



Horizon 2020

Societal Challenge 5: Climate action, environment, resource efficiency and raw materials



**Climate Action and Resource Efficiency
Research and Innovation DG
European Commission**

Societal Challenges: funding (€ million, 2014-2020)

1. Health, demographic change and wellbeing	7 472
2. Food security, sustainable agriculture, marine and maritime and inland water research & the Bioeconomy	3 851
3. Secure, clean and efficient energy *	5 931
4. Smart, green and integrated transport	6 339
5. Climate action, environment, resource efficiency and raw materials	3 081
6. Europe in a changing world - inclusive, innovative and reflective societies	1 309
7. Secure societies - protecting freedom and security of Europe and its citizens	1 695

* Additional funding for nuclear safety and security from the Euratom Treaty activities (2014-2018)

Societal Challenge 5: Climate action, environment, resource efficiency and raw materials



Objective:

"to achieve a resource – and water – efficient and climate change resilient economy and society, the protection and sustainable management of natural resources and ecosystems, and a sustainable supply and use of raw materials, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources and eco-systems."

Societal Challenge 5: Climate action, environment, resource efficiency and raw materials

Broad lines of activities (2014-2020):

- **Fighting and adapting to climate change**
- **Sustainably managing natural resources and ecosystems**
- **Sustainable supply of non-energy and non-agricultural raw materials**
- **Transition towards a green economy through eco-innovation**
- **Global environmental observation and information systems**
- **Cultural heritage**

Societal Challenge 5: Climate action, environment, resource efficiency and raw materials



Work Programme 2014-2015: 3 calls

- Waste: A resource to recycle, reuse and recover raw materials
- Water innovation: Boosting its value for Europe
- Call: Growing a low carbon, resource efficient economy with a sustainable supply of raw materials

Contribution to 3 other Focus Area calls:

- Energy-efficiency (2014 calls only)
- Disaster-resilience: Safeguarding society and adapting to climate change
- Blue growth: Unlocking the potential of the oceans

Call

Waste: A resource to recycle, reuse and recover raw materials

Rationale:

- Major opportunity for European society and economy
- Reinforce EU position as a world market leader
- Need to cover the whole production and consumption cycle
- Involvement of wide range of stakeholders for more sustainable consumption behaviour and lifestyle change
- Supported by Public-Private Partnerships on Sustainable Process Industries (SPIRE PPP) and on Bio-Based Industries
- Contributing to the Resource Efficiency Road Map



Waste: A resource to recycle, reuse and recover raw materials

- Areas covered in 2015



Support for research and innovation on:

- Promoting **eco-innovative waste management and prevention** as part of **sustainable urban development**
- Ensuring sustainable use of **agricultural waste**, co-products and by-products

Coordination and support actions on:

- Towards **near-zero waste** at European and global level

Water innovation: Boosting its value for Europe

Rationale:

- Reinforce water innovation capacity and market uptake of successful research results
- Boost the competitiveness and growth of the European water sector
- Create leadership in water resources management and position Europe as a global market leader in water related innovative solutions
- Support the needs of relevant EU water, innovation and resource efficient policies, international commitments and related initiatives: EIP Water, EIP Agriculture, JPI on Water, SPIRE PPP, IPCC, Rio+20, etc.



Water innovation: Boosting its value for Europe

- Areas covered in 2015

Support for research and innovation:

- Bridging the gap: from **innovative water solutions** to **market replication**
- Integrated approaches to **water and climate change: integrated approaches to food security, low-carbon energy, sustainable water management and climate change mitigation**

Coordination and support actions:

- **Harnessing EU water research and innovation results** for industry, policy makers and citizens
- Strengthening **international R&I cooperation** in the field of water

ERA-NET: Stepping up **EU research and innovation cooperation** in the water area

HORIZON 2020



Call: 'Growing a low carbon, resource efficient economy with a sustainable supply of raw materials'



HORIZON 2020

Call: Growing a low carbon, resource efficient economy with a sustainable supply of raw materials



Fighting and adapting to climate change

Rationale:

- Building the foundations for the development of European climate services
- Supporting climate policy through the development of strategic capabilities in climate projection, prospective economic analysis and international cooperation
- Preparing for future advances in IPCC reports

Call: Growing a low carbon, resource efficient economy with a sustainable supply of raw materials



Fighting and adapting to climate change

Topics in 2015:

- Climate services for Europe and globally: ERA for climate services
- Improving the air quality and reducing the carbon footprint of European cities
- Coordinating and supporting research and innovation for climate action: earth system modelling and climate services

