

The right data ? - for what?

The use of monitoring data for indicator based assessments linked to the DPSIR-framework on EU-level

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The EEA mission

"The EEA aims to support sustainable development and to help achieve significant and measurable improvement in Europe's environment through the provision of timely, targeted, relevant and reliable information to policy makers and the public"



What are our strategic areas of work?

- **Informing policy implementation**
- **Assessing systemic challenges**
- **Utilising networks, information networks, content-sharing and communication**

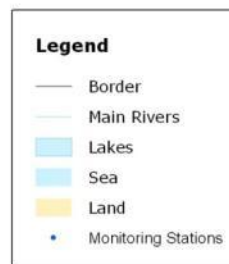


General Water Content at EEA

- Use of monitoring data and indicators in EEA products, EU network = MS network
- EEA information and indicators in the policy cycle – using the DPSIR
- SOE information and water directives (WFD+)
- Assessing interrelations and policy relevant information



Eionet-Water - River Stations in end 1990ies



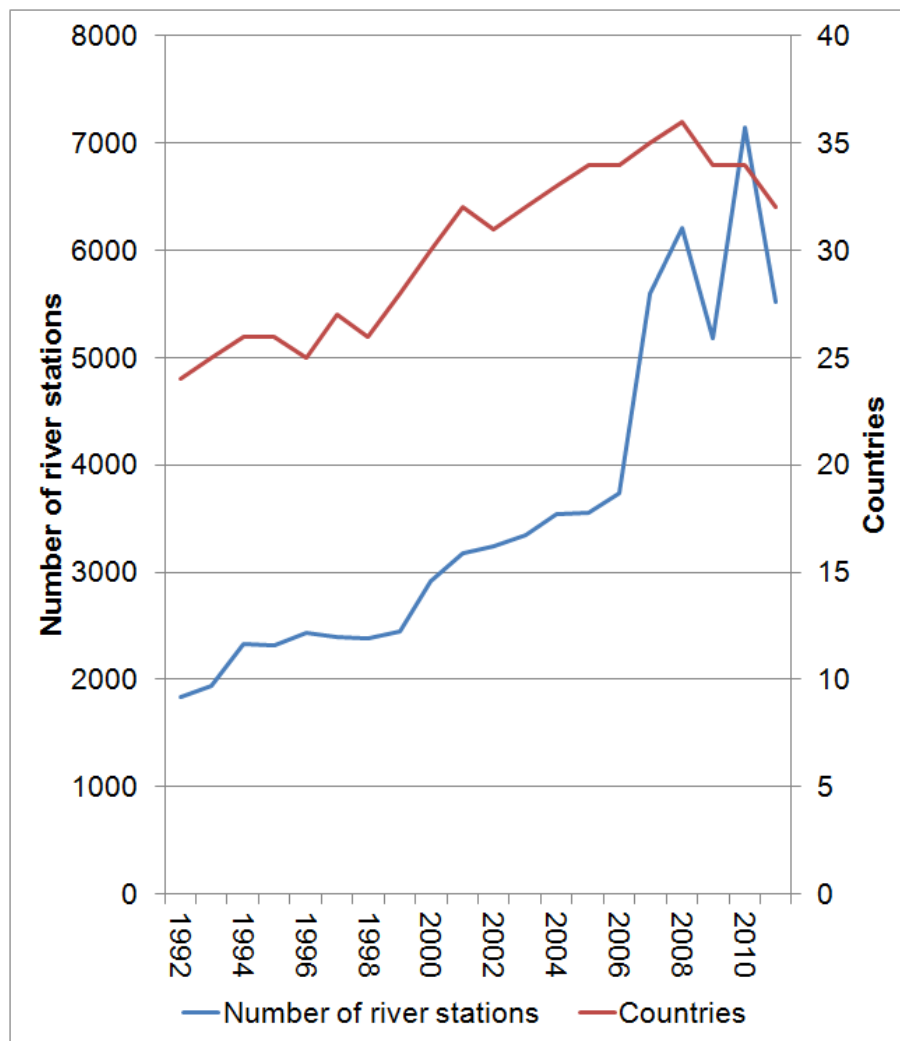
Number of river station increased from 3000 to over 10 000

