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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND  
THE COUNCIL**

**Annual Report on Research and Technological Development Activities of the European  
Union and Monitoring of Horizon Europe and Horizon 2020 in 2023**

## 1. BACKGROUND

This report provides a non-exhaustive overview of the EU's key research and innovation (R&I) activities in 2023 and monitoring of Horizon Europe, Horizon 2020 and the Euratom Research and Training programme.

It was drafted in accordance with Article 190 of the [Treaty on the Functioning of the European Union](#) and Article 7 of the [Euratom Treaty](#), in conjunction with Article 50 of the [Regulation \(EU\) 2021/695 of the European Parliament and the Council](#) establishing [Horizon Europe – the Framework Programme for Research and Innovation](#) and with Article 12 of [Council Regulation \(Euratom\) 2021/765 establishing the Research and Training Programme of the European Atomic Energy Community](#).

## 2. POLITICAL CONTEXT AND POLICY DEVELOPMENTS

2023 was a year of multiple global challenges. Climate change, biodiversity loss, pollution, the digital transformation, health threats and an ageing population led to strong demand for R&I-based solutions. The unstable geopolitical context, in particular Russia's war of aggression against Ukraine, also influenced R&I policy-making.

### 2.1 Ukraine and EU's internal security

The Commission continued providing [support to Ukraine](#), focusing on three key objectives:

1. support science and Ukrainian researchers in Ukraine and in refuge;
2. accelerate Ukraine's efforts towards EU integration in R&I;
3. advocate for the role of R&I in key political and operational frameworks to promote Ukraine's recovery.

The Commission's [proposal for a Regulation on a Ukraine Facility](#) includes important references to rebuilding the research infrastructure.

The Horizon Europe Office in Kyiv was inaugurated in December and will promote funding opportunities and support applicants. The event also served as a political launch of a EUR 20 million initiative to support Ukrainian breakthrough innovators.

To increase the EU's internal security, protect its population and critical infrastructure against cyber and physical threats and to increase disaster resilience, the following measures were taken:

- the EU framed its first [multiannual strategic policy for European integrated border management](#) for 2023-2027, with R&I as a cross-cutting component to support measures such as carrying out checks at borders;
- the European Parliament and the Council agreed on the [mandate for a new EU Drugs Agency](#), whose tasks include various R&I activities;
- the Commission published a [Communication on countering potential threats posed by drones](#), identifying how EU-funded research tackles the threats posed by drones;
- the Commission organised a [security research event](#), bringing together more than 1 000 policymakers, researchers, security practitioners and industry representatives to discuss how security research can make the EU more resilient;

- the [Union Secure Connectivity Programme for 2023-2027](#) was adopted to provide the EU with spaced-based satellite communication services based on R&I activities;
- the Council approved the revised [EU Maritime Security Strategy](#) and its action plan including numerous actions related to R&I that seek to tackle new security threats.

## **2.2 EU's open strategic autonomy, economic security and international cooperation**

The [European Economic Security Strategy](#) in line with the [Global Approach to Research and Innovation](#) aims to ensure both the EU's economic openness and safeguarding research security. R&I plays a key role in each of the Strategy's three priorities: promoting, protecting, and partnering.

### Promoting:

The economic security strategy promotes competitiveness by investing in strategic technologies through Horizon Europe that are critical for economic security, such as advanced semi-conductors and quantum computing.

The [Strategic Technologies for Europe Platform](#) proposed financial support for critical technologies and to boost the EU's resilience. The Commission also proposed a [Critical Raw Materials Act](#) and a [Net Zero Industry Act](#), both promoting more R&I in areas that will increase the EU's resilience.

### Protecting:

Improving research security is key to protecting the EU's open strategic autonomy by ensuring that existing tools are enforced systematically and by identifying and tackling any remaining gaps. The following measures applied in 2023:

- [security appraisal](#) of Horizon Europe projects involved screening 118 proposals (68 in 2022), of which 20 underwent the security scrutiny procedure in cooperation with national security experts;
- the Horizon Europe Regulation provides the possibility to limit participation to safeguard EU strategic assets, interests, autonomy or security (Article 22(5));
- in line with the [Toolkit on Tackling R&I Foreign interference](#), the Commission organised mutual learning exercises on R&I foreign interference, which brought together representatives from 14 Member States.

