SWIM and Horizon 2020 Support Mechanism

Working for a Sustainable Mediterranean, Caring for our Future

Economic and voluntary and instruments

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Good governance, focusing on regulatory aspects and the design, monitoring and enforcement of policies

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Objectives

1. To develop an understanding of principles and key terms of economic and voluntary instruments.
2. To explore the benefits and constraints of these instruments using illustrative case studies.
3. To assess opportunities for using these instruments.

Outline

1. Economic policy instruments

- What are economic policy instruments?
- What different types of instruments exist?
- Do they work, and what are their benefits and limitations?
- Case studies

2. Voluntary policy instruments

- What are voluntary policy instruments?
- What different types of instruments exist?
- Do they work, and what are their benefits and limitations?
- Case studies

3. Q & A / sharing of experiences

Economic policy instruments

Economic and voluntary instruments fit together with other policy mechanisms

Less flexibility
Stronger government role

More flexibility
Stronger stakeholder roles

Standards / 'command and control'	Economic instruments	Voluntary instruments
Water pollution standards	Charges on pollution emissions	Agreements between government and polluters
Water use quotas	Water prices	Information-based approaches
	Water trading	

What are economic instruments?

Economic instruments are …

- Policy tools that use *incentives*
- They operate on a *decentralised* scale through their impact on market signals (e.g. prices)
- Also called Market-Based Instruments
- They are contrasted to 'command and control' approaches – though the two often are *used together*

Source: UNEP, https://unep.ch/etu/publications/UNEP_Econ_Inst.PDF

Types of economic instruments:

- Emission charges (e.g. pollution fees)
- User charges (e.g. water prices)
- Product charges
- Trading schemes
- Non-compliance fees
- Environmental taxes

And also:

- Spending instruments (subsidies)
- Reform of environmentally harmful subsidies

Source: OECD, Database on Policy Instruments for the Environment, https://pinedatabase.oecd.org/

Advantages and disadvantages of economic instruments?

Key advantages:

- *Flexible and cost-effective*: actors can choose how to respond – e.g. companies can choose different approaches
- Price signals provide a long-term *incentive* for change, efficiency and innovation
- Some economic instruments generate *revenue* that can be used for environmental goals or the general budget

Source: IISD, Mikael Skou Andersen, http://enb.iisd.org/consume/skou.html

Disadvantages:

- Economic instruments depend on payments, which can (i) be unpopular and (ii) raise affordability issues
- Many actors – including governments and enterprises – tend to prefer regulations as…
- Regulations can provide: greater *certainty* (and arguments for exemptions)
- Economic instruments also need good *monitoring* and *enforcement*

Source: IISD, Mikael Skou Andersen, http://enb.iisd.org/consume/skou.html

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Taking a detailed look at three types of instruments

1. Water pricing

Setting a price on the volume of water consumed to:

- Recover the costs of infrastructure for water supply and waste water treatment
- Potentially, recover resource and environmental costs
- Encourage efficient water use

2. Water pollution charges

Polluters pay a fee per unit of pollution to the competent body.

- Provides an incentive to reduce pollution levels
- Raises revenue that can be used for investments

3. Water exchanges

Temporary or permanent transfer of the right to use water in exchange for compensation.

- Flexible
- Can promote more efficient water use across sectors

Case study: water pricing – EU policy applied in Italy

EU policy context

- EU Water Framework Directive states that:
  - "Water is *not a commercial product* like any other but, rather, a heritage which must be protected, defended and treated as such"

- The Directive also calls on Member States to:
  - "…take account of the principle of *the recovery of the costs of water services*, including *environmental and resource costs*… in accordance with the *Polluter Pays Principle*"
  - "…water-pricing policies [shall] provide adequate *incentives* for users to use water resources efficiently…"

Case study: water pricing

Overview of challenges in Italy

- Risks and water scarcity and drought, in particular in summer
- Need for investment in urban water services:
  - Urban water supply in many cities has high rates of leakages
  - Urban waste water treatment has improved but many plants do not meet EU requirements
- Agriculture is a major water user in many regions, competing with other users and ecosystem needs

Case study: water pricing – EU policy applied in Italy

Example 1: residential water tariffs in Italy (Emilia Romagna)

- Italy introduced a national water tariff system in 1994 (before EU Directive)
- Emilia-Romagna Region added a performance factor for urban water:
  - Delivery: fewer unplanned service disruptions
  - Environment/efficiency: lower water losses/per capita water consumption
- Water utilities with better performance could increase tariffs
- Institutions: the Region has an environmental agency to collect water data plus an "Observatory" for public services that tracks the water companies
- Results: the Region is more efficient in terms of water consumption

Implementation of EU requirements (2014 on)

- Italy updated its national methodology for water tariffs to include, among other elements, environmental and resource costs

Case study: water pricing – EU policy applied in Italy (continued)

