

Socioeconomic  
analysis  
on key best  
practices to  
prevent/reduce  
single use of  
plastic bags and  
bottles



## Regional meeting on Marine Litter Best Practices

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# Why do a socio-economic analysis?

**Environmental measures generally come with trade-offs between or among ecological objectives and economic activities and public costs/benefits as well as with varying distributional effects**

**→ *We don't want to « just come up with a number »...***

- **Justify a measure**
- **Convince stakeholders**
- **Compare different measures to choose the most relevant one or prioritize**
- **Anticipate and identify possible bottlenecks in implementation**
- **Avoid costs and ensure their « just » distribution**
- **Identify when and where flanking measures would be most beneficial**
- **Correct an existing measure**

# Socio-economic analysis on marine litter - scope

## Socioeconomic analysis on marine litter key best practices to prevent/reduce single use of **plastic bags** and **bottles**

2 levels of analysis:

1. **at the level of the Mediterranean Sea** via a **regional** socio-economic analysis of selected plastic prevention/reduction measures;
2. **at the level of case studies** of key practices already implemented, covering the diversity of natural, socio-economic and institutional/policy contexts in the Mediterranean

# SEA on marine litter - potential measures

- **Tax**
- **Ban**
- **Monetary bonus for bringing back reusable items**
- **Voluntary agreement approach**
- **Public communication campaigns**
- **(Replacement by biodegradable plastic bags)**

# Socio-economic analysis - methods

## Methods used in priority:

- **Cost effectiveness:** cost to achieve a specific reduction/prevention objective
- **Cost-benefit:** compare costs and benefits of specific measures (including if feasible indirect costs/benefits)

**Costs:** of measures/actions that help reduce and prevent single use plastic bags and bottles; including compliance, administration & enforcement costs

**Benefits:** for marine ecosystems & economic operators impacted by plastics

Priority to quantitative and monetary figures on costs and benefits; with qualitative information & **multicriteria analysis** as a complement

**Distributional impacts:** how are costs and benefits distributed among stakeholders?

# Example: Introduction of a plastic bag tax (1/3)

In line with « Packaging Waste Directive ».



## Theoretical effectiveness:

- Ireland case study (reduction of 95% with a 22 cents tax)
- In the Mediterranean, expected 8% decrease in overall marine litter

## Prerequisites, conditions for practical effectiveness:

- Set the tax at the right level
- A clear and large definition of the bags subject to the tax
- Make the tax visible to consumers
- Earmark tax revenues for environmental purposes
- Levy the tax at the right level according to the country context
- Focus the public consultation process

## Compliance cost for the regulated:

Tax amount 0,01€ (Palestine) to 0,18€ (France), result of economic transfer of data from Irish case via national GDP

→ Total annual tax revenue €670 million for Mediterranean countries.

Item	Costs	Benefits	Impact
<b>Direct costs</b>	<p>€670 million/year for consumers, which covers the administration fees as follows</p> <p>€107 million one-off costs for the regulator (first year)</p> <p>€20 million yearly costs for the regulator</p>	<p>€583 million raised during first year for environmental purposes</p> <p>€650million/year raised for environmental purposes (except first year)</p> <p><b>Cost-effectiveness: 95% reduction in use of plastic bags costing €670 million to consumers</b></p>	-
<b>Enforcement</b>	Unknown enforcement costs	Unknown revenues from fines for non-compliance	0
<b>Employment</b>	Unknown number of jobs lost in the plastic bag manufacturing industry	Unknown number of jobs created in the reusable bag and bin liner manufacturing sector and in the administrative sector for the management of the tax	0
<b>Direct economic impact</b>	<p>Plastic bag manufacturers: Loss of revenue from single-use plastic bags</p> <p>Retailers or manufacturers: administration costs</p>	<p>Retail sector: Savings linked to largely reduced purchase of plastic bags and linked storage costs</p> <p>Plastic bag manufacturers: Increased sales of bin liners and reusable plastic bags</p>	+

