



The Scientific and Technological Research Council of Türkiye (TÜBİTAK)
EU Framework Programmes Office

Presentation of Horizon Europe Climate, Energy and Mobility Calls (International Cooperation)

Çağrı YILDIRIM

Head of EU Framework Programme Department
Horizon Europe National Coordinator of Türkiye



International Cooperation in Horizon Europe



Horizon Europe is one of the main tools to implement Europe's strategy for international cooperation: the Global Approach to research and innovation

- Guiding principles:
 - ✓ Commitment to openness
 - ✓ Values & Principles
 - ✓ Pursuit of a level playing field and reciprocity
 - ✓ Pool global efforts to tackle global challenges

What is the aim of the Global Approach to Research and Innovation

To preserve openness in the research and innovation international cooperation

To strengthen multilateral partnerships to deliver new solutions to green, digital, health and innovation challenges

How will this be achieved?

Modulating bilateral cooperation in line with European interests and values and EU's open strategic autonomy

Accelerating Sustainable and inclusive, development and transition to resilient, Knowledge based societies and economies in the low and middle-income countries

Using a Team Europe approach, with actions by the EU, its financial institutions and Member States

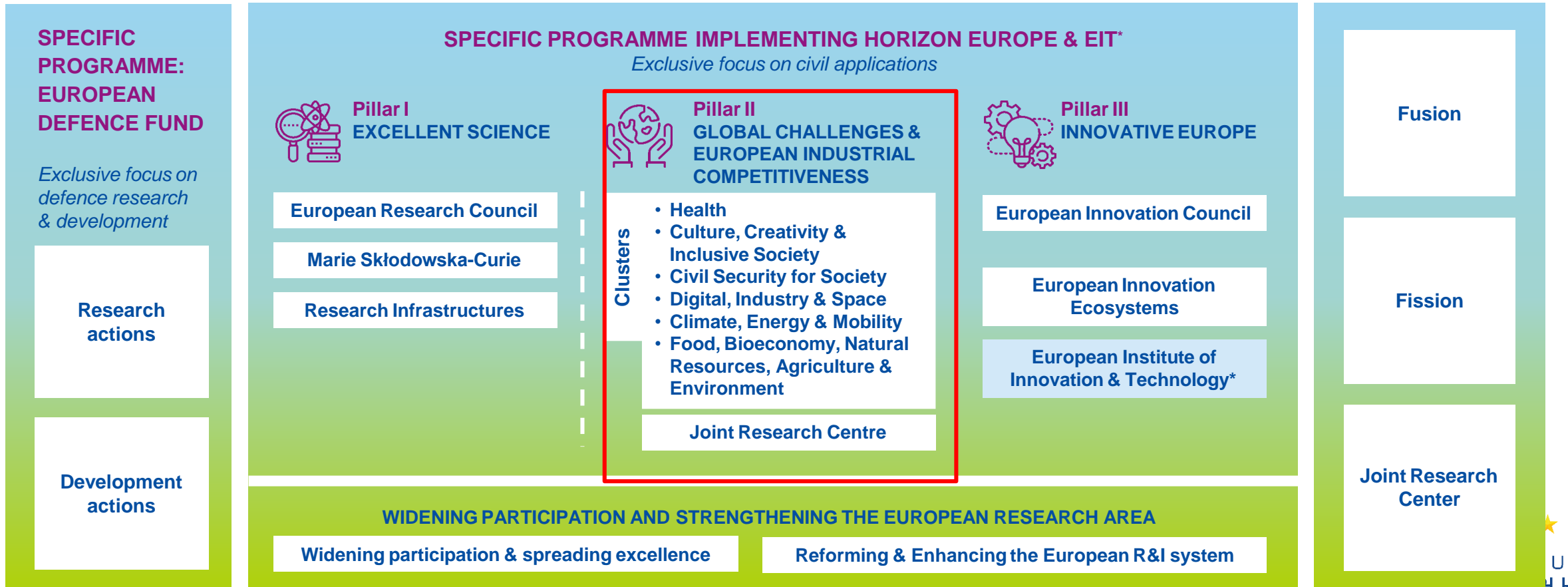


International Cooperation in Horizon Europe



HORIZON EUROPE

EURATOM



* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme



- Horizon Europe ‘by-default’ open to almost all countries
- Non-discriminatory: researchers and innovators of any nationality can apply for grants (MSCA, ERC...)
- Association to the programme:
 - 17 Countries associated to HE: Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, Georgia, Iceland, Israel, Kosovo, Moldova, Montenegro, North Macedonia, Norway, Serbia, Tunisia, Turkey, Ukraine, New Zealand
 - In the “process of Association”: Morocco, UK
 - Negotiations under way: Canada...
- Other third Countries ([https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation horizon-euratom en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation-horizon-euratom_en.pdf))

- **Access to Horizon Europe funding**
 - ✓ Automatically eligible for EU funding (“Beneficiaries”)
 - Low- and middle-income countries (see [list](#)).
 - Countries associated to Horizon Europe
 - ✓ Non-associated third countries not eligible for EU funding (“Associated partners”)
 - Exceptions on a case-by-case basis + specified in topic calls
 - ✓ Co-funding mechanisms
 - E.g. Canada, Monaco, China, Switzerland... ([Guide CFM](#) on F&T Portal)

- **Automatically eligible for EU Funding (3rd Countries not ACs)**

Most Horizon Europe calls are also open to participants from non-associated countries and international organisations, unless specific limitations or conditions are laid down.

