

Horisontti 2020

Verkotu. Kansainvälisty. Menesty.

Climate action, environment, resource efficiency and raw materials: calls 2020

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Horizon 2020 – Structure and themes

I Excellent Science

1. European Research Council (ERC)
2. Future and Emerging Technologies (FET).
 - a) Open
 - b) Proactive
 - c) Flagships
3. Marie Skłodowska-Curie (MSCA) – actions: training, career development and mobility for researchers
4. Research Infrastructures

II Industrial Leadership

1. Leadership in Enabling and Industrial Technologies
 - 1.1. ICT
 - 1.2. nanotechnology
 - 1.3. materials
 - 1.4. biotechnology
 - 1.5. manufacturing and processing
 - 1.6. space
2. Risk finance: loans & equity funding
3. Innovation in SMEs
4. EIC Pilot

III Societal Challenges

1. Health, demographic change and wellbeing
2. Food security, sustainable agriculture and forestry, marine, maritime and inland water research and bioeconomy
3. Secure, clean and efficient energy
4. Smart, green and integrated transport
5. **Climate action, resource efficiency and raw materials**
6. Europe in a changing world: inclusive, innovative and reflective societies
7. Secure societies – protecting freedom and security of Europe and its citizens

20% of the budget or pillars II + III to SMEs
SME Instrument(1/3)
Collaborative projects (2/3)

Science with and for society, Spreading excellence and widening participation

Joint Research center JRC

European Institution of Innovation and Technology EIT

Nuclear research EURATOM

Indicative timetables

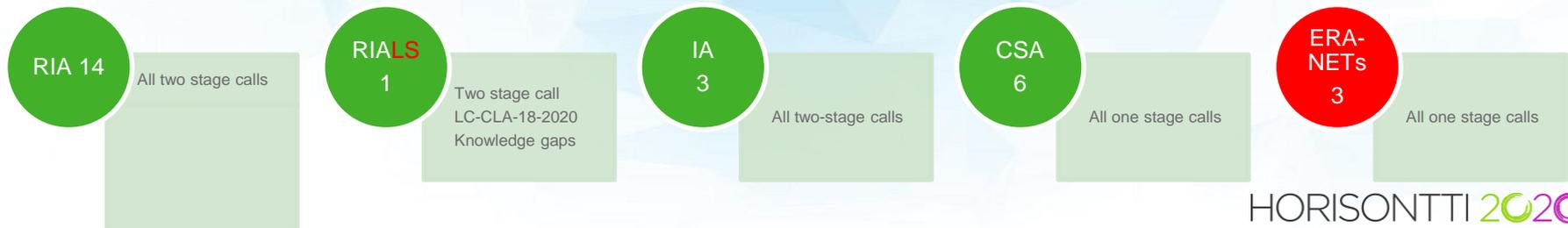
For single stage procedure:

- Call opening 12 Nov 2019; deadline 13 Feb 2020
- Evaluation: information max. 5 months from the final date for submission
- Grant agreements: signing max. 8 months from the final date for submission

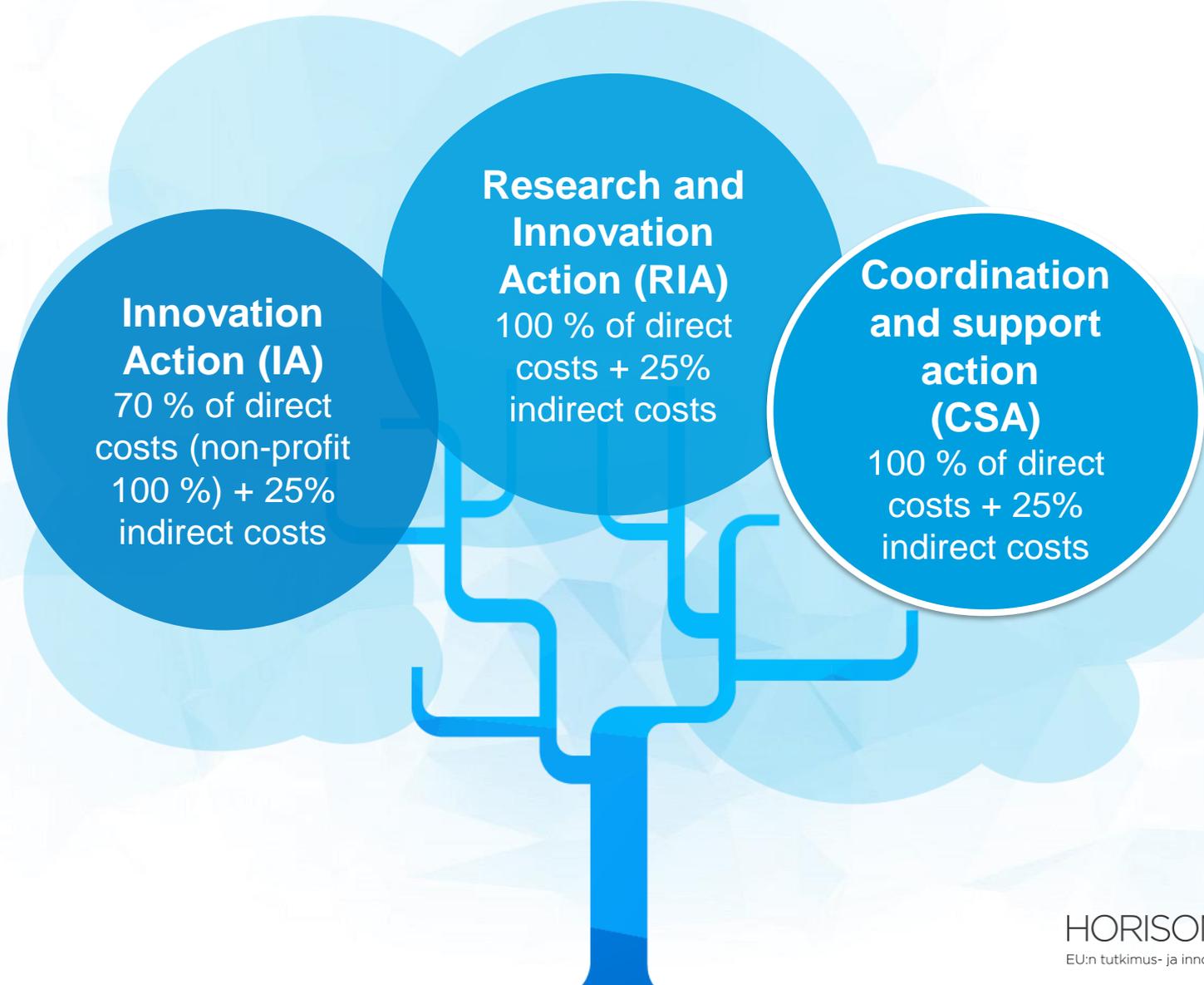
For two stage procedure:

- Call opening 12 Nov. 2019; deadlines 13 Feb. and 3 Sep. 2020
- Evaluation: information max. 3 months from the final date for submission for the 1st stage & max. 5 months from the final date for submission for the 2nd stage
- Grant agreements: signing max 8 months from the final date for submission of the second stage

See presentation/info days/plenary session 1/proposal tips



Actions



**Innovation
Action (IA)**
70 % of direct
costs (non-profit
100 %) + 25%
indirect costs

**Research and
Innovation
Action (RIA)**
100 % of direct
costs + 25%
indirect costs

**Coordination
and support
action
(CSA)**
100 % of direct
costs + 25%
indirect costs

Evaluation criteria

2 STAGE CALL

Excellence 3/5

Impact
3/5 (innovation
actions X 1.5)

Implementation
3/5

TOTAL 10/15

1 STAGE CALL

Excellence 4/5

Impact 4/5

No
implementation

TOTAL normally
8-8.5

Technology Readiness Level & Funding rates

RIA: 100 %					IA: 70 %			
1	2	3	4	5	6	7	8	9
Basic principles observed	Concept Formulized	Proof of Concept	Validation in lab	Technical validation in relevant environment	Demonstration in relevant environment	Demo in operational environment	System complete and operational	Commer- cial

TRL 5: LCA-CLA-14-2020 (RIA)

TRL 5-6: CE-SC5-24-2020 (RIA)

TRL 6-7: CE-SC5-28-2020 (IA);

TRL 6-7: SC5-10-2019-2020 (IA);

TRL 6-7: CE-SC5-07-2018-2019-2020 (IA)

Funding & Tenders

- Filter by programme/programme part/focus area/cross-cutting priority/call
 - Partner search
 - Support
 - Guidance and manuals
 - HelpDesk
 - FAQ
 - NCPs
 - National support
 - NCPs CaRE network
 - Projects and results
 - Dashboard
 - Cordis
 - EASME data hub
 - List of SC5 projects 2014-2018
- https://ec.europa.eu/research/environment/pdf/research_and_innovation_SC5_projects_2014-2018.pdf

2019 Information Days- Calls 2020

<https://ec.europa.eu/easme/en/section/horizon-2020-environment-and-resources/2019-information-days-calls-2020>



**Call – Building a low-carbon, climate resilient future:
climate action in support of the Paris Agreement
(H2020-LC-CLA-2018-2019-2020)
total budget 189.5 EUR million**

Call – Building a low-carbon, climate resilient future: climate action in support of the Paris Agreement (14 topics)

Decarbonisation
(RIA, IA)

Climate adaptation,
impacts and
services
(2 RIA, CSA)

Inter-relations
between climate
change, biodiversity
and ecosystem
services (3 RIAs)

The cryosphere
(RIA, CSA)

Knowledge gaps
(RIALS, CSA)

Earth observation
(2 RIAs)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-10-2020: Scientific support to designing mitigation pathways and policies . Three subtopics: A) Assessing and designing climate policies for the coming decade, B) Decarbonisation and life-style changes C) Science underpinning the preparation of NDCs after the 2023 Global Stocktake at the global scale.	25 (3 - 5)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Impacts

- providing measurable support to the EU's long term strategy on GHG emission reductions;
- providing national and global pathways towards the Paris Agreement's global temperature goal and insight into how these can inform countries' next NDCs;
- supporting the Stocktake Exercise by taking stock of collective progress towards the PA goals and investigating how progress can be accelerated;
- demonstrating how the latest climate science (including IPCC report) can be converted into practical advice for national mitigation action

Internationalisation (major emitters outside Europe and less-developed countries)

Info days: Rakonczay –niminen tiedosto;
Climate action, first part, ~10.11-10.27 + questions

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-11-2020: Innovative nature-based solutions for carbon neutral cities and improved air quality <i>Note: funding rates, eligibility and admissibility conditions, grant conditions</i>	30 (10)	2	IA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

What is a city? – see presentation

Impacts:

- the creation of an European reference framework and the establishment of EU leadership in a new global market for NBS;
- increased evidence and awareness of the benefits of re-naturing cities for combatting air pollution and mitigating climate change and for improving health, well-being and resilience to the impacts of climate change;
- creation of 'communities of practice';
- effective, better informed policy-and decision-making across Europe;
- documented, up-scalable and marketable NBS;
- enhanced stakeholder and citizen ownership of the solutions;
- enhanced implementation of relevant EU air quality regulations and environmental policies and programmes, including Paris Agreement and SDGs.

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-11-2020: Innovative nature-based solutions for carbon neutral cities and improved air quality <i>Note: funding rates, eligibility and admissibility conditions, grant conditions</i>	30 (10)	2	IA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Jatkuu..

Scope e.g.