WISE-SoE dataflow - a success

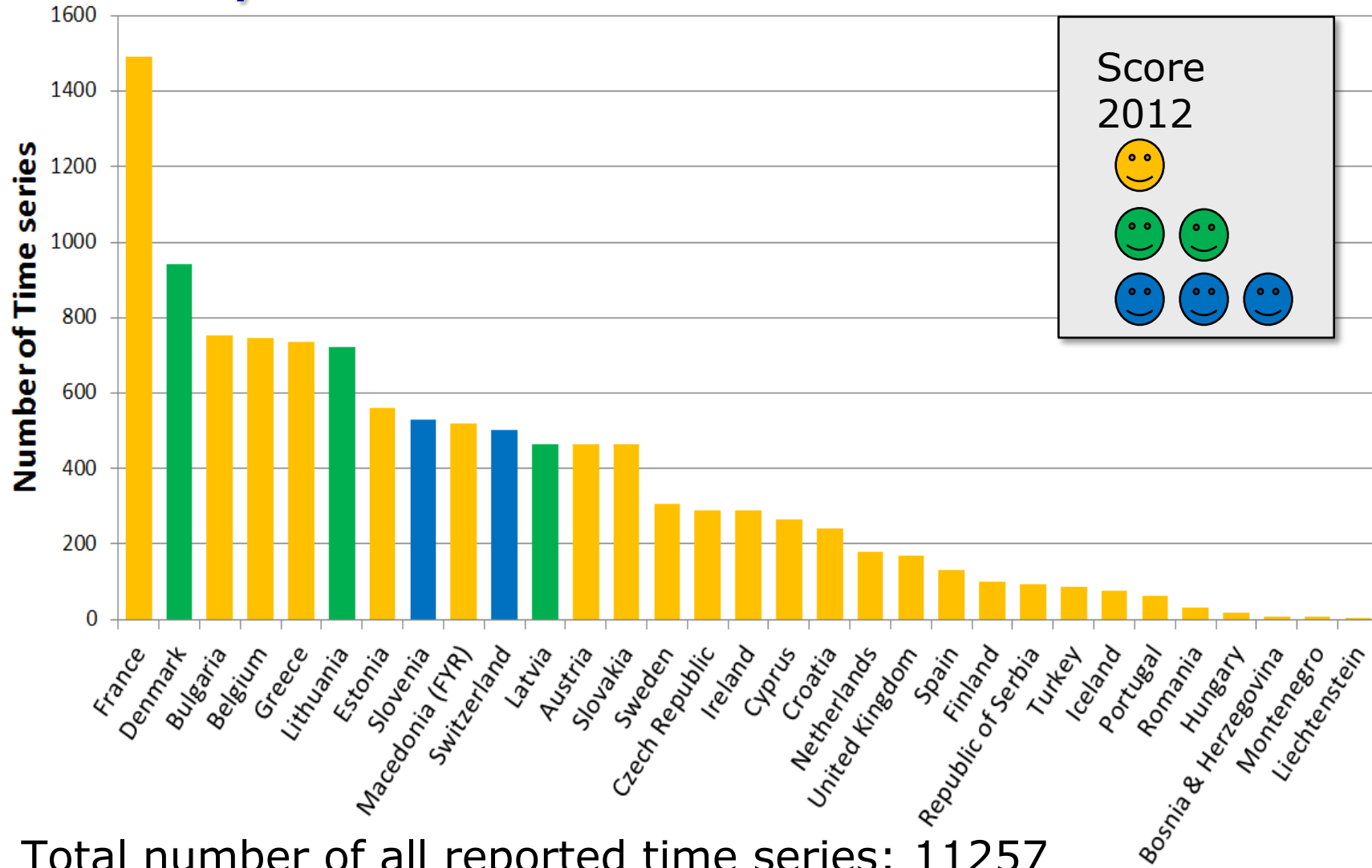
- Over the last 20 years countries have reported
- More than **11 000 river stations** (38 countries) – only Malta has not reported rivers
- More than **3200 lake stations** (36 countries)
- More than **1500 groundwater bodies**
- For rivers there are around 1000-1500 time series covering the last 20 years 1992 to 2011.



