

H2020 Green Deal

Building a low-carbon, climate resilient future: Research and innovation in support of the European Green Deal	Space Interest	Action type	EC Cont.
Area 1: Increasing Climate Ambition: Cross sectoral challenges			
LC-GD-1-1-2020: Preventing and fighting extreme wildfires with the integration and demonstration of innovative means - Subtopic 1	Specifically mentions making the best use of existing EU initiatives and services such as <i>Copernicus</i> , <i>Galileo</i> and <i>EGNOS</i> as well as more general referral to the use of <i>satellites, pseudo-satellites</i> and aircraft including drones. Also includes the use of land/air robotics for use by emergency responders	Innovation Action	€15-20M
LC-GD-1-1-2020: Preventing and fighting extreme wildfires with the integration and demonstration of innovative means - Subtopic 2	Expected impact includes coordination of demonstration activities that are deployed into <i>Copernicus Emergency Management System</i> (EMS) e.g. for Rapid Mapping, Risk & Recovery; <i>Copernicus Land Service</i> e.g. for monitoring changes in land cover and land use; <i>Copernicus Atmosphere Monitoring Service</i> e.g. for detecting, monitoring the intensity of fires and forecasting pollutants propagation; <i>Copernicus Security Service</i> e.g. for support to EU external action; the <i>Group on Earth Observations</i> and <i>Galileo Emergency Warning Service</i>	Coordination and Support Action	€2-3M
LC-GD-1-2-2020: Towards Climate-Neutral and Socially Innovative Cities	Includes developing innovative urban greening assessment methodologies for planning and monitoring GHG emissions reduction to meet the Green Deal ambitious targets - existing monitoring and forecasting programmes, in particular <i>Copernicus</i> , should be properly taken into account where relevant.	Research and Innovation Action	€53M
LC-GD-1-3-2020: Climate-resilient Innovation Packages for EU regions - Subtopic 1	Mentions the use of operational climate services (e.g. <i>Copernicus Climate Change Service</i>) available for public institutions and key sectors	Innovation Action	€10-15M

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LC-GD-1-3-2020: Climate-resilient Innovation Packages for EU regions - Subtopic 2	Expected impact includes improved knowledge access to adaptation solutions through synergies and/or integration of the online platform with Climate-ADAPT, <i>Copernicus services</i> and other existing Pan-European platforms	Coordination and Support Action	€3M
Area 2: Clean, affordable and secure energy			
LC-GD-2-1-2020: Innovative land-based and offshore renewable energy technologies and their integration into the energy system			
LC-GD-2-2-2020: Develop and demonstrate a 100 MW electrolyser upscaling the link between renewables and commercial/industrial applications			
Area 3: Industry for a clean and circular economy			
LC-GD-3-1-2020: Closing the industrial carbon cycle to combat climate change - Industrial feasibility of catalytic routes for sustainable alternatives to fossil resources			
LC-GD-3-2-2020: Demonstration of systemic solutions for the territorial deployment of the circular economy			
Area 4: Energy and resource efficient buildings			
LC-GD-4-1-2020: Building and renovating in an energy and resource efficient way	Mentions the use of digital and <i>EGNSS</i> based methods of design and construction, smart monitoring and tracking of building and renovation processes	Innovation Action	€10-12M
Area 5: Sustainable and smart mobility			

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<p>LC-GD-5-1-2020: Green airports and ports as multimodal hubs for sustainable and smart mobility - Area A: Green Airports</p>	<p>Actions under the transport heading should include applying innovative digital and <i>EU satellite-based solutions</i> , including new tools and traffic optimisation mechanisms for multimodal access, passenger and freight flows into and out of the airport, as well as between airports, facilitating airport access and reducing traffic from/to the city or other nodes. Actions under the cross cutting heading should use <i>EU satellite-based solutions</i> to effectively manage resources and assets, including management of information and production of knowledge, taking into account all the related safety and security aspects of the solutions developed and proposed</p>	<p>Innovation Action</p>	<p>€15-20M</p>
<p>LC-GD-5-1-2020: Green airports and ports as multimodal hubs for sustainable and smart mobility - Area B: Green Ports</p>	<p>Actions should demonstrate seamless and highly efficient logistics operations, for integrated sea/river- port-hinterland connections (e.g. between sea/river, rail and road), to enable modal shifts and system-wide door-to-door multimodal passenger mobility and freight transport. Demonstrations should also include performing pilot activities to showcase the positive environmental effects of digitalisation (incl. <i>EU satellite-based solutions</i>) in ports, particularly with clean (e.g. electrified/hydrogen) <i>connected and automated vehicles and cranes</i> , as well as intelligent port systems and dynamic vessel traffic flows for improved routing and scheduling, to minimise ship time at port, enabling efficient and automated logistics chains and multimodal inter-connections;</p>	<p>Innovation Action</p>	<p>€15-20M</p>
<p>Area 6: Farm to Fork</p>			

