



L'ambiente in Horizon 2020

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THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

The background of the slide is a deep blue gradient with a glowing horizon line. A small globe of the Earth is positioned at the center of the horizon, with light rays emanating from behind it. The text 'HORIZON 2020' is written in a white, sans-serif font across the horizon line.

Initial Commission proposal for a €80 billion research and innovation funding programme (2014-2020); now just over €70 billion (79 billion in current prices including inflation)

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

GROWTH

JOBS

**Investing in science & innovation
to make the economy grow**



HORIZON 2020

Coupling R&I

Challenge based

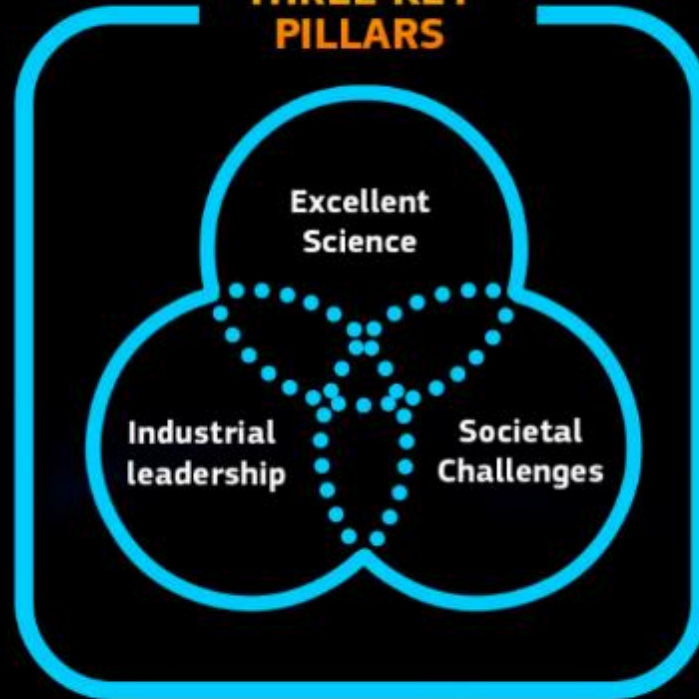
A simpler programme

**Horizon 2020 is designed to help
bring more ideas to the market**

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

THREE KEY PILLARS



H2020 Structure

Excellent Science

- **European Research Council**
 - Frontier research by the best individual teams
- **Future and Emerging Technologies**
 - Collaborative research to open new fields of innovation
- **Marie Skłodowska Curie actions**
 - Opportunities for training and career development
- **Research infrastructures** (including e-infrastructure)
 - Ensuring access to world-class facilities

Industrial Technologies

- **Leadership in enabling and industrial technologies**
 - ICT, nanotechnologies, materials, biotechnology, manufacturing, space
- **Access to risk finance**
 - Leveraging private finance and venture capital for research and innovation
- **Innovation in SMEs**
 - Fostering all forms of innovation in all types of SMEs

Societal Challenges

- **Health, demographic change and wellbeing**
- **Food security, sustainable agriculture, marine and maritime research & the bioeconomy**
- **Secure, clean and efficient energy**
- **Smart, green and integrated transport**
- **Climate action, resource efficiency and raw materials**
- **Inclusive, innovative and reflective societies**
- **Security society**

European Institute of Innovation and Technology (EIT)

Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)



Focus Areas

Personalising
health and
care

Sustainable
food security

Blue growth:
unlocking the
potential of
the oceans

Smart cities
and
communities

Competitive
low-carbon
energy

Energy
efficiency

Mobility for
growth

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

Water
innovation:
boosting its
value for
Europe

Overcoming
the crisis:
new ideas,
strategies
and
governance
structures for
Europe

Disaster-
resilience:
safeguarding
society and
adapting to
climate
change

Digital
security



Mainstreaming of climate and sustainable development objectives

- Climate action, resource efficiency and sustainable development supported across the whole of Horizon 2020
- At least 60% of the overall Horizon 2020 budget should be related to sustainable development
- Climate-related expenditure should exceed 35% of the overall Horizon 2020 budget



