



Water in the context of Circular Economy

**Green Business Week - AcquaLiveExpo
Lisbon, 5 March 2015**

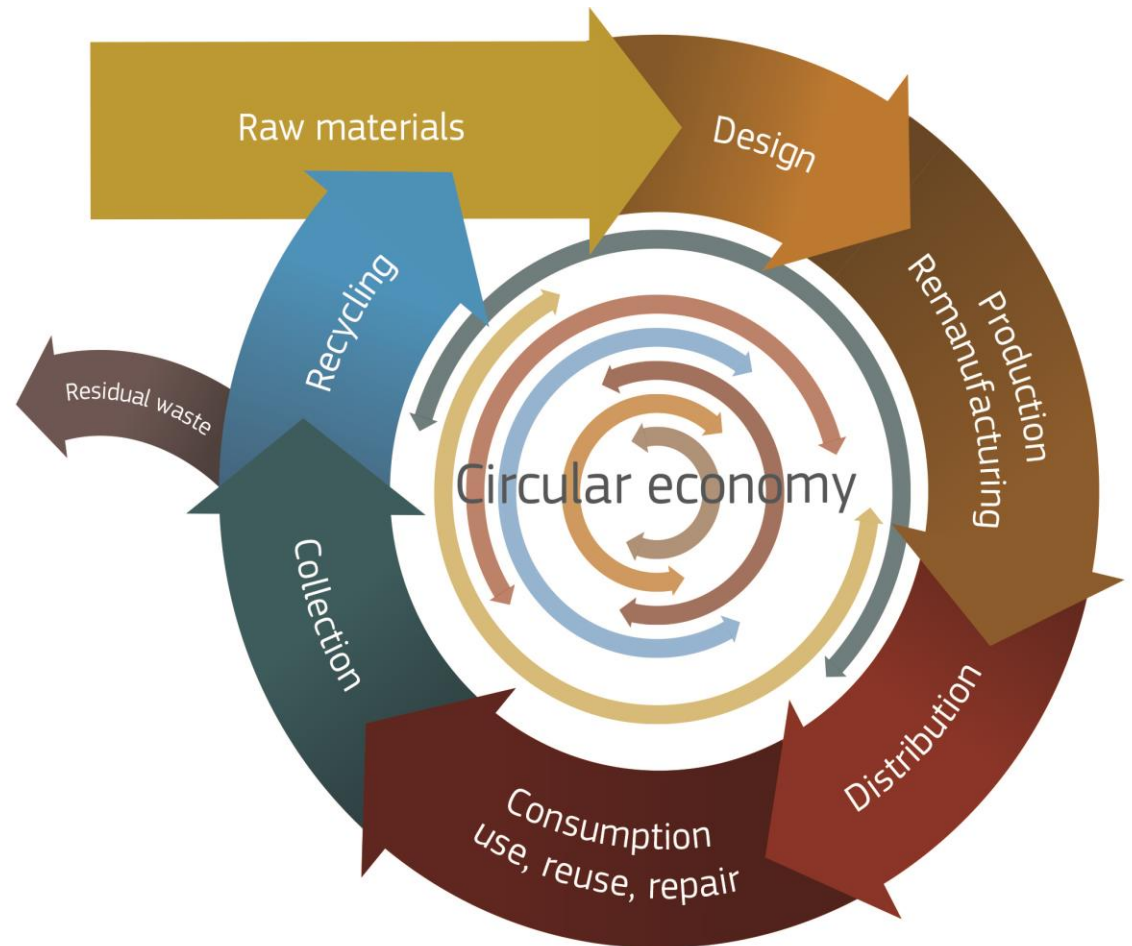


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What problem are we facing?

- ✓ *Global pressures on natural resources, rising costs, EU's dependency on imports, and environmental impacts*
- ✓ *The 20th century's economy model, based on plentiful and cheap resources and built on the principles of "take, make, waste", is unsustainable*

Circular Economy:
*a an alternative model
decoupling growth
from scarce resource
use*



Business models driving Circular Economy

- ✓ *Circular Supplies*
- ✓ *Resource Recovery*
- ✓ *Product Life Extension*
- ✓ *Sharing Platforms*
- ✓ *Product as a Service*

Source: Accenture Strategy 2014 -Circular Economy

Barriers to Circular Economy

Lack of

- ✓ internalisation of externalities and lack of resource pricing
- ✓ skills and investment in circular product design and production
- ✓ enablers to improve cross-cycle and cross-sector performance
- ✓ consumer and business acceptance
- ✓ know-how and economic incentives
- ✓ investment and innovation

Policy Actions promoting Circular Economy

Encouraging

- ✓ *Economic players to take into account the economic value of their environmental externalities*
- ✓ *The development of skills, awareness and investment in circular product design and production*
- ✓ *The improvement of cross-cycle and cross-sector performance*
- ✓ *Changes in consumption patterns*
- ✓ *Investment and innovation in recycling and recovery infrastructure and technologies*

Why focus on water?