- Cooperation and synergies with ongoing and future initiatives (Covenant of Mayors for Climate and Energy, EU-funded projects, knowledge platforms, etc.), in particular clustering activities with relevant NBS and citizen observatories projects (**dedicated task and resources**)
- Develop an interdisciplinary approach, including citizen science and the participation of applied natural sciences, social sciences, data science and humanities (**crucial**)

Info days: Enfedaque –niminen tiedosto;
Natural resources, ~12.40-12.50 + questions

Call – Building a low-carbon, climate resilient future: climate action in support of the Paris Agreement (14 topics)

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Earth observation
(2 RIAs)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-12-2020: Advancing climate services. Three subtopics: A) Mapping European coastal infrastructure at risk from sea-level rise, B) Detection and attribution of extreme events using Artificial intelligence C) Impacts of overshooting	22 (4 – 6)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Impacts:

- strengthened scientific knowledge on climate;
- better informed climate services and decision-making;
- enhanced adaptive capacity;
- enhanced action on adaptation;
- reduced vulnerability to climate change

A-topic: Cooperation with other projects (e.g. LC-CLA-13-2020), ICT

Info days: Drabicka –niminen tiedosto;
Climate action, first part, ~10.45-10.59 +
questions

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-13-2020: Climate resilience of European coastal cities and settlements	15 (10)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Impacts:

- improved decision-making on suitable adaptation options and coastal management strategies, in view of demographic, water supply, climate and land use changes on the basis of adaptation measures for specific local vulnerabilities, urban contexts and sectors in Europe and an assessment of coastal ecosystem services, adaptation costs and benefits;
- strengthened coastal adaptation network between scientists, engineers, policy-makers, stakeholders and the general public;
- improved integrated spatial management and adaptation of Europe's coastlines;
- the implementation of the Marine Strategy Framework Directive, the Water Framework Directive, the Flood Directive, the Natura and Habitats Directives and the Biodiversity strategy, and EU Climate Change Adaptation Strategy;
- underpinning of Integrated Coastal Zone Management and multi-level governance.

Clustering activities with other relevant ongoing and future actions (see presentation), a dedicated WP; front runners cities

Info days: Faivre –niminen tiedosto; Climate action, first part, ~11.08-11.19 + questions

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
LC-CLA-23-2020: Towards a comprehensive European mountain research strategy	1.5 (1.5)	1	CSA	12 Nov 2019	13 Feb 2020

Coordination and Support Action for R&I to advance current changes in mountain areas derived from climate changes (incl. impact human action, prediction of changes and foster observations for sound monitoring)

Impacts:

- raising scale and ambition of inter-disciplinary mountain regions research policy
- improved coherent and efficient use of resources
- significant extension of Copernicus and EuroGEOSS

International cooperation (Canada, China, India, Russia, United States, Latin America)

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Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-14-2020: Understanding climate-water-energy-food nexus and streamlining water-related policies	13 (4 – 5)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Increasing demands for water, energy, food in the context of climate change, demographic changes, economic development and international trade, creates conflicts in water allocation between these sectors.

-> there is a need to better align water-related or water-dependent policies

Impacts:

- More accurate evaluations of future demands for water, energy, food and related infrastructures;
- Enhance sharing knowledge and best practices in climate-water-energy-food nexus assessment and management and help create critical mass on capacity to innovate;
- Improve integrated water resources management and increase resilience to climate change;
- Help linking EU water policy objectives with the sustainable objectives of greening the CAP and energy efficiency policy objectives and assess the impacts of EU regulatory framework on a sustainable water-energy-food nexus;
- Reduce institutional fragmentation, reduce the water risks for the energy sector, and optimize market and trade solutions across the nexus;
- Strengthen EU role in international water issues, and become a leading actor on water diplomacy

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-14-2020: Understanding climate-water-energy-food nexus and streamlining water-related policies	13 (4 – 5)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Jatkuu

- Participation of relevant stakeholder is essential
- International cooperation
- Avoid duplication & seek synergies with ongoing activities
- TRL 5

Info days: Balabanis–niminen tiedosto;
Climate action, second part, ~12.18-12.26

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-15-2020: Forest Fires risk reduction: towards an integrated fire management approach in the E.U.	10 (10)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Impacts:

- national strategies for forest fire risk reduction and risk-informed decision-making, in compliance with the EU Forest Strategy and other relevant EU policies;
- improved coherence between EU policies' objectives and national legislative frameworks;
- more disaster-resilient communities through increased awareness and preparedness of populations at risk and a common culture of risk;
- increased knowledge exchange, sharing and access through relevant networks and platforms;
- harmonisation and exchange on methods of consistently recording and measuring wildfires;
- common framework for firefighting modules, training, exercises, incident management and command strategies to increase the awareness and preparedness of populations at risk

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-15-2020: Forest Fires risk reduction: towards an integrated fire management approach in the E.U.	10 (10)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Jatkuu

- Collaboration with leading research institutions with experience in extreme wildfires management such as in Australia, Canada, South Africa, the United States and other non-EU countries is highly encouraged (a dedicated WP)

Info days: Faivre–niminen tiedosto;
Natural resources ~12.10-12.22

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-16-2020: Multi-hazard risk management for risk-informed decision-making in the E.U.	5 (3 – 5)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Risks due to natural hazards have increased dramatically in Europe, due to deep changes in climate, land use and socio-economic evolution since the 20th century

- Improved disaster risk management and reduction requires **an integrated approach** to better forecast, prevent and adapt to multiple hazards, their interactions and impacts
- Risk managers and decision-makers need **innovative and comprehensive methodologies, models and tools that assess multi-hazard risks** and their associated cascading effects to prioritize mitigation/adaptation actions, plan preparedness and response operations and develop sustainable and resilient development pathways
- Actions shall contribute to define a common framework for risk and vulnerability assessments for areas exposed to multiple natural hazards

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-16-2020: Multi-hazard risk management for risk-informed decision-making in the E.U.	5 (3 – 5)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Actions should e.g.