Horizon 2020: Main environment-related novelties

- **Integrated, systemic and challenge-driven approach**
- Transformation towards a **green economy** and society
- **More eco-innovation**, including social innovation
- **More socio-economic** and forward-looking activities
- Inclusion of **raw materials**
- Environment and health now under "**Health**" Challenge

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

**€3 081
million**



**Climate action, environment,
resource efficiency & raw materials**

MARKET - SUSTAINABLE SUPPLY OF RAW MATERIALS - LOW CARBON ECONOMY - MANAGING WATER RESOURCES

Research and
Innovation

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





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

Rationale:

- Major opportunity for European society
- Capitalising on EU strengths to reinforce EU position as a world market leader
- Whole production and consumption cycle
- Involvement of different stakeholders (incl. citizens), better organisation at EU level of different actors
- Supported by Public-Private Partnerships on Sustainable Process Industries (**SPIRE PPP**) and on Bio-Based Industries
- Contributing to the **Resource Efficiency Road Map**

Water innovation: Boosting its value for Europe





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.**

Fighting and adapting to climate change





Fighting and adapting to climate change

- 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 report**

**Protecting the environment, sustainably
managing natural resources, water,
biodiversity and ecosystem**

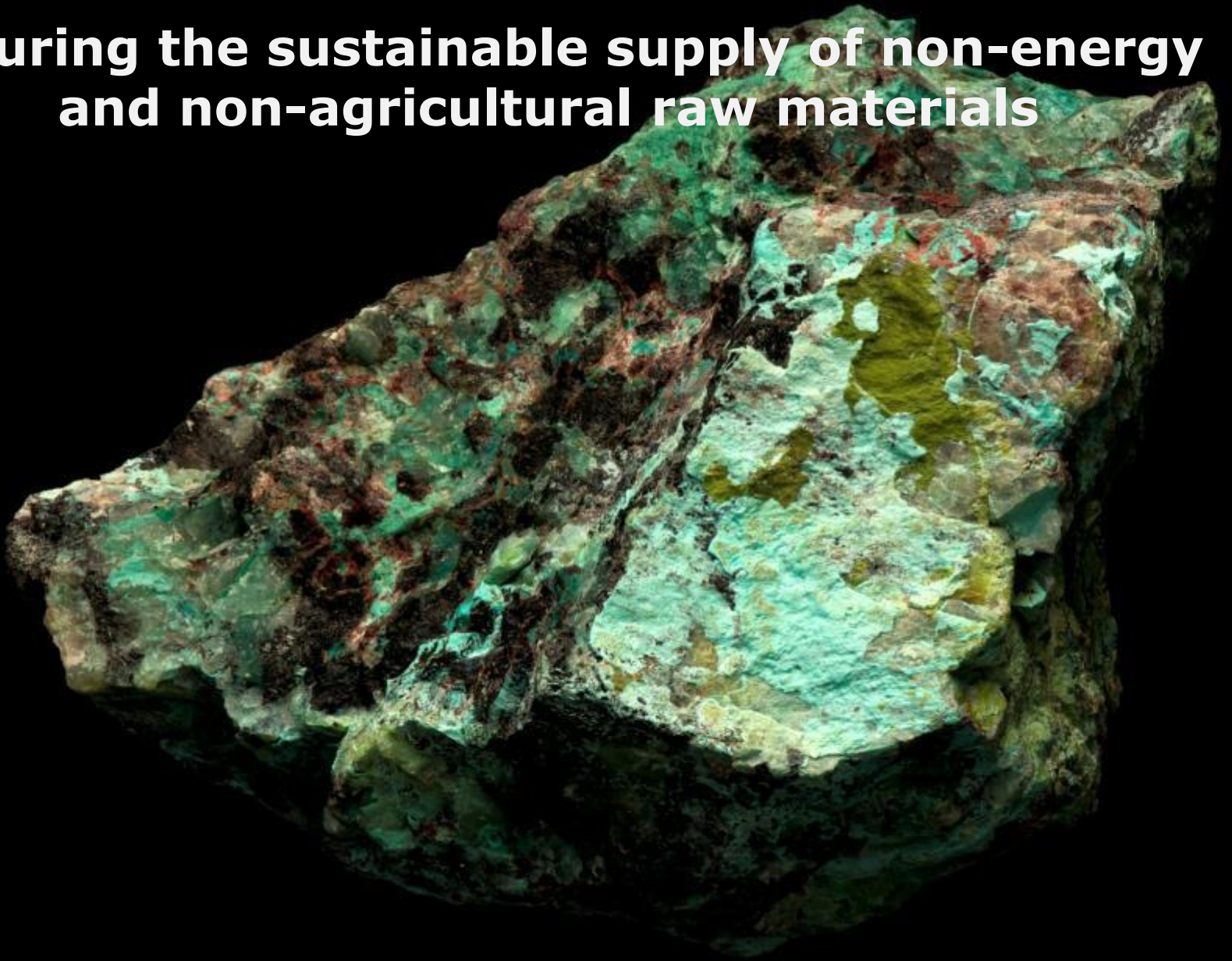




Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystem:

- The aim of this activity is to provide knowledge and tools for a balanced management and protection of natural resources.
- Research and innovation activities should therefore contribute to reversing the trends that damage the environment.
- Innovative actions should also ensure that ecosystems continue to provide the resources, goods and services that are essential for sustainable development.

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





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

- **The European "Raw Materials Initiative" (launched in 2008)**
 - Ensure level playing field in access to resource in third countries
 - Foster sustainable supply from European sources
 - Boost resource efficiency and recycling

- **The European Innovation Partnership on Raw Materials (COM(2012) 82 final - 29 February 2012)**