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<p>LC-GD-6-1-2020: Testing and demonstrating systemic innovations in support of the Farm- to-Fork Strategy - Subtopic A. Achieving climate neutral farms by reducing GHG emissions and by increasing farm-based carbon sequestration and storage</p>	<p>Proposals should pay particular attention to including the most appropriate mix of innovations, such as novel, digital and <i>space- based technologies using EGNSS and Copernicus data and services</i></p>	<p>Innovation Action</p>	<p>€6-12M</p>
<p>LC-GD-6-1-2020: Testing and demonstrating systemic innovations in support of the Farm- to-Fork Strategy - Subtopic B. Achieving climate neutral food businesses by mitigating climate change, reducing energy use and increasing energy efficiency in processing, distribution, conservation and preparation of food</p>	<p>Proposals should pay particular attention to including the most appropriate mix of innovations, such as novel, digital and <i>space- based technologies using EGNSS and Copernicus data and services</i></p>	<p>Innovation Action</p>	<p>€6-12M</p>
<p>LC-GD-6-1-2020: Testing and demonstrating systemic innovations in support of the Farm- to-Fork Strategy - Subtopic C. Reducing the dependence on hazardous pesticides; reducing the use and increasing the efficiency of fertilisers; reducing the losses of nutrients from fertilisers, towards zero pollution of water, soil and air</p>	<p>Proposals should pay particular attention to including the most appropriate mix of innovations, such as novel, digital and <i>space- based technologies using EGNSS and Copernicus data and services</i></p>	<p>Innovation Action</p>	<p>€6-12M</p>
<p>LC-GD-6-1-2020: Testing and demonstrating systemic innovations in support of the Farm- to-Fork Strategy - Subtopic D. Reducing the dependence on the use of antimicrobials in animal production and in aquaculture</p>	<p>Proposals should pay particular attention to including the most appropriate mix of innovations, such as novel, digital and <i>space- based technologies using EGNSS and Copernicus data and services</i></p>	<p>Innovation Action</p>	<p>€6-12M</p>
<p>LC-GD-6-1-2020: Testing and demonstrating systemic innovations in support of the Farm- to-Fork Strategy - Subtopic E. Reducing food losses and waste at every stage of the food chain including consumption, while also avoiding unsustainable packaging</p>	<p>Proposals should pay particular attention to including the most appropriate mix of innovations, such as novel, digital and <i>space- based technologies using EGNSS and Copernicus data and services</i></p>	<p>Innovation Action</p>	<p>€6-12M</p>

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<p>LC-GD-6-1-2020: Testing and demonstrating systemic innovations in support of the Farm- to-Fork Strategy - Subtopic F. Shifting to sustainable healthy diets, sourced from land, inland water and sea, and accessible to all EU citizens, including the most deprived and vulnerable groups</p>	<p>Proposals should pay particular attention to including the most appropriate mix of innovations, such as novel, digital and <i>space- based technologies using EGNSS and Copernicus data and services</i></p>	<p>Innovation Action</p>	<p>€6-12M</p>
<p>Area 7: Biodiversity and ecosystem services</p>			
<p>LC-GD-7-1-2020: Restoring biodiversity and ecosystem services</p>	<p>Activities related to improving ecosystem condition should be integrated into best practice monitoring activities within respective monitoring governance schemes for example <i>Earth Observation-based monitoring, using Copernicus data</i></p>	<p>Innovation Action</p>	<p>€16-25M</p>
<p>Area 8: Zero-pollution, toxic free environment</p>			
<p>LC-GD-8-1-2020: Innovative, systemic zero-pollution solutions to protect health, environment and natural resources from persistent and mobile chemicals</p>	<p>Projects should include elements such as the detection and identification of specific pollution problems and wherever relevant, applicants are invited to make use of</p>	<p>Research and Innovation Action</p>	<p>€8-12M</p>
<p>LC-GD-8-2-2020: Fostering regulatory science to address combined exposures to industrial chemicals and pharmaceuticals: from science to evidence-based policies</p>			
<p>Area 9: Strengthening our knowledge in support of the EGD</p>			

