



European
Commission

Management plan 2022

Joint Research Centre

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INTRODUCTION

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.

Being a service independent from national and private interests, the JRC builds trust by providing evidence to support the definition of policies – from their design to implementation, monitoring and evaluation. The JRC operates a wide spectrum of scientific facilities and laboratories spread over five member states and six sites with a total workforce of around 3000. It supports and brings together Commission services to make sense of increasingly complex societal challenges. Together with policymakers the JRC analyses knowledge needs, frames research questions and provides tailor-made approaches and solutions. The JRC also connects policymakers to a broad range of external stakeholders and citizens.

The management plan (MP) defines the activities planned for the coming year, following the structure of the multi-annual objectives of the strategic plan. It reflects the priority actions identified in the CWP 2022.

The JRC's research programme and the other activities described in the Strategic plan 2020-2024 contribute to the European Commission General Objective 7 '**A modern, high performing and sustainable European Commission**', with an intended impact of an enhanced image of the European Union. The priorities and some specific mandates given to the JRC by the Commission have been translated into specific objectives (Figure 1).

In 2022, the JRC will continue to focus on supporting the resilience and recovery policies and their implementation, as well as on the political priorities such as the Green Deal and the Digital Transition (specific objective 7.1). It will contribute to new policy initiatives, such as the Global Gateway and the Health Union.

The New European Bauhaus is now in its implementation phase. The JRC will support it with a dedicated team which can call on JRC's multi-disciplinary expertise in several of the relevant scientific-technical fields as well as on its experience with citizen engagement and community management.

After having extensively contributed to the update of the better regulation toolbox in 2021, the JRC will consolidate its efforts around its practical use and the further implementation of the data, information and knowledge management strategy.

The decision on the Multi-Annual Financial Framework (MFF) has resulted in a significant cut in the Euratom budget and several association agreements to the Framework Programme for Research are still under negotiation. There is thus an additional risk of a contribution to the JRC budget not materialising. JRC will adopt a new nuclear strategy in order to mitigate the effects of these cuts. It will continue to modernise its sites and support the greening of the European Commission, taking however into account the reduced budget (specific objective 7.2)

JRC is also continuing to modernise its own business model and activities through an organisational transformation process, with three guiding principles of anticipation,

integration and impact, as set out in the Strategic Plan 2020-2024. 2022 will see the completion of improvement actions, resulting in a review of its 2030 strategy and a strengthened prioritisation for the 2023-2024 work programme. The evaluation of JRC's actions under the Horizon 2020 and Euratom programmes (period 2014-2020), due to be completed in 2022, will also inform this process.

In cooperation with the other departments, the JRC will simplify the management of the Commission's intellectual property rights and provide updated guidance (specific objective 7.3)

The nuclear strategy will also affect the future activities under the decommissioning and waste management programme, now in its second year under the MFF. In 2022, progress will continue on the different work streams. A milestone for knowledge management will be an operational platform for dissemination and sharing of good practices and experiences among Member States (specific objectives 1.1 and 1.2).

For details on the main outputs, please see the next sections and the performance tables in Annex.

PART 1. Delivering on the Commission’s priorities: main outputs for 2022

EUROPEAN COMMISSION GENERAL OBJECTIVE 7

Figure 1 provides an overview of how the JRC’s specific objectives relate to the Commission General Objectives.



Figure 1. JRC support to Commission general objective 7. All of JRC’s contributions to evidence-based policymaking are described under one specific objective (7.1). Given that the JRC manages sites and infrastructures, a specific objective (7.2) has been defined related to the goals of the JRC Strategy 2030. For its mandate to support intellectual property (IP) management in the Commission, a specific objective (7.3) has been defined.

Specific objective 7.1: The JRC supports evidence-informed policymaking through creating and managing high-quality and fit-for-purpose scientific knowledge

The main outputs for the year 2022 can be grouped into the following categories:

- Support to the Commission work programme (CWP) The outputs will consist mainly of studies and reports, but also methodological development and will address all general objectives.
- Support to the implementation of Commission policies in selected policy areas through monitoring, methodological developments, quality assurance tools, reference materials and standards, etc.
- Support to crisis management, through operational regular and *ad hoc* support.
- Working with stakeholders and involving citizens more in EU policymaking processes, including the support to Member States and the setting up, design and implementation of the New European Bauhaus.
- Raising awareness on emerging or less-noticed issues, through high-profile reports and briefings. Support to Commission working methods, in particular better regulation and the data, information and knowledge management strategies.

Further examples are given under the different headings that follow.



Scientific excellence, impact and efficiency

The evaluation of JRC in Horizon 2020 and in the Euratom Research and Training Programme was launched in 2021 and will be completed in 2022.

Case studies are a useful tool for monitoring and communicating the impact of research and will continue to be rolled out across the portfolio of JRC's activities. After having completed 50 case studies in 2021, the aim is to complete another set of up to 10 in 2022.

The JRC's Centre for Advanced Studies, the Exploratory Research Programme and the Collaborative Doctoral Partnership provide cutting-edge scientific input to thematic areas emerging at the science-policy interface.



Responding to crisis and emergencies

Support to the EU in its response to the COVID-19 pandemic and the linked **resilience and recovery plan** will continue to be a major focus for 2022. The COVID-19 pandemic has shown the need for fast, coordinated actions, underpinned by scientific evidence. The pandemic has also brought to the fore the critical importance of scientific knowledge for effective policymaking and decision-making in response to complex crises. *Inter alia*, the crisis has revealed various challenges at the science-policy interface, such as dealing with scientific uncertainty, disinformation, contestation of expert authority, and a lack of coordination and cooperation between different advisory organisations and networks within and between Member States. Through Knowledge Centres, such as the Disaster Risk Management Knowledge Centre (DRMKC), the JRC established science-policy networks that are instrumental in crisis and emergencies. In particular, the JRC will work with the Member States to implement the science pillar of the Union Civil Protection Knowledge Network and integrate it into the foundations of the DRMKC. In support of the **European Semester** and country specific recommendations, the JRC will assess the economic and social impacts of

the COVID-19 pandemic and related containment measures, covering macroeconomic, regional, sectorial and social domains. The major outputs are described under the various headings below, in particular under ‘Promoting our European way of life’. The JRC will develop a strategic approach for the monitoring and implementation phase of the Recovery and Resilience Plans and future contributions to the European Semester. Key areas for future contributions include tax and benefits systems, territorial development, place-based innovation, productivity, education and skills, the impact of the digital and green transitions, and monitoring the impact of resilience building through the resilience dashboards,.

Working with stakeholders

In line with the priorities of the current Commission mandate, the JRC will support the delivery of the JRC work programme through focused engagement with stakeholders. It will reinforce strategic partnerships with the best research organisations worldwide and with international, national and regional stakeholders. The JRC will maintain open and inclusive, exchanges with stakeholders in support of evidence-informed policymaking.

2022 will see the implementation of the preparatory action ‘Advancing evidence for policy at Union, regional and local level’. This aims at strengthening local science for policy ecosystems through building awareness of evidence-informed policy-making and mutual understanding between policymakers and scientists; supporting local decision-makers to develop skills to use reliable high-quality scientific evidence as well as engaging with stakeholders; creating a community of practitioners across Europe to share experiences and knowledge. The programme includes more than 20 events, dedicated training, and pairing schemes.

The JRC will help develop capacities in Member States, in EU regions, and in Horizon Europe associated countries, as well as in third countries in line with EU’s priorities. It will provide access to vast amounts of country-specific and regional data, facilitate the exchange of best practices and open its unique research infrastructure to complement national research capacities.

The JRC, through its international cooperation, as well as the engagement in Team Europe Initiatives and science diplomacy will support the implementation of the Commission Communication on the Global Approach to research and innovation (COM(2021) 252 final).

The JRC will maintain an active dialogue with the Board of Governors and the network of National Contact Points in Member States and associated countries. The network will inform public entities and scientific communities about JRC’s latest initiatives, events and opportunities for collaboration with JRC.

JRC’s role at the service of the European project is to help provide solutions to the complex and inter-linked challenges faced by our society. The JRC will engage with other EU institutions to increase its visibility and scientific recognition, and to uphold and foster its scientific excellence.

By engaging with academic institutions in the Member States and Horizon Europe associated countries, the Collaborative Doctoral Partnerships train doctoral students at the science-policy interface and provides the higher education institutions with an opportunity

to collaborate on impactful research. The JRC Alumni Network broadens the JRC's stakeholder base.

Horizon Europe Missions under the Framework Programme for Research and Innovation are commitments to solve some of the greatest challenges facing our world, by consequence contributing also to the goals of the Recovery Package, the European Green Deal, Europe's Beating Cancer Plan, as well as the Sustainable Development Goals. In support of all five missions, the JRC will contribute to monitoring progress towards the missions' targets and bring understanding on why certain innovation approaches in the missions are successful and others not. The JRC's expertise on citizen engagement (CE) will also continue to shape the related activities in the missions.



Communication

As the science and knowledge service of the European Commission, the JRC's communication activities aim to:

- bridge science and policymaking by communicating evidence in an understandable way within the European Commission,
- facilitate dialogue and staff engagement internally within the JRC,
- foster external recognition of the Commission's political priorities by underpinning their credibility,
- position the JRC as a world-class scientific organisation and reaching out to citizens, scientists, journalists and other stakeholders.