- develop mapping tools and user-friendly ICT open interfaces to better understand the model scenarios and outputs
- envisage clustering activities with the relevant ongoing and future actions
- capitalise upon the work of relevant projects funded under previous and current H2020 Work Programmes (ks. Esitelmä)

Info days: Faivre–niminen tiedosto;
Natural resources ~12.30-12.37+ questions

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(RIA, CSA)

Knowledge
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Earth observation
(2 RIAs)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-17-2020: Polar climate: understanding the polar processes in a global context in the Arctic and Antarctic Regions	15 (7 – 8)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

- Proposals should aim at developing innovative approaches, building on existing data resources and infrastructures, the latest observational products (including in-situ observations), and state-of-the-art climate models, to **assess the key physical and chemical processes in the ocean and atmosphere and the key ocean-atmosphere-ice interactions**.
- Proposals should cooperate with relevant projects funded by the ESA Earth Observation Programme.
- In addition, they are encouraged to join the EU **Arctic** Cluster (<https://www.eu-polar.net.eu/eu-polar-cluster/>) in order to build synergies and maximise the complementarity of the different actions in the Cluster.
- Proposals should build upon previous actions funded under Horizon 2020 (*LC-CLA-08-2018*) and avoid duplication or overlap.
- International cooperation: Arctic Science Ministerial meetings
- Seven listed impacts (see WP p. 45-46)

Info days: Gambardella –niminen tiedosto;
Climate action, second part, ~13.00-13.10 + questions

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
LC-CLA-21-2020: Coordination of European Polar research	3 (3)	1	CSA	12 Nov 2019	13 Feb 2020

- Proposals should provide a **platform** to co-develop the strategies to advance and further **coordinate the European Polar Research action** and its contribution to the policy-making processes.
- This should include **the prioritisation of research areas** during transdisciplinary workshops, strategies for capacity building related to meaningful **stakeholder involvement**, allocation of seed money for the preparation of pre-studies and **interaction with national funding agencies on ways of building synergies and optimising the use of resources.**
- Proposals should **cooperate with the relevant services of the European Commission and provide evidence-based policy advice.**
- Proposals should **coordinate the EU Arctic Research Cluster** ensuring a good cooperation between the projects in areas such as communication, dissemination, and stakeholder engagement.

Info days: Gambardella –niminen tiedosto;
Climate action, second part, ~13.10-13.20

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Earth observation
(2 RIAs)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
LC-CLA-18-2020: Developing the next generation of Earth System Models (see p. 57 – grant conditions)	22 (10 – 12)	2	RIALS	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Earth System Models (ESMs) are essential tools for supporting climate policy-making and the Paris Agreement implementation -> development is still needed

Impacts

- improved models for the provision of climate services;
- increased confidence in climate projections;
- sustaining European leadership in climate science and Earth System Modelling;
- supporting the operationalization of the Paris Agreement with a view to delivering effective climate action;
- informing major international scientific assessment reports (e.g. IPCC).

This topic is part of the lump sum funding pilot scheme
-> see presentation, and links therein (S. Zavadlav)

Info days: Tulkens –niminen tiedosto;
Climate action, second part, ~12.26-12.36 + questions

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
LC-CLA-22-2020: Enhancing the Belmont Forum Collaborative Research Action on Climate, Environment and Health	3 (3)	1	CSA	12 Nov 2019	13 Feb 2020

Belmont Forum <https://www.belmontforum.org/>

a partnership of funding organizations

committed to the advancement of interdisciplinary and transdisciplinary science providing knowledge for understanding, mitigating and adapting to global environmental change

Impacts:

- contribute to policy advice on climate change and health at international and EU level and supporting the EU's international commitments with respect to the Paris Agreement, UNFCCC and others related to climate change and health sciences;
- bolstering a network of projects funded under the CRA (Collaborative Research Action) call with relevant EU-funded (see presentation) projects addressing climate, environment and health;
- better flow of information and knowledge dissemination on climate change, environment and health to low and medium income countries;
- raising global awareness of climate impacts on human, plant and animal health.

Info days: Tamborra –niminen tiedosto;
Climate action, second part, ~12.45-12.56
+ questions

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Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
LC-CLA-19-2020: Integrated GEOSS climate applications to support adaptation and mitigation measures of the Paris Agreement	10 (4 – 5)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

- Research and Innovation Action to develop integrated solutions tailored to the needs of Europe to support adaptation and mitigation measures of the Paris agreement.
- Timely and reliable EO data/information are indispensable to support the EU in its international commitment on climate change
- Developing integrated solutions depends on European capability to combine multiple EO data-sets –incl.GEOSS and Copernicus –with modelling , socio-economic and in-situ data (spatial and temporal) in different domains.
- Scope; see presentation

Info days van Merloo –niminen tiedosto;
Climate action, second part, ~13.36-13.44 + questions

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
LC-CLA-20-2020: Supporting the implementation of GEOSS in the Arctic in collaboration with Copernicus	15 (15)	1	RIA	12 Nov 2019	

- In order to gain more insight in the fast rate of **climate, ecological and environmental change taking place in the Arctic** and to facilitate well-informed decisions, there is a need to **develop coordinated Earth observations and information services** specifically targeting this region, also building on the essential contribution of indigenous knowledge and community-based monitoring systems.
 - These observations and services need to be delivered in order to support a sustainable development in the Arctic, particularly for responding to the needs of **the people who live there**.
 - Observations and services are also necessary to improve the **monitoring and predicting capabilities on changes that may affect other parts of the planet**, and in particular the Northern hemisphere.
 - The challenge and suitable actions to alleviate adverse consequences were identified in the **ASM2 (international cooperation)** Joint Statement of Ministers.
- See listed impacts (WP p. 54)

Info days: **Gambardella –niminen tiedosto;**
Climate action, second part, ~13.20-13.32 + questions



**Call – Greening of the economy in line with the
Sustainable Development Goals (SDGs)
(H2020-SC5-2018-2019-2020)
total budget 128.86 EUR million**

Call – Greening the economy in line with the Sustainable Development Goals (SDGs)

13 topics

Connecting economic and environmental gains – the circular economy
(3 RIA, IA, CSA)

Raw materials
(IA, CSA)

Innovating cities for sustainability and resilience
(RIA)

Protecting and leveraging value of our natural and cultural assets: Nature-based solutions, disaster risk reduction and natural capital accounting
(RIA, CSA)

Specific support and implementation aspects
(ERA-Nets 3)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
CE-SC5-24-2020: Improving the sorting, separation and recycling of composite and multi- layer materials	20 (4 – 5)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Challenge: **Composite or multi-layer materials** are increasingly used in different applications and combination of different materials brings **challenges for the sorting, separation, recycling or composting of the materials as well as reusing them for manufacturing processes**. A better understanding of these challenges should **inform the design** of composites and multi-layer materials

Scope: Proposals are expected to **develop new or improve existing innovative processes for the sorting, disassembly/separation, recycling and/or the introduction into manufacturing process** of materials from products made of composite and/or multi-layer materials and **assess the potential barriers** for their implementation

Proposals should aim to **optimise value retention in the economy**, rather than downgrading the composite or multi-layer materials for applications with low quality requirements, and **provide recommendations for the design** of these applications, to enable an increase in volume and quality of reuse and recycling of these products.