- ✓ *Water is strongly linked to global socioeconomic development and green growth, but its importance is often underrated*
- ✓ *The 2014 Global Risk report of the World Economic Forum, indicates that a water crisis is the 3rd highest risk that could undermine economic growth*
- ✓ *According to the 2030 Water Resources report, by 2030, under an average economic growth scenario and if no efficiency gains are assumed, European water requirements would increase by nearly 50%*

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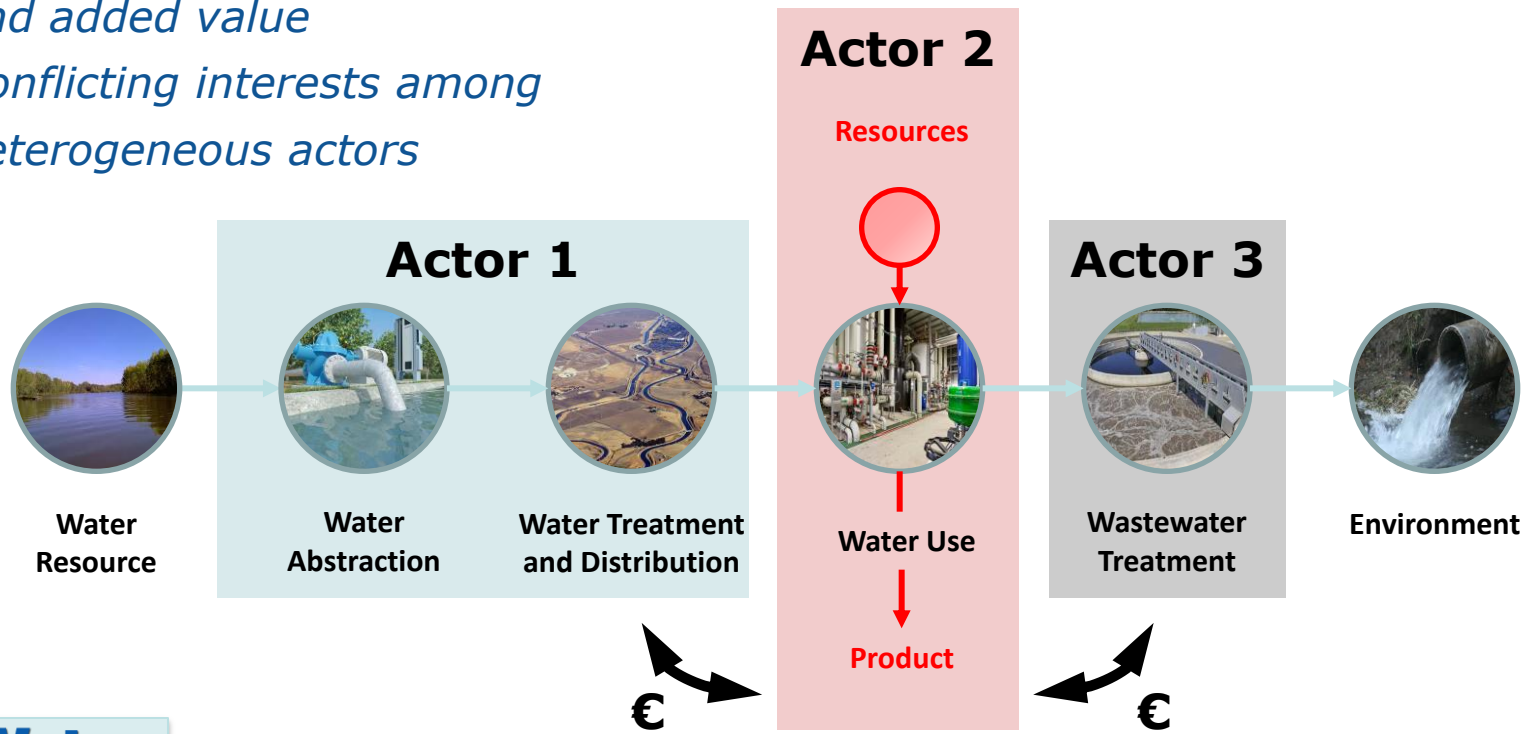
In the EU, on average, of the total water abstraction:

- 44 % is used for agriculture
- 40 % is used for industry and energy production (cooling in power plants), and
- 15 % is used for public water supply

The water use system

Socio-dynamics & Eco-innovation Uptake

- ✓ *Costs, services, products and added value*
- ✓ *Conflicting interests among heterogeneous actors*



