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Water research in the EU Framework Programmes & Horizon 2020

The Blueprint for European Waters: a Researchers' Roundtable

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Content

EU water research

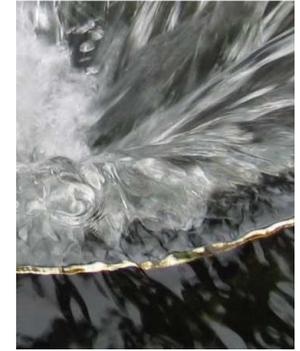
- **Examples from past and present FPs;**
- **Future perspectives:**
 - **Common Strategic Framework**
- **Science – Policy interface**



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Three decades of EU water research



- Water research: a **major component** of successive EU environmental research programmes since the late 80ies
 - Earlier programmes were focussed on the development of **scientific knowledge** through small and medium projects on areas such as hydrological and biogeochemical processes, aquatic ecosystems functioning, etc. to support **Environmental Quality Standards** and objectives;
 - From FP6 onwards, **larger projects** adopting **Integrated approaches** to:
 - Support to **water policies** and **sustainable water management**;
 - Management of **global change**;

Increased participation of technology providers and end-user communities



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EU Policy drivers for WATER Community research

✓ **Environmental Technology
Action Plan - ETAP (2004)**

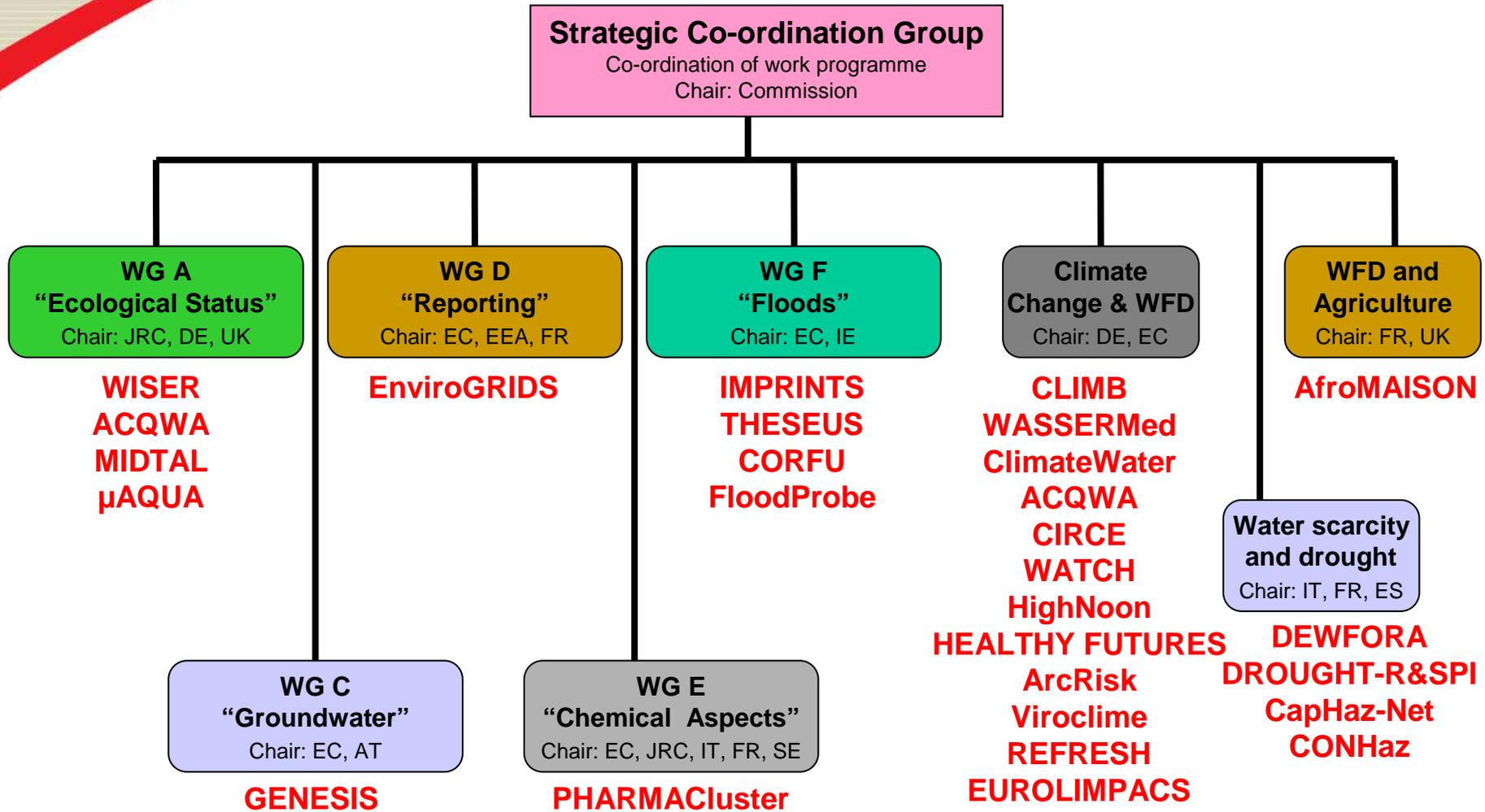
EU environmental policies

- 2008 - **Marine Strategy Framework Directive**
- 2007 - **Flood Directive**
- 2007 - **Water Scarcity and Drought Communication**
- 2007 - Green Paper "**Adapting to climate change in Europe**"
- 2006 - **Groundwater Directive**
- 2006 - New **Bathing Water**
- 2006 - First list of priority hazardous substances
- 2000 - **Water Framework Directive**
- 1998 - **Drinking Water Directive**
- 1996 - Directive concerning Integrated Pollution Prevention and Control
- 1992 - Habitats and Birds Directive
- 1991 - Urban **Waste water** treatment Directive
- 1991 - Nitrates Directive
- 1986 - **Sewage Sludge Directive**

European competitiveness on the global markets



Examples of RTD projects linked to CIS activities





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Environment Theme (incl. climate change)

STRATEGY and APPROACH for 2012-2013