Moreover, some Horizon Europe calls are particularly relevant for international cooperation, encouraging or even requiring the participation of legal entities from nonassociated non-EU countries in the funded actions **(INCO calls)**

Participants from non-associated non-EU countries can take part in Horizon Europe actions — **but not always with funding.**

Participants from the following countries are automatically eligible for Funding (ASEAN members case):

- Indonesia
- Lao (PDR)
- Malaysia
- Myanmar
- Philippines
- Thailand
- Viet Nam

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation_horizon-euratom_en.pdf

- **Exceptional EU Funding (3rd Countries not ACs)**

Participants from other countries (i.e. countries that are neither EU Member States nor countries associated to Horizon Europe, nor countries listed above) are not automatically eligible for funding and therefore usually have to participate at **their own cost**.

They can however receive **exceptional funding**, if:

- their country is explicitly identified in the work programme and call for proposals as being eligible for funding
- the granting authority considers that their participation as a beneficiary is essential for implementing the project, for example in view of their:
 - **outstanding competence/expertise**
 - **access to particular research infrastructures**
 - **access to particular geographical environments**
 - **access to particular data**.

In addition, a number of non-EU/non-associated countries that are not automatically eligible for funding have made specific provisions for national **co-financing mechanisms** for their participants in Horizon Europe projects (https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/complementary-funding-mechanisms-in-third-countries_he_en.pdf)

- Flagging of call topics specifically relevant for international cooperation in the work programmes, e.g. in
 - Strategic thematic areas (topics)
 - Geographical areas (countries/region's)
 - Multilateral initiatives
 - Collaboration with key partners
- WP 23-24: 22% INCO flagged topics ; see also F&T [Portal](#) – filter for international cooperation

International cooperation in Horizon Europe Work Programme 2023-24



	Topics total	Topics (ex Other Actions)	International cooperation encouraged	%
Cluster 1: Health	53	44	7	16%
Cluster 2: Culture, creativity and inclusive society	66	56	15	27%
Cluster 3: Civil Security for Society	44	42	9	21%
Cluster 4: Digital Industry and Space	159	130	22	17%
Cluster 5: Climate, Energy and Mobility	219	191	38	20%
Cluster 6: Food, Bioeconomy, Natural resources, agriculture, and environment	189	179	51	28%
TOTAL	730	642	141	22%

Cluster 5 is the cluster in the **2023-2024** work which supports international participation (**20 % of topics**).