### Partnering:

The Commission has strengthened R&I cooperation with:

- the United States, by [renewing the bilateral agreement for science and technology cooperation](#);
- Latin America and the Caribbean region, where a bi-regional [Senior Officials Meeting](#) initiated the development of a new strategic roadmap for cooperation;
- the African Union (AU) through the [AU-EU Innovation Agenda](#) to transform the EU's and AU's innovative capacity to foster sustainable jobs and growth;
- India, by setting up a working group on clean and green energy during the [EU-India Trade and Technology Council](#);

- the [All-Atlantic Ocean Research and Innovation Alliance](#), including Norway and the United Kingdom.

In line with the Joint Communication [EU-China Strategic Outlook](#), the Commission continued discussions on future EU-China cooperation in research and innovation.

## 2.3 Green and digital transition

Tackling climate change remained a top priority in 2023, as evidenced by the numerous EU R&I activities that provide the evidence base to implement the [European Green Deal](#):

- The Commission published a [Green Deal Industrial Plan, along with the Net-Zero Industry Act and the Critical Raw Materials Act](#), to boost the competitiveness of Europe's net-zero industry and support the transition to climate neutrality with specific actions on R&I, for instance on green hydrogen;
- new pieces of EU legislation were adopted, such as [RefuelEU Aviation](#), [FuelEU Maritime](#), and the [Alternative Fuels Infrastructure Regulation](#);
- in January, the Commission presented a [New Deal for Pollinators](#) to support research into pollinators and the causes and consequences of their decline;
- in July, the Commission presented a [proposal for a directive on soil monitoring and resilience](#) and in November a [monitoring framework for resilient European forests](#), to provide better knowledge on European forests;
- the important role of EU R&I in fostering systemic adaptation to climate change is acknowledged in the [Report on the implementation of the EU strategy on adaptation to climate change](#) accompanying the [2023 EU Climate Action Progress Report](#);
- improved auction design and non-price award criteria supporting innovation as part of the [European wind power action plan](#);
- the [EU action plan for grids](#) notes that R&I is key for electricity grids to upgrade to smart grids, becoming digital, monitored in real-time, remotely controllable and cybersecure;
- the [Communication on the revision of the Strategic Energy Technology Plan](#) supports the development of clean, efficient and cost-competitive energy technologies through collaboration in clean energy research;
- actions under the [New European Innovation Agenda](#) in low-carbon technologies, the circular economy and the digital transition contributed to achieving the objectives of the green and digital transition;
- in December, the Commission adopted the 'one substance one assessment' package, containing three legislative proposals to improve the knowledge base on chemicals;
- the EU expanded the scope and size of the [Innovation Fund](#), a key EU funding instrument for the take-up of R&I results and deployment of net-zero and innovative technologies to decarbonise Europe;
- the proposal on the [right to repair](#) and initiatives on [microplastics](#), building on the results of EU R&I projects to improve product circularity and prevent microplastic pollution;
- the [third AgriResearch conference](#) identified future research and innovation in agriculture, forestry and rural areas;
- under the [Food 2030 initiative](#), a conference was held in December and a [report](#) was released, outlining R&I pathways to transform food;

- the Commission adopted the [Fisheries and Ocean Package](#), including the [marine action plan](#) with a section focusing on strengthening research and innovation;
- 2023 saw the adoption of the [transition pathways for chemicals](#), [construction](#) and [textiles](#), which identify specific research actions to enable the green transition;
- the [European Chips Act](#) entered into force in September 2023 aiming to boost Europe's competitiveness and resilience through strong research activities in semiconductor technologies and applications;
- the Commission adopted a [Communication](#) on the long-term competitiveness of the EU that highlights R&I as one of the main drivers for long-term competitiveness. For instance, it suggests tax incentives, public-private partnerships and large-scale projects, especially in the key areas of clean technology, digitisation and biotechnology.