Call: Growing a low carbon, resource efficient economy with a sustainable supply of raw materials

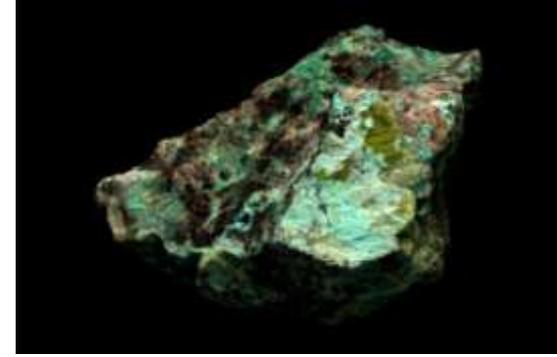


Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystems

Rationale:

- to provide knowledge and tools for a balanced management and protection of natural resources
- to contribute to reversing the trends that damage the environment
- to ensure that ecosystems continue to provide the resources, goods and services that are essential for sustainable development.

Call: Growing a low carbon, resource efficient economy with a sustainable supply of raw materials



Ensuring the sustainable supply of non-energy and non-agricultural raw materials

Rationale:

The European Raw Materials Initiative

- to ensure level playing field in access to resource in third countries
- to foster sustainable supply from European sources
- to boost resource efficiency and recycling

The European Innovation Partnership on Raw Materials

Ensuring the sustainable supply of raw materials to European economy and society, and aiming to:

- reduce import dependency
- improve supply conditions from the EU and other sources
- push Europe to the forefront in raw materials sectors
- provide alternatives in supply
- mitigate negative environmental and social impacts

Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystems



Rationale:

- to provide knowledge and tools for a balanced management and protection of natural resources, contribute to reversing the trends that damage the environment, and ensure that ecosystems continue to provide the resources, goods and services that are essential for sustainable development.

Topics in 2015

- More effective ecosystem restoration in the EU
- Coordinating and supporting R&I for the management of natural resources: an EU support mechanism for evidence-based policy on biodiversity and ecosystem services



Developing comprehensive and sustained global environmental observation and information systems

Rationale:

- Comprehensive environmental observation and information systems to stimulate the smart use of resources.
- Information and knowledge from these systems will also be used to support evidence-based policies and develop new opportunities in global markets.
- Free and open access to data for Earth observation and monitoring will be encouraged.

Topics in 2015:

- Demonstrating the concept of "Citizens' Observatories"
- Coordinating and supporting Earth Observation research and innovation in Europe and in the North African, Middle East, and Balkan region

Call: Growing a low carbon, resource efficient economy with a sustainable supply of raw materials



Cross-challenge issues

- Area Covered 2015

SME Instrument:

- Boosting the potential of **small businesses** for **eco-innovation** and a sustainable supply of **raw materials**

Call 'Disaster-resilience: Safeguarding society and adapting to climate change' (SC7)



Disaster-resilience: Safeguarding society and adapting to climate change

– SC5 topics



SC5 topics in 2015:

- Science and innovation for **adaptation to climate change**: from assessing costs, risks and opportunities to demonstration of options and practices
- Mitigating the impacts of **climate change and natural hazards on cultural heritage** sites, structures and artefacts

Call 'Blue Growth: Unlocking the potential of the oceans' (SC2)



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contribution to call **'Blue Growth: Unlocking the potential of the oceans'**

- The objective is to address wide and complex ocean challenges which are cross-cutting in nature

SC5 topic in 2015:

- Improving the preservation and sustainable exploitation of Atlantic marine ecosystems

Identifying H2020 opportunities

- "Bottom-up" opportunities...
 - Horizon 2020 pillars 1 and 2
 - More 'open' framework
- ...but also (perceived) top-down topics!
 - Cf. slide with SC2 topics...
 - ...but also other topics!
 - Also browse through the Work programmes and calls of other SC ("Food", Climate Action, Environment, Resource Efficiency and Raw Materials")

Identifying H2020 opportunities *ctd.*

- Work Programme (WP) 2015
 - P.1 of WP 2014-2015: *"Parts of the Work Programme that relate to 2015 (topics, dates, budget) are provided at this stage on an indicative basis only."*
 - Expected publication of WP 2015: Summer of 2014 (not before 22 July)

Further information about H2020?

- **NCP network** (National Contact Points)

- **Participant Portal**

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

- **Helpdesk**

<http://ec.europa.eu/research/enquiries>

- **Expert evaluators needed!**

<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>

- **Learn more about Horizon 2020**

<http://ec.europa.eu/horizon2020>

Thank you for your attention!