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#### COVER NOTE

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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 in 2024**

## 1. BACKGROUND

This report provides an overview of the EU's key research and innovation (R&I) activities and monitoring of Horizon Europe and the Euratom Research and Training Programme in 2024.

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 [Regulation \(EU\) 2021/695 of the European Parliament and of 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

2024 marked the 40th anniversary of the EU's first R&I funding programme and was an occasion to reflect on past achievements. Over the last four decades, the EU has demonstrated a steadfast commitment to advancing scientific progress and economic growth, earmarking over EUR 280 billion for R&I. These efforts have resulted in more than 120 000 grants involving approximately 75 000 beneficiaries. Notably, over 30 top EU-funded researchers have gone on to win Nobel Prizes for their work.

By learning from past achievements, while considering recent developments such as global security challenges or the rise of artificial intelligence (AI), the EU will continue to use its strengths in R&I to secure a global competitive edge.

### 2.1. Europe's sustainable prosperity, single market and competitiveness

In a rapidly evolving global landscape, innovation is a primary driver of economic prosperity and competitiveness. In 2024, the Letta and Draghi reports offered strategic roadmaps to strengthen the EU's economic position.

Enrico Letta's report '[Much More than a Market](#)' advocated for a 'fifth freedom' – free movement of knowledge – to enhance research, innovation and education in the single market. An example of an advance in this respect in 2024 is that Romania joined the [unitary patent system](#), bringing the number of its members to 18.

Mario Draghi's [Report on the Future of European Competitiveness](#) underscored the importance of embedding R&I at the core of the EU's economy to drive sustainable growth. A key advancement in this area in 2024 was the Commission's adoption of a [Communication on Advanced Materials for Industrial Leadership](#), followed by [Council Conclusions](#). R&I was highlighted as a way to secure a leading position in the field.

Competitiveness was a central focus of the [2024 European Semester](#), including recognition of the EU's lagging position in R&I investments compared to other major economies and the continued challenge of reaching the 3% GDP target. R&I featured prominently in the country reports for all Member States, with Czechia, France, Croatia, Lithuania, Luxembourg and Slovenia receiving country-specific recommendations on R&I.

**The circular economy** is key to support Europe's competitiveness. In 2024, the Ecodesign for Sustainable Products Regulation (ESPR) entered into force and an [Ecodesign Forum](#) was established to involve stakeholders in implementing it. Initial steps were taken to implement the ESPR digital product passport, supported by several R&I projects.

## 2.2 Strategic autonomy and economic security in the R&I domain

In 2024, the Commission worked on the implementation of the [European Economic Security Strategy](#). This was reinforced by the [Council Recommendation on enhancing research security](#), which emphasises self-governance in the sector supported by government measures. The Commission also started work to set up a due diligence platform to help European universities and research organisations evaluate risks and opportunities in international collaborations. Additionally, the Commission began joint risk assessments with Member States on four critical technology areas: advanced semiconductors, AI, quantum and biotechnology.

As part of the **Strategic Technologies for Europe Platform (STEP)**, the [EIC STEP Scale Up scheme](#) offered equity investments to start-ups, SMEs, and small mid-caps. The aim was to scale up innovations in strategic technology sectors such as digital, deep tech, clean tech and biotech. EUR 6.3 billion was reprogrammed under cohesion policy to bolster **critical technologies** and industries.

The Commission also adopted a [white paper](#) on R&I involving technologies with **dual-use** potential, launching a public consultation.

The Commission awarded a [concession contract](#) to develop the EU's secure connectivity satellite system, **IRIS<sup>2</sup>**. This will incentivise the deployment of innovative technology and strengthen the EU's strategic autonomy by 2030.

## 2.3. Green and digital transition

In 2024, the Commission presented a [Communication](#) proposing the **2040 EU climate target**, recommending a 90% net greenhouse gas emissions reduction by 2040 relative to 1990. One of the key steps proposed to achieve this goal is an industrial transformation driven by R&I. This Communication was accompanied by the [Industrial Carbon Management Communication](#), with a dedicated R&I chapter.

A number of further initiatives under the **European Green Deal** entailed an R&I component: notably, projects' results helped to support the implementation of the [Nature Restoration Regulation](#) and the [Long-term Vision for the EU's Rural Areas](#). Moreover, the [Communication on Biotechnology and Biomanufacturing](#) identified boosting R&I as a way forward, and the [Net-Zero Industry Act](#) granted legal status to the Strategic Energy Technology Plan to boost the EU's clean energy tech manufacturing. The Staff Working Document '[Towards a roadmap for accelerating the deployment of Hydrogen Valleys across Europe: challenges and opportunities](#)' was also adopted, in line with the REPowerEU plan. Following the Commission's proposal, the European Parliament and Council adopted regulations on [critical raw materials](#) and the [net zero industry](#).