## 2.4 Partnership with Member States

As of early December, out of the 613 R&I-related milestones that Member States must achieve to receive the corresponding [Recovery and Resilience Facility](#) payments, 87 had been achieved (around 14%). EUR 5.98 billion had been disbursed to Member States, representing around 12.5% of the overall support allocated to R&I (EUR 48 billion).

In 2023, bilateral discussions between the Commission and Member States were consolidated through [enhanced dialogues](#), which aim to create country-tailored approaches.

The EU also provided support to the Member States to improve their R&I system by a concerted roll-out of the [Policy Support Facility](#). This involved specific projects for Croatia, Greece, and Romania and the launch of mutual learning exercises on citizen engagement, EU research missions, foresight, knowledge valorisation and industrial decarbonisation.

To boost the attractiveness of careers in research, in July the Commission adopted a [proposal for a Council Recommendation on a European framework to attract and retain research, innovation and entrepreneurial talents](#).

To oversee implementation of the new European Research Area (ERA), a monitoring and reporting system was put in place and the first [ERA Monitoring 'EU-level report'](#) was published in November.

Several targeted info days took place in less successful countries in the [Widening part](#) of Horizon Europe.

In August, the Commission adopted its [third report on the application of the European Research Infrastructure Consortium Regulation](#), which has become a legal instrument for infrastructure initiatives.

## 2.5 Direct actions implemented by the Joint Research Centre of the Commission

The Joint Research Centre (JRC) supported numerous Commission initiatives and among many activities:

- launched the [EU observatory, covering deforestation and forest degradation](#) worldwide, that will help protect and restore forests;

- launched the [European Centre for Algorithmic Transparency](#), which will support efforts in regulating digital services;
- contributed to the [2023 Strategic Foresight Report](#), which builds on the [Science for Policy Report on social and economic choices in sustainability transitions](#);
- launched the [Atlas of Migration](#), which provides data on migration and contains a thematic section on people displaced from Ukraine following Russia's war of aggression.

### **3. IMPLEMENTATION AND MONITORING OF HORIZON EUROPE AND EURATOM**

#### **3.1. Horizon Europe in 2023 – Highlights & new features**

In March, the Commission amended the ‘main’ Horizon Europe work programme 2023-2024, to further foster R&I for supporting civil security for society and renewable energy, increasing the budget for the work programme by around EUR 55 million to a total of over EUR 13.5 billion.

The Commission implemented the [new eligibility criterion](#) on gender equality plans and created a new [EU Award for Gender Equality Champions](#).

#### **Association to Horizon Europe**

In 2023, the number of [associated countries](#) reached 17. In January 2024, the United Kingdom became the 18<sup>th</sup>.

New Zealand was associated retroactively as from 1 January 2023, which was the first associated country beyond the geographical vicinity of the EU.

The leaders at the [EU-Canada Summit](#) announced the conclusion of substantive negotiations. The agreement associating Canada to Horizon Europe is expected to be signed in mid-2024.

In November, the Commission endorsed the [Common Understanding](#) negotiated between the EU and Switzerland that has enabled exploratory talks for Switzerland’s association.

The launch of formal association negotiations with the Republic of Korea was announced at the [EU-Korea Summit](#) in May.

Discussions have continued at technical level with Japan and Singapore on prospects for association to Horizon Europe.

#### **3.2. Horizon Europe monitoring data**

##### **Calls and topics**

*Source: CPS data extracted on 09.01.2024*

The 284 calls for proposals launched by end of 2023 under the Horizon Europe main work programmes 2021-2022 and 2023-2024 covered a total of 1 581 research topics with a budget of EUR 25.6 billion. 77% of those calls had been fully evaluated by end of 2023.

The proposed topics aimed to attract R&I projects that will help tackle the [Commission’s priorities for 2019-2024](#). Around 28% of the topics encouraged or required international cooperation.