Horizon Europe

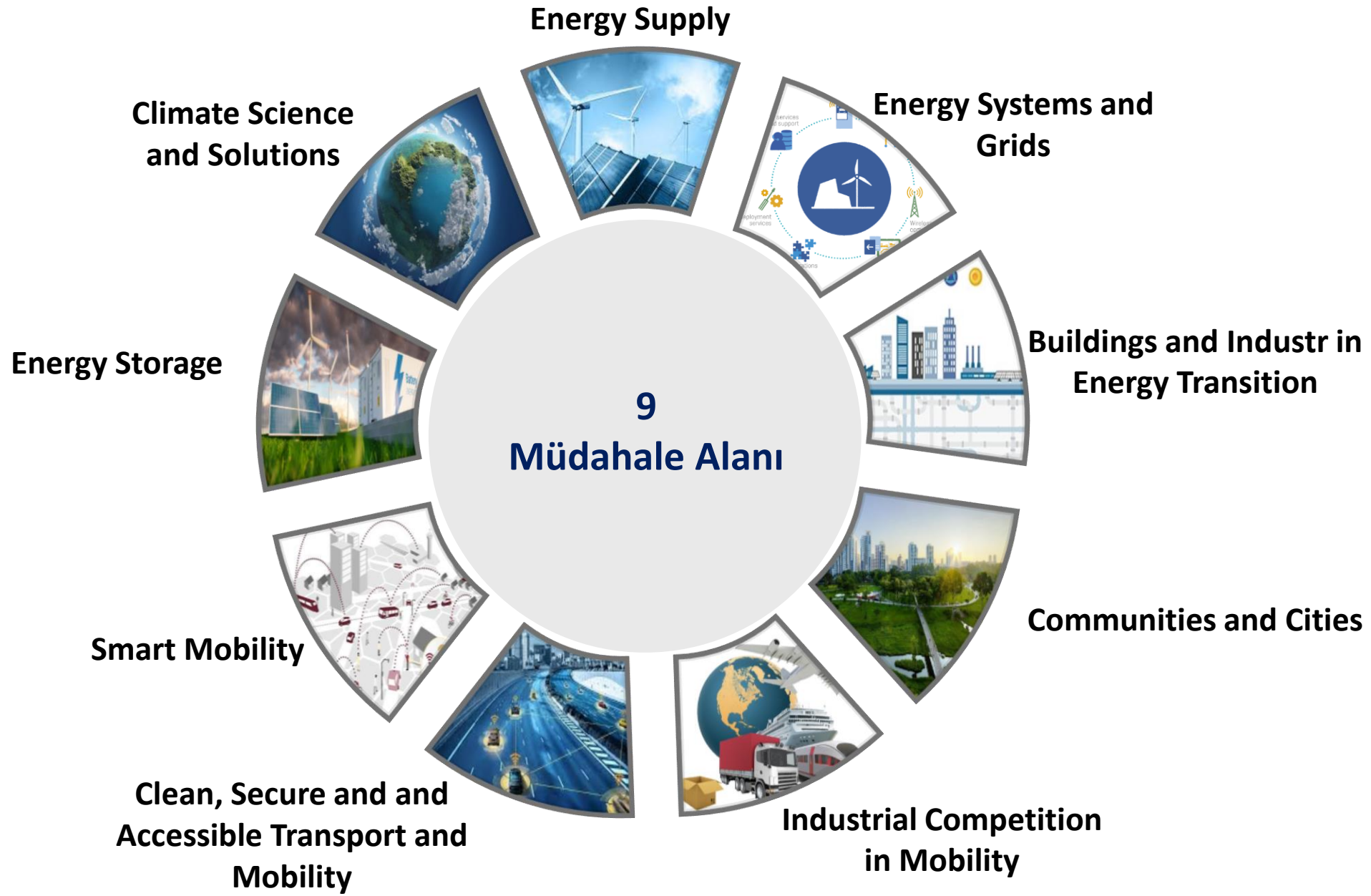
Cluster 5

Climate, Energy and Mobility



- 1. Contribution to Transition to Green and Digital**
- 2. Contribution to UN Sustainable Development Goals and EU Policy priorities**
- 3. 15,1 Billion Euro (2021-2027)**
- 4. Work Programme: 6 Destinations**
- 5. Single Stage and Two Stage (Climate) calls**
- 6. 2 Missions, 13 Horizon Europe Partnerships**







