



Innova

NETWORKING DEI GRUPPI OPERATIVI DEL PEI AGRI Utilizzo dei droni in agricoltura di precisione

IL CLUSTER 6 DEL NUOVO PROGRAMMA HORIZON EUROPE, I COLLEGAMENTI CON IL PEI AGRI E LE OPPORTUNITÀ PER I GO

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Research and Innovation

Horizon Europe: structure





Budget - Distribuzione





KEY ELEMENTS

Pillar 2- Global Challenges and European Industrial Competitiveness

- Impact-driven approach The impact defines the wider effects on society, the economy and science to be targeted by research and innovation activities, but not the manner in which to achieve them. This is entirely up to the imagination and skill of the applicants.
- **Top-down approach** R&I topics are predefined (difference with ERC/MSCA)
- Collaborative approach Target: multi-beneficiary consortia made up of participants from different countries (difference with ERC/MSCA)
- **Industry role** and citizen
- **¬** European **Partnerships** and **Missions**



Eligible activities (Main types of action)

RESEARCH AND INNOVATION ACTION (<u>RIA</u>)

Activities aiming primarily to establish new knowledge or to explore the feasibility of a new or improved technology, product, process, service or solution.

This may include basic and applied research, technology development and integration, testing, demonstration and validation on a small-scale prototype in a laboratory or simulated environment.

Funding rate: 100% of eligible costs

INNOVATION ACTION (IA)

Activities directly aimed at producing plans and arrangements or designs for new, altered or improved products, processes or services, possibly including prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

Funding rate: 70% (<u>except for non-</u> profit legal entities, where the funding rate is up to 100%) of the total eligible costs



Activities contributing to the objectives of the Horizon Europe Programme, excluding R&I activities (e.g. networking, awareness raising, coordination, stakeholder engagement)

Funding rate: 100% of the total eligible costs





Il contesto politico



GREEN DEAL EUROPEO

Adoperarsi per divenire il primo continente a impatto climatico zero.



UN'EUROPA PRONTA PER L'ERA DIGITALE

La strategia digitale dell'UE doterà le persone di competenze inerenti a una nuova generazione di tecnologie.



UN'ECONOMIA AL SERVIZIO DELLE PERSONE

L'UE deve creare un ambiente più attraente per gli investimenti e una crescita che offra lavori di qualità, in particolare per i giovani e le piccole imprese.

ALTRE POLITICHE EUROPEE

Politica agricola comune, Politica comune della pesca, Politica marittima integrata, Politica artica, Legislazione alimentare generale, Strategia per la bioeconomia, Strategia forestale, Strategia Crescita Blu, Strategia per la sostenibilità della Chimica, Strategia sulla plastica, Strategia europea in materia di dati, Food 2030 e altre iniziative legislative per la protezione della biodiversità, del suolo, dell' acqua, dell'aria e delle risorse marine.



From policy priorities to concrete action



From expected impacts to destinations...

Strategic Plan

Work Programme



Cluster 6: Work Programme 2021-2022 budget distribution per destination

DEADLINES Call 2021: 6 October 2021 Call 2022: February 2022



Destination	Number of topics	Budget [mIn EUR]	% Share
Biodiversity and ecosystem services	36	375,5	20%
Fair, healthy and environmentally-friendly food systems from primary production to consumption	39	416,5	22%
Circular economy and bioeconomy sectors	22	268,5	14%
Clean environment and zero pollution	14	116	6%
Land, oceans and water for climate action	16	193	10%
Resilient, inclusive, healthy and green rural, coastal and urban communities	13	128	7%
Innovative governance, environmental observations and digital solutions in support of the Green Deal	43	370	19%
Other actions	12	38,5	2%
Total	198	1906	100%

Disclaimer: Information included in this presentation is provisional and has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.



CL6 - Destinations

Destination #1 "Biodiversity and Ecosystem Services" Sostiene la ripresa e il ripristino degli ecosistemi attraverso una gestione sostenibile del suolo, delle acque interne e del mare, che ne protegga l'integrità e favorisca l'integrazione tra settori.