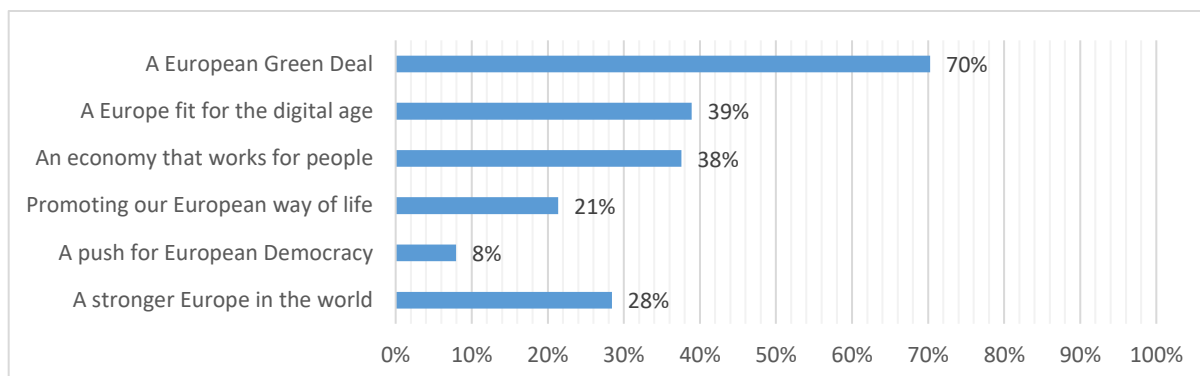


Fig. 1: Percentage of topics tackling Commission policy priorities

The [European Research Council](#) work programme announced 4 calls for frontier research grants with a total budget of EUR 2.12 billion. The calls were launched and fully evaluated.

Lastly, the [European Innovation Council](#) opened funding opportunities worth some EUR 1.6 billion for breakthrough innovators through three main funding schemes: [EIC Pathfinder](#) (EUR 343 million), [EIC Transition](#) (EUR 128 million) and [EIC Accelerator](#) (EUR 1.13 billion).

## Project proposals and success rates

Source: Horizon proposals dashboard frozen on 02.01.2024

The programme continued to raise great interest with around **64 000 eligible proposals** submitted<sup>1</sup> over the period 2021-2023. The overall quality of proposals remained stable with half of eligible proposals (33 637, 52.6%) reaching the evaluation score threshold and assessed by external experts as of high quality.

The success rate of proposals increased to 17.3% (from 15.9% at the end of 2022 and 11.9% under Horizon 2020). Over 11 000 proposals were selected for funding for a total of EUR 32.6 billion.

However, two thirds (67.2%) of all high-quality proposals still lack funding. An additional budget of around EUR 54.4 billion would have been needed to fund all high-quality proposals submitted over 2021-2023.

## Grants signed

Source: Horizon projects dashboard, frozen on 02.01.2024

Following the evaluation of the proposals, **EUR 30.8 billion** were awarded through **10 674 grants**. Some grants were still under preparation at the end of 2023. The average grant size is EUR 2.9 million, higher than under Horizon 2020 (EUR 1.8 million). Average EU funding allocated to mono-beneficiary grants (44% of grants) is around EUR 1.2 million, against EUR 4.2 million for collaborative grants (56% of grants). On average, collaborative grants involve 11 participants.

<sup>1</sup> Only under the calls that are closed and fully evaluated.