European Green Deal



Digital Europe



Developing an economy that works for people



Europe fit for the digital age



Stronger Europe in the world



New push for European democracy



EC's Current Initiatives

Climate Action

- EU Climate Law
- 2030 Climate Target Plan
- Make sectoral legislation «fit for 55»
- EU Climate Adaptation Strategy

Energy

- EU Strategy for Energy System Integration
- [Hydrogen Strategy](#)
- Renovation wave for Europe
- Offshore renewable energy

Mobility

- Sustainable and Smart Mobility Strategy
- **Research and Innovation**
- A new European Research Area

Work Programme

- 6 Destinations
- 2 Years Programming
(2021/2022- 2023/2024)

Misyonlar

- Climate Neutral and Smart Cities Mission
- Adaptation to Climate Change Including Societal Transformation

Ortaklıklar

- Institutionalized
- Co-Programmed
- Co-Funded

D1 Climate sciences and responses for the transformation towards climate neutrality

Understanding of past, present and expected future changes in climate and its implications on ecosystems and society, closing knowledge gaps, and the development of the tools that support policy coherence and the implementation of effective mitigation and adaptation solutions.

D2 Cross-sectoral solutions for the climate transition

Covers thematic areas which are cross-cutting by nature and can provide key solutions for climate, energy and mobility applications such as batteries, Hydrogen, communities and cities, breakthrough Technologies and citizen engagement

D3 Sustainable, secure and competitive energy supply

Activities targeting a sustainable, secure and competitive energy supply such as renewable energy; energy system, grids and storage; as well as Carbon Capture, Utilisation and Storage (CCUS)

D4 Efficient, sustainable and inclusive energy use

Activities targeting the energy demand side, notably a more efficient use of energy as regards buildings and industry

D5 Clean and competitive solutions for all transport modes

Activities that improve the climate and environmental footprint, as well as competitiveness, of different transport modes

- *Transforming road transport to zero-emission mobility*
- *Accelerating the reduction of all aviation impacts and emissions*
- *contribute to the competitiveness of the European waterborne sector*

D6 Safe, Resilient Transport and Smart Mobility services for passengers and goods

Addressing safe and smart mobility services for passengers and goods

- *Accelerating the implementation of innovative connected, cooperative and automated mobility*
- *Further developing a multimodal transport system through sustainable and smart long-haul and urban freight transport and logistics*

Destination 1

Climate

Climate Science and Transition to
Climate Neutral

221 M€-2023/2024

Destination 2,3,4

Energy

- Battery (stationary app.)
- Cities
- Breakthrough Technologies
- Active Citizen Participation
- Renewable Energy
- Energy system, Smart grids and storage
- CCUS
- Energy Efficient Buildings
- Clean, efficient and sustainable industrial processes (Waste heat etc)

1278,4 M€-2023/24

Destination 2,5,6

Mobility

- Battery (Mobility)
- Road transport to zero-emission mobility
- Aviation
- Waterbone Sector
- Reducing emissions and their impacts in mobility sector
- connected, cooperative and automated mobility (CCAM)
- Multimodal and sustainable transport systems for passengers and goods
- Safety and resilience

887 M€-2023/24

WP 23-24 | Overview Calls 2024



DESTINATION	CALL	OPENING DATE	DEADLINES
Destination 1- Climate sciences and responses for the transformation towards climate neutrality	HORIZON-CL5-2024-D1-01	12.09.2023	05.03.2023
Destination 2- Cross-sectoral solutions for the climate transition	HORIZON-CL5-2024-D2-01	7.12.2023	18.04.2024
Destination 3-Sustainable, secure and competitive energy supply	HORIZON-CL5-2024-D3-01	12.09.2023	16.01.2024
Destination 4-Efficient, sustainable and inclusive energy use	HORIZON-CL5-2024-D4-01 HORIZON-CL5-2024-D4-02	7.12.2023 17.09.2024	18.04.2024 21.01.2025
Destination 5-Clean and competitive solutions for all transport modes	HORIZON-CL5-2024-D5-01	7.12.2023	18.04.2024
Destination 6– Safe, Resilient Transport and Smart Mobility services for passengers and goods	HORIZON-CL5-2023-D6-01	4.05.2023	5.09.2023