Number of river stations and countries reporting per year



Number of reported time series per country under WISE-SoE

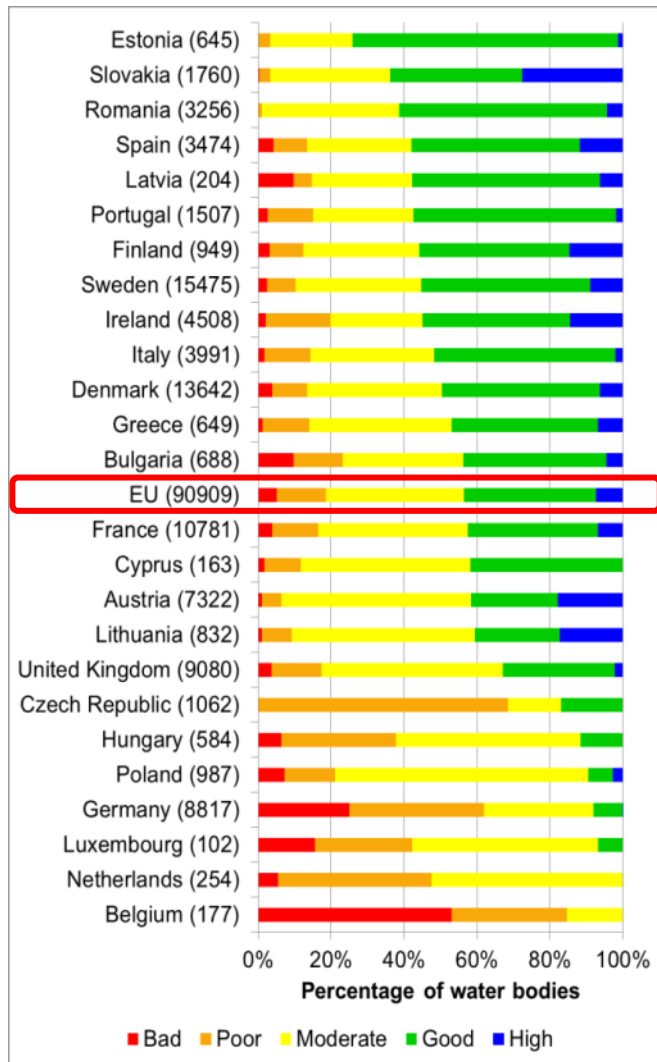


Total number of all reported time series: 11257

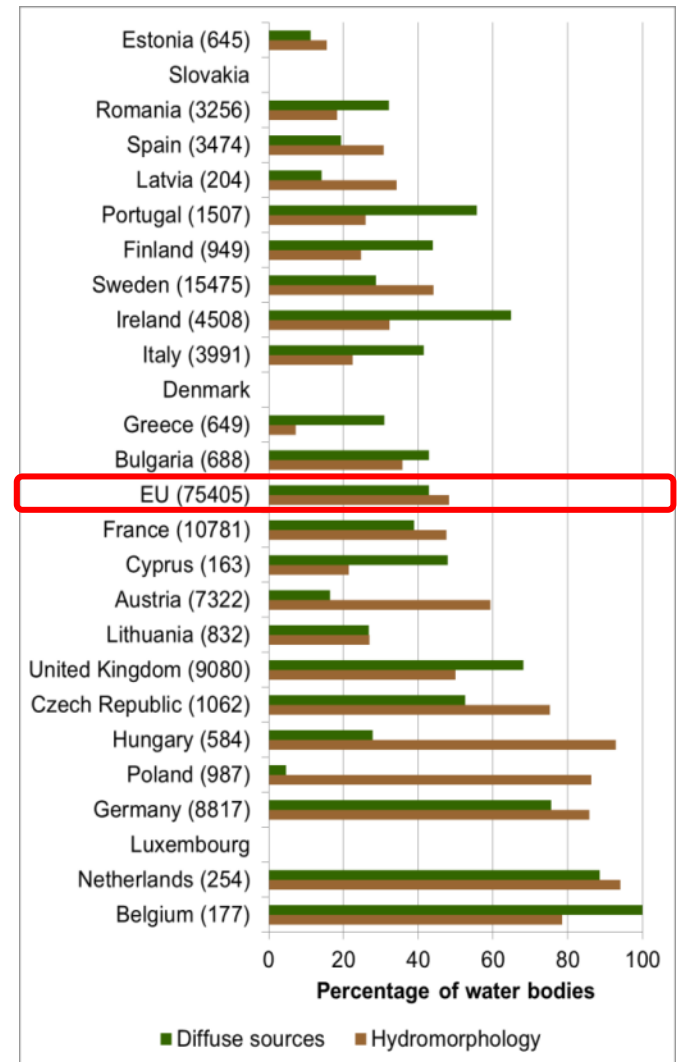


Water quality: WFD Rivers ecological status and pressures per country

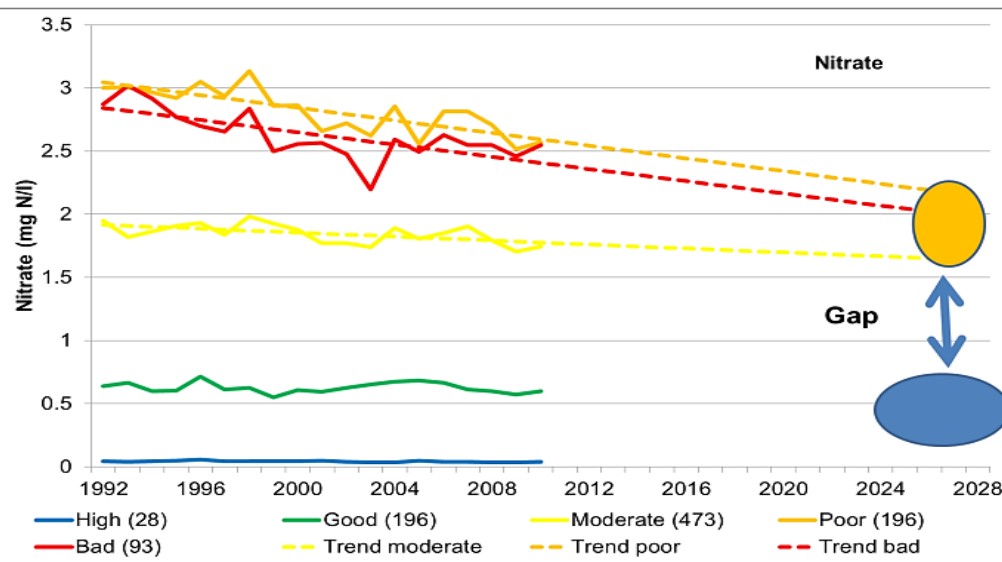
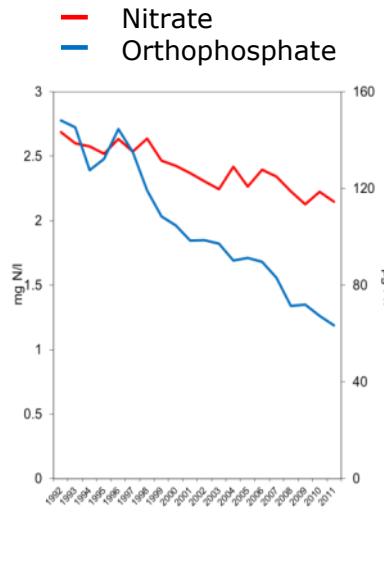
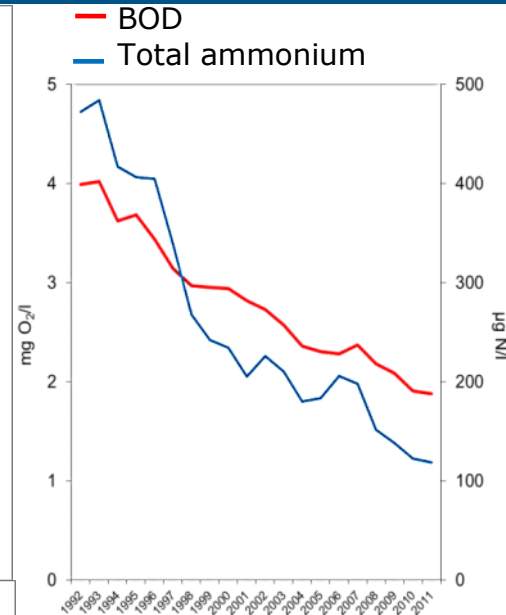
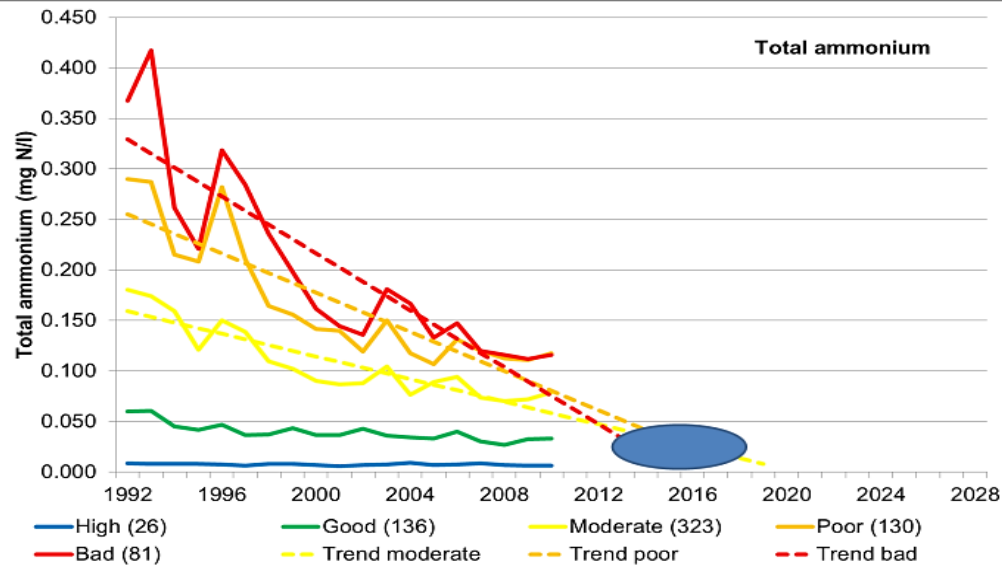
Ecological status/potential



