Health and EO within Horizon Europe and Horizon 2020

Marjan van Meerloo
European Commission
Climate change and environmental degradation are an existential threat to Europe and the world. To overcome these challenges, Europe needs a new growth strategy that will transform the Union into a modern, resource-efficient and competitive economy, where:

• there are no net emissions of greenhouse gases by 2050

• economic growth is decoupled from resource use

• no person and no place is left behind

The European Green Deal is our plan to make the EU's economy sustainable. We can do this by turning climate and environmental challenges into opportunities, and making the transition just and inclusive for all.

1550 applications for the European Green Deal call – also aiding Europe’s recovery in the wake of the Covid-19 crisis, contributing directly to the EU’s Recovery Plan for Europe.
The European Green Deal (2)
EIC Horizon Prize on Early Warning for Epidemics

(Horizon 2020)
EIC Horizon Prize

- 6 prizes launched under the EIC-pilot Work Programme in 2017-2018
- For Earth observation and health -> EIC Horizon Prize for 'Early Warning for Epidemics' an inducement prize of € 5 M
- Challenge: scalable, reliable and cost-effective early-warning system prototype to forecast and monitor vector-borne diseases
- Effective management of big data in the EO domain shall be an essential element in improving 'early warning' capabilities
- Expected results include a demonstration of the prototype at local level: 'proven prototype' (6 month period)
- Closed! Launch - 26 April 2018, extended deadline - 16 February 2021
  - Ongoing evaluation – award ceremony foreseen for September 2021
Horizon Europe structure (budget € 95.5 billion for 2021 – 2027)

Pillar 1
Excellent Science
- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Pillar 2
Global Challenges and European Industrial Competitiveness
- Clusters
  - Health
  - Culture, Creativity and Inclusive Society
  - Civil Security for Society
  - Digital, Industry and Space
  - Climate, Energy and Mobility
  - Food, Bioeconomy, Natural Resources, Agriculture and Environment
- Joint Research Centre

Pillar 3
Innovative Europe
- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

Widening Participation and Strengthening the European Research Area
- Widening participation and spreading excellence
- Reforming and Enhancing the European R&I system
Horizon Europe proposed Missions

Five missions proposed on the 22 September during the R&I Days

1. Conquering Cancer: Mission Possible
2. A Climate Resilient Europe - Prepare Europe for climate disruptions and accelerate the transformation to a climate resilient and just Europe by 2030
3. Mission Starfish 2030: Restore our Ocean and Waters
4. 100 Climate-Neutral Cities by 2030 - by and for the citizens
5. Caring for Soil is Caring for Life

Dedicated sections in the HE WP foreseen for the Missions, where Mission-related call topics will be published.

A mission is a portfolio of actions across disciplines intended to achieve a bold and inspirational and measurable goal within a set timeframe, with impact for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens.
New approach to European Partnerships

New generation of objective-driven and more ambitious partnerships in support of agreed EU policy objectives

Key features
- Simple architecture and toolbox
- Coherent life-cycle approach
- Strategic orientation

Co-programmed
Based on Memoranda of Understanding / contractual arrangements; implemented independently by the partners and by Horizon Europe

Co-funded
Based on a joint programme agreed and implemented by partners; commitment of partners for financial and in-kind contributions

Institutionalised
Based on long-term dimension and need for high integration; partnerships based on Articles 185 / 187 of TFEU and the EIT-Regulation supported by Horizon Europe
Clusters in ‘Global Challenges and Industrial Competitiveness’

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Areas of intervention</th>
</tr>
</thead>
</table>
| Health                                        | • Health throughout the life course  
• Non-communicable and rare diseases  
• Tools, technologies and digital solutions for health and care, including personalised medicine |
|                                               | • Environmental and social health determinants  
• Infectious diseases, including poverty-related and neglected disease  
• Health care systems                           |
| Culture, creativity and inclusive society     | • Democracy and Governance  
• Social and economic transformations |
|                                               | • Culture, cultural heritage and creativity                                             |
| Civil security for society                    | • Disaster-resilient societies  
• Protection and Security |
|                                               | • Cybersecurity                                                                      |
| Digital, Industry and space                   | • Manufacturing technologies  
• Advanced materials  
• Next generation internet  
• Circular industries  
• Space, including Earth Observation  
• Emerging enabling technologies |
|                                               | • Key digital technologies, including quantum technologies  
• Artificial intelligence and robotics  
• Advanced computing and Big Data  
• Low-carbon and clean industry  
• Emerging enabling technologies |
| Climate, Energy and Mobility                  | • Climate science and solutions  
• Energy systems and grids  
• Communities and cities  
• Industrial competitiveness in transport  
• Smart mobility |
|                                               | • Energy supply  
• Buildings and industrial facilities in energy transition  
• Clean, safe and accessible transport and mobility  
• Energy storage |
| Food, bioeconomy, natural resources, agriculture and environment | • Environmental observation  
• Agriculture, forestry and rural areas  
• Circular systems  
• Food systems |
|                                               | • Biodiversity and natural resources  
• Seas, oceans and inland waters  
• Bio-based innovation systems in the EU Bioeconomy |
Environmental observation in HE

• Environmental observation is cross cutting over many parts of HE -> overall contributing to the European Green Deal objectives
• Ensure better access to and exploitation of environmental knowledge including decreasing in-situ gaps and ensuring availability
• Emphasising integration of information from different sources (space-based, airborne including drones, in-situ and citizens observations) with other relevant data
• Focus on downstream part of the value chain
• Targeting some specific domains – Including ONE HEALTH
Thank you!

#HorizonEU

http://ec.europa.eu/horizon-europe

For questions please contact:
marjan.van-meerloo@ec.europa.eu