HORIZON-CL5-2024-D2-01-02: Non-Li Sustainable Batteries with European Supply Chains for Stationary Storage (Batt4EU Partnership)

Scope:

- Proposals are invited for projects which advance the development of non-Li battery systems, show their potential to be manufactured at scale at a cost the market will bear, and which meet regulatory requirements
- Projects may target any stationary storage applications
- This topic is open to all non-lithium battery chemistries
 - Develop and demonstrate sustainable and safe non-lithium battery solutions from abundant, non-toxic raw materials
 - Develop and demonstrate an innovative non-lithium battery technology with energy density and power metrics
 - Prove the battery system's sustainability and compatibility with a European supply chain
 - Risks will be demonstrably managed to the lowest possible level
- International cooperation is **encouraged** for use cases, particularly with **India, Africa and Australia.**

Project – Call Budget: 7 EUR / 21 EUR (3 Project)

Type of Action: Innovation Actions (60% of the eligible cost, except for non-profit legal entities %100)

TRL: Activities are expected to achieve TRL 6-7 by the end of the project

HORIZON-CL5-2024-D3-01-04: Improvement of light harvesting and carbon fixation with synthetic biology and/or bio-inspired//biomimetic pathways for renewable direct solar fuels production

Scope:

- The aim is to achieve a significant improvement of components of both, light harvesting and carbon fixation, which are rate limiting for the conversion of solar energy to renewable fuels.
- Proposals are expected to include case studies for analysing the potential and impact of the technology for future application at scale and analyse possible interfaces with other solar fuel Technologies
- All relevant aspects of safety of the technology are expected to be addressed. **Hydrogen as a fuel and end-product is excluded.**
- Expected outcome
 - Availability of disruptive and sustainable solar fuel technologies in order to accelerate the replacement of fossil-based energy technologies
 - Reduced cost and improved efficiency of solar-based renewable fuel technologies and their value chains
 - Increase technology leadership, competitiveness and technology export potential of European industry in possibly game-changing solar fuel and synthetic biological technologies.
 - Reinforced European scientific basis and European export potential for renewable energy technologies through **international collaborations** (e.g., the AU-EU Climate Change and Sustainable Energy partnership, the missions and innovation communities of Mission Innovation 2.0).

Project – Call Budget: 4 EUR / 8 EUR (2Project)

Type of Action: Research and Innovation Actions

TRL: Activities are expected to achieve TRL 3-4 by the end of the project

HORIZON-CL5-2024-D3-02-03: Development of smart concepts of integrated energy driven bio-refineries for co-production of advanced biofuels, bio-chemicals and biomaterials

Scope:

- Development of zero-waste and neutral or negative carbon emission energy-efficient biorefinery concepts
- Conversion of biogenic wastes and residues as well as algae and aquatic biomass through chemical, biochemical, electrochemical, biological, thermochemical pathways or combinations of them in highly circular processes are in scope.
- The advanced biofuels cost should aim to be reduced at parity with marketed biofuel equivalents or in the absence of these competitive to the fossil fuel equivalents.
- Technology validated in relevant environment is required. International cooperation with **Mission Innovation countries** is expected.
 - Expand the portfolio of cost-effective advanced biofuel production concepts through energy-driven biorefineries
 - **Contribute to the Mission Innovation 2.0 mission of Integrated Biorefineries**

Project – Call Budget: EUR 3,5 Million / EUR 7 Million (2 Project)

Type of Action: Research and Innovation Actions

TRL: Activities are expected to achieve TRL 5 by the end of the project

HORIZON-CL5-2024-D3-02-03: Innovative, Community-Integrated PV systems

Scope:

- Demonstration of a community-aggregated system with a portfolio of producers and users to facilitate the energy transition to a low carbon economy
- Overcoming energy poverty, support energy democracy, and expand cooperative solutions for the collective benefit of providers and users.
- Peer to peer trading and use can be made feasible and emerging solutions highly attractive and implementable.
- This topic requires the effective contribution of Social Science and Humanities (SSH) disciplines and the involvement of SSH experts
- International cooperation with the **Mediterranean Region** is **encouraged**.