Example 2: agricultural water use

- In many regions, farmers pay for irrigation water on a per hectare basis (no incentive for efficiency)
- Prices cover operation and maintenance but not other costs (including environment costs)

Implementation of EU requirements (2014 on)

- EU Rural Development funding requires Member States to implement tariffs in line with the Water Framework Directive
- EU Rural Development funding for irrigation requires the use of the most efficient technologies (e.g. drip irrigation)
- Italy has updated its national methodology for water tariffs to include, among other elements, environmental and resource costs
- Regions are supporting the introduction of water meters to measure actual consumption by farms

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Case study 2: water pollution fees: Poland

Challenge

- Reduce water pollution from industry and cites (urban waste water treatment) to:
  - Meet EU requirements
  - Protect the Baltic Sea
- So: need for financing for urban waste water treatment investments

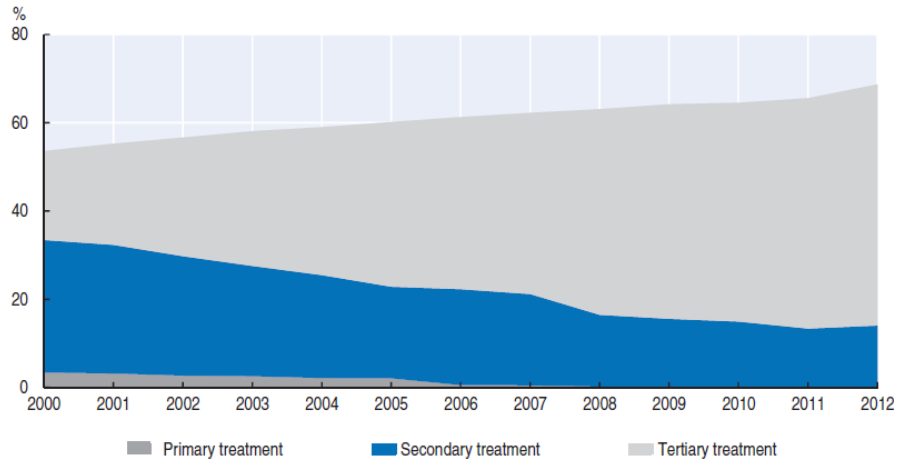
Approach: fees on water pollution

- For over 20 years: fees on water pollution, combined with permitting
- Base charge below permit level; higher penalty rate above
- Revenue goes to the National Fund for Environment and Infrastructure and is used for environmental investments

Case study 2: water pollution fees: Poland (continued)

Figure 1.15. **Population connected to wastewater treatment facilities, 2000-12**

Percentage share by type of treatment[a]



Results

- Poland has invested in waste water treatment using its National Fund and EU money

Remaining challenges

- Fee levels generally too low to provide incentives for pollution reduction
- As pollution levels have fallen, so have revenues
- System is complex (different fees for many specific pollutants)
- Remaining challenge: water abstractions high and water efficiency poor – and no fees on water abstractions for key sectors (e.g. mining, industry)

Source: OECD Environmental Performance Review of Poland

Case study 3: water trading in Spain

Challenge

- Water scarcity, in particular in summer months, and drought
- Competing water needs: agriculture, urban areas, industry, 'ecological flows' to ensure aquatic ecosystems
- Water scarcity and drought varies within and across water basins

Water trading approach

- Water is owned by the state, but farmers have long-term concessions to use certain volumes of water (via 'Communities of Irrigators')
- Exchanges set up in periods of drought and water scarcity
- In the exchanges, farmers can sell a part of their concession to other users

Case study 3: water trading in Spain (continued)

Successes

- The system reallocates water to those who need it more
- Governments and NGOs have bought water to ensure 'ecological flows'

Difficulties

- Administration: Complicated procedures
- Inefficiency: in some cases, farmers could sell rights for water they don't actually use – this doesn't reduce water use
- Monitoring: in some transactions, the actual amount of water has not been well monitored

Source: Sara Paloma-Hierro et al, Water Markets in Spain: Performance and Challenges, Water, 2015. doi:10.3390/w7020652

Key lessons

OECD Guiding Principles for Economic Instruments (1991)

- Clear framework and objectives
- Well-defined field of operations
- Simple mode of operation
- Acceptability (to public/stakeholders)
- Integration with sectoral policies
- Cost-effective implementation (including enforcement)
- Assessment of consequences
- Conformity with principles of international trade, fiscal policy and environmental policy

Questions for discussions

- What economic instruments are used in your country?
- How could these economic instruments be more effective?
- What are the obstacles to greater use of economic instruments?

Voluntary policy instruments

What are voluntary instruments?

A widely used definition

"Commitments by industries to improve their environmental performance beyond legal obligations".