| Programme part                                                               | Eligible proposals | Selected proposals | Success rate of proposals (% of eligible) | EU contribution requested in selected proposals (in million EUR) | Signed grants | EU contribution in signed grants (in million EUR) | Average project size (participants) | Average grant size (in million EUR) |
|------------------------------------------------------------------------------|--------------------|--------------------|-------------------------------------------|------------------------------------------------------------------|---------------|---------------------------------------------------|-------------------------------------|-------------------------------------|
| <b>Pillar 1 - Excellent Science</b>                                          |                    |                    |                                           |                                                                  |               |                                                   |                                     |                                     |
| European Research Council                                                    | 22 856             | 3 235              | 14.2%                                     | 5 621                                                            | 2 903         | 4 990                                             | 1.2                                 | 1.7                                 |
| Marie Skłodowska-Curie Actions                                               | 17 914             | 2 947              | 16.5%                                     | 1 684                                                            | 3 090         | 1 719                                             | 4                                   | 0.6                                 |
| Research infrastructures                                                     | 233                | 130                | 55.8%                                     | 870                                                              | 132           | 873                                               | 22.5                                | 6.6                                 |
| <b>Pillar II - Global Challenges and European Industrial Competitiveness</b> |                    |                    |                                           |                                                                  |               |                                                   |                                     |                                     |
| Cluster 1 Health                                                             | 2 012              | 438                | 21.8%                                     | 3 469                                                            | 439           | 3 408                                             | 15.5                                | 7.8                                 |
| Cluster 2 Culture, Creativity and Inclusive Society                          | 1 591              | 246                | 15.5%                                     | 815                                                              | 225           | 667                                               | 11.8                                | 3.0                                 |
| Cluster 3 Civil Security for Society                                         | 650                | 94                 | 14.5%                                     | 424                                                              | 100           | 428                                               | 16.7                                | 4.3                                 |
| Cluster 4 Digital, Industry and Space                                        | 4 419              | 906                | 20.5%                                     | 5 568                                                            | 891           | 5 223                                             | 14.2                                | 5.9                                 |
| Cluster 5 Climate, Energy and Mobility                                       | 3 834              | 852                | 22.2%                                     | 6 704                                                            | 837           | 6 228                                             | 16.7                                | 7.4                                 |
| Cluster 6 Food, Bioeconomy, Natural Resources, Agriculture and Environment   | 2 221              | 582                | 26.2%                                     | 3 637                                                            | 540           | 3 002                                             | 18                                  | 5.6                                 |
| <b>Pillar III – Innovative Europe</b>                                        |                    |                    |                                           |                                                                  |               |                                                   |                                     |                                     |
| The European Innovation Council*                                             | 5 631              | 843                | 15.0%                                     | 1 356                                                            | 830           | 2 165                                             | 3.2                                 | 2.6                                 |
| European innovation ecosystems                                               | 1 148              | 247                | 21.5%                                     | 232                                                              | 250           | 224                                               | 3                                   | 0.9                                 |
| The European Institute of Innovation and Technology**                        | 21                 | 18                 | 85.7%                                     | 1 173                                                            | 17            | 913                                               | 9.7                                 | N/A                                 |
| <b>Widening participation and strengthening the European Research Area</b>   |                    |                    |                                           |                                                                  |               |                                                   |                                     |                                     |
| Widening participation and spreading excellence                              | 1 135              | 404                | 35.6%                                     | 807                                                              | 344           | 796                                               | 4.1                                 | 2.3                                 |
| Reforming and enhancing the European R&I System                              | 233                | 84                 | 36.1%                                     | 251                                                              | 76            | 166                                               | 12.2                                | 2.2                                 |
| <b>Total for Horizon Europe</b>                                              | <b>63 898</b>      | <b>11 026</b>      | <b>17.3%</b>                              | <b>32 610</b>                                                    | <b>10 674</b> | <b>30 802</b>                                     | <b>6.8</b>                          | <b>2.9</b>                          |

Table 1: Proposals and signed grants per pillar and programme part (Source: R&I proposals and R&I projects dashboards, frozen on 02.01.2024)

\*Figures for EIC Accelerator are incomplete (number of proposals) or missing (retained EU contribution, 2021-2022 calls)

\*\* Figures refer to 'envelope' grants to EIT KICs only

## Tackling EU policy priorities

Source: [Horizon Europe programme statement](#)

Research and innovation play a significant role in accelerating the green transition. So far, preliminary monitoring figures combined with the 2023 estimated figures indicate a Horizon Europe's climate contribution close to 35% by the end of 2023. Preliminary *ex post* estimations reveal that spending on biodiversity has increased from 7.9% in 2021 to 8.7% in 2023.

Horizon Europe investments in the digital transformation for 2021-2023 are estimated at up to EUR 14 053.2 million, or 40% of the Horizon Europe budget for these years.

In 2023, EUR 50 million were allocated to projects whose principal objective is to improve gender equality and around EUR 1.7 billion to projects that contribute in some way to gender equality.

## Applicants and beneficiaries

Source: *Horizon projects dashboard, frozen on 02.01.2024*

The projects signed in the first three years of the programme involve around 21 894 different participants from **163 different countries**, including 34.1% from small and medium-sized enterprises (SMEs).