- ✓ Calls reflecting a **challenge-driven approach**, avoid over-subscriptive research topics to allow the scientific community to define relevant research to address the challenges;
- ✓ Promote **multi-disciplinary** Research to develop and strengthen **European leadership** in innovation in key **environmental technologies** as well as in **policy, governance** and **management**;
- ✓ Promote and facilitate **knowledge transfer, uptake and exploitation** of scientific data and results;
- ✓ Involvement of multiple actors and **stakeholders** including a wider participation of the **industry** and **SMEs**





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WATER research in Europe

Many programmes, initiatives, networks and actors at various levels! High probability for costly **overlaps** and unnecessary **duplication**.

How to solve the jigsaw?

By strengthening the **European Research Area (ERA)** in the field of **water** to create a **single market for water R&I**





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Horizon 2020 – A Common Strategic Framework for EU Research & Innovation

- **Clear set of objectives** based on **Europe 2020 strategy** to:
 - Facilitate the implementation of “**Innovation Union**” and “**Resource-efficient Europe**” Flagship initiatives;
 - Strengthen the **European Research Area** (increase spending level on R&I to 3% of GDP);
- **Integrate** R & I in a seamless programme;
- **Focus** on overall policy priorities – **grand challenges**
- **Simplified** common rules and funding **schemes**;





Horizon 2020 – A Common Strategic Framework for EU Research & Innovation

- The **RTD Framework Programme**
 - Current (FP7) €53 billion (2007-13)
- **Innovation-related** part of the **Competitiveness and Innovation Framework Programme (CIP)**
 - €3.6 billion (2007-13)
- The **European Institute for Innovation and Technology (EIT)**
 - Autonomous EU body **bringing together higher education, research and business** to stimulate innovation in **Knowledge and Innovation Communities** - €309 million (2007-13)
- Strengthen **complementarities** and **synergies** with the **Structural Funds**
 - €86 billion allocated (2007-13) to R&D and innovation, entrepreneurship, ICT and human capital development