To do so, the JRC will make full use of a diverse portfolio of communication channels, ranging from articles intended for scientists and academic stakeholders and publications that target policymakers, to a rich online offering of news, virtual content, and social media. It will further explore new citizen engagement techniques and innovative methods of communicating and engaging the public. All activities will be coordinated by a new JRC communication unit, established in the summer of 2021. A key priority for the new unit is to develop one single JRC communication community, involving all relevant partners. Furthermore, anticipating and aligning JRC communication activities are important objectives for the coming year.

The JRC will leverage the unique opportunities presented by its world-class scientific infrastructure throughout Europe to offer on-site and virtual visits and events to highlight the contribution of its scientific work to stakeholders and individuals, particularly through its new Visitors' Centre in Ispra (Italy).

It will continue to encourage and train its scientists to act as communicators and bridge the gap between science, policymaking and citizens, including through:

- tailor-made courses and tools produced for the JRC Clear Writers' Network,
- coaching on TED talks and public speaking in general,
- training on how to use infographics and data visualisation tools,
- the novel EU Academy e-learning platform,

- a new storytelling lab.

The quality of JRC publications will be further improved through internal peer reviews of a significant proportion of publications carried out by the Editorial Review Board.

The JRC will continue to work closely with other Commission services and with the corporate communication function to leverage synergies and contribute to common projects. The JRC will pursue its advisory role on issues such as dis/misinformation, behavioural sciences, science for policy as well as citizen engagement. It will contribute to important corporate communication campaigns such as **NextGenerationEU**, the **Conference on the Future of Europe** and the **New European Bauhaus**. The JRC will also transition to Office365, it will integrate its EU Science Hub and other JRC websites into the EUROPA website, and further develop an EC-branded Knowledge Platform, compliant and compatible with the EUROPA web presence.



The European Green Deal





The European Green Deal is a driving force that will transform every aspect of our economy, environment and society from the energy we use, the air we breathe, to the food we eat, the way we work, travel, produce and consume products and shape our built environment.

The actions under the European Green Deal will enable climate neutrality by 2050 focusing on adaptation and mitigation, on protecting and preserving our environment and on a new growth strategy for Europe, leaving no one behind. The latter will help create jobs and growth, making our economy and industry more innovative, resource efficient, circular and competitive.

This transition requires a coordinated and targeted mobilisation of Europe's scientific knowledge, research, innovation, investment and societal assets, institutions and capacities. The JRC will play a key enabling role by contributing to the scientific, technical and economic evidence base. It will use, for example, foresight, modelling and monitoring necessary for the transformations to take place, in close cooperation with relevant Commission services and with other partners within and outside the EU. The JRC will assess potential trade-offs between economic, social and environmental objectives, as well as help to embed climate action into all policies through interdisciplinary research. It will work on issues such as climate action, sustainable and smart mobility, energy, nuclear safety and security, green and circular economy, environment, oceans and fisheries, agriculture and food systems.

The JRC will underpin many Green Deal initiatives and, to look beyond them, by anticipating future challenges, needs and transformations. Almost half of the JRC work resources deployed for the Commission priorities are dedicated to the European Green Deal. The Green Deal is also the topic of the next Science and Art Resonances cycle starting in 2022, engaging artists to reflect with JRC scientists on our relationship with nature.

The CWP 2022 lists a number of legislative and non-legislative initiatives to which the JRC will contribute. In addition, the JRC is heavily involved in the implementation of the Green Deal strategies and action plans adopted since the beginning of the President's mandate. Examples of the JRC's support to CWP 2022 and other policy initiatives include:

-  **Zero-pollution initiatives.** The JRC will support the legislative proposal on **Integrated Water Management – revised lists of surface and groundwater pollutants**, which is about updating the lists of substances that are considered pollutants in surface and groundwater and their safety limits. The JRC will conduct analyses, risk assessment, and propose the safety limits to update the lists considering the latest scientific evidence. The JRC will draw on its long-standing expertise in air quality modelling and monitoring in support to the **Revision of EU ambient air quality legislation**. There is a specific mandate for the JRC to monitor the quality of air pollution measurements by the Member States in line with the 2008 Directive, which is done in the European Reference Laboratory for Air Pollution (ERLAP).
-  **Biodiversity and Farm to Fork.** The JRC will support the legislative proposal on **Sustainable use of pesticides – revision of the EU rules** in three ways. First, it will help to develop harmonised risk indicators on the sustainable use of pesticides. Second, it will conduct socio-economic analyses to assess the environmental, economic and trade consequences of possible transition pathways, and finally it will conduct chemical analyses to assess the safety of certain chemicals for humans and the environment (e.g. endocrine disruptors).
-  For the **Review of the CO₂ emission standards for heavy-duty vehicles**, the JRC will provide scientific data and analysis of various technological options for the reduction of vehicle energy consumption for the impact assessment.
- In parallel, the JRC will continue to support activities related to the proposed amendment of the **CO₂ emission standards for cars and vans**. The JRC will contribute to the development of the **in-service verification and real-world CO₂ emissions monitoring regulations**, and the corresponding test procedures for light and heavy-duty vehicles. For this, the JRC will perform experimental tests, evaluate real-world CO₂ emissions monitoring data and further develop the Vehicle Energy Consumption calculation Tool (VECTO) and the database for in-service CO₂ emissions (DICE) information systems.
-  **GreenData4All** – The JRC has a mandate for the technical implementation of the infrastructure for spatial information (INSPIRE) directive. The implementing phase and the lessons learnt from it will support the revision of the directive (REFIT initiative).
- **The legislative framework on sustainable food systems** (to be adopted by the end of 2023). This initiative is expected to become the basis to promote policy coherence at EU and at national level and mainstream sustainability in all food sustainability-related policies. The JRC will work on the impact assessment in close cooperation with Directorate-General Health and Food Safety (responsible for the

file), Directorates-General Agriculture and rural development, Environment and Maritime affairs.

- **New European Bauhaus (NEB)**. The NEB is a flagship initiative of President von der Leyen to stimulate a new lifestyle matching sustainability with good design, inclusive and affordable for all, while respecting diversity in Europe and beyond. Now in its implementation phase, about 85 million EUR will be mobilised from various EU programmes including Horizon Europe, Single Market Programme, LIFE, and European Regional Development Fund. The JRC will bring to this initiative its multidisciplinary knowledge, its experience in managing broad networks of stakeholders and its long-standing experience in a host of relevant areas. This includes knowledge of the construction sector and protection of public spaces (one example is the JRC's unique scientific facility 'European Laboratory for Structural Assessment'), but also of running inclusive design and co-creation exercises in its 'Policy Lab'. Last, but not least, the JRC has a long experience with citizen's engagement.

In addition, the JRC will be engaged in the implementation of several initiatives adopted from the CWP 2020 and/or 2021 including:

- the **hydrogen strategy** – the JRC is currently working towards bringing advanced fuel cell and hydrogen technologies to commercialisation and on defining international standards/
- The **chemicals strategy for sustainability** – The JRC is assessing the risks from combined exposure to multiple chemicals (mixtures), new approaches to regulatory toxicology testing using non-animal methods, exploring safer and sustainable advanced materials and working on a more reliable assessment of exposure and effects of micro and nano-plastics.
- The **EU strategy on adaptation to climate change** – The Commission will use the JRC Risk Data Hub as a platform to standardise at the EU level the recording and collection of comprehensive, comparable and granular climate-related risk and loss data.
- The **EU forest strategy for 2030** – It foresees the development of a new European forest science partnership through the JRC. The JRC will, e.g., develop methods for European forest monitoring, assess the forest condition and pressures combining remote sensing and statistical data.
- The JRC will follow up on recommendations of the **taxonomy** task force for the decisions on nuclear and gas integration in the EU Taxonomy Regulation Complementary Delegated Act released in 2021.
- **EU biodiversity strategy 2030** – The JRC will support the monitoring of its implementation through the Knowledge Centre for Biodiversity, which make full use of the digital transformation, Earth observation data and citizen science. The knowledge centre will bring all this together, providing a one-stop shop for key information about biodiversity and the impact of related policies and improving the way we generate and manage biodiversity knowledge to more effectively support EU policies.

- **Nuclear safety Directive** – The JRC will continue to support the roll out and the implementation of the post-Fukushima stress tests of the Akkuyu nuclear power plant (Turkey) and EU-wide topical peer review on fire safety of nuclear installations within the frame of the implementation of the Nuclear Safety Directive.
- **Strategic Agenda for Medical Ionising Radiation Applications (SAMIRA)** – The JRC has been involved in the drafting and implementation of SAMIRA since the start and is integrating the collaborative work in the different aspects of medical radionuclide research (Euratom direct and indirect actions), quality and safety, capacity building and policy support.




A Europe fit for the digital age

The Commission is proposing actions to ensure that digital technologies help Europe develop and pursue its own vibrant, globally competitive, value-based and inclusive economy and society. Digital is the second component of the ‘twin transition’ in the EU’s political agenda and a potentially powerful enabler of the green transition. The Communication on ‘A Europe fit for the digital age’ identifies five main streams for action: the European digital strategy, the industrial strategy, digital services, cybersecurity and consumers, and research.

The JRC will explore the interplay between cybersecurity, data protection, blockchain technologies and artificial intelligence (AI) in the context of the latest developments of the digital transformation landscape. For example, a new stream of work concerns the impact of AI on human behaviour, while another involves the implications of the use of blockchain technologies for inter-institutional services. The JRC will analyse the EU’s technological sovereignty from the standpoint of current and emerging digital technologies applied to security (including cyber), defence, public safety and competitiveness. In this context, in synergy with the launch of the European Cybersecurity Atlas, the JRC will analyse foreign direct investment in cybersecurity technologies. All these activities will contribute to research that is fundamental for digital innovation and for guaranteeing the competitiveness of Europe. In addition, the JRC will support innovation policy and technology transfer activities. Finally, the JRC will provide support to the single market, for example, through standardisation work and activities in support of market surveillance and compliance and supporting the streamlining of cybersecurity principles in the new sectorial policy initiatives.