 - The overall objective of the EIP is to contribute to the 2020 objectives of the EU Industrial Policy to increase the share of industry on GDP to 20%, the Innovation Union flagship initiative, and the Resource Efficiency Policy by ensuring the sustainable supply of raw materials to European economy and society.
 - Specific:
 - 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



SIP adopted on 25 September 2013

Enabling the transition towards a green economy through eco- innovation





Enabling the transition towards a green economy through eco-innovation

Rationale:

- Decoupling growth from the use of natural resources
- Eco-innovation as the main driver
- Eco-innovation creates major opportunities for growth and jobs in Europe and internationally
- Green growth tackled globally and contributes to international commitments

**Developing comprehensive
and sustained global environmental
observation and information systems**





Developing comprehensive and sustained global environmental observation and information systems

- 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.



Societal Challenge 2 - Food security, sustainable agriculture, marine and maritime research & the bioeconomy

Blue Growth: Unlocking the potential of the oceans





Blue Growth: Unlocking the potential of the oceans

Rationale:

- The objective is to address wide and complex ocean challenges which are cross-cutting in nature
- Developing in-situ Atlantic Ocean Observations for a better management and exploitation of the maritime resources
- Improving the preservation and sustainable exploitation of Atlantic marine ecosystems
- Strengthening international cooperation in the field of marine sciences
- European polar research cooperation



Societal Challenge 3 - Secure, clean and efficient energy

Energy-efficiency





Energy-efficiency

Rationale:

- Historic buildings provide essential infrastructure in European cities but mostly need more energy efficient solutions for upgrading and adaptation



Societal Challenge 7 - Secure societies – Protecting freedom and security of Europe and its citizens

A photograph of a large, deep pothole in an asphalt road. The pothole is filled with loose gravel and has jagged edges. The surrounding asphalt is cracked and shows signs of wear. In the background, there is a concrete curb and some greenery. Overlaid on the image is red text that reads: "Disaster-resilience: safeguarding and securing society, including adapting to climate change".