2024 also saw progress on the **digital transition**, to which R&I are key contributors. For example, the [white paper on digital infrastructure needs](#) presented possible scenarios to ensure that the EU has the state-of-the-art digital infrastructure required to support innovation. The new [Cultural Heritage Cloud](#) also offered a European platform for researchers and practitioners to collaborate on cultural heritage R&I.

In addition, 2024 marked a new peak in the [rapid acceleration](#) of progress in **AI**, driven by significant advances in widespread data availability, [computing power](#) and machine learning. The [AI innovation package](#) aimed to support EU start-ups and SMEs in developing trustworthy AI and established the European AI Office. The GenAI4EU initiative under this package will support the development of generative AI solutions. Lastly, the Commission published [guidelines on the use of generative AI in research](#).

## 2.4. Partnership with Member States

As of December, 175 R&I-related milestones and targets had been met, out of 710 which Member States must achieve to receive the corresponding [Recovery and Resilience Facility](#) payments. As regards synergies with cohesion policy, Malta and Lithuania made budget transfers from the European Regional Development Fund to Horizon Europe.

Furthermore, the bilateral discussions between the Commission and Member States were deepened through [enhanced dialogues](#) with Estonia, Germany and the Netherlands. Intensified deployment of the [Policy Support Facility](#) also helped Member States enhance their R&I systems. Specific exercises started with Bulgaria, Czechia, Finland and Ukraine, and mutual learning exercises were launched on topics such as science for policy, research careers and AI for science.

The [European Research Area \(ERA\) Policy Platform](#) was launched, enabling information to be shared among Member States, associated countries, R&I stakeholders and the Commission. In addition, the [Communication on the implementation of the ERA](#) assessed the progress achieved since the 2020 [ERA Communication](#) and the first ERA policy agenda.

## 2.5 Global Europe

The Commission continued to play a key role in **multilateral R&I cooperation**. Together with the Belgian Presidency, it co-organised a ministerial conference as part of the multilateral dialogue on principles and values for international R&I cooperation. It participated in the [Group on Earth Observations](#), the [Intergovernmental Panel on Climate Change](#) (IPCC) and the [Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services](#).

With regard to specific regions and countries, a number of highlights are noteworthy:

- The Commission continued to support **Ukraine's** R&I through dedicated initiatives under Horizon Europe. A [Policy Support Facility](#) exercise was launched to interconnect Ukraine's research infrastructure with that of the EU.

Furthermore, the EU continued to advocate for the role of R&I in the country's reconstruction.

- The EU-US Energy Council at ministerial level confirmed the commitment to cooperate on fusion research, climate modelling and carbon capture, utilisation and storage. Under the EU-US Trade and Technology Council, collaboration on e-mobility and smart grids led to joint recommendations on vehicle-grid integration demonstrations.
- The [All-Atlantic Ocean Research and Innovation Alliance](#) welcomed Iceland and Senegal as partners.

## 2.6. Non-nuclear direct actions implemented by the Joint Research Centre (JRC)

The JRC supported several initiatives through its research, including:

- the [European Innovation Centre for Industrial Transformation and Emissions](#), promoting **emissions-reducing technology** in industry;
- the first [World Drought Atlas](#), alongside the United Nations;
- a security of supply tabletop simulation exercise, validating EU **gas supply preparedness** for the 2024-2025 winter considering the anticipated end of Russian gas transit through Ukraine after 2024;
- the development of methodologies to detect **antibiotic residues** in animal feed, enabling new EU regulations and advancing OneHealth goals against antibiotic resistance.

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

### 3.1. Horizon Europe in 2024 – highlights & new features

The Commission adopted an amendment to the Horizon Europe 'main' 2023-2024 work programme. A package of experimental actions was introduced to make the programme more open and support early-stage researchers. The New European Bauhaus (NEB) Destination launched three topics, as an intermediary step paving the way towards the upcoming NEB Facility. Calls for 2025 were included in the work programme to ensure continuity of recurrent actions such as the Marie Skłodowska-Curie Actions, 'Teaming for Excellence' and 'ERA Fellowships'.