Water in the context of circular economy

Key challenges for a systemic approach

- *Stimulate industrial symbiosis via water reuse and recycling*
- *Foster innovation in water reuse in agriculture*
- *Address the water use system, across production/product/services*
- *Address the water/energy/food/land-use interconnections*
- *Explore and create new business models for water services*
- *Go beyond the technological challenges*
- *Address the structural issues*
- *Stimulate the market*

OUR VISION

SYSTEMIC ECO-INNOVATION

when all societal stakeholders generate and share economic and environmental benefits and

where all kinds of innovations are addressed in combination with new organisational and managerial arrangements



<http://bookshop.europa.eu/en/systemic-eco-innovation-pbKI0214461/?CatalogCategoryID=h2YKABstrXcAAAEjXJEY4e5L>

HOW to IMPLEMENT?

EU Research and Innovation Programmes

- FP7, Horizon 2020

Group of Experts

- A Systemic Approach to Eco-Innovation for a Low Carbon Circular Economy

European Innovation Partnerships (EIP)

- EIP WATER, EIP RAW MATERIALS

EC Communication

- Revision EcoAP and Circular Economy

Horizon 2020 – The Societal Challenge approach

Societal Challenge: Climate action, environment, resource efficiency and raw materials

✓ Transition towards a green economy through eco-innovation

- **Research & Innovation actions**
- **Innovation actions**
- **Public Procurement**
- **Support to PPPs (SPIRE)**
- **Support to EIPs**
- **SMEs and Industrial focus**

H2020 Work Programme 2014-2015

• WASTE and WATER FOCUS AREAS

- Moving towards a **circular economy** through **industrial symbiosis**
- Promoting **eco-innovative waste management and prevention** as part of sustainable urban development
- A **systems approach** for the reduction, recycling and reuse of food waste
- An EU **near-zero waste stakeholder platform**
- Preparing and promoting **innovation procurement** for resource efficiency
- Bridging the gap: from **innovative water solutions** to market replication
- Stepping up **EU research and innovation cooperation** in the water area (Era-net co-found)
- Harnessing EU water **research and innovation results** for **industry, agriculture, policy makers and citizens**

- WASTE 131 M€

- WATER 163 M€

H2020 Work Programme 2016-2017

Industry 2020 in a Circular Economy (tbc)

- ✓ **Cross cutting Focus Area: LEIT and Societal Challenge pillars together**

Call for Ideas

- ✓ **Large-scale pilot/demonstration projects**
- ✓ **Systemic eco-innovation for a circular economy**
- ✓ **Develop the water services of the future, moving toward a circular economy approach.**

Deadline: 28 February 2015

Group of Expert on a Systemic Approach to Eco-Innovation to achieve a low-carbon, circular economy

- **5 Experts representing 5 main sectors**
 - ✓ Research, Regions and Cities, Waste Management, Large consumer goods Industry and Association of Plastic Industries
- **Meetings with key note speakers (Sept. – Nov. 2014)**
- **Outcome**
 - ✓ Recommendations in the form of a roadmap for R&I investments up to 2020 (Feb. 2015)

European Innovation Partnerships

EIP Water

Boosting opportunities – Innovating water

- **EIP WATER**

- ✓ Facilitates the development of innovative solutions to address major European and Global water challenges
- ✓ Supports the creation of market opportunities for these innovations, both inside and outside of Europe

- **EIP RAW MATERIALS**

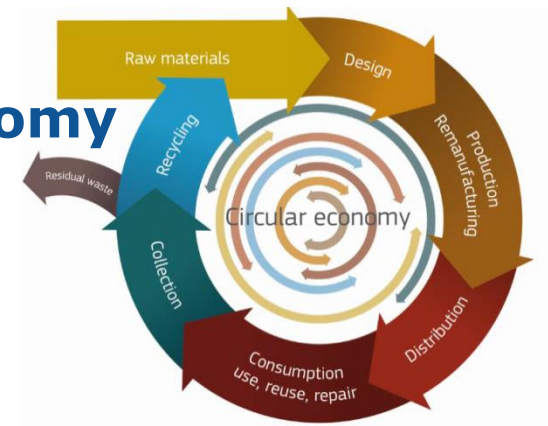
- ✓ Promotes both technological and non-technological **innovation along the entire value chain** of raw materials (i.e. exploration, extraction, processing, refining, re-use, recycling, substitution) involving stakeholders for relevant **upstream and downstream sectors**

EC COMMUNICATIONS

- **Revision of the Eco-Innovation Action Plan**
 - ✓ **DG ENV and DG RTD**



- **New Communication on Circular Economy**
 - ✓ New, more ambitious Proposal
 - ✓ Going beyond waste





Thank you for your attention!

Find out more:

www.ec.europa.eu/research/horizon2020