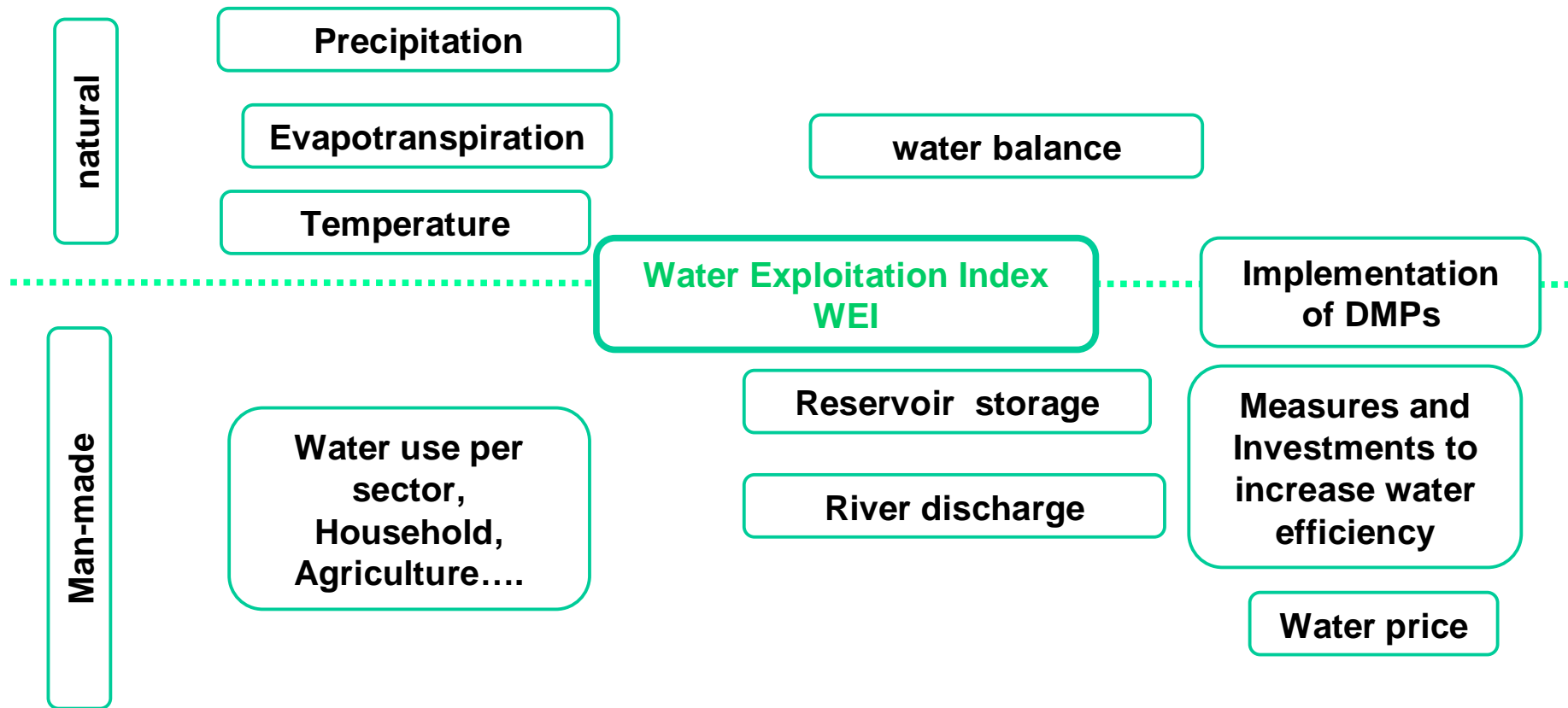
Pressures



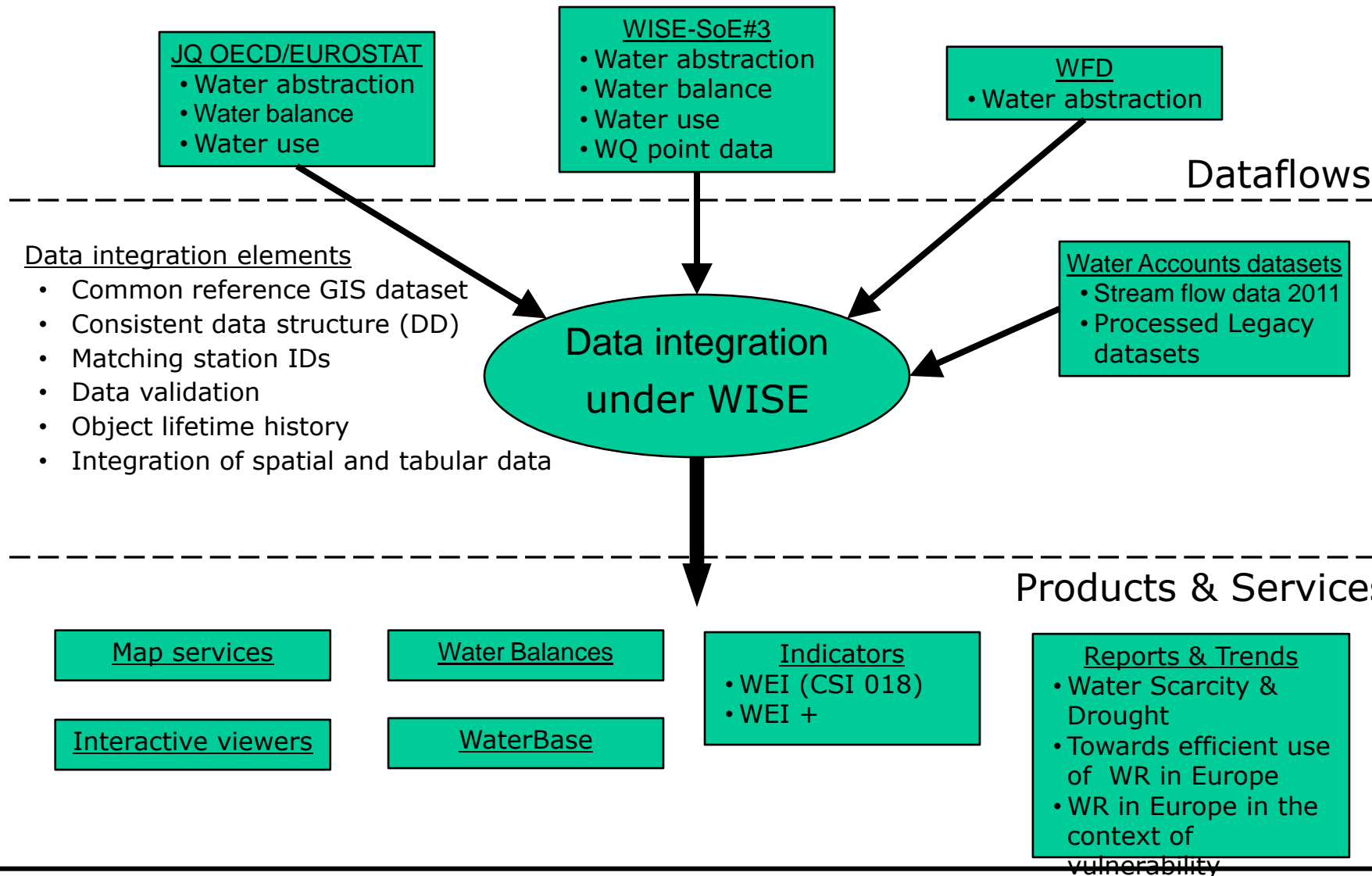
Pollution reduction from point sources



Water quantity: Indicator framework for WS&D



Streamlining Water Quantity dataflows



Established water quantity dataflows

	OECD/EUROSTAT	WISE-SoE	WFD
Data categories	water abstraction, water balance, water use	water abstraction, water balance, water use	water abstraction
Spatial scale	Country (JQ), RBD, Sub-Unit, NUTS (REQ)	Country, RBD, Sub-Unit, NUTS	RBD, Sub-Unit
Reference to geographical entity	Region	Region and Point (Station)	Region
Time scale	Annual	Annual, Seasonal, Monthly, Daily	Annual, Seasonal
Data collection period	Biennially	Annually	~6 yrs (i.e. following WFD implementation schedule)
