natural resource tax rather than a charge to recoup infrastructure costs — on tap water are generally used in combination with licensing and permit systems. In general, water abstraction taxes are designed either as taxes on the amount of water abstracted or on the quantity for which an abstraction permit has been given. ⁶⁹	Denmark, France, Germany, Netherlands, Estonia, India, Ethiopia, Egypt
	Water effluent charges	Water effluent charges are a common instrument used for regulating discharges of effluents into natural waters. Charges usually include chemical and biological oxygen demand, heavy metals, suspended solids, nutrients (nitrogen and phosphorus) and the total volume.	Belgium, France, the Netherlands, Estonia, Colombia, the Philippines, Nigeria, Mexico, Poland, Germany, Japan, Canada, Ireland
	Water quality trading schemes	Water quality trading refers to the application of emissions trading to water pollution control.	Australia, Canada, New Zealand, United States

Chapter 4. Auditing market based instruments

- What should be considered while auditing MBIs?
 - What should be done in different policy phases by policy makers – hints for auditors
 - Possible (audit) questions to ask in different policy phases



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Main risks/obstacles and opportunities

- Complex and complicated systems
- Evidence based policy design
- Multiplicity of policies and policy objectives
- Uncertainties
- Complex administration
- Use of revenues
- Evaluation of impacts
- Political volatility

- Competence
- Mandate issues
- Quality/lack of data

Appendixes

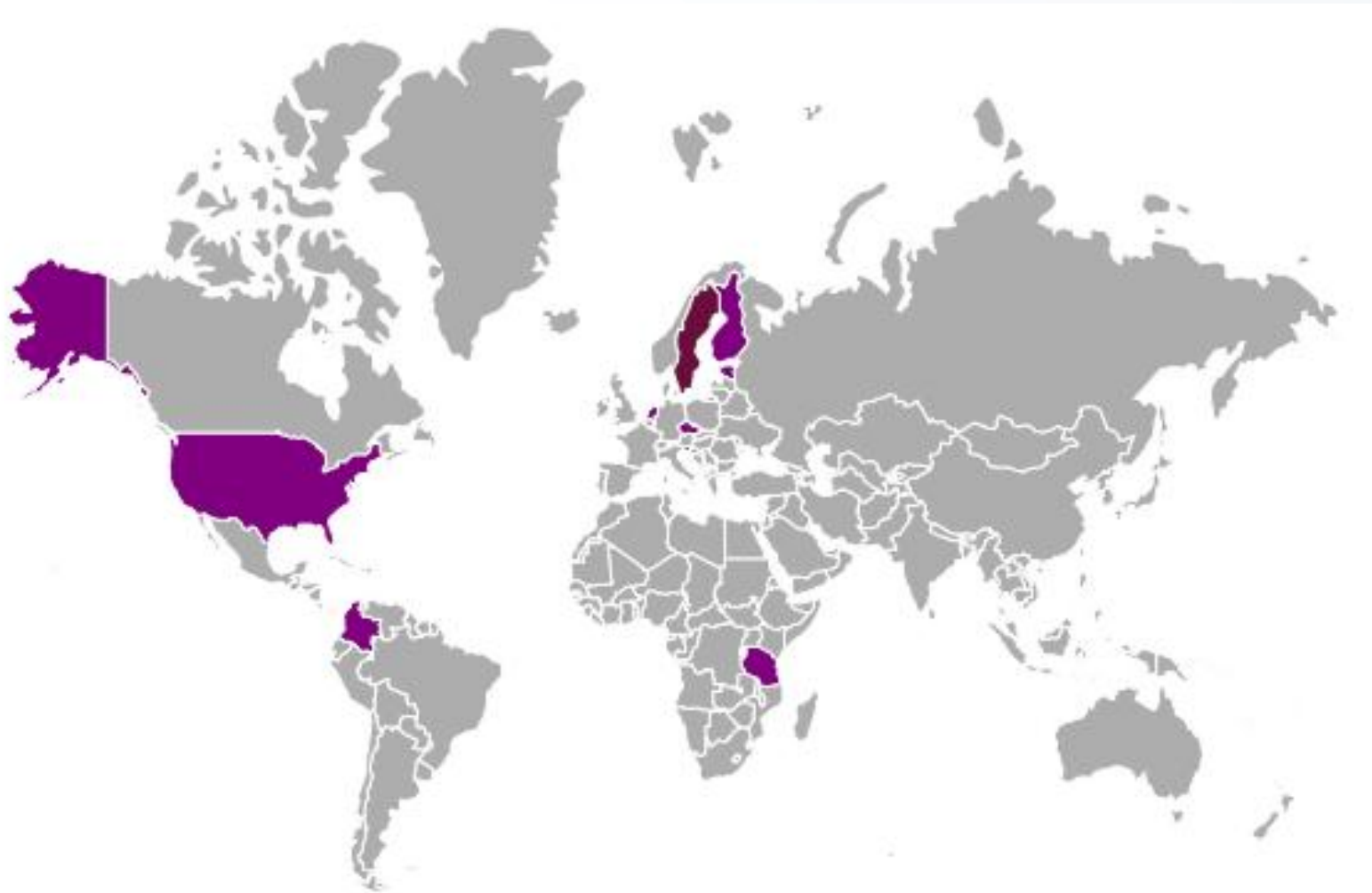
Appendix 1. Recommendations for policy makers in designing environmental taxes and emission trading schemes

Appendix 2. 11 audit cases

Title of the audit, name of the SAI

1. Objective of the audit
2. Audited market-base environmental policy instrument
3. Audited stages of implementing the instrument
4. Methodology used to audit the instrument
5. Main findings and recommendations
6. Additional information

Audit cases



Cases

SAI Columbia

Audit: Analysis and evaluation of the economic, financial and tax instruments for environmental management in Columbia 2008-2012 (2013)

Objective: evaluate the design and efficiency of effluent charges and their impact in improving water quality

Instrument: effluent charge

SAI Finland

Audit: Vehicle taxation (2009)

Objective: to assess whether the vehicle taxation of used cars was carried out cost-effectively and according to good governance

Instrument: vehicle tax

The research project report will be available in INTOSAI WGEA
website www.environmental-auditing.org

Thank you!

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