Sources: OECD, Policy Instruments for the Environment – database brochure, 2015

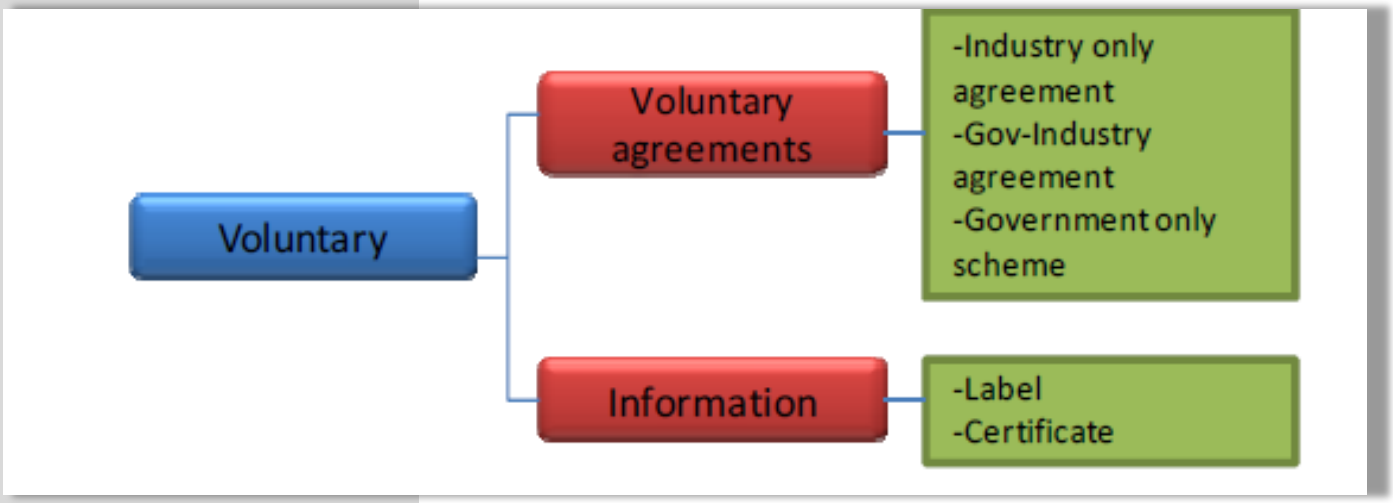
Limitations

- Voluntary instruments not only initiated by private sector
- Focus on industry/companies only
- Voluntary instruments may be used to meet legal obligations

A more comprehensive view

Voluntary policy instruments

*aim to **encourage** single companies/operators, groups of companies/operators or individuals to improve their environmental performance to meet and exceed legal obligations.*



Types of instruments

Voluntary agreements

- *Industry self regulation*
- *Negotiated agreements between government and industry*
- *Voluntary partnerships*
- *Programs offered by government*
- *…*

Information instruments

- *Information disclosure programs*
- *Environmental labeling*
- *Certification schemes*
- *…*

The PINE database lists 146 voluntary approaches implemented in 24 countries, including unilateral commitments, negotiated agreements or voluntary programmes.

Advantages and disadvantages

Advantages	Disadvantages
• May contribute to achieving objectives set by regulation as part of a policy package (e.g. WFD) • May trigger compliance beyond legislation • Quick response to urgent/emerging environmental challenges (e.g. Bhopal, India, 1984) • Useful when scientific information is still imprecise • Implementation costs may be lower than costs of implementing, enforcing and monitoring regulation (e.g. in case of large number of small polluters) • Public resistance exists towards legislative action • Weak regulatory capabilities are week	• Voluntary instruments may delay passing of regulation ("greenwash") • Voluntary instruments may prevent regulation • Voluntary!

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Effectiveness

*Voluntary approaches have become part of a more diverse **instrumental toolbox** in environmental policy, in which both market based approaches and traditional command-and-control approaches play important roles.*

BUT to be effective, voluntary instruments require:

- Clear objectives
- Establishment of timelines
- Transparency
- Participation
- Monitoring
- Review cycles

Case studies from two strategic economic sectors

Agriculture (Voluntary agreements)

- Cooperative agreements in agriculture (DE)

Tourism (Information instruments)

- EU Ecolabel for Tourist Accommodation

Case study

Co-operative agreements between water suppliers and farmers in Germany

Why collaborative agreements?

- Diffuse pollution from agriculture remains one of the biggest water quality challenges in Europe.
- Policy efforts to tackle this problem:
  - Common Agricultural Policy (CAP) - greening measures and agri-environmental measures;
  - Water Framework Directive (WFD) – river basin management plans and programmes of measures
  - The Nitrates Directive (91/676/EEC) - action programmes nitrate vulnerable zones and codes of practice
- BUT limited effectiveness:
  - difficulty in controlling the actions of farmers,
  - pollution by nitrates and pesticides caused by different farming practices varies from year (farming practices and changing climatic conditions).