Examples of the JRC’s support to CWP 2022 and other policy initiatives include:

-  **The European Chips Act.** For example, the JRC supports the screening of foreign direct investment into the semiconductor supply chain and assesses from the scientific/technical and financial point of view if these investments pose a threat to security or public order in Member States. **The European Cyber Resilience Act** will complement the EU’s legislative framework in the field of cybersecurity. Recognised for its cybersecurity research, the JRC has been supporting both the conception and the implementation of cybersecurity policies. In the future, the JRC will continue its work to strengthen the cyber-resilience and autonomy of the Union

by supporting the evidence-based design of cybersecurity policies concerning new disruptive digital technologies (AI, blockchain), critical sectors and next generation internet.

The JRC will also be engaged in the implementation of several adopted initiatives from the CWP 2020 and/or 2021 including:

- the **EU action plan on synergies between civil, defence and space technologies** foresees setting up a Commission observatory on critical technologies. The JRC co-leads the observatory with Directorate-General for Defence Industry and Space. This observatory will identify critical technologies, including emerging and potentially disruptive ones, relevant to defence, space and security. The JRC will analyse strategic value and supply chains to assess the risks associated with strategic dependencies and propose mitigation measures.
- The **Data Governance Act** for which the JRC conducts relevant research on data governance, standards, interoperability and analytical methods for the deployment of European data spaces in strategic sectors (incl. environment, health, agriculture and the public sector). Particular focus is on the Green Deal data space through the support to the GreenData4All and Destination Earth initiatives.





An economy that works for people

In the last years, globalisation, digitalisation and the economic and financial crisis have challenged the economic and social fabric of the EU. Achieving a deeper and fairer Economic and Monetary Union, boosting investment and creating jobs, and refocusing the European Semester towards green growth and sustainability count among the flagship ambitions under this priority.

The JRC will provide integrated analyses to inform policy-making in the economic, financial, employment and social fields. It will develop monitoring frameworks for providing policy makers with a bigger picture on economic, financial and societal issues, assessing and following individual EU Member States' performance over time, thereby benchmarking them and evaluating convergence between them. It will also assess the potential and opportunities arising from the Blue Economy under the EU Blue Growth Strategy. Finally, the JRC will contribute to the revamped European Semester driven by the recovery.

The CWP 2022 lists a number of legislative and non-legislative initiatives to which the JRC will contribute. Examples of the JRC's support include:

-  **Fair taxation.** The JRC has a track record of supplying economic analyses conducted with models to inform the development of EU regulations and directives on corporate taxation. Its economic analyses also helped the EU to promote a consensus-based global tax agreement within the framework of the OECD, and may feed into the new legal proposal.

-  **Recommendation on minimum income.** The JRC will assess the current minimum income schemes in the 27 EU Member States and work on poverty projections up to 2025.

In addition, the JRC will be engaged in the implementation of several adopted initiatives from the CWP 2020 and/or 2021 initiatives including:

- the **Sustainable finance package** with technical support to Directorate-General for Financial Stability, Financial Services and Capital Markets Union and Directorate-General for Environment and contributions to several EU taxonomy delegated acts.
- The JRC will work on the **territorial dimension** of the European Research Area. The JRC will help regions design and implement innovation strategies, provide targeted support to enhance their innovation ecosystems, and improve technology transfer. Finally, the JRC will provide support to the single market, for example through standardisation work and activities in support of market surveillance and compliance and supporting the streamlining of cybersecurity principles in the new sectorial policy initiatives.



A stronger Europe in the world

Europe strives to strengthen its unique brand of responsible global leadership, most recently through the Global Gateway announced by President von der Leyen in her State of the Union address. It aims to be an assertive geopolitical player, the ‘guardian of multilateralism’ and to uphold and update the rules-based global order. This priority interlaces closely with the European Green Deal, which aims to promote ambitious environment, climate and energy policies across the world. Furthermore, trade policy will support the EU’s ecological transition. Through this priority, Europe aims to give new impetus to its relationship with China, Africa and with the Western Balkans, where it sees the enlargement policy as an instrument for catalysing comprehensive national reforms.


In this context, the JRC will provide scientific evidence and use its scientific networks outside Europe as avenues for science diplomacy and to support Europe’s commitments on the global and multilateral systems and the implementation of the EU’s international policy objectives. The ongoing JRC support to the United Nations Convention on Climate Change, Biological Diversity and Combating Desertification, as well as to the Non-Proliferation Treaty, the Comprehensive Test Ban Treaty and the UN Sendai Framework enables the definition of international requirements and standards and increases partnerships at the global scale. Furthermore, JRC will work on trade, foreign direct investments, security and defence, nuclear safety and crisis management. JRC’s early warning systems, such as for floods, wildfires and droughts, crop yield forecasting and agricultural production anomaly detection and the global disaster alert and coordination systems help Members States and third countries prepare for disasters and manage crisis worldwide.

‘Putting science into standards’ is a JRC strategic programme (in collaboration with other DGs and European standardisation bodies) using our anticipatory and pre-normative research expertise to enhance the EU’s competitiveness on a global scale. The program

aims at identifying emerging science and technology areas that could benefit from standardisation activities, to enable innovation and promote industrial competitiveness.

The JRC will contribute with technical support to the implementation of several international agreements concerning nuclear security, safeguards and non-proliferation including, where appropriate, the Iran nuclear agreement, nuclear safeguards and security research and development (with Japan and the USA), the EU CBRN¹ Centres of Excellence and the EC support to the International Atomic Energy Agency safeguards.

The CWP 2022 lists a number of legislative and non-legislative initiatives to which the JRC will contribute. Examples of the JRC's support include:

-  **New strategy on international energy engagement** – The JRC is supporting the preparation of this initiative, as well as its implementation by performing sustainable energy planning analyses for Africa, producing modelling-based projections of the evolution of the global energy system, spreading the acquis communautaire on security of gas supply to neighbouring regions like Ukraine and the Western Balkans, providing evidence on international trade, competition and clean energy technologies and assessing the evolution of the EU energy innovation landscape.

The JRC will also be engaged in the implementation of several adopted initiatives from the CWP 2021 and other initiatives including:

- **Global Gateway** is a new European strategy to enhance investments in connectivity and services around the world, in line with the EU's principles of ensuring a level playing field, transparency and sustainability. Together with Directorate-General for International Partnership and Directorate-General for Neighbourhood and Enlargement Negotiations, the JRC is involved in the analysis and selection of 'strategic corridors' according to the EU priorities. The final list of corridors subject to investments and the formal announcements of the 'Team Europe Initiatives' are planned for the AU-EU Summit in early 2022.
- **Communication on the EU's humanitarian action** – The JRC supports the Directorate-General for European Civil Protection and Humanitarian Aid Operations in its actions to provide civil protection response to crisis, and it has adapted its tools such as the Global Disaster Alert and Coordination System as well as situation maps and analytical reports to include information on COVID risks. The JRC and the Directorate-General for European Civil Protection and Humanitarian Aid Operations jointly develop the INFORM risk index, a global, open-source risk assessment for humanitarian crises and disasters.
- **Africa Knowledge Platform** – The JRC will continue engaging with EU services and partners in the co-development of the Africa Knowledge Platform (AKP), a gateway to data and information on Africa's social, economic, territorial and environmental

¹ Chemical, biological, radiological and nuclear risks

development. The AKP aims to support the European Union (EU) objective of deepening the partnership with Africa, and has been designed to answer complex EU policymakers' questions in the crossroads of different domains of the EU cooperation with Africa.

- The JRC will conclude a new cooperation agreement between the European Commission and the **United Nations Scientific Committee on the Effects of Atomic Radiation** (UNSCEAR) on research and data exchange on the effects of ionising radiation to humans and the environment, in partnership with Directorate-General for Research and Innovation and Directorate-General for Energy.



Promoting our European way of life



Our European Way of Life is built on values of solidarity, equality and fairness. The JRC will provide support for a sustainable reform of migration and asylum, considering both its internal and external dimensions. It will support the reform of the Common European Asylum System with data innovation, advanced modelling and detailed thematic analyses on asylum procedures and scenarios. It will further explore the relationship between migration and demography, and provide foresight analysis on the long-term economic impact of migration flows to support the design of evidence-informed policies on legal migration and integration.

The JRC will support actions to increase security at our external borders and strengthen collaboration with the European Border and Coast Guard Agency on research and innovation relevant for EU border security.

Modernising education, training and lifelong learning and developing transversal skills are key for addressing challenges related to promoting our European way of life. JRC research on key competences in a life-long learning perspective will be extended to green education and green skills.

Finally, the JRC will intensify its work on health, among others in response to the COVID-19 pandemic.

The CWP 2022 lists a number of legislative and non-legislative initiatives to which the JRC will contribute. Examples of the JRC's support are:

-  The JRC's Knowledge Centre for Cancer and nuclear programme on medical applications of radioisotopes support the Horizon Europe cancer mission, **Europe's Beating Cancer Plan**, adopted in February 2021, **and the update of the Council Recommendation on cancer screening**.
-  **European Care Strategy**. The JRC will support Directorate-General for Justice and consumers with the revision of the Barcelona targets by analysing the impact on labour supply. It will also support their implementation.