Some 82.3% of the eligible applications submitted are from Member States and close to 25% of those applications come from ['widening' countries](#).

Entities located in associated countries submitted 6.1% of applications and entities located in third countries submitted 11.7% of all applications, of which half were from UK-based organisations.

| Country group                 | Applications in eligible proposals | % of total number of applications | Success rate of application | Participation in signed grants | % of all participations | EU contribution in signed grants (in million EUR) | % of total EU contribution in signed grants |
|-------------------------------|------------------------------------|-----------------------------------|-----------------------------|--------------------------------|-------------------------|---------------------------------------------------|---------------------------------------------|
| Member States                 | 268 153                            | 82.3%                             | 22.1%                       | 61 008                         | 84.3%                   | 28 334                                            | 92%                                         |
| <i>Non-widening countries</i> | <i>205 413</i>                     | <i>63.0%</i>                      | <i>22.8%</i>                | <i>48 378</i>                  | <i>66.9%</i>            | <i>24 141</i>                                     | <i>78.4%</i>                                |
| <i>Widening countries</i>     | <i>62 740</i>                      | <i>19.3%</i>                      | <i>19.8%</i>                | <i>12 630</i>                  | <i>17.5%</i>            | <i>4 193</i>                                      | <i>13.6%</i>                                |
| Associated countries          | 19 761                             | 6.1%                              | 19.6%                       | 3 929                          | 5.4%                    | 2 024                                             | 6.6%                                        |
| Third Countries               | 37 999                             | 11.7%                             | 21.6%                       | 7 392                          | 10.2%                   | 444                                               | 1.4%                                        |
| <b>TOTAL</b>                  | <b>325 913</b>                     | <b>100%</b>                       | <b>21.9%</b>                | <b>72 329</b>                  | <b>100%</b>             | <b>30 802</b>                                     | <b>100%</b>                                 |

Table 2: Applicants origin

The highest shares of participants come from higher education institutions (33.5%), private-sector entities (30.5%) and research organisations (22.5%).

The number of **new participants** to the programme **increased** from 36% in 2022 to 47%.

Overall, entities located in Member States were awarded EUR 28.3 billion (92% of the funds). Entities in widening countries were granted 13.6% of the funds. Entities located in associated countries were awarded over EUR 2 billion (6.6%) and non-associated third countries EUR 444 million (1.4%).

SMEs received 20.6% of the allocated Horizon Europe budget (EUR 6.6 billion), of which EUR 5.34 billion in grants (17% of Horizon Europe's allocated grant budget) and EUR 1.26 billion in direct investments through the EIC Fund.

## **First results**

*Data source: Key Impact Pathway dashboard frozen on 02.01.2024*

Over 59 000 researchers have received support for upskilling activities under Horizon Europe; 45% of them women. Three years after the programme was launched, the funded projects (489 projects or 4.5% of all projects in progress) started to produce results. So far the projects have produced 2 843 peer-reviewed publications, and 1 804 [innovative results](#). Only 174 projects (1.6%) had been closed at the time of this analysis.

## **Focus on European partnerships**

*Data source: Horizon projects dashboard frozen on 02.01.2024*

By the end of 2023, 44 of the 49 partnerships identified in the Horizon Europe first strategic plan 2021-2024 had been set up.

Under the **10 active joint undertakings** (institutionalised partnerships based on [Article 187 TFEU](#)), 345 grants were signed for a total of **EUR 2.9 billion** (9.5% of Horizon Europe funds granted over 2021-2023). The partnerships involve around 3 000 different organisations, two thirds of which are private companies and 40% are SMEs. An additional EUR 2.75 billion were brought in by beneficiaries, representing 50% of the project investments. In November, the [Global Health European and Development Countries Clinical Trials Partnership](#), designed to study poverty-related and neglected infectious diseases, achieved autonomy.

As far as the **co-funded partnerships** are concerned, grant agreements were signed with eight consortia of beneficiaries under pillar II and with one consortium under pillar III for a total of EUR 680 million. Eight further partnerships were under preparation. The partners contributed between 50% and 70% of the funds (an additional EUR 1.65 billion) for R&I.