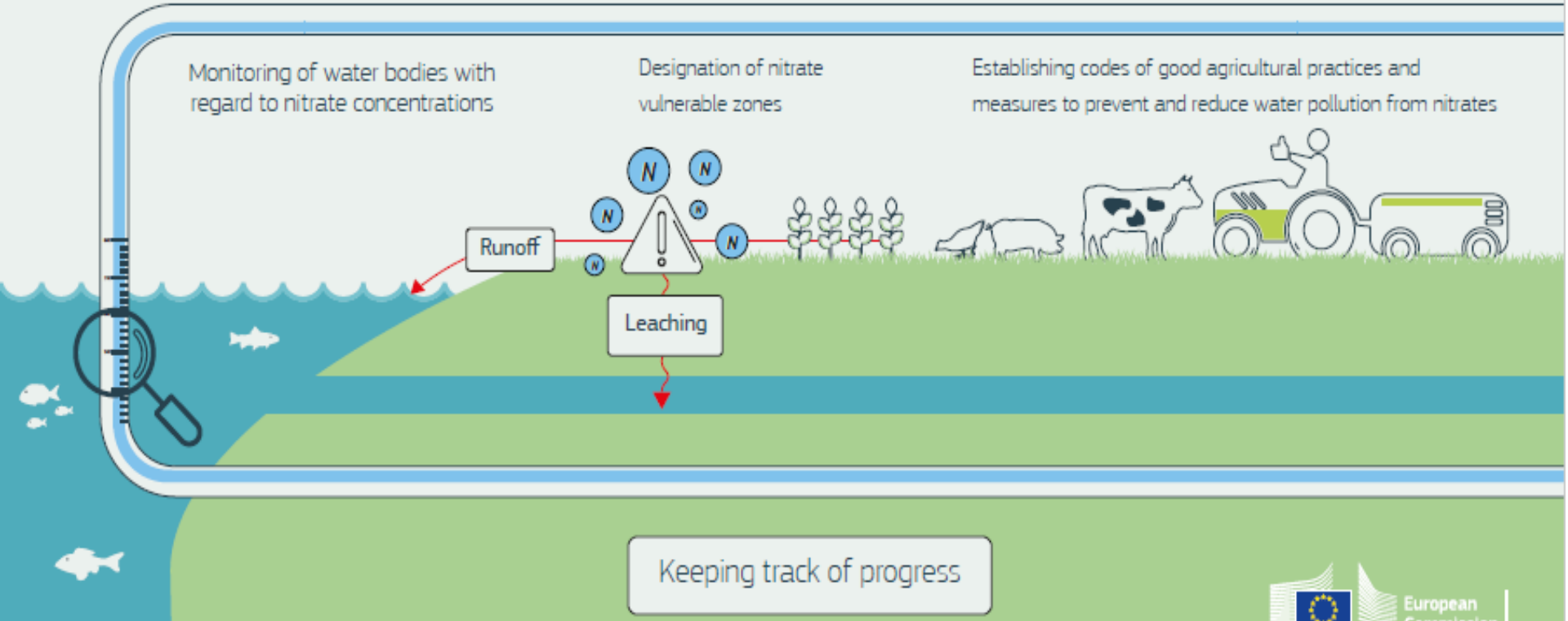
THE NITRATES DIRECTIVE IN A NUTSHELL

Nitrogen is a vital nutrient that helps plants and crops grow, but high concentrations are harmful to people and nature.

Pure, clean water is vital to human health and to natural ecosystems.

Excess nitrogen from agricultural sources is one of the main causes of water pollution in Europe.

The EU wants to reduce water pollution caused by nitrates used in agriculture and sets out steps for EU countries to take