Number of quantifiable param.	131 (JQ)	186	SW: 11 GW: 8
Character	Supported by national stat. offices and EUROSTAT (specific grants also applicable)	Voluntary, using national resources, supported by EEA – ETC/ICM	Mandatory, EU-Directive
Responses 2012	35	29	27
Reporting format	MS-Excel file	XML (produced by Reporting tool)	XML (produced from MS-Access)



WISE-SoE dataflow

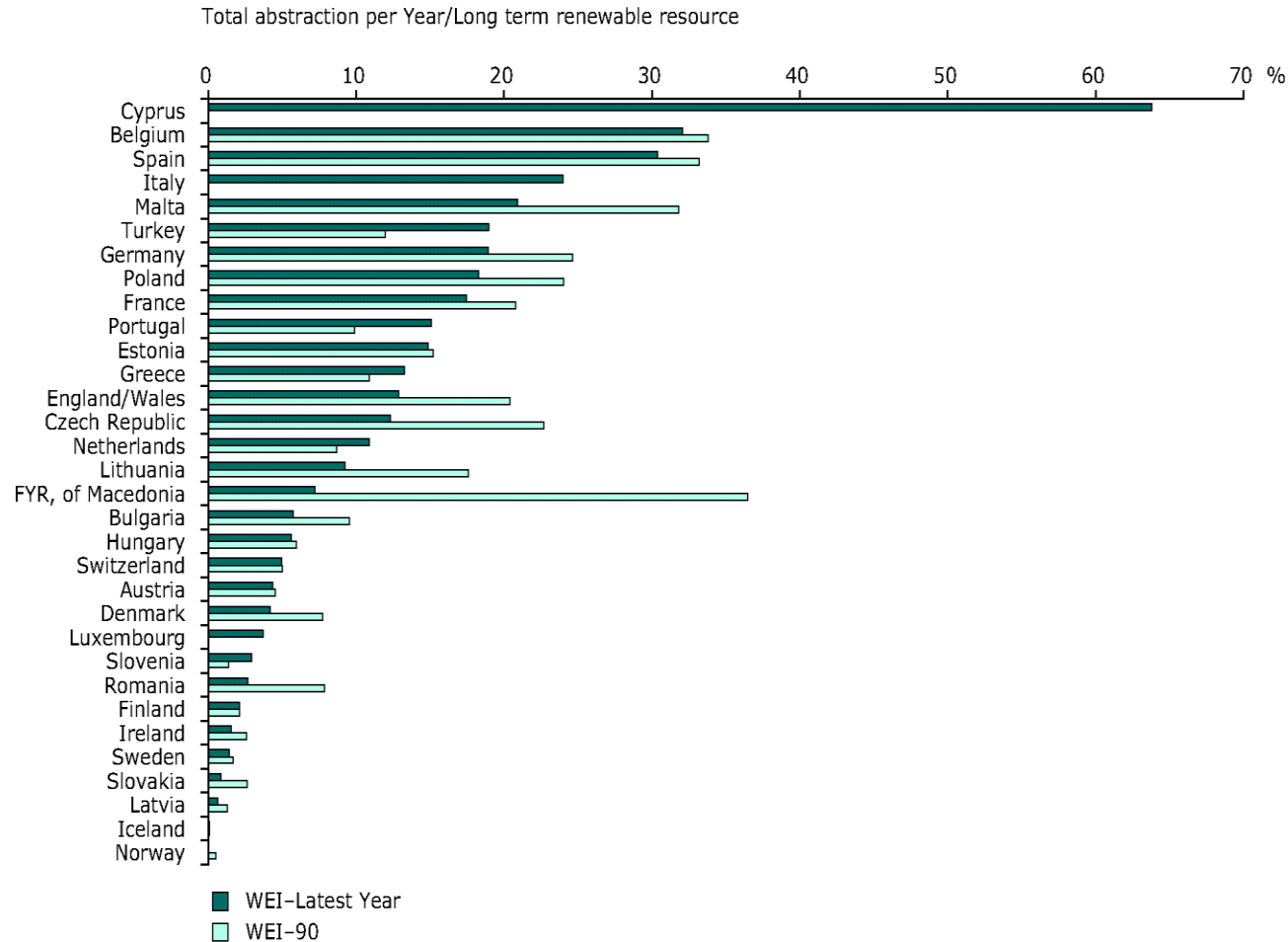
Reporting year	2009	2010	2011	2012
Geographical point entities (stations)	3 687	4 380	5 246	8 625
Total time series	3 680	5 190	8 066	11 257
Time series on geographical points	1 343	2 347	3 770	6 027
Time series on geographical areas	2 337	2 843	4 296	5 230
Total number of time series records	147 438	290 634	1 027 551	1 862 476
Total number of participating countries	17	22	26	31