These **recommendations should also cover requirements for product information** to enable effective identification and management after use (including consumer targeted labelling, where appropriate).

Environmental, social and economic impacts should be assessed in a holistic way, whole lifecycle taken into account. Proposals are also expected to provide evidence of the potential market impact – i.e. **quantitative information of the market size!**

Participation of **relevant industrial partners** (technology providers, end-users etc.) is considered important and activities are expected to achieve **TRL 5-6** by the end of the project.

This topic is in support of the **European Strategy for Plastics in a Circular Economy**. Selected projects are strongly encouraged to **participate in joint activities with other projects** selected under other topics in H2020 supporting the Plastics Strategy and applicants should **plan the necessary budget** to cover those activities.

Impact: •increased **yield and quality of sorting**, •increased **recycling** of raw materials & **reduced use of virgin raw materials**, •increased **knowledge on how to design** for reuse and recycling, •increased knowledge on the process **environmental footprint**

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
CE-SC5-25-2020: Understanding the transition to a circular economy and its implications on the environment, economy and society	10 (3 – 4)	2	RIA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Challenge: The **transition to a circular economy entails a systemic transformation** of entire value chains, covering design, production and consumption phases, so that the value of products, materials and resources can be **maintained in the economy for as long as possible**, while **reducing environmental impact**. It also aims at **increasing material productivity, including de-materialisation**, and **exploring new representations and practices of property** for individuals and collectives.

Understanding the transition to a circular economy with its positive and negative implications will be important for the development and adoption of circular economy approaches (policy measures, best practices on different levels etc.).

Scope: The research will **assess the current state of transition** towards the circular economy in **relevant economic sectors**, and **analyse possible transition scenarios** as well as their outcomes and impacts

- 
- It will **identify the key factors** (regulatory, governance-based, technological, market, cultural, societal, etc.) that can **stimulate or hinder this transition.**
 - **selected sectors** should be among the ones identified in the **EU Circular Economy Action Plan** (additional sectors could also be selected)
 - **implications of the transition** (positive/negative, for the economy/ environment/society) **will be assessed qualitatively and as much as possible quantified** (->models for the purpose should be developed)
 - implications considered should include social, economic and environmental aspects (see call text)
 - **role of public awareness and acceptance and other social aspects**, including gender issues, **need to be considered**
 - **policy recommendations** at the local, national, European and global levels **will be derived from the research**
 - social sciences and humanities & gender issues important
 - international cooperation encouraged, in particular with Africa

The topic is in support of the European Plastics Strategy -> projects are encouraged to participate in joint activities with other related projects and to demonstrate support to common coordination and dissemination activities (i.e. plan a budget for this).

Impact: •more systemic policy decisions, •efficient/effective use of primary/secondary resources, •new business opportunities, •tools for impact assessment, •creating incentives and support the development of strategic governance, •supporting the achievement of climate commitments and specific quantitative targets on resources efficiency

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
CE-SC5-28-2020: Develop and pilot circular systems in plastics, textiles and furniture sectors	15 (7 – 8)	2	IA	12 Nov 2019	13 Feb 2020 (1 st) 3 Sep 2020 (2 nd)

Innovation in sectors like plastics, textiles and furniture, has often taken place in **silos**, optimising for a specific aspect of the product or material. **Improvements** in one domain have **often weakened value creation in other parts of the value chain**.

Systemic innovation should create value for the system as a whole. However, this potential has been explored to a limited extent – hence **there is a need for designing and piloting circular systems, incl. business models, products and materials, and covering the entire value chain in scope, to test and demonstrate systemic innovation** towards a circular economy in practice.

Scope: The objective of this action is to **develop and pilot systemic circular economy innovations in plastics, textiles and furniture sectors** that take into account value retention throughout the lifecycle of the product or service. Such innovations could cover **design of business models, products and materials, industrial symbiosis**, assuming the **interdependencies and connections** to the overall system in which the product/service is offered, are considered and acted upon.

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- proposals are expected to provide **quantitative information on the size of the targeted market**, how that would evolve as a result of the proposed solution
 - **environmental and other societal benefits should be assessed from a lifecycle perspective and quantified**
 - participation of **stakeholders across the value chain** (e.g. material/product producers, end-users, collection/sorting/recycling organisations, etc.) is considered important.
 - data and **information exchange across the different actors** should be deployed, tested and evaluated to ensure value retention throughout the life cycle
 - activities are expected to achieve **TLR 6-7** by the end of the project
 - The topic is in support of the European Plastics Strategy -> projects are encouraged to **participate in joint activities** with other related projects and to demonstrate support to common coordination and dissemination activities (i.e. plan a budget for this).

Impact: project results are expected to contribute to •effective use of both primary and secondary resources in Europe, •first-hand insights on how to develop and support systemic innovation towards a circular economy, •evidence to inform more systemic policy decisions, •systemic knowledge of product service systems and circular design management systems, •new business opportunities, •long-term value creation and positive impacts on the environment, health and quality of life of users, •the achievement of climate commitments and specific quantitative targets on resources efficiency, recycling rates etc.