Destination #2 "Fair, healthy and environmentally-friendly food systems from primary production to consumption" Contribuisce a guidare e accelerare la transizione verso sistemi alimentari sostenibili, sicuri, sani e inclusivi, dal produttore al consumatore, e a garantire la sicurezza alimentare.

Destination #3 "Circular economy and bioeconomy sectors" Sostiene soluzioni circolari, guidate dalla neutralità climatica e dalla bioeconomia per generare soluzioni, integrate, sicure a livello territoriale e in settori diversi.

Destination #4 "Clean environment and zero pollution" Arresta e previene l'inquinamento, sostenendo azioni di R&I su acque interne e marine, suolo, aria, comprese le emissioni di azoto e fosforo, sulle prestazioni ambientali e sulla sostenibilità dei processi nei sistemi a base biologica

CL6 - Destinations

Destination #5 "Land, oceans and water for climate action" Studia l'impatto del cambiamento climatico sugli ambienti terresti e marini, sulle risorse naturali, l'agricoltura e i sistemi agroalimentari, identificando azioni di mitigazioni e percorsi di adattabilità.

Destination #6 "Resilient, inclusive, healthy and green rural, coastal and urban communities" Mette al centro i luoghi, dalle aree rurali e a quelle costiere, e le persone per raggiungere un'Europa più sostenibile e resiliente, anche nella reazione alla recente pandemia, nell'utilizzo, protezione e gestione delle risorse naturali.

Destination #7 "Innovative governance, environmental observations and digital solutions in support of the Green Deal" Assicura che il processo di transizione verde passi per un'innovazione nei modelli di governance, un'informazione e conoscenza disponibile e accessibile, un utilizzo diffuso delle osservazioni ambientali e delle soluzioni digitali.



Complementarietà con altri cluster



Horizon Europe: topic structure

Title	 apply the impact logic and reflect the outcomes covered by the topic
Expected outcomes	 brief description of the policy context and intervention logic related to the topic, i.e. the contribution of the expected outcomes of the topic to the impact described at Destination level list of the expected outcomes of the topic, précising if projects should address all or some of the outcomes
Scope	 describes the area of R&I that needs to be tackled if the expected outcomes are to be successfully addressed



Potenziali topic di interesse - 2021

- HORIZON-CL6-2021-COMMUNITIES-01-03: Smart XG, last-mile and edge solutions for remote farming, forestry and rural areas
- HORIZON-CL6-2021-FARM2FORK-01-03: Digitalisation as an enabler of agroecological farming systems
- HORIZON-CL6-2021-GOVERNANCE-01-20: Data economy in the field of agriculture effects of data sharing and big data
- HORIZON-CL6-2021-GOVERNANCE-01-21: Potential of drones as multi-purpose vehicle – risks and added values
- **HORIZON-CL6-2021-ZEROPOLLUTION-01-02:** Optimisation of nutrient budget in agriculture



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HORIZON-CL6-2021-GOVERNANCE-01-21: Potential of drones as multi-purpose vehicle – risks and added values

Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 12.00 million.
Type of Action	Research and Innovation Actions
Technology Readiness Level	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B.
Legal and financial set-up of the Grant	The rules are described in General Annex G. The following exceptions apply:
Agreements	Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.

expected outcomes:

- Strengthened capacities for sustainable smart farming, forestry and rural communities through exploiting the potential of drones and other remotely piloted aircraft systems.
- strengthened the capacities for plant, plant-health, livestock, livestock-heath, and agri-environmental monitoring (including tree health) through the use of drones and other remotely piloted aircraft systems.
- Reduced risk of the use of drones and other remotely piloted aircraft systems.

HORIZON-CL6-2021-GOVERNANCE-01-28: Thematic networks to compile and share knowledge ready for practice HORIZON-CL6-2022-GOVERNANCE-01-12: Thematic networks to compile and share knowledge ready for practice

Project results are expected to contribute to the following outcomes:

- The cross-cutting objective of modernising the sector by fostering and sharing of knowledge, innovation and digitalisation in agriculture and rural areas, and encouraging their uptake469, as well as European Green Deal and Farm to Fork objectives;
- The collection and distribution of easily accessible practice-oriented knowledge on the thematic area chosen, in particular the existing best practices and research findings that are ready to be put into practice, but not sufficiently known or used by practitioners.
- Conserve practical knowledge for the long term beyond the project period in particular by using the main trusted dissemination channels that farmers/foresters consult most often.