Horizon 2020 – A Common Strategic Framework for EU Research & Innovation

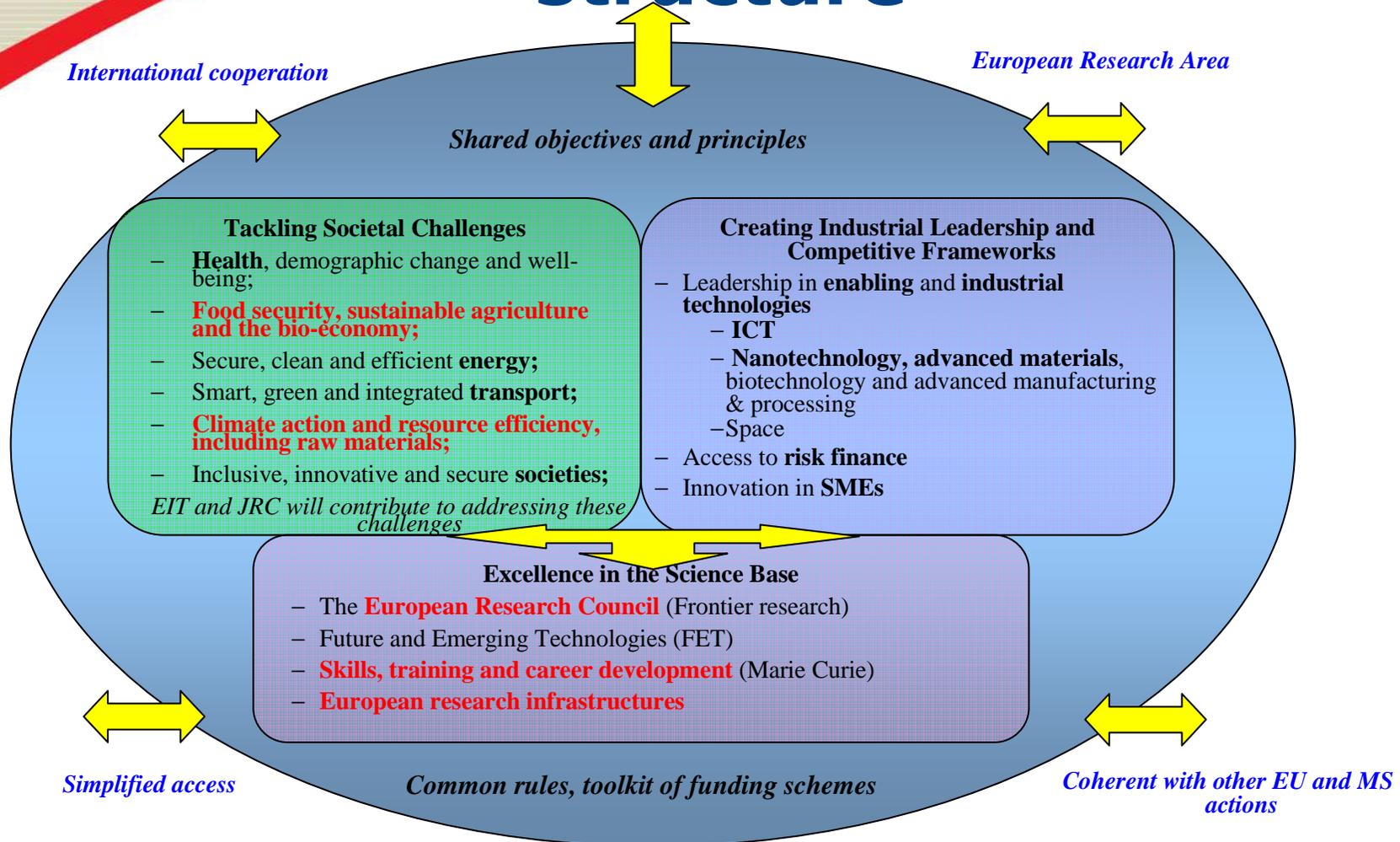
- Three **distinct**, but **mutually reinforcing** strategic objectives :
 - **Excellence** in the science base;
 - Tackling **societal challenges**;
 - Creating **industrial leadership** and **competitive frameworks**;
- Commission's proposal for the **Multi-Annual Financial Framework** foresees a total budget of EUR **80 billion**, (i. e. a **46% increase** compared to FP7);
- Around **two thirds** of this budget to be implemented through increased **externalisation** (executive agencies, public-private and public-public partnerships).