Project – Call Budget: EUR 5 Million / EUR 10 Million (2 Project)

Type of Action: Innovation Actions

TRL: Activities are expected to achieve TRL 6-7 by the end of the project

INCO CALL TOPICS – List -1



Call Number	Topics Name	Opening Date	Closing Date
CL5-2024-D3-01-13	DC and AC/DC hybrid transmission and distribution systems	12.09.2023	16.01.2024
HORIZON-CL5-2024-D3-02-12	DACCS and BECCS for CO2 removal/negative emissions	17.09.2023	21.01.2025
HORIZON-CL5-2024-D3-02-07	Resource Efficiency of PV in Production, Use and Disposal	17.09.2023	21.01.2025
HORIZON-CL5-2024-D1-01-04	Improved toolbox for evaluating the climate and environmental impacts of trade policies	12.09.2023	05.03.2024
HORIZON-CL5-2024-D1-01-02	Inland ice, including snow cover, glaciers, ice sheets and permafrost, and their interaction with climate change	12.09.2023	05.03.2024
HORIZON-CL5-2024-D1-01-05	Next generation low-emission, climate-resilient pathways and NDCs for a future aligned with the Paris Agreement	12.09.2023	05.03.2024
HORIZON-CL5-2024-D1-01-06	The role of climate change foresight for primary and secondary raw materials supply	12.09.2023	05.03.2024
HORIZON-CL5-2024-D2-02-03	Size & weight reduction of cell and packaging of batteries system, integrating lightweight and functional materials, innovative thermal management and safe and sustainable by design approach (Batt4EU Partnership)	07.12.2023	18.04.2024



INCO CALL TOPICS – List - 2



Call Number	Topics Name	Opening Date	Closing Date
HORIZON-CL5-2024-D6-01-01	Centralised, reliable, cyber-secure & upgradable in-vehicle electronic control architectures for CCAM connected to the cloud-edge continuum (CCAM Partnership)	04.05.2023	05.09.2023
HORIZON-CL5-2024-D6-01-02	Scenario-based safety assurance of CCAM and related HMI in a dynamically evolving transport system (CCAM Partnership)	04.05.2023	05.09.2023
HORIZON-CL5-2024-D6-01-03	Orchestration of heterogeneous actors in mixed traffic within the CCAM ecosystem (CCAM Partnership)	04.05.2023	05.09.2023
HORIZON-CL5-2024-D6-01-04	AI for advanced and collective perception and decision making for CCAM applications (CCAM Partnership)	04.05.2023	05.09.2023
HORIZON-CL5-2024-D6-01-05	Robust Knowledge and Know-How transfer for Key-Deployment Pathways and implementation of the EU-CEM (CCAM Partnership)	04.05.2023	05.09.2023
HORIZON-CL5-2024-D6-01-06	Optimising multimodal network and traffic management, harnessing data from infrastructures, mobility of passengers and freight transport	04.05.2023	05.09.2023
HORIZON-CL5-2024-D6-01-11	Effects of disruptive changes in transport: towards resilient, safe and energy efficient mobility	04.05.2023	05.09.2023
HORIZON-CL5-2024-D6-01-12	A new framework to improve traffic safety culture in the EU	04.05.2023	05.09.2023



International Events



Horizon Europe Cluster 5 Virtual Info Day on 17 Oct 2023

<https://research-innovation-community.ec.europa.eu/events/4MjD45QEP6eLsP9j3MCEOc/overview>

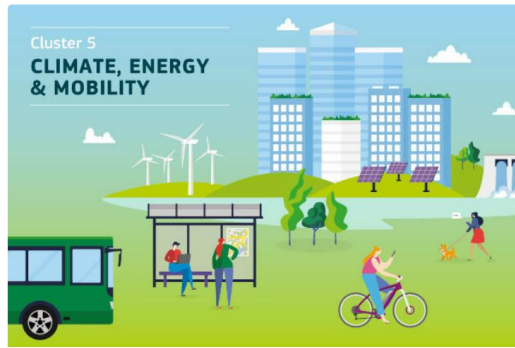
Horizon Europe Cluster 5 Brokerage Event