**EUR 3.1 billion** from Horizon Europe (around 10%) supported **co-programmed partnerships** and the project partners brought in an additional **EUR 0.5 billion**. 460 projects were financed over 2021-2023 involving 3 879 different organisations, a third of which were SMEs.

## Focus on the European Institute of Innovation and Technology (EIT)

The results achieved in 2023 included:

- 1 576 people graduated from EIT-labelled master and doctoral programmes;
- 72 start-ups were created by students from EIT programmes and 97 were the result of EIT innovation projects;
- 945 start-ups received support from [EIT Knowledge and Innovation Communities \(KICs\)](#);
- 301 innovative products or services were put on the market by the EIT KICs.

## Focus on EU missions

Source: Horizon proposals and project dashboards, frozen on 02/01/2024

An assessment of the EU missions was completed and reported in the first [Communication](#) analysing the selection process, governance, budget, focus and progress to date.

By the end of 2023, 36 mission calls had been launched, closed and fully evaluated. The calls for proposals attracted 856 eligible proposals, of which 215 were selected for funding for a total amount of EUR 1.7 billion.

173 Horizon Europe grants involving 2 386 participants were signed for a total amount of EUR 1.43 billion split<sup>2</sup> as follows across the five missions:

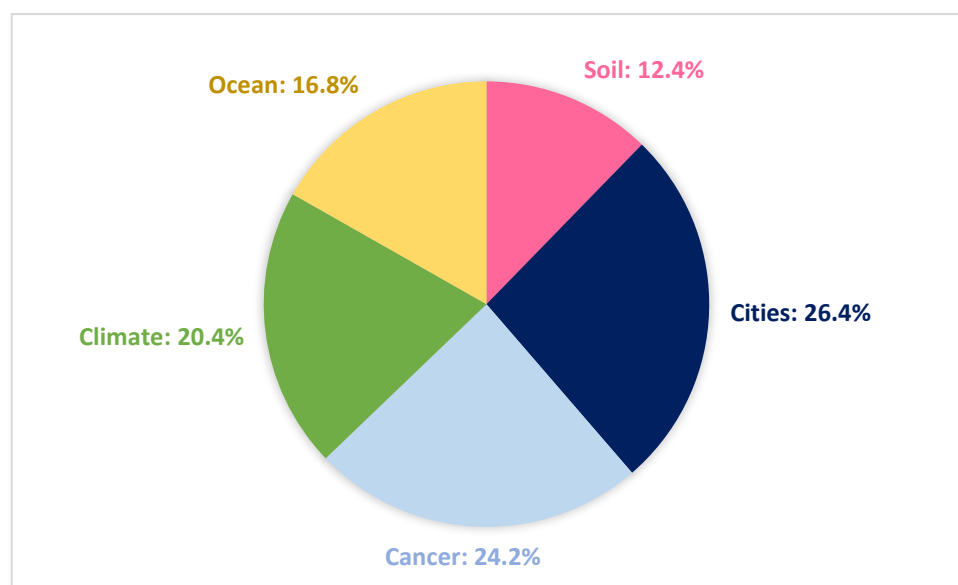


Fig. 2: Mission grants in %

Although it is too early to fully assess the impact of the five targeted missions, some selected achievements can already be reported:

- The [Mission on Adaptation to Climate Change](#) launched its implementation platform providing services to 311 regions and local authorities. The first 21 projects started and tackled issues such as testing and demonstrating solutions for climate resilience.

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<sup>2</sup> Expenditure for horizontal projects or joint projects between missions is split equally between the missions to which the projects contribute.

- By early December, over 2 000 individuals and 370 organisations had committed to supporting the [Mission ‘A Soil Deal for Europe’](#). 20 more proposals, including the first living labs, were selected for funding.
- The [Mission to Restore our Ocean and Waters](#) launched the Mission Service Portal. Nearly 600 actions have signed the Mission Charter.
- The [Mission on Climate-Neutral and Smart Cities](#) reached a major milestone when the first 10 participating cities were awarded the [Mission Label](#).