The JRC will be engaged in the implementation of several adopted initiatives from the CWP 2020, 2021 and important initiatives launched in 2021, including:

- **European Health Union.** The first initiatives to create the European Health Union seek to boost crisis preparedness and response measures. JRC's expertise in the detection of health threats and in monitoring their spread will contribute to the **European Health Emergency Preparedness and Response Authority (HERA)** launched by the President at this year's State of the Union speech. The aim is to develop, produce and procure medical countermeasures to tackle health emergencies.
- The Communication on achieving the **European Education Area** by 2025. Concerning the actions to support the green transition through education, the JRC will be supporting Directorate-General for Education, Youth, Sport and Culture with the Education for Climate Coalition, drawing on its expertise in public engagement with science



A new push for European democracy


Giving Europeans a stronger role in decision-making starts with rethinking the way EU policies are prepared and decided. This means strengthening EU's capacity to anticipate societal challenges by creating policies that are informed through the best possible evidence, but which also respond to the different values and concerns of citizens and regional/territorial specificities, including demography. At the same time, growing complexities, including spreading of social media and global information technologies could pose threats to democracy.

The JRC will support better regulation and strategic foresight. It will carry out activities to strengthen the EU's democratic foundations, as well as stepping up Europeans' engagement in the EU policymaking.

The JRC will develop its advanced AI-based tools for **disinformation** detection. Building on previous work on the potential causality between online technologies and political behaviour, it will seek to understand the ramifications of different communication strategies, reflecting upon the extent that public institutions can meaningfully and ethically communicate using values, narratives, metaphors and frames as well as causal reasoning. It will carry out research to improve evidence-informed policymaking, developing practical toolkits to factor values and identities in the process, while nurturing science-policy ecosystems through active networking and capacity building at national and regional level.

To help fulfil the President's strong pledge for an institution capable to communicate with citizens to engage them in the political debate, the JRC will establish itself as a provider of methodological toolboxes and protocols for **citizen engagement** initiatives, to be deployed, *inter alia*, in support of the Conference on the Future of Europe and the Horizon Europe Missions.

The CWP 2022 lists a number of legislative and non-legislative initiatives to which the JRC will contribute. An example of the JRC's support is the following:

-  **Strengthening the role and independence of equality bodies.** The JRC will develop a system for monitoring sentiment values and emotions in published text, based on its Europe Media Monitor (EMM).

Better Regulation

The JRC continues to be centrally involved in implementing and innovating the **better regulation** agenda. It offers methodological advice, training and IT solutions to policy DGs on evaluations and impact assessments (an overview is given in Figure 2). The aim is to provide this advice early in the policy making process. To this effect, the JRC and the Publications Office are piloting a Better Regulation Evidence Transparency Service as part of the rolling action plan for the Data, Information and Knowledge management at the European Commission, and the JRC participates in the upstream meetings with the Regulatory Scrutiny Board.

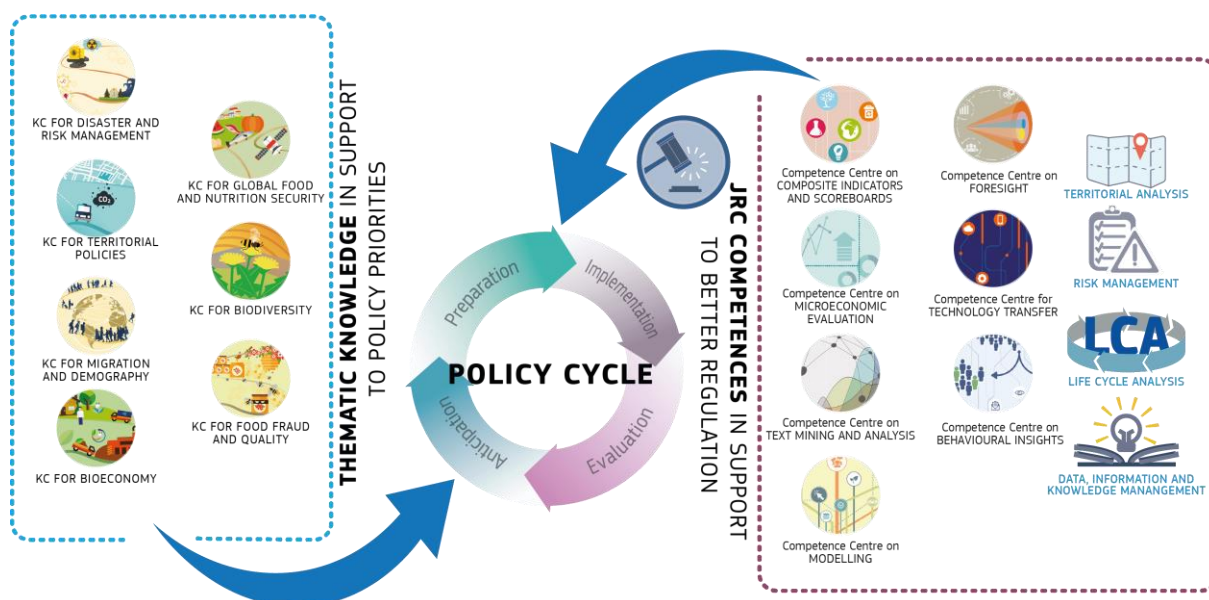


Figure 2. Examples of JRC's role in support to the policy cycle. The various competence and knowledge centres in the JRC provide competences and thematic knowledge to the policy cycle.

Smart policies should be 'future-proof'. The JRC is helping the Commission in its ambition to put strategic foresight at the heart of the EU policy process. It will support the Commission's 2022 Strategic Foresight Report. In addition, it will produce a JRC Science for Policy Report addressing the twin (green and digital) transition in its complexity and identify some case studies of specific technologies. Specifically it will address the technological and systemic avenues necessary for a successful implementation of the goals of the twin transition. In addition, the JRC leads the cooperation with other EU institutions in the European Strategy and Policy Analysis System (ESPAS) and supports other Commission services in developing their foresight capacities.

As an example, the JRC will support the **Commission Communication on the 2022 Strategic Foresight Report**. The JRC foresight process will address the twin transition in its complexity and identify some case studies of specific technologies that may be

functional to this purpose. Specifically it will address the technological and systemic avenues necessary for a successful implementation of the **European Green Deal** goals. The JRC will also produce a **JRC Science for Policy Report** summarising the factual results of the foresight process.

Also, smart policies should be based on the best available data and information and respond more attentively to the concerns of people. The effective management of data, information and knowledge is therefore vitally important. However, data and knowledge remain scattered and the acquisition of new data and generation of new knowledge needs to be well coordinated. The JRC will contribute to the Commission's data, information and knowledge strategies and offer tools, advice and support to facilitate knowledge sharing and collaborative working.

An example is the **Composite Indicators and Scoreboards Explorer**, an innovative JRC tool that brings hundreds of composite indicators and scoreboards just a click away to help the Commission at developing sound and relevant indicator frameworks to underpin its strategies and action plans, by:

- helping to assess EU progress towards the social, economic, digital and green goals,
- facilitating, among others, the European Semester process,
- providing flexibility in exploring interactively various sets of indicators in the context of policy labs or other brainstorming or exploratory meetings
- helping to bring coherence in the design of future or revision of existing composite indicators and scoreboards.

Smart policies should also respond more attentively to the concerns of people. These responses should rely on sound interaction and co-creation with them. New ways of working with Member States, stakeholders and citizens can improve decision-making and implementation and ensure citizen support for EU policies. A permanent dialogue with citizens is also a key element in communicating more effectively across a whole continent in times of increasing fragmentation and disinformation. The JRC is experimenting with different formats of engagement and successful practices, testing solutions at EU level and scaling them up.

Specific objective 7.2: The JRC operates modern, sustainable and open access research campuses

Unlike other DGs and Offices, the JRC owns buildings and related infrastructures on five Commission sites (Geel, Ispra, Karlsruhe, Petten and Seville) and it is therefore directly in charge of managing them. Support services include all activities related to infrastructure development and maintenance, energy and water management, logistics, transport, and certain aspects of safety, security and environmental protection. The JRC Strategy 2030 set as a goal 'an internationally recognised, modern, safe and secure infrastructure for the JRC, which creates a positive working environment'. On this basis, the JRC developed local site development plans, which articulate the following priorities:

- modern and fit-for purpose infrastructures, including for office, scientific and social usage and supporting collaboration and outreach,
- smart eco-friendly sites and efficient services.

In 2021, following the adoption of new Commission priorities, the reduction of the Euratom budget, the impact of the synergy and efficiency review, the COVID-19 pandemic – including increased teleworking, hybrid meetings, new dynamic collaborative spaces, and the new HR strategy – the JRC has decided to review each local site development plan. The result of this exercise will pave the way for the adoption of a number of multi-annual projects aiming at modernising the JRC to deliver on its scientific activities.

The JRC continues to provide open access to selected physical research infrastructures to the research community, public authorities, SMEs and industry to enhance scientific knowledge dissemination, boost competitiveness, bridge the research-industry gap, provide training and capacity building and bridge the innovation gap.

Specific objective 7.3: The Commission has appropriate capacity to manage risks related to intellectual property rights and be compliant with the rules and regulations

The EU owns many intangible assets, protected by intellectual property (IP) rights, ranging from publications to software, to datasets, to technical inventions, to signs. In their daily work, Commission staff may have to use IP assets, owned by third parties. The Commission aims to facilitate further use (and reuse) of EU owned IP assets and to ensure compliance use of third party owned assets by Commission staff. As rules on IP are not always straightforward or easy to understand, it is necessary to give clear guidance on the management of IP assets to Commission staff, thus contributing to a modern, high performing and sustainable European Commission. In 2022, and together with the IP correspondents' network and Legal Service, the JRC will further facilitate appropriate IP management at the Commission, alleviate administrative burden in relation to IP procedures, introduce new guidelines and make information more easily accessible. It will continue its IP management awareness raising activities, coinciding with the adoption of new IP communication and the Staff Working Document, and the provision of legal advice on matters related to IPR.