**Disaster-resilience:
safeguarding and securing society,
including adapting to climate change**



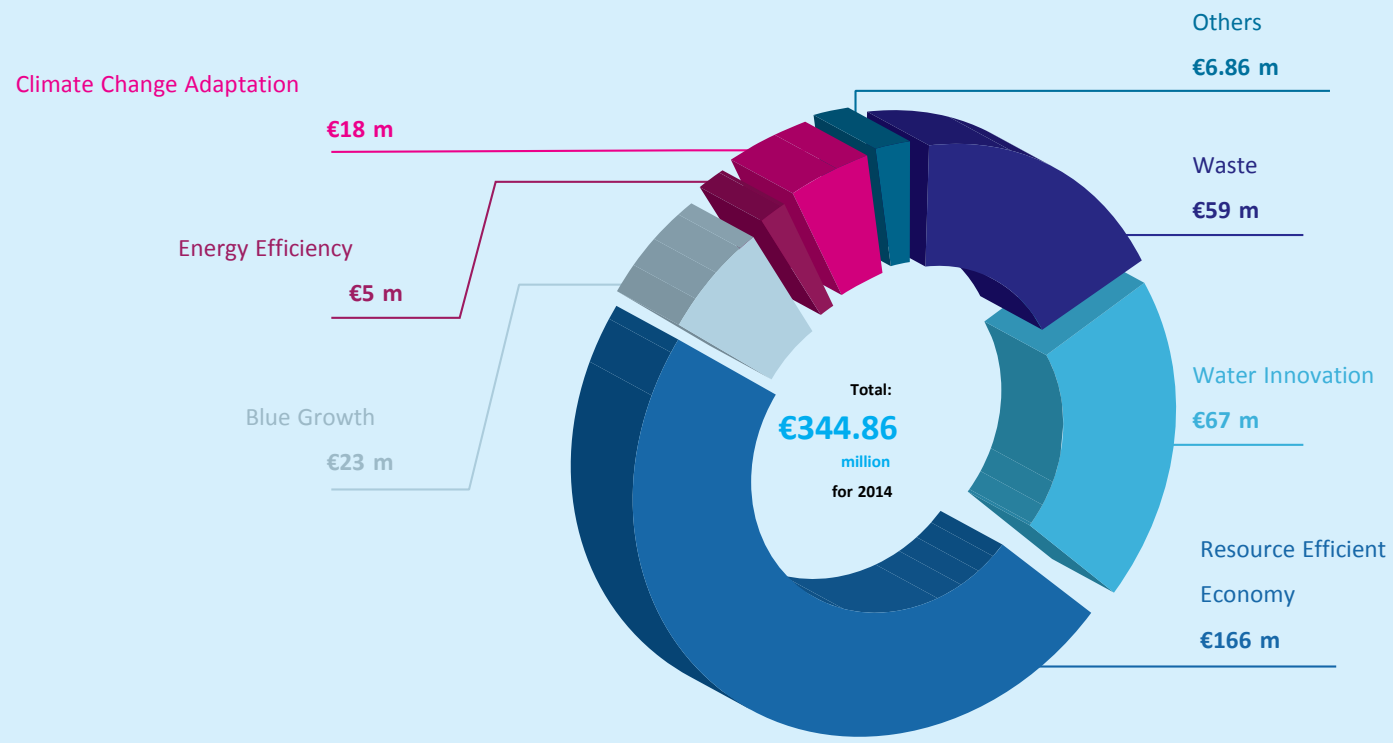
Disaster-resilience: Safeguarding society and adapting to climate change

Rationale:

- Adaptation to climate change: from assessing costs, risks and opportunities to demonstration of options and practices
- Natural hazards: towards risk reduction plans at national and European level



Climate action, environment, resource efficiency and raw materials





Useful links:

Participant Portal

<http://bit.ly/H2020PP>

Helpdesk

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

Learn more about Horizon 2020

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

National contact Points (NCPs):

<http://bit.ly/H2020NCP>

Enterprise Europe Network:

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

Register as an expert:

<http://bit.ly/H2020Experts>