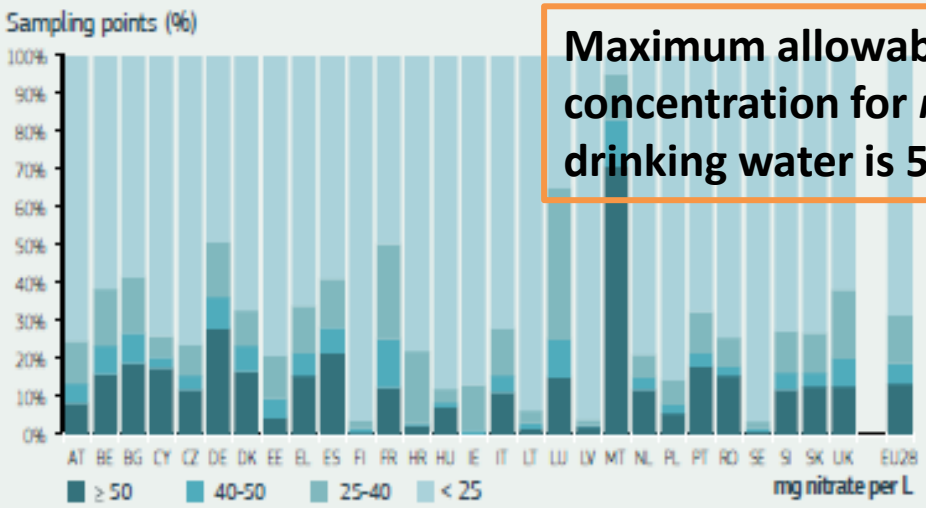
Keeping track of progress

European Commission

WATER QUALITY IN THE EU

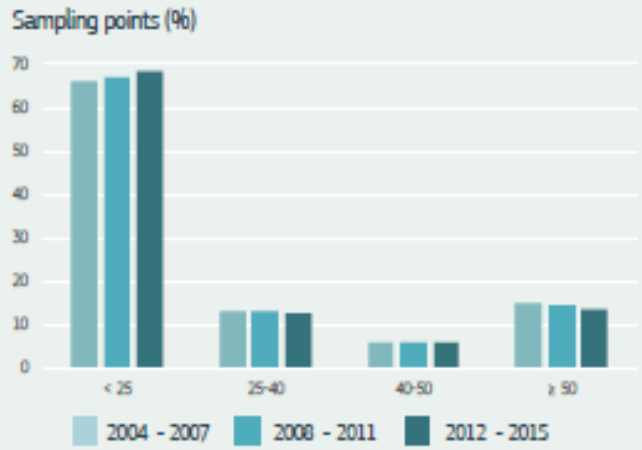
Ground and surface water quality in the EU has improved over the last decade, but more efforts are needed

Annual average nitrate concentrations in groundwater in the period 2012-2015

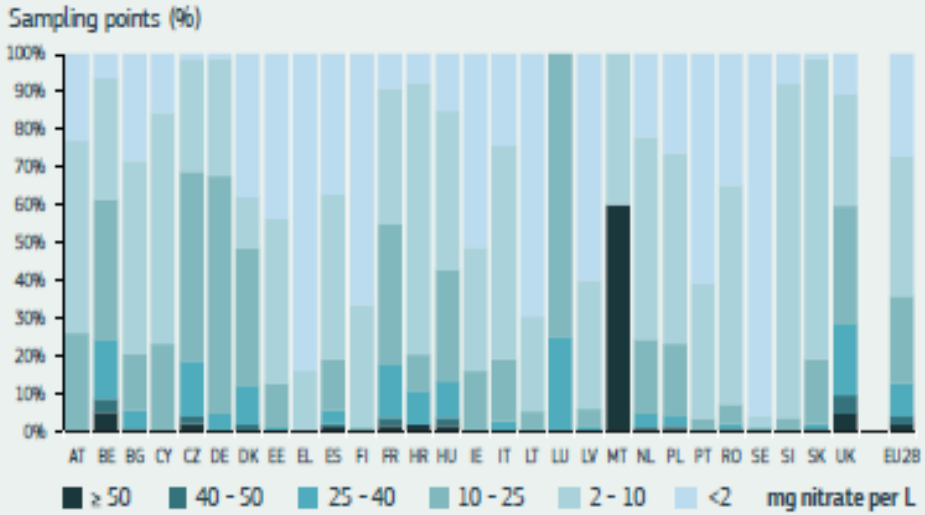


Maximum allowable concentration for *nitrate* in drinking water is 50 mg/l

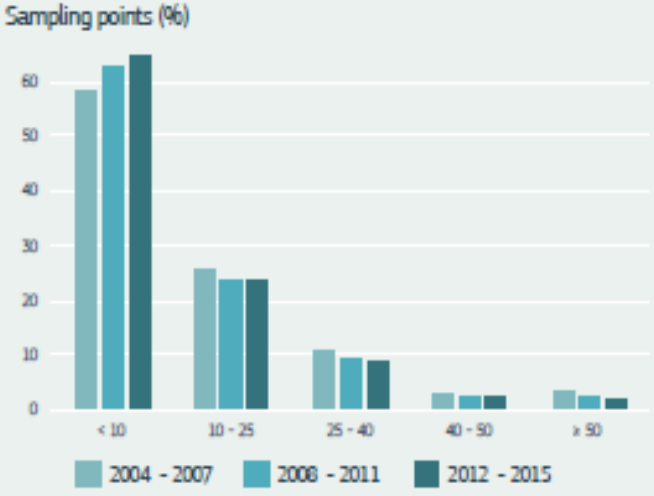
Ground water nitrate concentrations



Annual average nitrate concentrations in fresh surface waters (rivers and lakes) in the period 2012-2015



Surface water nitrate concentrations



Co-operative agreements in Germany

- In many catchment areas water suppliers have entered into negotiations with farmers.

State	Total farmland 1000 ha	Total numbers of suppliers	Number of agreements	Farms involved 1000	Area covered 1000 ha
Bavaria	3,300	2,580	150	4	50
Hesse	800	468	45	6	203
Lower Saxony	2,700	346	112	11	265
North Rhine-Westphalia	1,500	594	113	10-15	1,250

Source: WAgriCo project

What are these agreements about?