EUROPEAN COMMISSION GENERAL OBJECTIVE 1

Figure 3 provides an overview of how the JRC is structuring its work and setting specific objectives in support to Commission GO1.



Commission General Objective 1

the European Green Deal

JRC Specific objectives

1.1

The JRC progressively decommissions its disused nuclear facilities and safely disposes of its radioactive waste

1.2

The JRC establishes links and tools for nuclear decommissioning knowledge sharing and dissemination with stakeholders in the Member States

Figure 3. JRC support to Commission general objective 1.

Specific objective 1.1: The JRC progressively decommissions its disused nuclear facilities and safely disposes of its radioactive waste

Decommissioning and waste management are an integral part of the life-cycle of JRC's nuclear research facilities; they fulfil the final aim of returning the land used to a 'green-field status'. The nuclear Decommissioning and Waste Management Programme (D&WMP) of the JRC entails a complex set of specific activities and projects with related objectives.

JRC's decommissioning activities are included in a new instrument in the Multi-annual Financial Framework 2021-2027, the 'Nuclear Safety and Decommissioning Programme'. Since 2021, the establishment of a directorate dedicated to these activities is facilitating the implementation of the programme in line with its operational character.

The overall objectives of the programme include safe conservation, pre-decommissioning, decommissioning and waste management covering a variety of large installations.

Different levels of advancement/implementation characterise the situation at the four nuclear sites of the JRC. In Ispra, most of the nuclear facilities ceased to operate before 1999 and there is a well-established organisational structure implementing the programme, while establishment of such a structure in the remaining JRC sites is still at an embryonic stage.

In 2022, progress in Ispra on the three main work streams (nuclear material, waste management and decommissioning) will include the relocation of fresh nuclear material, advancement in decommissioning of some facilities (*i.e.* Ispra cyclotron) and design, licensing and in-field work for waste treatment and characterisation facilities. Some waste treatment off-site services will also produce significant outputs.

In Karlsruhe, the expected progress will include preparation of glove boxes for dismantling increasing amount of low-level characterised waste. Pending a new JRC nuclear strategy, long-term decommissioning concept for the nuclear facilities will be developed.

In Petten, an important goal for 2022 will be to use the framework contract (established in 2021) with the Dutch operator (Nuclear Research and Consultancy Group) to start to remove and dispose the historical waste still present on site.

In Geel, based on the established inventory of nuclear material, transport options for removal of the material will be investigated in order to perform transports in 2022; removal of obsolete pieces of equipment will be continued.

Specific objective 1.2: Establish links and tools for nuclear decommissioning knowledge sharing and dissemination with stakeholders in the Member States

Knowledge sharing is the second component foreseen in the Commission proposal for the nuclear D&WMP of the JRC under the new Multiannual Financial Framework 2021-2027. The main activities for 2022 will be the design and development of the prototype of a platform for dissemination and sharing of good practices and experiences among Member States, launching its operational implementation.

PART 2. Modernising the administration: main outputs for 2022

The internal control framework² supports sound management and decision-making. It notably ensures that risks to the achievement of objectives are taken into account and reduced to acceptable levels through cost-effective controls.

The JRC has established an internal control system tailored to its particular characteristics and circumstances, supported by an Integrated Management System based on ISO 9001. The effective functioning of the service's internal control system will be assessed on an ongoing basis throughout the year and be subject to a specific annual assessment covering all internal control principles.

The JRC's priorities for 2022 include a number of initiatives and projects which will contribute to further modernise the administration.

In the area of human resources management, in addition to talent management, career and leadership development programmes, a considerable effort will be devoted to help and guide staff and line managers through the Covid-19 pandemic.

In the area of sound financial management, the JRC will again endeavour to ensure good performance and results. In 2022, the JRC will also finalise its new internal control strategy.

In support to the digital transformation, the eProcurement programme will continue to deliver in 2022 and efforts will continue to ensure improved data management within the JRC.

Last but not least, the JRC will further pursue its multi-annual programmes for energy efficiency and sustainable transport on its sites outside Brussels.

A. Human resource management

The JRC aims to recruit, train, motivate and retain highly qualified staff to ensure the effective and efficient operation of the DG as well as the promotion of equal opportunities and diversity. Building on the objective of a 'people centred organisation' of its long-term strategy 2030, the JRC started to review its future orientation through a comprehensive 'Reset, re-imagine, re-energise the JRC' (3R). This process will provide the JRC with a **new local HR strategy**, especially related to talent management, management development, staff well-being and diversity, to be implemented in 2022. In addition, the **JRC Equality Mainstreaming Plan** addresses how the JRC as an organisation applies the highest standards in terms of equality for its staff, and supports diversity and inclusion.

² [Communication C\(2017\)2373 - Revision of the Internal Control Framework](#)

During the COVID-19 pandemic, the JRC has been devoting considerable efforts to help and guide staff and their line managers with the continued hybrid working conditions. Specific focus has been put on swift and transparent communication, ergonomic assistance, psychosocial well-being, management of remote teams and on-line training. In line with the corporate de-confinement action plan, further customised support measures will continue to be developed in the framework of a JRC specific 'return to the workplace strategy' to facilitate the transition to a gradual 'new normal'.

Despite the challenging context, the JRC will continue developing its talent management and career development programmes to cover strategically important competence areas throughout 2022. New programmes were launched in 2021 and two cycles will close before mid-2022. In line with the Commission Decision of 30/09/2020 regarding complementary measures to improve gender equality at management level, JRC has appointed a deputy to the Director for each of its Directorates. In addition, the JRC continues to select and appoint deputy Heads of Unit to ensure each Unit will have a deputy before the end of 2022, respecting gender balance. To reach the targets of first female appointments to middle management positions, the JRC will also continue to engage in the promotion of management careers amongst its female AD population, including the organisation of targeted development actions for female AD staff with management potential. JRC currently has 19 female middle managers (29%), a significant increase in comparison to the baseline of 1st of December 2019 when it had 14 (22%).

To enhance the positive trend in staff engagement and underpin the high level of staff well-being, the follow-up of the last staff opinion survey was completed in 2020 and supported by a communication campaign with a 'you said - we did' approach. The aim is to improve on e.g. the staff engagement index (baseline 68% in the 2018 survey). Two pulse surveys were done in 2021 to measure the evolution of the staff engagement index. These surveys will continue in 2022 as part of the 3R programme. The Commission wide-staff survey took place towards the end of 2021. The JRC will take appropriate measure to follow up the results, as soon as these will be communicated.

Leadership development opportunities for the JRC managers will continue to be promoted. For example, in 2021 most middle managers participated in targeted workshops on detecting psychosocial stress. The participation to these programmes will be open to team leaders and project managers throughout 2022.

With the Collaborative Doctoral Partnership, Exploratory Research Programme and the Centre for Advanced Studies, the JRC is complementing its competence base with experts and motivated young scientists from specific fields relevant for upcoming policy challenges. By working with artists, curators and designers, the JRC scientists engage in transdisciplinary thinking to address complex issues.

B. Sound financial management

2022 will see a number of initiatives to further strengthen JRC financial management, including:

- pro-active oversight of calls for tender for renewable critical contracts,

- tailored anti-fraud training in cooperation with OLAF,
- increased automation via the on-boarding of PPMT by Commission agencies and bodies,
- the development and consequent delivery of a mandatory training map for operational initiators.

The eProcurement programme will continue to deliver in 2022. As well as its benefits to the digitalisation priority of the European Commission, the programme will continue to enhance JRC's operations throughout the year as further explained in part 2F.

C. Fraud risk management

Fighting fraud is a top priority for the JRC since 2012. Ethics and integrity are central values in the JRC Strategy 2030. The JRC anti-fraud strategy (AFS) and related action plans have been designed, implemented and assessed to ensure a zero-tolerance-approach. The JRC also provides technical and scientific support to other Commission DGs in their fight against fraud.

During 2020, the JRC revised its anti-fraud strategy in accordance with the new Commission AFS (CAFS)³, focusing on two prioritised objectives of CAFS: 'data collection and analysis' and 'coordination, cooperation and processes'. The aim of the JRC strategy is to achieve a fully-fledged governance structure with clear roles and defined methodology for data analysis and information exchanges, covering both financial and non-financial aspects. Tailored trainings started in 2021 and will continue in 2022 to reinforce awareness of staff. The JRC Scientific Integrity Framework and Research Ethics Board are being reinforced. New guidelines and tools for responsible conduct of research have been embedded into the scientific project management cycle and will be further implemented during 2022. The JRC continues to participate in specific OLAF⁴ subgroups, providing its experience in data analysis and indicator definition, especially in the context of research, trainings, and management system integration.

During 2022, additional efforts will be focused on improving, if possible, fraud data collection and analysis and possible further development of the rapid alert system beyond financial issues. Relations with other European Institutions will be strengthened to ensure cooperation also on training supply and fraud risk assessment and management.