#### Support to Ukraine through Horizon Europe

In 2024, twelve Ukrainian cities joined the [SUN4Ukraine initiative](#) under the EU Climate-Neutral and Smart Cities Mission. The initiative supports Ukrainian cities aiming to become climate-neutral. Support via [MSCA4Ukraine](#) continued, with EUR 10 million added for displaced researchers' fellowships. The [EIT Community RIS Hub in Kyiv](#) became fully operational in 2024, serving as a one-stop shop to access EIT Knowledge and Innovation Communities (KIC). Ukraine was also involved in R&I cooperation on marine and river-based ecosystems in the Black Sea basin, notably via the

‘Restore our Ocean and Waters by 2030’ mission and the Sustainable Blue Economy Partnership.

### Association to Horizon Europe

In 2024, the number of [associated countries](#) reached 19, with the **UK** [becoming fully associated](#) (except for the EIC Accelerator Fund) and **Canada** joining for pillar II. Association negotiations were concluded with the **Republic of Korea**, while formal negotiations started with **Japan**. The Council adopted a mandate to start first formal negotiation with **Singapore**, and negotiations were initiated with **Egypt**. Negotiations with **Switzerland** concluded, with the agreement expected to be signed in 2025. The combined operational contribution from associated countries in 2024 totalled EUR 2.8 billion, with almost 10 000 participations.

## 3.2. Horizon Europe monitoring data

### Funding opportunities

The 656 calls for proposals launched under the Horizon Europe main and other work programmes up until 2024 covered a total of 2 534 research topics with a budget of EUR 59.4 billion.

The proposed topics aimed to attract R&I projects that would address the [von der Leyen Commission’s priorities for 2019-2024](#). In total, so far 95.5% of projects have contributed to these priorities.

### Project proposals and success rates

*Source: Horizon Proposals Dashboard frozen on 6 January 2025*

Interest in the programme remained strong, with **88 803 eligible proposals** submitted<sup>1</sup> over the period 2021-2024. Quality remained stable overall, and more than half of the eligible proposals (54%) reached the minimum evaluation score threshold.

By January 2025, 14 592 proposals had been retained for funding, for a total estimated budget of EUR 43 billion. The success rate of proposals was 16.4%.

However, due to a lack of funds only around 30% of proposals that passed the minimum threshold for funding are being financed. An additional EUR 81.7 billion would have been needed to fund all such proposals submitted in 2021-2024.

### Funded projects

*Source: Horizon Projects Dashboard frozen on 6 January 2025*

Following the evaluation of the proposals until the end of 2024, **EUR 43.2 billion** was awarded through **15 148 grants**. Some grants were still under preparation at the end of 2024.

The average grant size is EUR 2.9 million. Average EU funding allocated to mono-beneficiary grants (45% of grants) is around EUR 1.2 million while it is around EUR 4.2

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<sup>1</sup> Number of eligible proposals submitted only under calls that are closed and fully evaluated.



million for multi-beneficiary grants (55% of grants). The latter involve an average of 11.5 participants.

Programme part	Eligible proposals	Accepted proposals	Success rate of proposals (% of eligible)	EU contribution requested in retained proposals (in million EUR)	Signed grants	EU contribution in signed grants (in million EUR)	Average grant size (in million EUR)
<b>Pillar 1 - Excellent Science</b>							
European Research Council (ERC)	30 413	4 404	14.5%	7 849	4 182	7 319	1.8
Marie Skłodowska-Curie Actions (MSCA)	27 366	4 473	16.3%	2 596	4 704	2 641	0.6
Research infrastructures	399	167	41.9%	1 181	173	1 214	7
<b>Pillar II - Global Challenges and European Industrial Competitiveness</b>							
Cluster 1 - Health	2 502	562	22.5%	4 590	565	4 312	7.6
Cluster 2 - Culture, creativity and inclusive society	2 311	330	14.3%	1 135	322	991	3.1
Cluster 3 - Civil Security for Society	1 022	136	13.3%	600	145	611	4.2
Cluster 4 - Digital, Industry and Space	5 655	1 091	19.3%	8 083	1 094	7 439	6.8
Cluster 5 - Climate, Energy and Mobility	5 291	1 091	20.6%	7 946	1 159	7 945	6.9
Cluster 6 - Food, Bioeconomy, Natural Resources, Agriculture and Environment	3 408	763	22.4%	4 636	720	4 190	5.8
<b>Pillar III – Innovative Europe</b>							
The European Innovation Council (EIC)*	6 289	554	8.8%	1 650	1 114	2 925	2.6
European innovation ecosystems	1 330	267	20.1%	307	272	297	1.1
The European Institute of Innovation and Technology (EIT)	25	20	80%	1 189	26	1 741	66.9
<b>Widening Participation and Strengthening the European Research Area</b>							