- Agreements include voluntarily-agreed commitments both for water suppliers and farmers.
- Timeframe (usually around 5 years).
- Water suppliers commit to spending money for compensation payments and advisory services and farmers agree to apply more sustainable – often defined - farming practices.
- Often, commitments are laid down in contracts = *contractual nature protection (Vertragsnaturschutz)*

Water catchment Holsterhausen/Üfter Mark

Farmland involved (ha)	Main changes of farming practices	Nitrate value achieved (mg/l)	Cost of agreement (EUR/year)	Proportion of cost to water priced (%)	Benefit of agreement
10,000	Increased storage capacity for manure Intercropping Advanced technology in manure spreading	7	419,000	0.9	Good water quality maintained 175,000 EURO per year saved in fertilisers

Water catchment München

Farmland involved (ha)	Main changes of farming practices	Nitrate value achieved (mg/l)	Cost of agreement (EUR/year)	Proportion of cost to water priced (%)	Benefit of agreement
2,500	Organic farming Mulch seed in maize cultivation	8	765,000	0.7	Good water quality maintained

The main commitments in the agreement of München are:

- only as many livestock as can be supported by mainly self-produced feed (about 1.5 large animals per hectare),
- use of manure mainly produced on the farm,
- total distribution of farm manure limited to 1.4 (organic) fertiliser units per hectar (unit = 80 kg nitrogen and 70 kg phosphorus),
- strict prohibition of chemical / synthetic fertiliser (mineral fertiliser) and plant production products (pesticides),
- as far as possible, covering of the soil by crops throughout the year.
- Regional level: establishment of ‘manure exchange’ for the distribution of surplus semi-liquid manure among farmers

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Do voluntary agreements work?

Benefits

- Evidence shows that water quality goes far beyond the mandatory standards for drinking water (e.g. below 50 mg/l nitrate).
- Voluntarily-agreed commitments are more flexible and can be better tuned to changes of local conditions in catchment areas.
- **BUT** overall status of water quality shows that voluntary agreements alone are not sufficient.

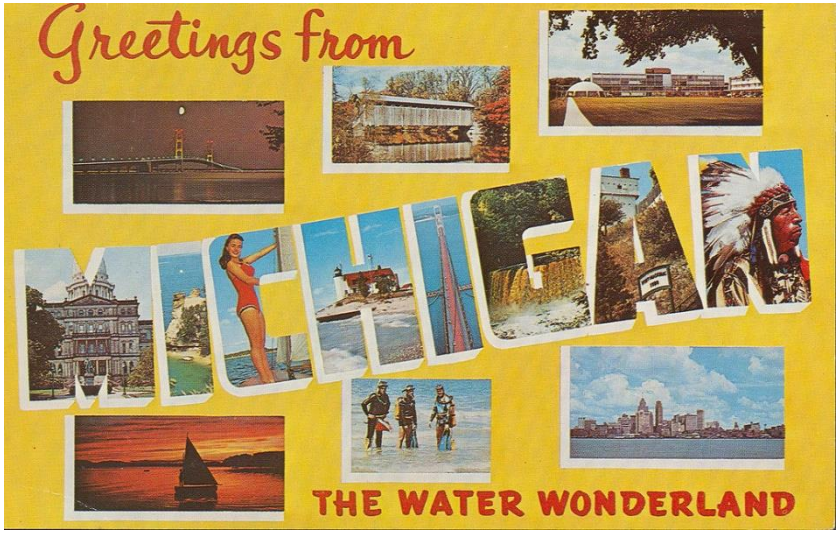
Monitoring and enforcement

- Yearly visit from advisory services
- Access to operations data
- Yearly sampling and analysis of soil and water quality

Case study

The EU Ecolabel for tourist accommodation services

Why information instruments?



A tourist consumes three or four times more water per day than a permanent resident (EEA estimate)

- Non-tourist water use = 100 - 200 litres per person/day across Europe.

Water consumption for tourism is small but it often occurs in water-scarce seasons and areas.

- Alicante, Murcia and Almeria (Spain)
  - estimated to be in deficit by at least 400 million m3 of water/year.
  - approximately 1 million tourists during the summer.