D. Digital transformation and information management

The JRC will pursue six main lines of activities:

³ https://ec.europa.eu/anti-fraud/sites/antifraud/files/2019_commission_anti_fraud_strategy_en.pdf

⁴ European Anti-Fraud Office

- further development of the e-procurement solutions,
- implementation of the ICT architecture and further strengthening the ICT governance process,
- implementation of the JRC's part of the Rolling Action Plan for Data, Information and Knowledge Management post 2021,
- implementing corporate governance and policies by improving internal JRC data management and data sharing. This includes further advancing the big data analytics platform, establishing a JRC research data repository and coordination of data acquisitions,
- implementation of data protection rules,
- a sound records management in compliance with the e-Domec policy.

The JRC is the business owner for **e-procurement**. The new e-procurement corporate solution currently being built and already partially in production is based on the proven practices and solid architecture of eGrants. The solution aims to be fully integrated, automated and paperless, covering the whole e-procurement end-to-end process, with a high user experience and full integration with the financial and accounting processes. For more information on the e-procurement project plans for 2022 please refer to section 2F.

A future-proof, end-to-end **ICT architecture** is currently being implemented that defines capabilities aligned to business needs and supports the JRC 2030 strategy. This architecture addresses aims to ensure a cost effective, fit for purpose, secure and well-coordinated ICT environment. A number of projects were defined and in 2022, concrete results are expected for an improved security of the JRC network (reinforced system security evaluations, consolidation of existing specific JRC networks, design of a specific JRC network), the availability of an application development platform, and a virtual desktop facility (as an alternative to powerful workstations and for isolated development environments). The ICT governance process will be further strengthened to involve more the scientific users and the senior management in the consolidation process.

The JRC supports the digital strategy principles and does this systematically when assessing the JRC ICT projects through the JRC **ICT Programme Office**. Tools used for daily work and collaboration include: 1) alignment with the corporate choices made for collaboration tools taking into account its specific needs; 2) Welcome will be deployed in the JRC by Directorate-General for Informatics including the transfer of the management of the physical network of the JRC to Directorate-General for Informatics.

Concerning ICT security, the JRC is making a huge effort in order to finalise the security risk assessment and security plans and will revise them regularly. The intention is also to set up a single scientific network and to phase out the existing ones. In view of its specificities, the JRC will continue to invest in ICT security. The JRC collaborates intensively with DIGIT.S to achieve monitoring and improving capability and maturity.

The JRC will contribute to the implementation of the **post-2021 Rolling Action Plan for Data, Information, and Knowledge Management** at the Commission (the Information Management Steering Board (IMSB) work programme). Especially in the context of the DataStrategy@EC action plan, the JRC is leading the Data Advisory (DA) service action. The DA service was run as a pilot throughout 2021. In 2022, the DA service will be consolidated

including sharing the knowledge base and contributing to the implementation of the EC data governance and policies. Re-enforced awareness raising and outreach will be a priority. The DA service action contributes to the digital strategy objective of enhancing openness and transparency within the EC. In addition, the JRC will continue to support operationalising the DataStrategy@EC action plan, e.g., in the area of Data Analytics and Business Intelligence (BI@EC strategic approach).

Continued efforts will be made to ensure more **coherent data management** within JRC and in support of implementing the corporate governance and policies (and relevant legislation).

The mandate of the Chief Data Officer was reviewed to facilitate and promote the sound management and effective use of all types of data in research activities and for ensuring proper data management throughout the JRC. A revised data strategy centred on five themes (governance, culture, infrastructure, service and community) is expected to be adopted early 2022. The strategy will make it easier for scientists, support staff and managers to work strategically with data, through clear processes for handling data, leading by example in the Commission's Data Governance & Policies. It will ensure that staff can more easily access and integrate its data, information and knowledge in an efficient and effective way. It will support innovation in data science. The strategy will deliver high quality data, compliant with the FAIR⁵ principles where appropriate, to support Commission policy and serve the Commission's political priorities through impactful use of data for science advice.

Guidance will be provided to data owners and data stewards around their tasks and responsibilities, and to the extent possible, collaboration between the various roles will be pursued. Other roles involved will be informed about the contents of the policies relevant to them. The status of the implementation will be assessed with the digital transformation indicators. Also, a JRC research data repository will be deployed that will support staff to store data in a way that preserves the integrity of the content and of the accompanying metadata.

The JRC will continue being amongst the services leading **evidence-based transformation of the EC working methods** into post-COVID modern, hybrid and human-centric processes. Building upon the success of the One-Stop-Shop for Collaboration, it will foster exchange and uptake of scientific and other knowledge in the Commission even further, nurturing EC communities of experts while seeking to establish knowledge partnerships with external centres of expertise. Specifically in the area of Country Knowledge (CK), it will follow-up the proposal for more efficient CK management in the Commission it presented to IMSB in 2021, developing scalable pilot actions conceived on the basis of a Commission stakeholders' survey carried out in spring 2021, refined with other interested services and agreed upon by IMSB at the end of the year. Following up the successful development of a competency framework for the policymaking profession in the Commission, the JRC will continue promoting uptake of science to policy within the EC and beyond, organising training, collaborating with the EU Policymaking Hub and nurturing the

⁵ Findable, Accessible, Interoperable and Reusable

development of science-to-policy ecosystems in EU Member States. Last but not least, the JRC will continue managing and upgrading the Knowledge for Policy (K4P) Platform as a virtual meeting point between JRC knowledge services and policymakers and a digital home for communities of experts and practitioners.

The JRC strives to ensure rigorous implementation of the **data protection rules**. An awareness raising campaign by the JRC Data Protection Coordinator (DPC) will continue in 2022. This year, the DPC will request (through the JRC middle management) all JRC staff to follow one of the available data protection trainings (with preference for the e-learning course), in addition to reaching out to different units with direct presentations.

With regard to the policy on **record and archives management** (e-Domec), the JRC will pursue a sound record management by providing staff with the necessary knowledge to manage the life cycle of electronic files and records by several means including trainings, info sessions, guidelines and presentations. To support a full compliance with the e-Domec policy, the JRC will also raise awareness and promote the use of the new flag 'Sensitive Personal Data' in Ares (in place since April 2021). In the context of the Digital Preservation Strategy and its relevant action plan, the JRC will support the analysis and assessment of records created outside HAN (Hermes-Ares-NomCom) that need long term preservation, including in case of migration and/or rebuilding of knowledge repositories.

With the **EU Academy**, a modern, scalable e-learning platform will be further developed. For the first time, such a platform is available to all EU Institutions for hosting, managing and monitoring pedagogical content, with the main objective of reaching out policy makers, regions and the public at large in Europe.

E. Sound environmental management

In line with the revision of the JRC local site development plans and the corporate EC EMAS⁶ strategy, the JRC will further pursue its multi-annual programmes, seeking to reduce energy consumption through efficiency measures, such as substituting fossil energy sources with renewable ones, and promoting sustainable transport as reflected in the EMAS Global Annual Action Plan.

Efforts will focus on energy use for scientific activities, in particular laboratory tests or experiments.

The JRC will disseminate examples and environmental outcomes of scientific initiatives among the EC EMAS network, such as those under the umbrella of the pilots of the Living Labs initiative. This latter is an initiative to open JRC sites to third parties in order to create

⁶ **EU Eco-Management and Audit Scheme (EMAS)** is a premium management instrument developed by the European Commission for companies and other organisations to evaluate, report, and improve their environmental performance. EMAS is formalised in [Regulation \(EC\) No 1221/2009 \('EMAS III'\)](#)

high-quality, policy-relevant and people-oriented solutions in particular with relation to smart cities.

In particular, the JRC will:

- contribute by delivering timely inputs to the Communication 'Greening the Commission', as well as disseminating the Communication among the JRC staff;
- continue to actively participate in the EC environmental management system through all the phases of the cycle, from management review or indicator data collection to external verifications;
- assess the profile of its missions and incorporate the principles of the upcoming EC Missions guide by Directorate-General Human Resources expected to be published in January 2022 and the instrumental data provider PMO tool;
- assess and possibly reduce energy loads in laboratories;
- increase the capacity of renewable energy installations in Ispra and maintain the ones in Petten;
- continue to insulate buildings in Ispra;
- continue substituting parts of the service car fleet with hybrid and e-cars whilst maintaining the existing ones;
- negotiate with the landlord environmental improvements to the premises in Seville;
- implement initiatives on efficiency and use of resources, such as energy, paper or waste in Brussels site.

F. Initiatives to improve economy and efficiency of financial and non-financial activities

The JRC has contributed significantly to a report listing a number of recommendations for simplification recently presented to the Commission's community of financial units (RUF). The initiatives in this report were discussed directly with Directorate-General Budget senior management in mid-November 2021 to decide on the actions to take forward in 2022. These may include automation introduced to process financial transactions with a reasonable balance between risk exposure and cost of controls.

As from 2022, the JRC will contribute to help advise on the practicality of the proposed solution(s).

In the meantime the JRC intends to take appropriate action to minimise the number of validations for low risk financial transactions already in 2022.

During 2022, the JRC will pursue the initiative of mandatory financial training as a prerequisite to the appointment of operational actors in the financial and procurement processes.

Finally, the economy and efficiency of JRC and Commission procurement preparation activities will be greatly enhanced during 2022 with the following anticipated deliverables:











- finalise the roll out of public procurement management tool (PPMT) to other institutions and regulatory agencies,
- support very low value/low/middle value procedures with eSubmission,
- further integration with eSubmission for high value procedures,
- preparation and integration with new eTendering and eForms,
- generation of tender specifications and contract templates (direct/framework contract),
- integration with contract management through Eris⁷,
- regular online training and Q&A sessions for JRC and Commission users of PPMT.








⁷ E-Domec Repository Integration Service

ANNEX: Performance tables

Part 1

Items in the table marked with the icon  refer to JRC contributions to policy initiatives led by other DGs.