Potenziali topic di interesse - 2022

- HORIZON-CL6-2022-BIODIV-01-01: Observing and mapping biodiversity and ecosystems, with particular focus on coastal and marine ecosystems
- HORIZON-CL6-2022-BIODIV-01-05: Intercropping understanding and using the benefits of complexity in farming and value chains
- HORIZON-CL6-2022-CIRCBIO-02-06-two-stage: Harnessing the digital revolution in the forestbased sector
- HORIZON-CL6-2022-FARM2FORK-02-01-two-stage: Agroecological approaches for sustainable weed management
- HORIZON-CL6-2022-FARM2FORK-02-04-two-stage: Smart solutions for the use of digital technologies for small- and medium-sized, farms and farm structures
- HORIZON-CL6-2022-GOVERNANCE-01-11: Upscaling (real-time) sensor data for EU-wide monitoring of production and agri-environmental conditions

HORIZON-CL6-2022-GOVERNANCE-01-11: Upscaling (real-time) sensor data for EU-wide monitoring of production and agri-environmental conditions

Specific condition	Specific conditions			
Expected EU contribution per project	The Commission estimates that an EU contribution of between EUR 5.00 and 7.50 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.			
Indicative budget	The total indicative budget for the topic is EUR 15.00 million.			
Type of Action	Research and Innovation Actions			
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply:			
	The Joint Research Centre (JRC) may participate as member of the consortium selected for funding.			
	If projects use satellite-based Earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may			

expected outcomes

- Strengthening capacities for smart farming, and thus to enhance the environmental and economic performance of the agricultural sector.
- Strengthening capacities for agri-environmental (climate) monitoring, particularly of soil and crop conditions.
- Provision of inputs to the work of the Horizon Europe candidate partnership "Agriculture of Data" and the potential R&I mission on soil health.



HORIZON-CL6-2022-FARM2FORK-02-04-two-stage: Smart solutions for the use of digital technologies for small- and medium-sized, farms and farm structures

Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and
	selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 15.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: The proposals must use the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.
Technology Readiness Level	Activities are expected to achieve TRL 6-7 by the end of the project – see General Annex B.
Legal and financial set-up of the Grant Agreements	The rules are described in General Annex G. The following exceptions apply: Beneficiaries may provide financial support to third parties. The support to third parties can only be provided in the form of grants. The maximum amount to be granted to each third party is EUR 60 000.

Expected outcomes

- Innovative solutions for the use of digital technologies (fostering soft- and hardware) tailored to the needs of small- and medium-sized farms and farm structures, including crop- and livestock production;
- Increased uptake of innovative digital technologies by farmers;
- Contribution to avoiding an increased digital divide between small and large farms;
- Increase in the environmental and economic performance of small- and medium-sizedfarms in the EU and Associate Countries.



Aspetti orizzontali



Open Science across the programme



Gender dimension in R&I content



Pathway to impact



Measures to maximise impact

Do no significant harm principle (DNSH)

Da considerare in tutte le call e, ovviamente, anche nell'ambito del cluster 6 Alcune call potrebbero prevedere aspetti agguntivi (ex. MAA, SSH, Social Innovation,stakeholder engagement,...)



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Artificial intelligence



APPROCCIO MULTI ATTORE



Budget and number of Multi-Actor Approach topics



		MAA topics	Topic share	topics	(mio Euro)	Budget share	(mio Euro)
	2021	35	34%	104	383,5	37%	1035,3
_	222	41	53%	78	403,5	45%	890,64
HorizonE	tal	76	42%	182	787	41%	1925,94

HORIZON-CL6-2021-BIODIV-01-14: Fostering organic crop breeding

Specific condition	S
Expected EU contribution per project	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
Indicative budget	The total indicative budget for the topic is EUR 10.00 million.
Type of Action	Innovation Actions
Eligibility conditions	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: The proposals must use the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.
Technology Readiness Level	Activities are expected to achieve TRL 6-7 by the end of the project - see General Annex B.