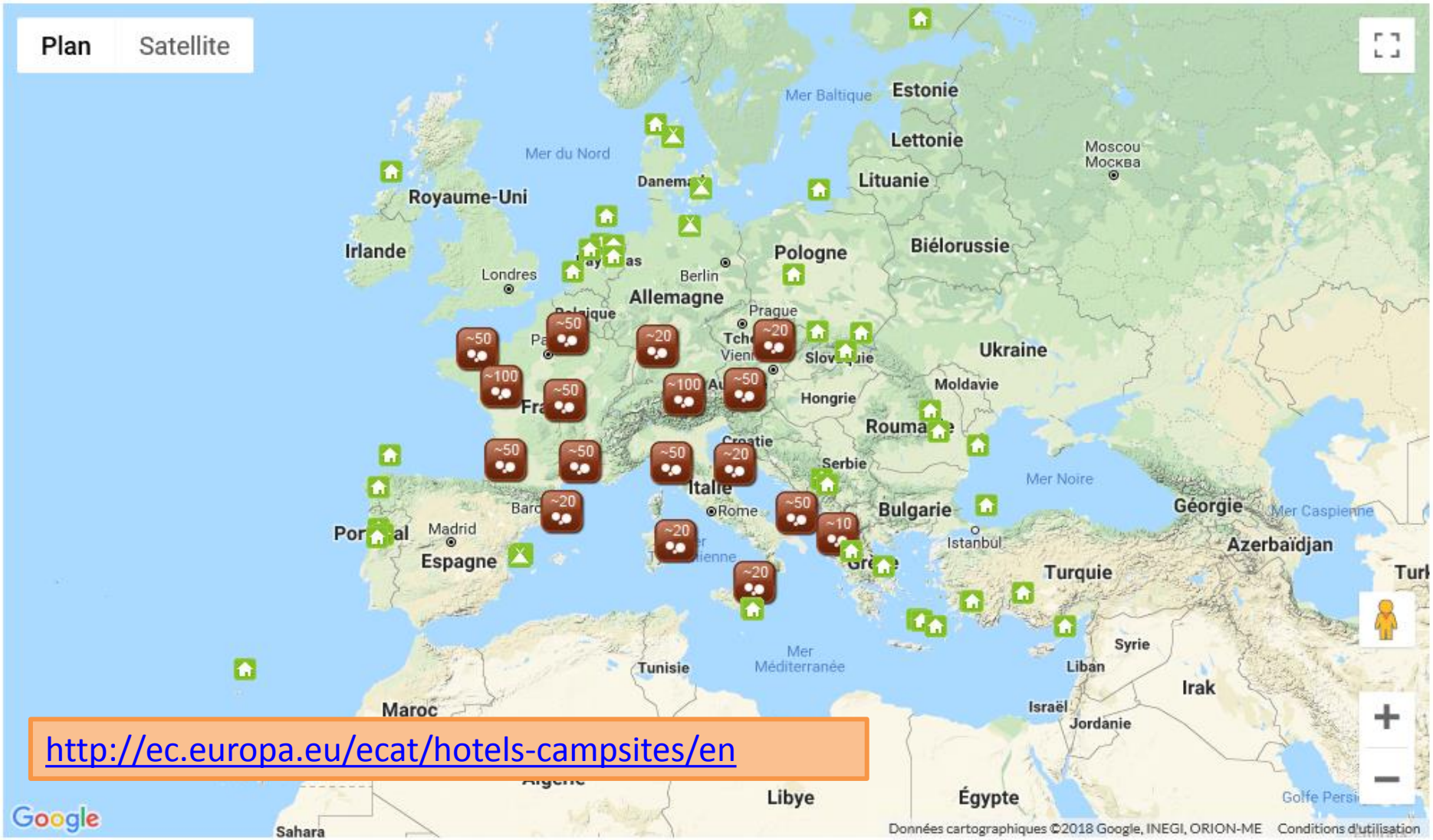
How much water is consumed by the tourism sector in your country?

EU Ecolabel

- Council Regulation (EC) 880/92 of 23 March 1992 instituted an eco-label award scheme.
- EU Ecolabel criteria for tourist accommodation were first issued in 2009 and then revised in 2017.
- The label demonstrates that accommodation providers have met certain environmental and social standards.
- Currently, there are 796 licenses that are held either by individual entrepreneurs or big hotel groups.
- “Tourist Accommodation Services” and “Campsite Services” are the most popular service groups within the EU Ecolabel scheme (making up 40% of total EU Ecolabel licenses as of 2017).

Tourism 2030 Atlas

Instructions sur la recherche et l'affichage: The right hand search bar allows you first to zoom to a specific location of the map. To define your search, enter a keyword (optional), then check-mark the boxes to choose what you want to display. Currently displaying **778** location(s).



URL de la carte :

https://destinet.eu/portal_map?lat_center=46.008784118300056&lon_center=12.855062658339989&map_zoom=4&map_engine=google&base_layer=physical&ge