### 3.3. In-depth analysis: Horizon monitoring flashes and other studies

The Commission has published a [report](#) and a [factsheet](#) on the participation of newcomers in EU R&I framework programmes and a [factsheet](#) on Horizon Europe key implementation data for 2021-2022. It has also published reports on how the R&I programmes have contributed to the [Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services](#), and to the [Intergovernmental Panel on Climate Change](#).

### 3.4 Dissemination and exploitation

The programme continued to use the established [dissemination](#) tools – the [Horizon Results platform](#), [Horizon Results Booster](#), [CORDIS](#), [Horizon Dashboard](#) and the [EU Innovation Radar](#) to provide usable results.

It also carried out further dissemination activities:

- The Commission awarded the [2023 Security Innovation Award](#), celebrating outstanding examples of R&I that benefit EU citizens’ security.
- 20 events on topics ranging from bioterrorism to disaster resilience in the framework of the [Community of European Research and Innovation for Security](#) brought together policymakers, researchers, industry and civil society for exchanges including dissemination of security research results.
- The [Transport Research and Innovation Monitoring and Information System](#) analysed European R&I project results in mobility and transport.
- To mark the [European Year of Skills](#), the Commission published a [Cordis Results Pack](#) showcasing the work of 13 research projects funded under Horizon 2020 in training, reskilling and upskilling.
- In March, the [Science is Wonderful!](#) Initiative enabled 4 000 school pupils from across Europe to engage with leading scientists.
- In September, the [European Researchers’ Night](#) took place in 26 countries attracting over 1.5 million visitors and displaying the impact of science on people’s daily lives.
- In May, a high-level event wrapped up the project [Citizen Voices for the EU Climate Transition](#), resulting in national and European roadmaps identifying specific action to be undertaken with the active participation of citizens.

### 3.5 Implementing and monitoring the Euratom programme 2021-2025

#### a) Nuclear direct actions implemented by the JRC

The JRC has supported the European Commission’s response to Russia’s war of aggression against Ukraine by carrying out radioactivity environmental monitoring, nuclear safety and emergency preparedness response.

The JRC worked with the OECD's [Nuclear Energy Agency](#) and contributed to reports and case studies on small nuclear reactors and their potential future role in decarbonisation.

In the field of Alpha Therapy activity to treat cancer, the JRC co-organised with the University of Pretoria, the [International Symposium of Targeted Alpha Therapy TAT12](#).

As part of its foresight activities, the JRC performed a Horizon Scanning for Nuclear Safety and Security published in a [yearly report](#).

The JRC published 111 peer-reviewed articles in nuclear areas such as the safety of spent nuclear fuel, materials, radioactive waste management, medical applications or environmental radiation measuring. It also provided 13 training courses to Member States under the European Nuclear Security Training Centre programme.

#### **b) Indirect actions of the Euratom Research & Training Programme (grants)**

In March, the Commission adopted the [Euratom work programme for 2023-2025](#), which made EUR 132 million available for research for the EU's security of energy supply while ensuring the highest standards of safety. At the launch event, the Commission signed a declaration on [EU SMR 2030: Research & Innovation, Education & Training](#) which focused on the key role of R&I, education and training for Small Modular Reactors development.

In August, the Euratom-funded project [EURAMED Rocc-n-Roll](#) presented a strategic research roadmap for medical applications of ionising radiation for better and individualised healthcare; one of the cornerstones of [Europe's Beating Cancer plan](#) and the [Cancer Mission](#).

The Euratom co-funded partnership, EUROfusion, achieved the research goals of its third deuterium-tritium experimental campaign at the [Joint European Torus device](#). The experiments explored fusion processes and control techniques in preparation for future fusion power plants.

In September, the Commission launched a call for the 2024 [SOFT Innovation Prize](#), recognising and showcasing innovation in fusion research and rewarding excellent research.

## **4. OUTLOOK 2024**

In 2024, the Commission will adopt the next Horizon Europe strategic plan for 2025-2027, identifying the R&I priorities for the second half of Horizon Europe. On its basis the Horizon Europe work programme 2025 will be drafted.

In 2024, the Commission will continue to promote EU missions and partnerships and Horizon Europe R&I activities. By way of example, it will mark 40 years of the EU's research and innovation framework programmes and their role in creating a more positive future during the [European Research and Innovation Days](#).