Widening participation and spreading excellence	2 509	647	25.8%	1 464	583	1 398	2.4
Reforming and enhancing the European R&I system	283	87	30.7%	197	89	193	2.2
<b>Total for Horizon Europe</b>	<b>88 803</b>	<b>14 592</b>	<b>16.4%</b>	<b>43 425</b>	<b>15 148</b>	<b>43 215</b>	<b>2.85</b>

Table 1. Proposals and signed grants per pillar and programme part (Source: Horizon Projects Dashboard frozen on 6 January 2025)

\*Figures for EIC Accelerator (proposals) are not included.

## Addressing EU policy priorities

Source: Horizon Europe Performance Programme Statement

R&I play a central role in accelerating the green transition. So far, Horizon Europe is well on track to meet its target of 35% of spending allocated to address climate change, while preliminary estimates indicate that 7.7% of the programme's spending for 2021-2027 is allocated to biodiversity.

In addition, 21.2% of Horizon Europe contributes to the digital transformation, with investments in digital technologies set at EUR 11 657 million between 2021 and 2024.

In 2024, an estimated EUR 104 million was also allocated to projects whose principal objective is to improve gender equality and EUR 1 391 million to projects that will contribute to gender equality.

## Applicants and beneficiaries

Source: Horizon Projects Dashboard frozen on 6 January 2025

The projects signed in the first four years of the programme involve **28 136 unique participants** from **171 different countries**, with 35.8% of participants from SMEs. On average, each participant takes part in 3.6 projects. Participants from Member States represent nearly 82% of all eligible applications submitted, and 19.8% are from widening countries.

The table shows a shift in application distribution between associated and non-associated countries. Associated countries now account for 12.6% of all applications, while non-associated countries make up 5.6%. This reversal from January 2023 is largely due to the UK's new associated country status.

Country group	Applications in eligible proposals	% of total number of applications	Success rate of application	Participation in signed grants	% of all participation	EU contribution in signed grants (in million EUR)	% of total EU contribution in signed grants
Member States	380 816	81.8%	20.3%	85 351	84%	39 451	91.3%
<i>Non-widening countries</i>	288 513	62.0%	21.0%	67 441	66.4%	33 498	77.5%
<i>Widening countries</i>	92 303	19.8%	18.0%	17 910	17.6%	5 952	13.8%
Associated countries	58 817	12.6%	18.3%	10 200	10%	3 238	7.4%
<i>Associated countries – without the UK</i>	30 271	6.5%	17.8%	5 841	5.7%	2 850	6.6%
<i>Associated – UK only</i>	28 546	6.1%	18.8%	4 359	4.3%	388	0.9%
Non-associated countries	25 990	5.6%	21.5%	6 045	6.0%	526	1.2%
<b>TOTAL</b>	<b>465 623</b>	<b>21.9%</b>	<b>20.1%</b>	<b>101 596</b>	<b>100%</b>	<b>43 215</b>	<b>100%</b>

Table 2: Applicants' origin

The highest share of participants comes from higher education institutions (34%), receiving the highest financial contribution (EUR 15 billion). Private sector entities and research organisations represent 30.7% and 21.9% of participation respectively and each receives a similar contribution (EUR 11.9 billion).

The number of **new participants** in the programme **continues to increase**. New participants represent 51.1% of all participants, compared to 47% a year ago. However, their participation rate (i.e. the number of projects joined on average by each participant) remains low compared to the old-timers (1.25 versus 6). Newcomers mainly come from the private sector, particularly from SMEs, and have been granted 11.6% of all Horizon Europe funds so far.

Overall, Member States were awarded EUR 39.5 billion or 91.3% of the funds. Widening countries were awarded 13.8% of the funds. Associated countries were awarded 7.4% or just over EUR 3 billion and non-associated countries 1.2% or EUR 526 million. The observations made regarding participation also apply to share of funding. With the UK's association, the distribution of total funding between associated and non-associated countries has altered significantly compared to January 2023.