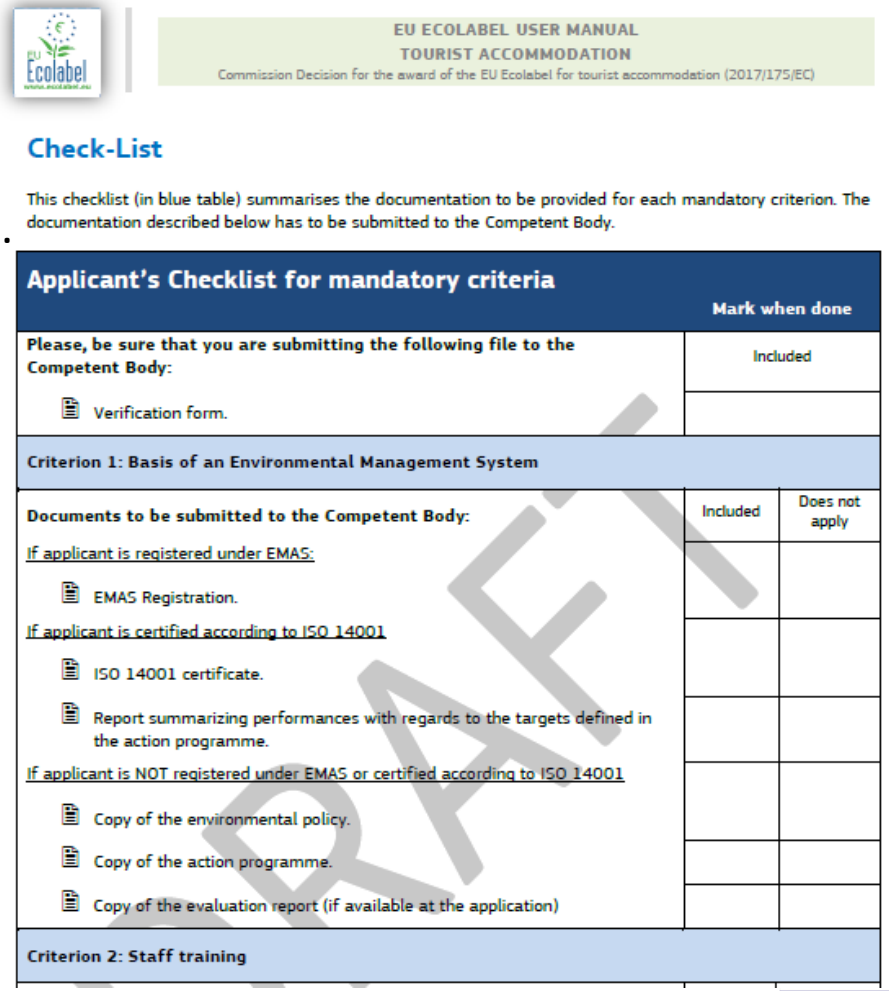
Criteria

- Mandatory criteria, common for all the accommodations.
- Optional criteria.
- Product group criteria are included in different sections: General Management, Energy, Water, Waste and wastewater, and Other criteria.

General management criteria	
1	Basis of an Environmental Management System
2	Staff training
3	Information to guests
4	General maintenance
5	Consumption monitoring
Energy criteria	
6	Energy efficient space heating and water heating appliances
7	Energy efficient air conditioning and air-based heat pumps appliances
8	Energy efficient lighting
9	Thermoregulation
10	Automatic switching off of HVAC and lighting
11	Outside heating and air conditioning appliances
12	Procurement of electricity from a renewable electricity supplier
13	Coal and heating oils
Water criteria	
14	Efficient water fittings: Bathroom taps and showers
15	Efficient water fittings: Toilets and urinals
16	Reduction in laundry achieved through reuse of towels and bedclothes
Waste and wastewater criteria	
17	Waste prevention: Food service waste reduction plan
18	Waste prevention: Disposable items
19	Waste sorting and sending for recycling
Other criteria	
20	No smoking in common areas
21	Promotion of environmentally preferable means of transport
22	Information appearing on the EU Ecolabel

Assessment and verification

- For each criterion, the necessary declarations, documentation, analyses, test reports, or other evidence to show compliance with the criterion is defined.
- These may originate from the applicant and/or their supplier(s).
- Tests/evidence might need to use standardised assessment methods or carried out by accredited bodies.



EU ECOLABEL USER MANUAL
TOURIST ACCOMMODATION
Commission Decision for the award of the EU Ecolabel for tourist accommodation (2017/175/EC)

Check-List

This checklist (in blue table) summarises the documentation to be provided for each mandatory criterion. The documentation described below has to be submitted to the Competent Body.

Applicant's Checklist for mandatory criteria		**Mark when done**
Please, be sure that you are submitting the following file to the Competent Body:		Included
Verification form.		
Criterion 1: Basis of an Environmental Management System		
Documents to be submitted to the Competent Body:	Included	Does not apply
If applicant is registered under EMAS:		
EMAS Registration.		
If applicant is certified according to ISO 14001		
ISO 14001 certificate.		
Report summarizing performances with regards to the targets defined in the action programme.		
If applicant is NOT registered under EMAS or certified according to ISO 14001		
Copy of the environmental policy.		
Copy of the action programme.		
Copy of the evaluation report (if available at the application)		
Criterion 2: Staff training		

Monitoring and enforcement

- Regular inspections by competent authority.
- Penalties.
- Label is awarded for 5 years and then subject to review.

Questions for discussions

- What voluntary instruments are used in your country?
- Are you considering using voluntary instruments?
- How could these voluntary instruments be more effective?
- What are the obstacles to greater use of voluntary instruments?

SWIM and Horizon 2020 Support Mechanism

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Thank you for your attention.

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