Reporting issues

- Some countries focus only on specific parameters
- Data delivered not always in the specified XML format
- Poor response to the validation questions

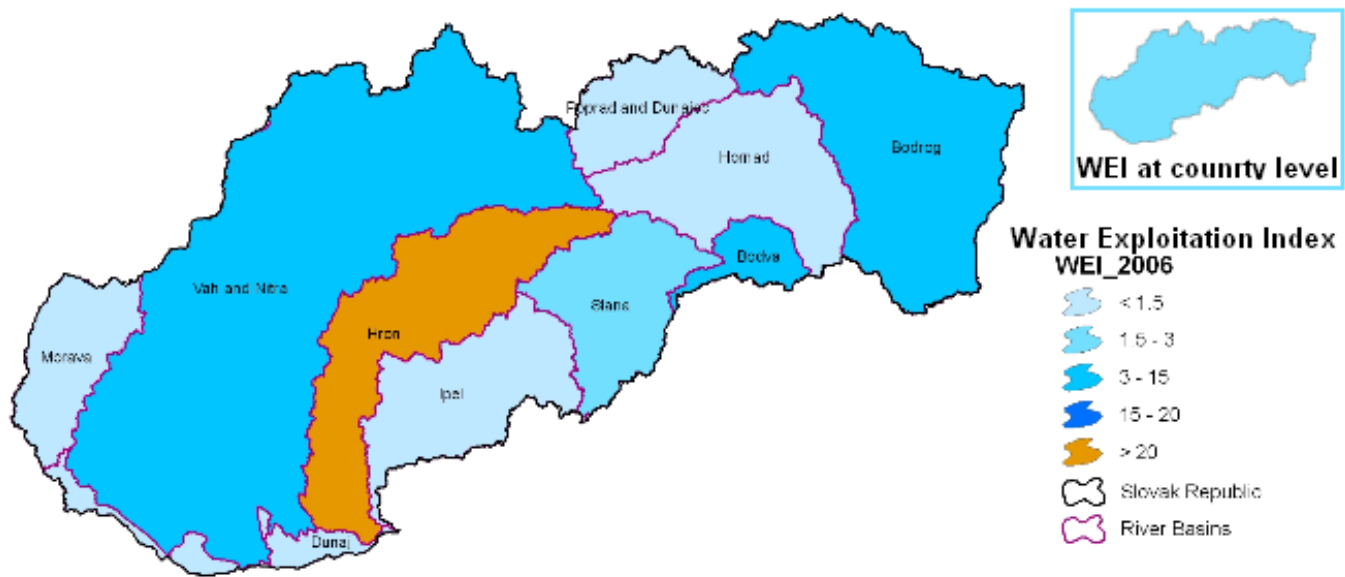


EEA CSI 18 - Water Exploitation Index national level/annual



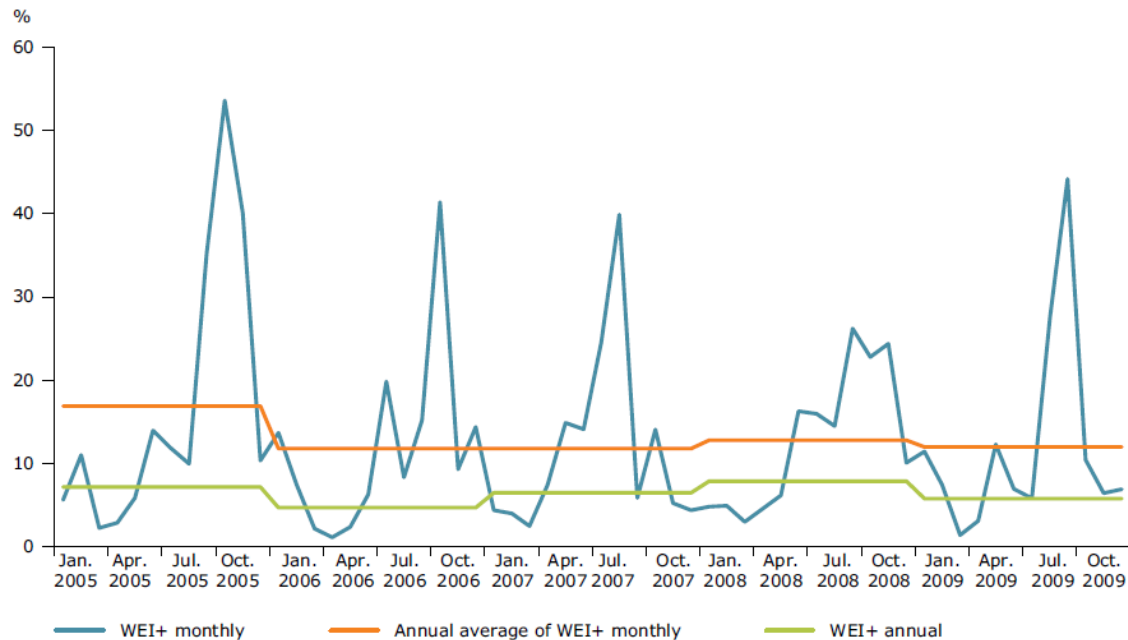
Slovak Republic

Modified WEI_{regional}: FW Abstractions / Renewable water resources 2006



Morava River; comparison annual average with monthly/sessional variations