## Key impact pathways

*Data Source: KIP dashboard frozen on 6 January 2025*

Key impact pathways (KIPs) were introduced in Horizon Europe to track the programme's impact through short-, medium-, and long-term indicators. This section

provides an overview of short-term indicators. A total of 6 922 peer-reviewed publications (KIP 1) have emerged from Horizon Europe. A total of 10 222 publications, including non-peer-reviewed articles, have been reported under Horizon Europe, with over 79% available in open access via beneficiaries (KIP 3). Additionally, 124 intellectual property rights outputs have been declared (KIP 7). Horizon Europe is also facilitating the upskilling of 95 156 researchers (KIP 2), with women representing 44.1% of them. Moreover, the programme has created and/or maintained 39 543 jobs (expressed as full-time equivalents) in the EU (KIP 8). Co-investments totalling EUR 10.2 billion have already been mobilised by participants to implement R&I projects (KIP 9).

However, only 983 projects (6.5%) had been closed at the time of this analysis and only 21% of projects had completed periodic reporting, therefore the number of reported and quantifiable results is expected to increase by 2025.

### **Focus on European partnerships**

*Data Source: Horizon Projects dashboard frozen on 6 January 2025*

As of January 2025, 50 European partnerships had been identified and another ten announced in the second [2025-2027 strategic plan](#), of which three were still pending signature.

Under the **10 active joint undertakings** (institutionalised partnerships based on Article 187 TFEU), 530 grants have been signed for a total of **EUR 4.8 billion** (or 11% of Horizon Europe funds granted over 2021-2024). Those involve 4 281 organisations (engaged in 9 186 projects), two thirds of which are private companies. Of those, 44% are SMEs. 81% of the EU funds are directed to activities supporting the digital and climate transitions. An additional EUR 3.86 billion was brought in by the beneficiaries, representing 45% of the total project investments.

**EUR 4 billion** from Horizon Europe supported 11 **co-programmed partnerships**, with 589 grants to 4 753 distinct organisations, a third of which were SMEs.

As regards **co-funded partnerships**, grant agreements were signed with 14 consortia of beneficiaries under pillar II and with one consortium under pillar III for a total of EUR 1.17 billion. Partners are expected to contribute between 50% and 70% of the funds, or an additional EUR 2.5 billion for R&I.

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

In 2024, 82 start-ups were founded by students from EIT programmes and 112 start-ups were born out of EIT innovation projects. Additionally, through the Deep Tech Talent Initiative, 388 partners pledged to train over 1 million individuals by 2025, with more than 900 000 receiving training by 2024. By December 2024, the European Battery Alliance Academy run by the EIT KIC InnoEnergy had met its goal of training 100 000 learners by 2025<sup>2</sup>. Furthermore, the European Commission confirmed the upcoming new EIT KIC on Water, Marine, and Maritime Sectors and Ecosystems.

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<sup>2</sup> Targeted figures only. The verified results will be available later in 2025.

## Focus on EU missions

Source: Horizon Proposals and Project Dashboards frozen on 6 January 2025

By the end of 2024, 54 Horizon Europe mission calls had been launched, closed and evaluated. Those attracted 862 eligible proposals. 236 Horizon Europe grants involving 3302 beneficiaries have been signed for a total of EUR 1 842 million, with the funding split as follows across the five missions:



Key achievements of the missions in 2024 include the following:

- The ‘**Cancer**’ mission hosted a high-level conference on innovative palliative care, presenting policy developments and solutions from EU-funded projects, and issued a [policy brief](#) outlining future challenges. Additionally, a roadshow held in Poland, Lithuania and Romania reached nearly 11 million people, raising awareness of cancer prevention and screening.
- The ‘**Adaptation to Climate Change**’ mission continues to support 145 regions to assess their climate risk, develop pathways to climate resilience or develop adaptation plans.
- The ‘**Restore our Ocean and Waters by 2030**’ mission provided additional funding of EUR 127 million to support local communities and to further develop the European Digital Twin of the Ocean. The first prototype was delivered at the Digital Ocean Forum in June.
- The mission ‘**100 Climate-Neutral and Smart Cities by 2030**’ saw 43 additional cities awarded the [Mission Label](#) in 2024. A **EUR 2 billion lending envelope by the European Investment Bank** was launched, to support cities with the Mission Label to plan for green and sustainable investments.
- The mission ‘**A Soil Deal for Europe**’ set up the first 25 living labs, encompassing around 250 testing sites involving 167 partners (25% private sector) in 11 Member States.