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
CE-SC5-29-2020: A common European framework to harmonise procedures for plastics pollution monitoring and assessments	2 (2)	1	CSA	12 Nov 2019	13 Feb 2020

Challenge: To develop long-term solutions to reduce plastic pollution, a thorough **understanding of the emission problem and its scale** is needed. At present, there are **no harmonised EU-wide methods for determining the composition and occurrence of plastics in various relevant environmental compartments** (e.g. marine waters, marine sediments, freshwater, soil, air) and a **commonly accepted terminology is missing**. Rather than continuing to have different organisations and bodies at international or European level proposing their own definitions, a **coordinated approach needs to be promoted**.

Scope: to develop a common European framework to harmonise procedures for plastics pollution monitoring and assessments by bringing together the main national research groups to present jointly designed process proposals for the determination of plastics in different environmental matrices.

A **critical mass of actors and increased synergies** between all relevant research areas (e.g. marine, surface, groundwater, drinking and waste water, soil, air), **industry, regulators, associations and relevant EU services and standardisation bodies** will be a key element to address the challenge.

It is expected that **different sampling, extraction and analysis methods are evaluated for their suitability and feasibility** (availability, cost-effectiveness, quality of data generated) for use within future monitoring activities. This action should:

- ensure **adequate flexibility for taking into account all relevant aspects prior to formal standardisation** procedures and provide:
 - a) harmonised methods for sampling, sample preparation and analytical detection of different kind of plastics
 - b) monitoring methods to enable a comprehensive inventory to classify the occurrence, to identify emission, pollution priorities and changes
 - c) methods for identification and analysis of plastics in the environment
 - e) recommendations for future relevant EU policy and legislation
 - f) increased knowledge on the occurrence of plastics in the environment with respect to related questions, such as physical and chemical adverse effects on biota
- deliver **guidance on data management**, including the need for relevant infrastructures, cooperation on sharing data, creation of joint databases and the promotion of meta-analysis of existing data. No data collection involved!
- supports the European Plastics Strategy -> projects are encouraged to **participate in joint activities** with other related projects and to demonstrate support to common coordination and dissemination activities (plan a budget!)

Impact: •**future prioritisation of measures** in Europe and possibilities to review their effectiveness, •**fostering policymaking**, •**bringing the EU to the forefront in the field of plastic pollution monitoring and assessing**, •improving the economic viability of analytical instrument manufacturers, •**establishing a foundation for the implementation of EU/ global level monitoring programmes for nano-, micro- and macro-plastic.**

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
CE-SC5-30-2020: Plastics in the environment: understanding the sources, transport, distribution and impacts of plastics pollution	5 (5)	2	RIA	12 Nov 2019	13 Feb 2020 (1 st) 3 Sep 2020 (2 nd)

Challenge: Efforts to **understand the sources, transport and distribution of plastic pollution** have mainly focused on the **marine** environmental compartment. At the same time **majority of marine plastic litter originates from land-based sources** and that plastic litter of all sizes is prevalent in all environmental compartments (freshwater, marine, terrestrial, biological and atmospheric). **Understanding of the main sources and transport mechanisms of plastics into and through the environment is needed. This needs to be combined with determination of the quantity and composition, an understanding of plastic degradation processes in different environmental compartments and an assessment of plastics impacts on key species and ecosystems.** Experiences from **different disciplines**, such as hydrology, oceanography, limnology, monitoring, modelling, chemistry, toxicology, and risk assessments, and from relevant stakeholders, is needed.

Scope: The aim of this action is to gain a better understanding on the sources, transport, distribution and impact of plastic pollution.



The **main areas for research** activities should include:

- a) **Sources of plastic pollution** to different environmental compartments;
- b) **Transport and pathways** of plastics into/through different environmental compartments;
- c) **Occurrence/distribution** of plastic across all environmental compartments;
- d) **Accumulation**, including in soil and the food chain;
- e) **Degradation mechanisms for different plastic materials** under range of environmentally conditions;
- f) **Physical and chemical effects of plastic pollution on different biotic and abiotic environments**

Proposals should address different ecosystems, geographical areas and spatial scales. ->**case studies in selected areas, across Europe and comparative data** on the contribution of point and diffuse sources and transport pathways to the scale of plastic pollution. To enhance understanding of the processes that drive the transport and fate of plastics in different ecosystems, **computational models validated with empirical data, that predict hotspots and sinks of plastics would be also needed**. Proposals should also **enhance the current understanding of plastic degradation** in the environment, including the characterisation of leaching chemicals and plastic degradation products.



Cooperation with existing national and EU funded activities, such as JPI Oceans initiative, is encouraged

supports the European Plastics Strategy -> projects are encouraged to **participate in joint activities** with other related projects and to demonstrate support to common coordination and dissemination activities (plan a budget!)

Expected impacts:

- objectives of the Plastics Strategy, in particular with regard to the possibilities for future prioritisation of measures in Europe (prioritisation);
- development of mitigation solutions
- identifying promising intervention points and targeted actions for fighting plastics pollution (CE Action Plan and Plastics Strategy)
- establishing the EU as a scientific leader in understanding and solving plastic pollution.

Call – Greening of the economy in line with the Sustainable Development Goals (SDGs)

13 topics

Connecting economic and environmental gains – the circular economy
(3 RIA, IA, CSA)

Raw materials
(IA, CSA)

Innovating cities for sustainability and resilience
(RIA)

Protecting and leveraging value of our natural and cultural assets: Nature-based solutions, disaster risk reduction and natural capital accounting
(RIA, CSA)

Specific support and implementation aspects
(ERA-Nets 3)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
CE-SC5-07-2020: Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery scheme <i>(transferred to Cross-cutting activities!)</i>	40 (8 – 13)	2	IA	3 Jul 2019	5 Feb 2020 (1 st) 3 Sep 2020 (2 nd)

Challenge: **Securing the sustainable access to raw materials** for the European industry.

Complex primary and secondary resources contain many **different raw materials** and their **processing, reuse, recycling and recovery schemes are complex**. The challenge for industry is to **scale up promising raw materials production technologies** and to **demonstrate that raw materials can be produced in an innovative and sustainable way** in order to make sure that **research and innovation end up on the market to strengthen the competitiveness** of the European raw materials industries, **meet ambitious energy and climate targets for 2030, minimise environmental impacts and risks, and gain the trust of EU citizens** in the raw materials sector.