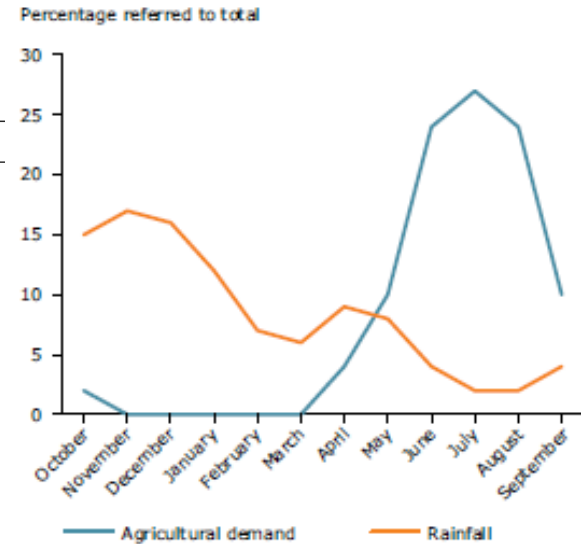
Figure 3.5 Variability of the WEI+ at Morava river basin (Czech Republic)



Note: Provisional data for the period 2005–2009 at monthly and yearly scale.

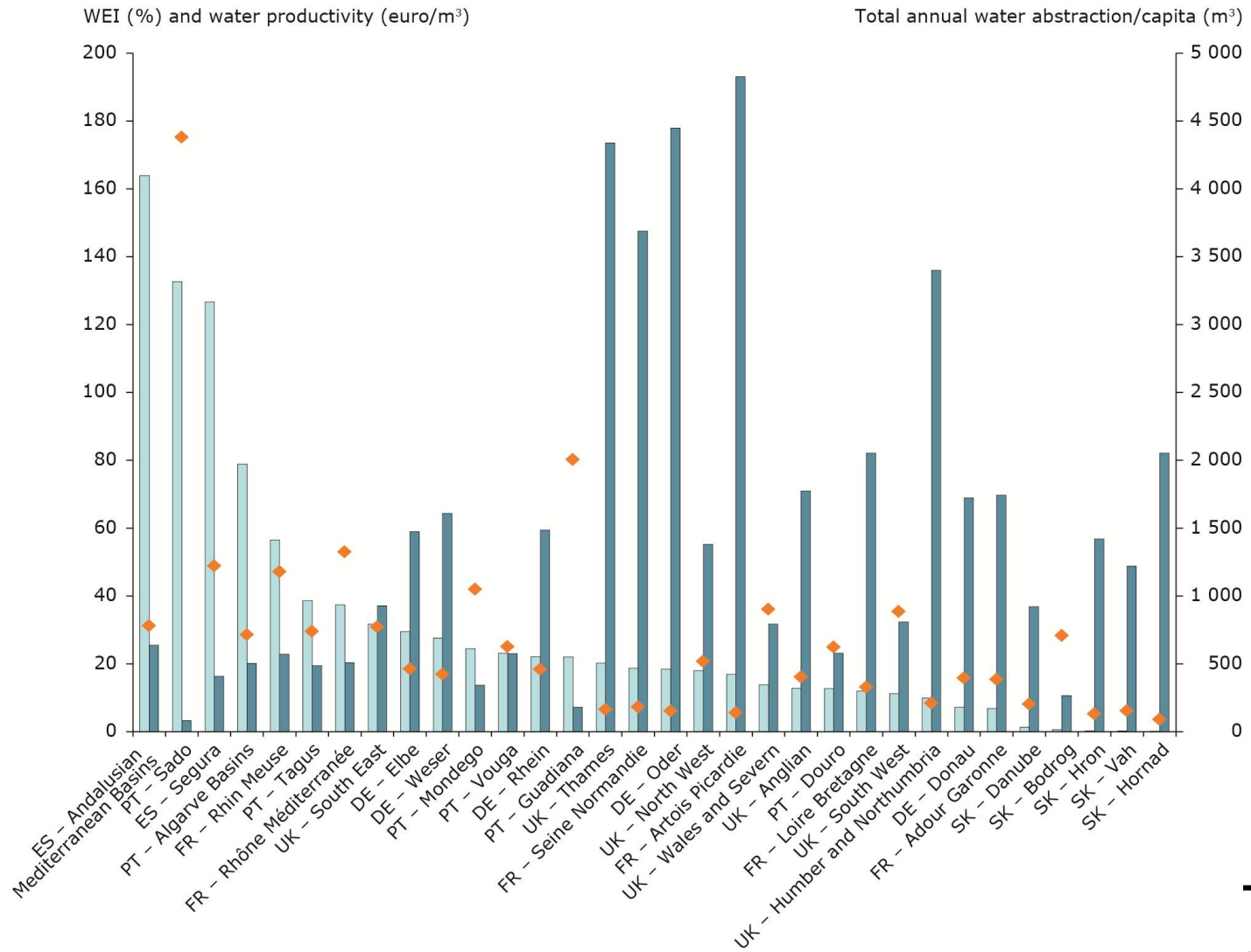
Source: Czech Republic Department of Hydrology (draft results, not published).

Figure 3.3 Precipitation versus agricultural demand patterns



Source: Júcar Pilot River Basin Management Plan/Estrela et al., 2004.