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

Several reports have been published in 2024, including:

- a [monitoring flash](#) on the contribution of the framework programme to the field of hydrogen since 2007;
- a [monitoring flash](#) summarising key facts and data on SME participation in Horizon Europe;
- a [monitoring flash](#) on country participation in Horizon Europe.

### Horizon Europe mid-term evaluation

The expert group report on the interim evaluation of Horizon Europe, ‘[Align, act, accelerate](#)’, was published. The experts gave recommendations for making the programme more effective at aligning R&I with Europe’s strategic goals. Moreover, the Commission released several evaluations and reports focused on specific impact areas of Horizon Europe and its predecessor (green transition, resilient Europe, innovative Europe).

### 3.4. Dissemination and exploitation

More than 5 000 beneficiaries have already been supported by the Horizon Results Platform and Horizon Boosters. The Commission provided Cordis Results Packs and Boosters on:

- [Environmental observations for the EU Green Deal](#)
- [Blue carbon for biodiversity and climate action](#)
- [Understanding impacts of climate change on Earth’s vulnerable polar regions](#)
- [Reducing and preventing drivers of marine biodiversity loss](#)
- [Tackling marine litter from source to sea](#)
- [Algae innovation](#)
- [Diving deeper: propelling ocean knowledge and its sustainable management](#)

Examples of other notable publications and outreach events include the following:

- [Environmental observations and artificial intelligence for the benefit of science and society](#)
- [Mapping ERC frontier research artificial intelligence](#)
- [Biodiversity: the nexus approach](#)

- [EU-funded projects leading the way to transformative change for biodiversity](#)
- [Frontier research for transformative change](#)
- [Insights from the authors of the IPCC 6th assessment report on knowledge gaps and priorities for research](#)
- [Frontier research for democracy](#)
- [Awareness-raising campaign on knowledge valorisation](#)
- [R&I for a fair green transition](#)
- [R&I for a fair digital transition](#)

### 3.5. Implementation and monitoring of the Euratom programme

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

In 2024 the JRC published **90 peer-reviewed articles** on diverse nuclear research topics. It produced **10 reference materials**, incorporated into nuclear libraries, 10 technical systems for nuclear safeguards, and three contributions to **international standards**. It provided 37 specialised **training courses** for over 900 beneficiaries from the EU, Ukraine and other countries. Over 350 nuclear safeguards inspectors and officers received training through the European Nuclear Security Training Centre (EUSECTRA). A total of 59 EU and Ukrainian researchers used the JRC's nuclear research facilities.

As Euratom's implementing body for the Generation IV International Forum, the JRC hosted key meetings and conducted research on Generation IV systems.

The JRC supported the Commission's response to Russia's illegal war of aggression against **Ukraine** by providing technical expertise for sanction packages and conducting benchmarking on radiological dispersion with European radiation protection authorities.

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

In 2024, the Commission initiated 21 nuclear research projects, including partnerships on radioactive waste management and nuclear materials, funded with EUR 121 million from the Euratom programme. Nearly EUR 48 million was allocated to nuclear power plant safety, and EUR 11 million supported ionising radiation applications.

Following a Euratom work programme amendment, the Commission launched two new initiatives: a future public-private fusion energy partnership and a European nuclear skills initiative. The ex post evaluation of the 2014-2020 Euratom Research and Training Programme was published.

Furthermore, the Commission launched a second project to strengthen nuclear fuel supply security for Russian-designed nuclear power plants in Europe and Ukraine.

Lastly, the Commission established the European Industrial Alliance on Small Modular Reactors (SMRs), aiming at the deployment of the EU's first SMR. This was

underpinned by direct and indirect actions on the safe design, security, safeguards, construction and operation of SMRs.

#### **4. OUTLOOK 2025**

In 2025, the Commission is planning to adopt the Horizon Europe ‘main’ work programmes for 2025 and for 2026-2027. The two work programmes will contribute to the key strategic orientations of the second Horizon Europe strategic plan 2025-2027 as well as to the overarching Commission political priorities for 2024-2029. The work programmes will also contribute to the Commission’s simplification efforts, in particular making the programme more accessible to applicants and simplifying reporting for beneficiaries.

Furthermore, the Commission is set to propose the next Multiannual Financial Framework, incorporating insights from a broad public consultation to align R&I funding with future funding priorities. Initiatives in 2025, such as the Competitiveness Compass and the Clean Industrial Deal, as well as the forthcoming Start-up and Scale-up Strategy, will ensure that the EU stays at the forefront of R&I. These initiatives will help address future challenges and leverage opportunities for sustainable growth.