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<p>LC-GD-9-1-2020: European Research Infrastructures capacities and services to address European Green Deal challenges - Subtopic (b) Enhancing European research infrastructures for greenhouse gases observation in and around cities</p>	<p>The action should seek, at all stages, synergies and interoperability among European research infrastructures and with air quality monitoring networks as well as coordination with European observational programmes and initiatives such as <i>Copernicus</i> (including the CO2 monitoring Task Force), <i>GEOSS</i> and WMO. In particular an appropriate framework to coordinate with or contribute to key relevant European initiatives such as <i>Copernicus</i>. The expected impact should include a strengthened and sustained <i>Copernicus in-situ component</i>.</p>	<p>Research and Innovation Action</p>	<p>€13M</p>
<p>LC-GD-9-1-2020: European Research Infrastructures capacities and services to address European Green Deal challenges - Subtopic (c) Enhancing observations for air quality and citizens' health in urban areas</p>	<p>The action should explore, at all stages, synergies and interoperability with European research infrastructures, among air quality monitoring networks and, when relevant, <i>satellite-based observations</i>. The action should propose an appropriate framework to coordinate with or contribute to key relevant European initiatives such as <i>Copernicus</i>.</p>	<p>Research and Innovation Action</p>	<p>€8M</p>

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<p>LC-GD-9-2-2020: Developing end-user products and services for all stakeholders and citizens supporting climate adaptation and mitigation</p>	<p>The projects under this topic should build on existing services and frameworks, such as <i>Copernicus</i>, <i>GEOSS</i>, <i>EMODnet</i> and <i>ESA actions</i> . This includes addressing the <i>downstream part of the value chain</i> and engage with end users and stakeholders, customising of data and exploitation platforms, the use, scale-up and replication of existing service models, brokerage of knowledge and dissemination to the public. Actions can focus on contributing to delivering the <i>next-generation of climate services</i> , in collaboration with the commercial sector, through addressing part or all of the downstream part of the value chain, focusing on sectoral and geographical gaps, providing actionable information to non-specialists for adapting to extreme climate events and new climatic conditions through tools, platforms (e.g. <i>GEOSS & Copernicus</i>) and/or mobile applications. <i>international cooperation is encouraged</i> in particular for this topic addressing the climate priority of the <i>Group on Earth Observation (GEO)</i> .</p>	<p>Research and Innovation Action</p>	<p>€3-5M</p>
<p>LC-GD-9-3-2020: Transparent & Accessible Seas and Oceans: Towards a Digital Twin of the Ocean</p>	<p>Proposals should address the integration of data from existing or new automated sensors and autonomous mobile and fixed platforms, additional structured and unstructured data, alternative sources such as private companies data, citizen science or historic data collected before the digital age (chemical, physical, biological and ecological) and delivered through EMODnet and <i>Copernicus</i></p>	<p>Innovation Action</p>	<p>€12M</p>
<p>Area 10: Empowering citizens for the transition towards a climate neutral, sustainable Europe</p>			
<p>LC-GD-10-1-2020: European capacities for citizen deliberation and participation for the Green Deal</p>			

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LC-GD-10-2-2020: Behavioural, social and cultural change for the Green Deal			
LC-GD-10-3-2020: Enabling citizens to act on climate change, for sustainable development and environmental protection through education, citizen science, observation initiatives, and civic engagement			
Area 11: International cooperation			
LC-GD-11-1-2020: Accelerating the green transition and energy access Partnership with Africa	<i>Copernicus data</i> and products may be used to support the optimal location of some infrastructures (hydro energy, wind energy, solar energy, even maybe coastal marine energy) and may also support activities to evaluate the human and environmental impact of these new energy structures and the loss of biodiversity associated with them.	Innovation	€5-10M