Water stressed River basins are not having the highest water productivity

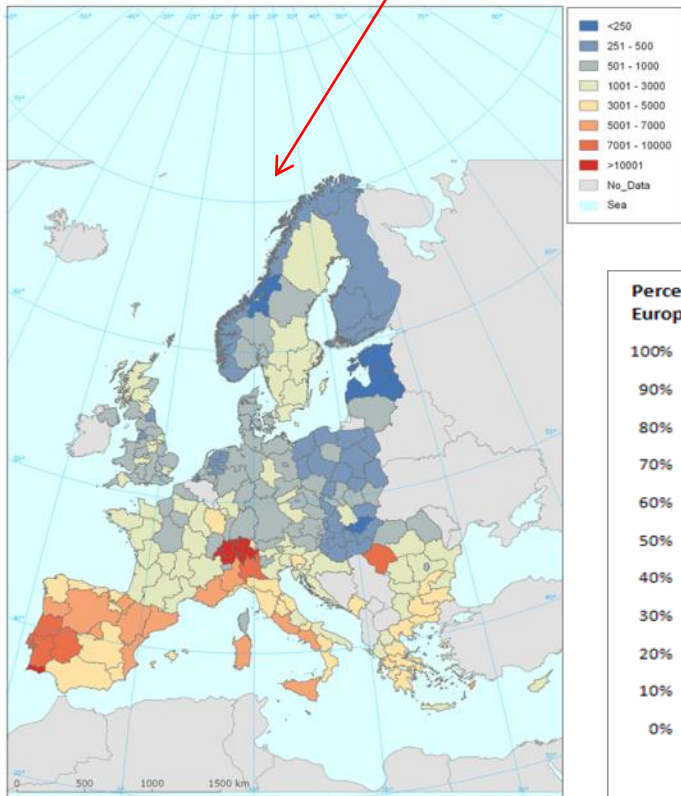


Economic Water Productivity of irrigated crops (€/m³) – ECWP - indexed by Purchase Power Standard (PSS)

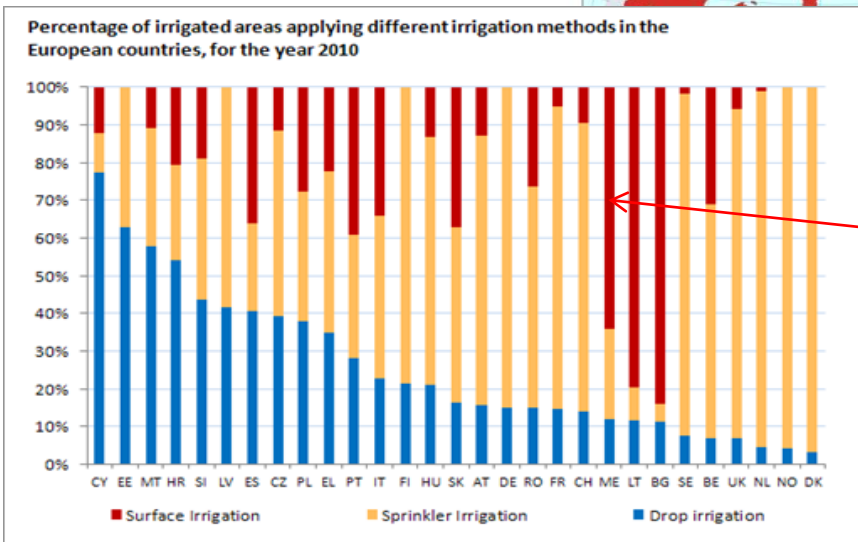
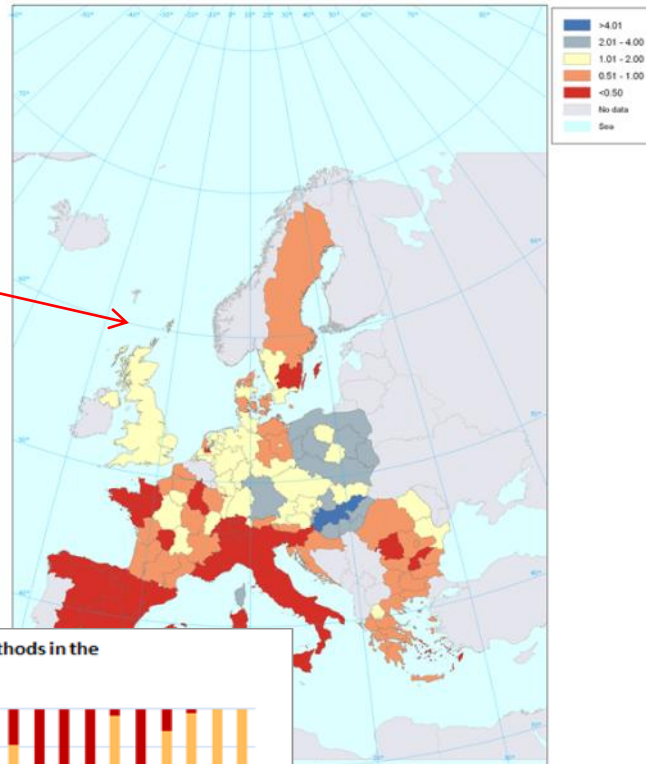
Based on water use for irrigation and crops grown

and GVA for various crops:
Calculates ECWP

Map 1 - Water Used for Irrigation in Europe per NUTS2 Regions (m³/ha)



Map 3 - ECWP (in € PPS/m³) for maize (green and grain) across EU NUTS2 areas



Irrigation methods may improve ECWP

Blueprint complements WFD towards water resource management

- By supporting integrated sustainable water resource management
- By focusing on resource efficiency in water use and management



- MS and EU level assessment and policy implementation
- Focus the monitoring on policy relevance on MS and EU level
- WFD, and water resources information to be assessed towards consistent RBM planning
- Regular water quality (and quantity) monitoring for SOE purposes (annual) and WFD (6 yearly) need to integrate pressures and impacts from different drivers → focus needs to extend to all water policies
- Data quality and consistency (between countries & between directives) is key for National Water Information Systems and INSPIRE

Thank you



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