MAA – Multi Actor Approach

L'approccio multi-attore mira a far sì che il processo di R&I e i suoi risultati sia guidato dalla domanda, affidabile e rilevante per la società (è un aspetto del concetto di RRI). Questo è più di una semplice diffusione dei risultati di un progetto, o della consultazione di parti interessate: un multi-attore progetto assicura il coinvolgimento di una mirata diversità di attori utili agli obiettivi del topic lungo tutto l'arco di vita del progetto (from participation in project planning and experiments to implementation, dissemination of results and a possible demonstration phase).



Multi-Actor Approach (MAA) in Cluster 6

Multi-Actor requirements can be found on:

NEW wp-9-food-bioeconomy-natural-resources-agriculture-and-environment horizon-2021-2022 en.pdf (europa.eu) page 19-21

- 1. The MAA is an integral part of the topic text and is counted as criterion for excellence:
- Clarity and pertinence of the project's objectives (=> focus on needs and opportunities of end-users of project results)
- Soundness of the proposed methodology, including open science practices including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate (=> focus on working according to MAA and plenty of broad communication and dissemination, in particular to end-users of project results)
- 2. The MAA = eligibility criterion as indicated in the topic table: « proposals must use the MAA »
- 3. IMPACT of MA project: outcomes are more demand-driven, reliable and relevant to society

4. End-users/practitioners and intermediates are to be involved, not as a study-object, but to use their practical and local knowledge and/or entrepreneurial skills to develop solutions and create 'co-ownership' of results for (end-) users and practitioners APPLIED RESEARCH

This will speed up the acceptance and take-up of new ideas, approaches and solutions eloped in the project

The Multi-Actor requirements

- 1. Project objectives must be targeting the needs and opportunities of end-users of results
- The project concept and composition of the consortium must reflect a balanced choice of key relevant actors with complementary knowledge, able to ensure broad implementation. All actors actively involved all over the whole course of the project as from the planning phase
- 3. Cross-fertilisation during the project must integrate tacit and practical knowledge
- 4. Use methods to facilitate the multi-actor engagement process
- 5. Demonstrate added value: how does the project complement existing research and best practices?
- 6. Results must be practical, easily understandable and feed into the most used dissemination channels for end-users
- 7. For EU wide communication: "practice abstracts" in the common EIP format

8. Involve as much as possible local interactive innovation groups (EIP-AGRI Operational Groups under the CAP)

From strategy to action: working in close synergy



PILLAR III - Innovative Europe

European Partnership

HORIZON EUROPE PILLAR II - Global challenges & European ind strial competitiveness

CLUSTER 1: Health	CLUSTER 4: Digital, Industry & Space	CLUSTER 5: Climate, Energy & Mobility	CLUSTER 6: Food, Bioeconomy, Agriculture,	EIT (KNOWLEDGE & INNOVATION COMMUNITIES)	SUPPORT TO INNOVATION ECOSYSTEMS
Innovative Health Initiative	Key Digital Technologies	Clean Hydrogen	Circular Bio-based Europe	InnoEnergy	Innovative SMEs
Global Health Partnership	Smart Networks & Services	Clean Aviation	Rescuing Biodiversity to Safeguard Life on Earth	Climate	
Transformation of health systems	High Performance	Single European Sky ATM Research 3	Climate Neutral,	Digital	
Chemicals risk	Computing European	Europe's Rail	Sustainable & Productive Blue Economy	Food	
assessment ERA for Health	Metrology (Art.	Connected and	Water4All	Health	
	Al-Data-Robotics	Automated Mobility	Animal Health & Welfare*	Raw Materials	
Rare diseases*	Photonics	Batteries	Accelerating Farming	Manufacturing	
One-Health Anti Microbial Resistance*	Made in Europe	Zero-emission waterborne transport	Systems Transitions*	Urban Mobility	
Personalised Medicine*	Clean steel – low-carbon steelmaking	Zero-emission road transport	Agriculture of Data*	Cultural and Creative Industries	
Pandemic Preparedness* Co-funded or co-programmed	Processes4Planet	Built4People	System*		
	Global competitive space systems**	Clean Energy Transition		CROSS-PILLARS II &	: 111
Lestinite elles d'Deste encline (A		Driving Urban Transitions		European Open Science Clo	ud
Institutionalised Partnerships (A Institutionalised Partnerships /	,				
Co-Programmed		* Calls with opening dates in 2023	24		
Co-Funded		** Calls with opening dates in 2023	APRE		