Scope: Actions should **develop and demonstrate innovative pilots** for the clean and sustainable production of **non-energy, non-agricultural raw materials** in the EU from **primary and/or secondary sources** finishing at Technology Readiness Levels (TRL) **6-7**

All actions should:

- contribute to **achieving the targets of the EIP on Raw Materials, particularly in terms of innovative pilot actions on processing, refining and/or recycling for the innovative production of raw materials**, and to **building the EU knowledge base of primary and secondary raw materials** by feeding into the EC Raw Materials Information System – RMIS
- widely contribute to improving awareness
- **facilitate the market uptake of solutions** developed through industrially- and user-driven multidisciplinary consortia
- justify the relevance of selected **pilot demonstrations in different locations**
- include an **outline of the initial exploitation and business plans**

Clustering and cooperation with other selected projects is encouraged.

Actions for this topic should address only one of the following five sub-topics:

- a. Sustainable processing and refining of primary and/or secondary raw materials
- b. Recycling of raw materials from end-of-life products
- c. Recycling of raw materials from buildings and infrastructures
- d. Advanced sorting systems for high-performance recycling of complex end-of-life products (2 previous years – no proposals reaching stage 2)
- e. Sustainable metallurgical processes (new sub-topic!)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
CE-SC5-08-2020 Raw materials policy support actions for the circular economy – Expert Network on Critical Raw Materials (transferred to Cross-cutting activities!)	3 (3)	1	CSA	3 Jul 2019	5 Feb 2020

Challenge: securing sustainable access to primary and secondary raw materials, including metals, industrial minerals, construction raw materials, wood, and particularly Critical Raw Materials (CRMs) for the EU economy. Supply of CRMs to the EU often mined as by-products and usually still have recycling rates below 1% -> need for an expert advice in support of decision-making at the EU level covering all the raw materials and their value chains.

- All actions should contribute to improving EU official statistics and to building the EU knowledge base of primary and secondary raw materials (EC Raw Materials Information System – RMIS)
- Actions should strengthen an EU expert network and community covering all raw materials screened in the CRM assessment, support the Commission in policy making related to CRM and in the analysis of the future supply and demand of raw materials, policy and technology gaps and innovation potential along the raw materials value chains.
- Clustering and cooperation with other projects encouraged



Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
SC5-10-2019-2020: Raw materials innovation actions: exploration and Earth observation in support of sustainable mining. Two subtopics C) Mining pilots D) pilots on substitution of critical and scarce materials.	41.86 (8 – 13)	2	IA	12 Nov 2019	13 Feb 2020 (1st) 3 Sep 2020 (2nd)

Challenge: Securing the **sustainable access to raw materials**, including metals, industrial minerals and construction raw materials, and **particularly Critical Raw Materials (CRM), is of high importance** for the EU economy. **Substitution provides an alternative approach to reduce the EU’s consumption of CRMs and decrease the relative dependence upon imports** as well as related adverse environmental impact.

The **challenge for industry is to scale up promising technologies for raw materials production or substitution of critical raw materials, and to demonstrate** that raw materials can be produced in an innovative and sustainable way.

This specific challenge addresses two major targets of the European Innovation Partnership (EIP) on Raw Materials: the development of "innovative pilot actions“: (subtopic c) and finding substitutes for at least 3 applications of critical and scarce raw materials (subtopic d).



Scope: Actions should develop **innovative pilots** demonstrating clean and sustainable production or substitution of non-energy non-agricultural raw materials in the EU, finishing at Technology Readiness Levels **(TRL) 6-7**.

All actions should:

- contribute to **achieving the objectives and targets of the EIP on Raw Materials** and to **building the EU knowledge base of primary and secondary raw materials** by feeding into the RMIS
- widely contribute to improving awareness
- **facilitate the market uptake of solutions** developed through industrially- and user-driven multidisciplinary consortia
- justify the relevance of selected **pilot demonstrations in different locations**
- include an **outline of the initial exploitation and business plans** with clarified management of intellectual property rights, and commitment to the first exploitation

Clustering and cooperation with other selected projects is encouraged as well as international cooperation.

Actions should address only one of the sub-topics.

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
SC5-26-2020: Sustainable management in extractive industries	2 (2)	1	CSA	12 Nov 2019	13 Feb 2020

Challenge: In order to secure the sustainable access to primary raw materials, including metals, industrial minerals, construction raw materials, and particularly CRM for the EU economy, there is a need to tackle a number of specific non-technology challenges related to the raw materials policy framework including access to mineral deposits, land use planning and permitting procedures.

Scope: the actions should

- strengthen raw materials policy framework and foster mineral production in the EU
- ensure cross-sectoral policy coordination and integration aspects covering economic, environmental and social aspects in the value chain
- develop a toolkit applicable across the EU Member States for assessing socio-economic and environmental impacts
- avoid duplication and build up on the results of the previous actions
- contribute to improving EU official statistics and building the EU knowledge base of primary and secondary raw materials (RMIS)
- envisage clustering activities with other relevant selected projects for co-operation , sharing results etc. (dedicated WP)

Call – Greening of the economy in line with the Sustainable Development Goals (SDGs)

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Specific support and implementation aspects
(ERA-Nets 3)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
SC5-27-2020: Strengthening international collaboration: enhanced natural treatment solutions for water security and ecological quality in cities (<i>see p. 136- eligibility conditions</i>)	10 (5)	2	RIA	12 Nov 2019	13 Feb 2020 (1 st) 3 Sep 2020 (2 nd)

OECD EC harmonised definition of a city:

https://ec.europa.eu/regional_policy/sources/docgener/focus/2012_01_city.pdf

Scope:

- Identify and review examples of innovative natural water treatment systems
- Develop methodologies and guidance; new business models & standards
- Pilots/demonstrations for testing innovative approaches
- Monitoring, methodologies for public/social engagement
- Clustering activities (!), international cooperation

Cross-cutting priorities:

- International Cooperation
- Gender

Impact:

- Increased use of innovative natural water treatment measures
- Enhanced water availability – reduced pressure on existing freshwater resources
- Increased investment from urban authorities/ water companies/ property dev.
- Sharing of capacity, expertise and know-how
- Increased business opportunities in Europe and globally

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Specific support and implementation aspects
(ERA-Nets 3)

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadlines
SC5-32-2020: Addressing wild pollinators decline and its effects on biodiversity and ecosystem services	5 (5)	2	RIA	12 Nov 2019	13 Feb 2020 (1 st) 3 Sep 2020 (2 nd)

Scope:

- Develop tools, guidelines and methodologies to better understand and analyse the trends and causes of wild pollinators decline...under farming and other land management practices and ecosystem functioning
- Assess and evaluate th wild pollinators ecosystem services
- Address the relations between plant diversity and pollinator diversity
- A systemic approach
- Public engagement, dissemination
- Build on previous EU-funded projects, IPBES reports, Copernicus
- Inform EU, national and regional policy processes and actions

Impact:

- Mitigate and reverse trends in wild pollinators decline
- Better informed EU-wide and global pollinators relevant policy
- Accurate assessment/prediction/valuation/mapping of ecosystem services
- Deliver key knowledge & methodologies
- An integrated assessmetn framework to address pollinators decline

Topic	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
SC5-33-2020: Monitoring ecosystems through research, innovation and technology	3 (3)	1	CSA	12 Nov 2019	13 Feb 2020

Scope:

- Design an EU-wide framework for monitoring biodiversity and ecosystem services integrating different data sources and monitoring activities at different levels
- Advice on the best EU-level monitoring approaches for key targets
- Contribute to a more comprehensive and long-term monitoring of EU ecosystems
- Expected to work with relevant actors to ensure long-term implementation of biodiversity and ecosystems services monitoring

Impact:

- The implementation of the Bioeconomy strategy
- The implementation of ecosystem related EU policies, action plans, programmes
- Proposing EU-level monitoring approaches of key EU ecosystem and biodiversity targets
- The integration of citizen-science data and research data depositories into publically accessible EU-level data

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Specific support and implementation aspects
(ERA-Nets 3)

Topics	Total budget/ budget per project (EUR Mil)	Stages	Action	Opening	Deadline
SC5-34-2020: ERA-NET Cofund action on conservation and restoration of degraded ecosystems and their biodiversity, including a focus on aquatic systems Academy of Finland	5 (5)	1	ERA-NET Cofund	12 Nov 2019	13 Feb 2020
SC5-35-2020: ERA-NET Cofund action on enhancing urban transformation capacities	5 (5)	1	ERA-NET Cofund	12 Nov 2019	13 Feb 2020
SC5-36-2020: ERA-NET Cofund action on raw materials Business Finland	5 (5)	1	ERA-NET Cofund	12 Nov 2019	13 Feb 2020

General information and services on Public-Public-Partnerships (P2Ps) is provided by ERA LEARN project <https://www.era-learn.eu/network-information/h2020-calls-for-p2p/2020-era-net-cofund-csa>

More information in our webpages

SA <https://www.aka.fi/fi/rahoitus/hae-rahoitusta/>

BF <https://www.businessfinland.fi/suomalaisille-asiakkaille/ajankohtaista/>



Other relevant calls, which SA and BF will fund

BiodivErSA: 2019-2020 Call on the theme "Biodiversity and Climate Change"

- Indicative schedule: Call opens on 2 September 2019, closes on 10 April 2020 (and with a mandatory submission of pre-proposals by 5 November 2019)
- More information soon: <http://www.biodiversa.org/1587>
- Contact person Science Adviser Harri Hautala (etunimi.sukunimiATaka.fi)
- Academy's webpage <https://www.aka.fi/fi/tiedepoliittinen-toiminta/kansainvalinen-toiminta/eurooppa/era-netit--ja-inconetit/kaynnissa-olevat-era-netit-ja-muut-eu-yhteistyoverkostot/biodiversa/>



NCP-verkostot apunasi

NCP network in Finland

Yhteystiedot

Information on all aspects of participation in H2020

Guidance on H2020 topics and types of action

Monitoring Finnish participation in EU projects (statistics)

Advice on proposal writing

NCPs from Business Finland and the Academy of Finland



NCPs CaRE – project

- has received funding from the European Union's Horizon 2020 research and innovation programme <http://www.ncps-care.eu/>
- forms a joint cooperation network of experienced and less-experienced NCPs on Societal Challenge 5 which aims at pooling their resources and know-how to raise the overall quality of services provided to their clients.
- strengthen transnational cooperation in Europe by involving 23 formally nominated NCPs (SA) and 26 NCPs from partner organisations (BF)
- activities include teaming and twinning schemes, the compilation of best practices handbooks and manuals, events, meetings and trainings both on-line and on a face-to-face basis, as well as a wide range of other communication and dissemination tools and platforms

NCPs CaRE project: services for applicants

Useful guides

- [H2020 SC5 calls for 2020](#) (2019)
- [General observation on ESR Analysis](#) (2017)
- [Evaluators recommendations for applicants](#) (2017)
- [Do's and don't's for Applicants](#) (2017)

Partner search tool

- <http://partnersearch.ncps-care.eu/>



Additional information

Online sources of information

EC EASME H2020 SC5 challenge

<https://ec.europa.eu/easme/en/horizon-2020-societal-challenge-climate-action-environment-resource-efficiency-and-raw-materials>

Funding & Tenders H2020

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/h2020>

EC information days SC5 2020 calls

<https://ec.europa.eu/easme/en/horizon-2020-environment-resources-information-days>

SC5 Finnish pages

<https://www.businessfinland.fi/suomalaisille-asiakkaille/palvelut/rahoitus/horisontti-2020/yhteiskunnalliset-haasteet/ilmastotoimet-ymparisto-resurssitehokkuus-ja-raaka-aineet/>

SC5 twitter

<https://www.linkedin.com/groups/6691505/profile>

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KIITOS 😊 😊 😊