General objective 7 – A modern, high performing and sustainable European Commission		
Specific objective 7.1 – To support evidence-informed policymaking through creating and managing high-quality and fit-for-purpose scientific knowledge		
<i>Related to spending programme(s): Horizon Europe, Euratom</i>		
Main outputs in 2022:		
New policy initiatives		
Output	Indicator	Target
Related to GO1		
 Evolving the chemicals acquis towards a simpler and better regulatory framework (Revision of Regulation (EC) No 1272/2008 on classification, labelling and packaging)	Technical report delivered	Q4
 Monitoring data analysis of substances which are on the Watch List (Integrated water management – revise lists of surface and groundwater pollutants)	Technical report delivered	Q4
 Regional and urban dimensions of air quality (Revision of EU ambient air quality legislation)	Technical Report delivered	Q3
 Technical review of CO ₂ emissions from heavy-duty vehicles (Review of the CO ₂ emission standards for heavy-duty vehicles)	Technical report delivered to main policy DG	Q2
 Scientific support to the enhancement of the GHG inventories (Carbon removal certification)	Policy report published	Q3
 Design of bio-based indicators (Policy framework for bio-based, biodegradable and compostable plastics)	Technical report published	Q2
Related to GO2		
 Analysis of potential supply chains bottlenecks in strategic sectors in the energy, defence and ICT domains (European chips act)	Technical report published	Q3
 New achievements in implementing traditional forensic methods (e.g. fingerprinting, DNA extraction) in nuclear environment (Roadmap on security and defence technologies)	Technical report published	Q1
 Support to the implementation of research, development and innovation actions to evolve the EU GOVSATCOM capability (Building an EU space-based global secure communication system)	Technical report published	Q3
 Update of the Digital Competence framework for citizens towards version DigComp 2.2 (Recommendation on improving the provision of digital skills in education and training)	Technical report published	Q1

Output	Indicator	Target
 Development of a quantitative tool to evaluate the proposed measures in terms of transport costs and modal shift (Multimodal digital mobility services)	Validated methods, reference methods and measurements	Q4
Related to G03		
 Analysis of international tax rules and of policy options (Proposal on implementation of the OECD global agreement on re-allocation of taxing rights)	Report published	Q4
 Analysis of various alternative hypothetical scenarios of minimum income increases (Recommendation on minimum income)	Report published	Q4
Related to G04		
 Report of best practices and assessment of regional risk assessments (New strategy on international energy engagement)	Report published	Q4
Related to G05		
 Analysis of impact on labour supply of revising the Barcelona targets for childcare (European care strategy - Communication on a European care strategy), accompanied by the revision of the Barcelona targets and a proposal for a Council Recommendation on long-term care)	Report accepted	Q3
Related to G06		
 Development of systems for monitoring sentiment values and emotions in published text (Strengthening the role and independence of equality bodies)	Report published	Q4
Evaluations and fitness checks		
Output	Indicator	Target
 Support for the establishment of the European Green Deal data space; Data Spaces Cookbook (GreenData4All - Revision of the infrastructure for spatial information in the European Community (INSPIRE) Directive and the public access to environmental information Directive)	Technical reports published	Q4
External communication actions		
Output	Indicator	Target
Flagship reports	Number of mentions in the media monitoring	10
The #EUKnowledge4SDGS campaign	Number of readers / listeners of the launch event	100
	Number of contacts made during the campaign	50
	Number of visits of the dedicated website	50
	Number of mentions in the media monitoring	10

Output	Indicator	Target
Launch of the Knowledge Centre on Cancer	Number of mentions in the media monitoring	10
Launch of the EU observatory on Deforestation and Forest Degradation	Number of mentions in the media monitoring	10
Launch of the Annual Foresight Report	Number of mentions in the media monitoring	10
	Number of interactions (cumulative for all above outputs)	45 000
	Number of mentions	17 m
JRC monthly newsletter	Number of subscribers	26 500
Commissioner's monthly newsletter	Number of subscribers	4 200
Science Flash For You national newsletters	Number of subscribers	5 000
Knowledge Centre on Earth Observation	Launch event	Q1
Other important outputs		
Output	Indicator	Target
Report on disinformation activities in 2022	Report published	Q1
Global Energy Climate Outlook 2021	Report published	Q1
The Observatory on Critical Technologies Civil-Space-Defence	Launch of observatory	Q1
Improving the evaluation of gamma spectra using Artificial Intelligence for nuclear safeguards and nuclear security	Report published	Q4
Analysis of the costs and benefits of chemical risk management measures along the food chain, with a view to informing a holistic assessment of food sustainability	Report published	Q3
Cooperation agreement with the UN Scientific Committee on the Effects of Atomic Radiation	Agreement signed	Q2
Knowledge Centre on Biodiversity's Actions Tracker and targets dashboard	Actions Tracker and Biodiversity targets dashboard updated	Q4
Agreement between the European Commission and European Space Agency on nuclear	Agreement signed	Q4
Support to the implementation of the Nuclear Safety directive (Akkuyu nuclear power plant, EU-wide peer review on fire safety nuclear of nuclear installations)	Contributions on stress tests delivered to DG Energy	Q4
Support to the Strategic Agenda for Medical Ionising Radiation Applications (SAMIRA)	Proposals for the next Euratom indirect actions call delivered	Q4
Competence building through the Exploratory Research (ER) Programme	% of thematic priority areas addressed with Exploratory Research projects	60%
	Number of running ER projects	> 15
	JRC scientific staff actively involved in the exploratory Research community (ER&CAS) Programmes	> 3%
Projects of the Centre of Advanced Studies (CAS)	Number of implemented CAS projects	5
	number of high-level experts engaged with CAS	>35

Output	Indicator	Target
Science and Art (SciArt) projects EUSA Talks: Stimulating/state of the art	Number of artists participating in summer school Number of scientists participating in summer school Number of participants per talk	Between 8 and 12 > 25 > 50
Open Access to JRC Research Infrastructures	Number of RIs engaged in the programme Percentage of access delivered in the programme	>20 20%
Evaluation of the JRC in Horizon 2020 and the Euratom Research and Training Programme	Report published	Q3
Implementation of the preparatory action 'Advancing evidence for policy at Union, regional and local level'	Events, training and pairing schemes	20+
Earth Observation for Biodiversity	Case study on Earth Observation for Biodiversity	Q4
The Africa Knowledge Platform	Presentation of the Africa Knowledge Platform (AKP) during the EU-Africa Summit 2022	Q1

General objective 7 – A modern, high performing and sustainable European Commission

Specific objective 7.2 – The JRC operates modern, sustainable and open research facilities

Related to spending programme(s): Horizon Europe, Euratom

Main outputs in 2022:

Other important outputs

Output	Indicator	Target
Brussels: In collaboration with OIB, to optimise JRC Brussels office space	Increase the number of work places (+/- 20) without increasing our office space allocation Colleagues grouped by unit	100%
Geel: Refurbishment and adaptation of the conference centre following the New European Bauhaus approach	Preliminary design	Q3
Geel: Safety and security improvements	% completion of a fence around Building 40	100%
Geel: Renewal electricity and data cabling for site perimeter	% completion	100%
Ispra: Refurbishment of the tri-generation plant	% completion of the construction of the hosting building	100%

Output	Indicator	Target
Ispra: Finalisation of the Citizens' Space/new Visitors Centre	% completion	100%
Ispra: Renovation of the sewage system	Sewage Line Via Francia towards Via Estonia	100%
Karlsruhe: Construction of the nuclear facility 'Wing M', including hot laboratories	Signature of the contract for the construction works with a new contractor	100%
Petten: Construction of a new entrance building	Complete the final stages of the engineering phase	Engineering study delivered Q2 2022 Launch of tender procedure Q3 2022
Petten: New fence	Contract Award	100%
Seville: New Commission building	Architectural Contest; Awards and signature of contracts	100%
Conference centre	% completion	100% - operational 2Q 2022
New collaborative dynamic space including facilities for hybrid working	% completion	100% - operational 1Q 2022

General objective 7 – A modern, high performing and sustainable European Commission

Specific objective 7.3 – The Commission has appropriate capacity to manage risks related to intellectual property (IP) rights and be compliant with the rules and regulations

Related to spending programme(s): Horizon Europe, Euratom

Main outputs in 2022:

Other important outputs

Output	Indicator	Target
Trade mark strategy for the Commission	Delivery of a draft strategy and launch of an inter service group	Q3
Raising awareness on IP management with Commission staff	Number of staff trained	Maintain 2021 results
Improved accessibility of available information on IP management	Revised dedicated webpage IP management	Number of visits to website/ number of page views to exceed the figures of 2021
Implementing the Commission decision on the open source licensing and reuse of Commission software (cooperation with DG DIGIT)	Discussion of draft guidelines in inter service group Organise information sessions	Q1 Minimum two by Q2
Introducing guidelines on publications	Discussion of draft guidelines with IP Correspondents Network, adoption	Q1
Impact case studies	Delivered	10

General objective 1 – the European Green Deal

Specific objective 1.1 – The JRC progressively decommissions its disused nuclear facilities and safely disposes of its radioactive waste

Related to spending programme(s): Horizon Europe, Euratom

Main outputs in 2022:

Other important outputs

Output	Indicator	Target
Geel: Transport of 1 st batch (reference materials) of nuclear material	Transfer of 1 st batch executed	Q2
Preparation of 2 nd batch for removal of nuclear material	Transport mode, containers and timeline defined	Q4
Petten: Implementation of the framework contract established in 2021 to remove and dispose historical waste	Preparation of contractual arrangement with Nuclear Research Group for the 1 st batch	Q3
Karlsruhe: Update declaration of LLW legacy packages at J	% updated waste package declarations	100%
Ispra: Treatment of the bituminised drums waste stream	Signature of a contract for off-site treatment	Q3
Super-compaction treatment of waste	Transfer the first batch to super-compaction plant	Q4
Transfer and storage of waste to Interim Storage Facility (ISF) at	Transfer of first batch of unconditioned Very Low Level Waste to ISF	Q2
Cyclotron decommissioning	Submission of the decommissioning application to competent authorities	Q3
Management of irradiated nuclear material	Feasibility studies related to the off-site long term storage of nuclear material available	Q3
Management of non-irradiated nuclear material	Signature of a contract for the outsourcing of part of the nuclear material inventory	Q4

General objective 1 – the European Green Deal

Specific objective 1.2 – The JRC progressively decommissions its disused nuclear facilities and safely disposes of its radioactive waste

Related to spending programme(s): Horizon Europe, Euratom

Main outputs in 2022:

Other important outputs

Output	Indicator	Target
Platform for dissemination of knowledge on operational nuclear decommissioning	Prototype available	Q4

Part 2

A. Human resource management

Objective: The JRC employs a competent and engaged workforce and contributes to gender equality at all levels of management to effectively deliver on the Commission's priorities and core business.