RISORSE, LINK, EVENTI, MATERIALI UTILI



Link e materiali utili

Risorse sul sito APRE



https://horizoneurope.apre.it/struttura-eprogrammi/global-challenges-europeanindustrial-competitiveness/cluster-6/

Horizon Europe Work Programme 2021-2021- Food, Bioeconomy, Natural Resources, Agriculture and Environment	VISITA	>
General Annexes – Horizon Europe Work Programme 2021-2022	VISITA	>
Horizon Europe Standard Proposal Template (RIA, IA)	VISITA	>
Horizon Europe Standard Evaluation Form (RIA, IA)	VISITA	>
Horizon Europe General Model Grant Agreement (RIA, IA)	VISITA	>
APREbrief – Cluster 6	SCARICA	>
European Green Deal	VISITA	>
Farm to Fork Strategy	VISITA	>
Ell Diadivarcity Stratomy 2020	VISITA	<u> </u>







APREbrief HORIZON EUROPE

CLUSTER 6: FOOD, BIOECONOMY NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT

CLUSTER 6

L'ambizione del Cluster 6 è quella di fornire opportunità per migliorare e bilanciare gli obiettivi ambientali, sociali ed economici e per impostare le attività economiche umane su un percorso verso la sostenibilità.

Il paradigma alla base del Cluster 6 è quindi la necessità di un cambiamento trasformativo dell'economia e della società dell'UE volto a ridurre il degrado ambientale, arrestare e invertire il declino della biodiversità e gestire meglio le risorse naturali, al servizio degli obiettivi climatici dell'UE e garantire cibo e acqua in sicurezza.



2021 2027

HORIZON



Aggiornamenti su <u>www.apre.it</u> o <u>https://horizon-europe.it/</u>

VAI SU

WWW.HORIZON-EUROPE.IT





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European Commission Mission for Healthy oceans, seas, coastal and inland waters

STARFISH MISSION 2030: RESTORE OUR OCEAN AND WATERS Evento di presentazione

5 Maggio 2021 h 15.00

APRE



#MissionOcean #missionITALIA



Info day e Brokerage Event europeo

Cluster 6 - Food, Bioeconomy, Natural Resources, Agriculture & Environment

INFO DAY: <u>https://www.horizon-europe-infodays2021.eu/event/cluster-6-food-bioeconomy-natural-</u> resources-agriculture-environment BE: <u>https://he-cluster6.b2match.io/</u> 9:00 Welcome and general presentation of the C 2021 Work Programme & Horizon Europe n guidance for guality proposals



Day 1 🛙	Day 1 Day 2				
9:00 🛑	Welcome and general presentation of the Cluster 6 2021 Work Programme & Horizon Europe novelties and guidance for quality proposals 9:00 - 12:45 CEST Watch this session >				
13:30 🔶	Destination 1 - Biodiversity and ecosystem services				
	13:30 - 17:30 CEST Watch this session >				
13:30	Destination 7 - Innovative governance, environmental observations and digital solutions in support of the Green Deal 13:30 - 16:45 CEST Watch this session >				
13:30 🛑	Destination 5 - Land, ocean and water for climate				
	action 13:30 - 16:30 CEST				
	Watch this session >				



Eventi EU rilevanti



https://ec.europa.eu/research-and-innovation/en/events/upcoming-events/research-innovation-days

CHIEDI SUPPORTO AI TEAM TEMATICI IN APRE





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THANK YOU!

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