<https://greenet-brokerage-event-2024.b2match.io/>



The **aim** is to improve the professionalisation of the CL5 NCPs across Europe, **simplifying applicants' access to Horizon Europe calls** and raising the average quality of submitted proposals

GREENET Partner Search Tool



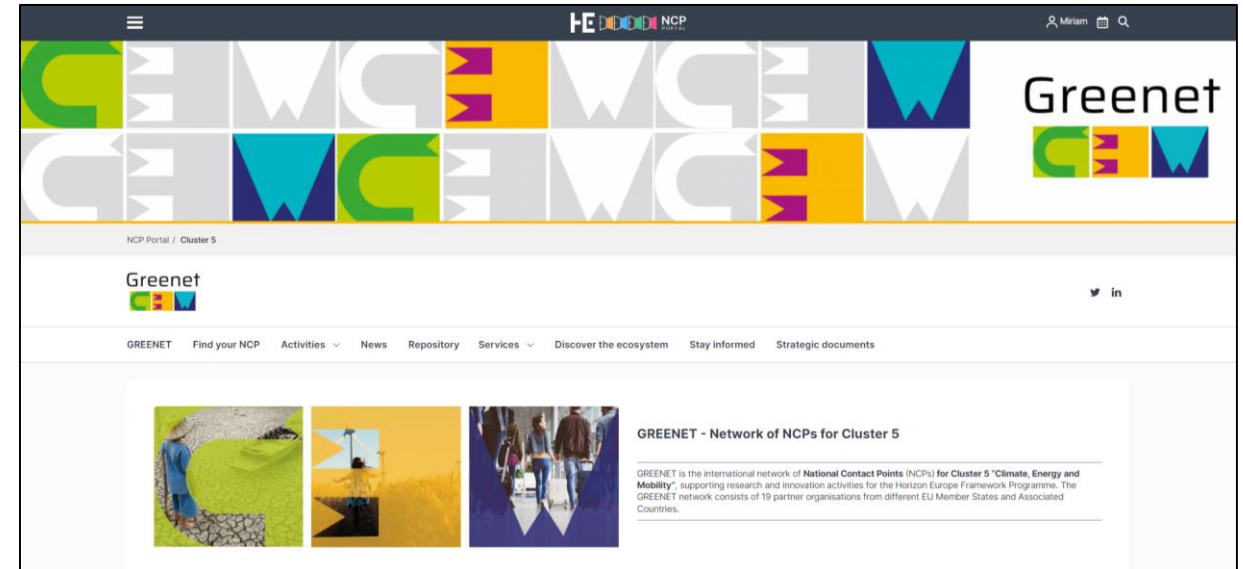
GREENET supports your mission to build strong consortia for your Cluster 5 proposal!

The GREENET Partner Search Tool brings together organisations (Coordinators as well as partners) from across the world. This tool is a unique opportunity to generate new contacts and collaborate on potential Horizon Europe projects (including related missions and partnerships).

Finding partners has never been easier! Simply register, express your interest in a specific topic/s and browse for existing profiles.

[Join the community](#)

<https://horizoneuropencpportal.eu/ncp-networks/cluster-5/greenet-partner-search-tool>



- The cornerstone of GREENET services
- Main source of info
- <https://ncp-greenet.eu>

Useful Links



- **Horizon Europe Info Day:** <https://research-innovation-community.ec.europa.eu/events/4MjD45QEP6eLsP9j3MCEOc/overview>
- **Greenet Brokerage Event 2024:** <https://greenet-brokerage-event-2024.b2match.io/>
- **Funding & Tender :** <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon>
- **Greenet Website:** <https://horizoneuropencpportal.eu/cluster-5>
- **Horizon Europe Expert Registration:** <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/work-as-an-expert>
- **Horizon Europe Partner Search:** <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/partner-search>
- **European Commission International Cooperation:** https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/europe-world/international-cooperation_en





Thank you For Your Attention

ufukavrupa@tubitak.gov.tr