Horizon 2020 – Objectives and structure

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Climate Action and Resource Efficiency, including Raw Materials Challenge

- **Policy drivers:**
 - **Europe 2020** strategy;
 - **Innovation Union** (corresponding Roadmap);
 - **Resource-Efficient Europe** (corresponding Roadmap);
 - The Roadmap for **moving to a competitive low carbon economy in 2050**;
 - **Raw Materials Initiative**;
 - **EU Sustainable Development Strategy**;
 - **Integrated Maritime Policy for the EU**;
 - **Eco-innovation Action Plan**;
 - Etc.



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Climate Action and Resource Efficiency, including Raw Materials Challenge

Activities:

- Fighting and adapting to **climate change**
- **Sustainably managing natural resources and ecosystems;**
- Ensuring the sustainable supply of non-energy and non-agricultural **raw materials;**
- Enabling the transition towards a green economy through **eco-innovation;**
- Developing comprehensive and sustained **global environmental observation & information systems**





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Joint Programming Initiative on "Water Challenges for a Changing World"

- A **new process led by MS** to make **optimal use of existing R&D instruments** (existing national programmes or the setting up of entirely new ones) through increased **cross-border collaboration** for a more strategic and focused Water Research in Europe;
- Proposed and led by **SP** and **NL** and supported by **12+ Member States** and **Associated Countries** (variable geometry);
- MS define, develop and implement a common **Strategic Research Agenda** based on a **common vision** on how to address the water societal_challenge;
- Commission only as **facilitator**; If requested, CSF funding could be used to fund JPI activities;



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Towards a European Innovation Partnership on "Water efficiency"

- Currently **under elaboration** to:
 - **streamline, simplify** and better **coordinate existing instruments, initiatives** and **investments** in the water sector in Europe to achieve breakthroughs;
 - **mobilise all key players**, including regulators, standard-setters and procurers, across the **entire innovation chain**, speed up standards and mobilise demand;
 - **remove bottlenecks** to get products through to market faster;
- Selection criteria for EIPs:
 - **clear** and **verifiable goals**;
 - significant **market potential**;
 - strong **political** and **stakeholder commitment**;
 - adequate **financial support**;



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Dissemination of EU R&D results

- ✓ Continuous efforts to improve **dissemination** and **up-taking of results** generated by **environmental** EU-funded research:
 - By individual research **projects**;
 - Through a series of '**Science meets Policy**' and '**Bridging the Gap**' meetings and conferences (since 1998);
 - Through the setting up of the **WISE-RTD portal** serving multiple user-groups (policy makers, water managers, modellers, stakeholders etc) to provide **intelligent search of information** about national and EU-funded research results and specific issues associated with the WFD (milestones, CIS guidance documents, etc).
- ✓ However, is broadly acknowledged that **further effort is still needed** to strengthen Science-Policy Interfaces (SPI)



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Towards a more efficient Science-Policy Interface (SPI) in support of EU water policies

- An « institutionalized » SPI has been set up in the context of the **Common Implementation Strategy** of WFD to:
 - Make an inventory of research and implementation needs from CIS groups;
 - Identify if research results available to address these needs and if further gaps exist;
 - Improve transfer and usability of research outputs;
- **First SPI event** on 30/09/2010
 - 59 research areas, identified 180 research issues;
- **Second SPI event** on 29-30/09/2011 on "Implementation of the WFD: when **ecosystem services** come into play"



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**Thank you for your
attention!**