<b>Indirect economic impact</b>	<p>Savings linked to less beach cleaning and litter picking</p> <p>Savings for waste management due to less waste to be managed</p> <p>Increase in revenues in the recreation and tourism sector due to cleaner beaches</p> <p>Savings in the shipping sector due to less cleaning and repair operations and linked down time</p> <p>Additional earnings in the fishing sector due to improved health and biodiversity of marine species</p> <p>Savings in the fishing and aquaculture sector and coastal power stations due to less cleaning and repair operations.</p>	<b>+</b>
<b>Ecosystem services</b>	<p>Provisioning services: Reduced death, illness, intoxication and injury of fish, shellfish and turtles caused by marine plastic bag waste</p> <p>Cultural services: aesthetic and recreational services and non-use value increased</p>	<b>+</b>
<b>Other</b>	<p>Saving of resources needed in the manufacturing process of plastic bags</p>	<b>+</b>
<b>TOTAL</b>		<b>+</b>



# Guidelines for socio-economic assessments of measures



## Description of the measure

Implementation status and policy objective. DPSIR framework and link with GES and descriptors. Reference condition and target situation under GES. Cases of practical applications and assessments.

## Assessment of direct costs

- Personnel and administrative costs: (i) development, design and launch; research, information and meeting costs; enactment and lobbying costs; (ii) implementation and coordination; (iii) maintenance, monitoring and surveillance costs, prosecution costs
- Investments and goods: (i) development and launch of measure; (ii) investment in equipment and infrastructure; (iii) maintenance, monitoring and surveillance; (iv) compensation payments, land/real estate purchase, plantings, etc.
- Compliance costs for the regulated (damage costs)
  - Identification of impacted sectors and stakeholders
  - Obligations: (i) changes in operations/production processes or behavior; (ii) changes in quantity or quality of inputs; (iii) additional processes; (iv) limitations of quantities produced
  - Payment of additional taxes, duties or other charges or application for permits
- Identification of funding sources and alternatives; potential for revenue capture

## Effectiveness assessment

- Scientific evidence (for example studies conducted elsewhere);
- Estimate of the effectiveness for example reduction of NOx in kg indicating units of measurement
- Practical effectiveness:
  - Issues impacting effectiveness (need for behavior change, involvement of more than one institution) and how to mitigate these issues
  - Prerequisites and conditions for success

effectiveness analysis

## Economic and social impacts

- Economic sectors and stakeholders impacted by the measure (add indirect costs/negative impacts not captured under direct costs assessment)
- Financial revenues generated by the measure (how and when?)
- Employment creation (which sectors and when?)

If monetization is challenging, use multicriteria

- Identify criteria to assess the extent to which objectives will be reached (scoring system)
- Analyze the measure against the fixed criteria
- If relevant, apply weighting system and/or aggregate scores

## Impacts resulting from the improvement of the environment

- Assessment of the improvement of the environment
  - Identify existing valuation studies and apply them to the national context via benefit transfer/unit value transfer
  - If no valuation studies available: illustrate non-use values, benefits from ecosystem services and avoided costs
  - If relevant discount to present value

Cost-benefit analysis

Always interpret results

provide recommendations.

# Potential conclusions

- **With information within reach, can we demonstrate that benefits exceed costs for regional measures / case studies?**
- **How do measures rank in:**
  - **cost-effectiveness?**
  - **balance of costs and benefits?**

**Analysis to be nuanced to account for non-monetary costs/benefits**
- **Are additional acceptability/feasibility criteria to be taken into account due to distributional impacts?**

# Conclusion: next steps

## Identify

- **Diversified regional measures**
- **Representative case studies**
- **Relevant costs and benefits**
- **Value transfert & conditions**

***→ Data hungry process. A need to focus efforts!***



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Merci pour votre attention



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