Main outputs in 2022:

Output	Indicator	Target
1. Improving female representation in middle management		
Promotion of female representation in middle management	Number of internal female candidates applying for middle-management positions	At least 1 female applicant per middle management vacancy
	Number of awareness-raising activities to improve female representation in middle management	At least 2 activities
2. Enhancing staff engagement		
Completion of follow-up on staff opinion survey 2021	Launch new working groups to act on the results of the 2021 staff survey	Q2
Implement JRC Career Development Package	Implement JRC Career development actions, targeting both permanent staff and contract agents	At least 2 info sessions for all staff
Continue local talent management programme	Continue the launch of the new programme with special focus on female AD staff with management potential as well as the inclusive programme for AD7+ staff	Q2
Development of staff in deputy Heads of Unit and team leaders positions	Number of participants in targeted events (trainings, workshops)	> 30 participants
	Satisfaction rate	> 75%
3. Attracting and retaining competent scientific staff		
Recruitment of scientists at post-doc and expert levels for exploratory research (CAS & ER)	Number of scientists applying to vacancy calls at postdoc and expert level	> 15
Doctoral students pursue their PhD at JRC in cooperation with academic institutions	Number of doctoral students co-supervised by the JRC through the CDP scheme (counting students at either JRC or high education institutions)	> 30
	Minimum number of PhD students under the CdP scheme residing at JRC	>25
Alumni network	Website active and up to date	Updated with information at least once per week (52/year)
	Activities between alumni and JRC (workshop, seminars, lectures), to exchange information	1 annual workshop 4 seminars

B. Sound financial management

Objective: The authorising officer by delegation has reasonable assurance that resources have been used in accordance with the principles of sound financial management and that cost-effective controls are in place which give the necessary guarantees concerning the legality and regularity of underlying transactions.

Main outputs in 2022:

Output	Indicator	Target
Effective controls: Legal and regular transactions	Risk at payment	Remains < 2 % of relevant expenditure
	Estimated risk at closure	Remains < 2 % of relevant expenditure
	Proportion of exceptions	Remains < 1 % of number of transactions
	Share of procurement procedures receiving a positive opinion from the Public Procurement Advisory Group (PPAG)	Remains ≥ 95 % screened by PPAG
Effective controls: safeguarded assets	The tri-annual inventory – scanning of movable assets on each JRC site	+/-90% of assets tracked during each physical inventory exercise.
Efficient controls	Time-to-pay	Percentage of payments (in value) made within legal time limits remains ≥ 93%
Economical controls	Overall estimated cost of controls	Reduced to <4% of funds managed
	Cost of supervisory measures (ex-post controls)	Remains < 0.4 % of ex-post value controlled

C. Fraud risk management

Objective: The risk of fraud is minimised through the application of effective anti-fraud measures and the implementation of the Commission Anti-Fraud Strategy (CAFS)⁸ aimed at the prevention, detection and correction⁹ of fraud.

Main outputs in 2022:

Output	Indicator	Target
Implementation of the actions included in the JRC's AFS (Strategic Plan mandatory objective)	Degree of implementation of actions for 2022 in the JRC anti-fraud strategy action plan 2021	100%
Contribute to the strategic monitoring of the Commission's anti-fraud activities through reporting on the follow-up of the financial recommendations issued by OLAF	Percentage of recommendations implemented	100%
New internal control strategy	Approval by DG	Q2

D. Digital transformation and information management

Objective: JRC is using innovative, trusted digital solutions for better policy-shaping, information management and administrative processes to forge a truly digitally transformed, user-focused and data-driven Commission

Main outputs in 2022:

Output	Indicator	Target
Revised Data Strategy	Adopted	Q1
Implementation of the corporate principles for data governance for the JRC key data assets	Percentage of implementation of the corporate principles for data governance for JRC key data assets	50%
Specific actions contributing to the implementation of the JRC ICT architecture	Improved security, virtual desktop infrastructure, consolidated IT	Q4
EC Data Advisory service	Consolidated Data Advisory service (specifically this includes re-enforced communication on the data advisory offer and a published knowledge base)	Q4

⁸ Communication from the Commission 'Commission Anti-Fraud Strategy: enhanced action to protect the EU budget', COM(2019) 196 of 29 April 2019 – 'the CAFS Communication' – and the accompanying action plan, SWD(2019) 170 – 'the CAFS Action Plan'.

⁹ Correction of fraud is an umbrella term, which notably refers to the recovery of amounts unduly spent and to administrative sanctions.

Output	Indicator	Target
JRC research data repository	Operational JRC research data repository established	Q4
Data owners and data stewards for JRC key data assets	Percentage of JRC key data assets for which data owners and data stewards have been communicated their tasks and responsibilities set in the EC data governance and policies.	100%
Data owners and data stewards job description	Formal job description (including responsibilities) that can be applied to data owners and data stewards	Q4
Steps in data management processes in place	Processes and guidelines for sharing, use, and preservation are established.	Q4
One-Stop Shop for Collaboration	Percentage of customers that are satisfied or very satisfied with the One-Stop Shop service	85%
Provide training and capacity building for Commission researchers and policymakers	Total number of participants/year	200
	Proportion of participants recommending course to colleagues	85%
In the frame of Science4Policy - provide e-learning to researchers on EU Academy platform	Total number of participants enrolled/year	300
Develop tailored training and tool box on clear writing at the science-policy interface	New training courses and tools	3
	Coaching sessions on flagship reports	3
Management of KM Platforms	Proportion of new knowledge services embedded in the Knowledge4Policy platform	100%
Awareness raising activities on data protection compliance among JRC staff	Percentage of staff reached by the awareness raising activities	>80%
Compliance with the e-Domec policy	Percentage of new registered Ares documents with the option 'sensitive personal data' flagged	30% increase by Q4 2022
EU Academy - Develop and deliver a platform release for hosting of a wide variety of e-learning content	Number of JRC courses on platform	> 50
PSIS (Standardisation) - Organise a workshop bringing scientists, policy makers, industry and experts from different disciplines together	Workshop organisation	At least 1
	Minimum number of participants	> 50

E. Sound environmental management

Objective: The JRC takes account of its environmental impact in their actions and actively promotes measures to reduce the related day-to-day impact of the administration and its work, with the support their respective EMAS Correspondents/EMAS Site Coordinators.

Main outputs in 2022:

I. More efficient use of resources (energy, water, paper):

Output	Indicator	Target
Efficient maintenance of the existing installations and increased installed capacity of photovoltaic panels	Electrical capacity of photovoltaic panels	+96% ¹⁰ with respect of 2019 baseline ¹¹
Analysis of water consumption of buildings	At least yearly follow up	Q4
Reduction of paper consumption by deploying electronic signature of contracts for all JRC Authorising Officer by Subdelegation	Electronic signature deployed	Q4
Staff awareness actions about resources' efficiency during spring corporate events	Information posted on Connected	Q2

II. Reducing CO₂, equivalent CO₂ and other atmospheric emissions

Output	Indicator	Target
Increased number of service bikes	Number of new bikes	+12% ¹⁰ of 2021 results ¹²
Efficient maintenance of the current fleet of electric and hybrid cars and increased number of these vehicles	Number of new electric and hybrid cars	+72% ¹⁰ of 2019 results ¹³
Staff awareness actions about sustainable commuting during EU Mobility week and VeloMai corporate events	Information posted on Connected	Q2

¹⁰ Subject to 2022 budget allocation

¹¹ Baseline 2019 – Geel: 0 – Ispra: 740 kW – Karlsruhe: 0 – Petten: 390 kW – Seville: 0 – All JRC sites: 1130 kW

¹² Baseline 2021 – Geel: 0 – Ispra: 140 – Karlsruhe: 0 – Petten: 40 – Seville: 0 – All JRC sites: 180

¹³ Baseline 2019 – Geel: 1 – Ispra: 37 – Karlsruhe: 0 – Petten: 1 – Seville: 0 – All JRC sites: 39

III. Reducing and management of waste

Output	Indicator	Target
Staff awareness actions about waste reduction and sorting in line with the corporate EMAS waste reduction campaign	Information posted on Connected	Q4

IV. Promoting green public procurement (GPP)

Output	Indicator	Target
Green public procurement (GPP) – Maintain the existing alert system through the PPMT (Public Procurement Management Tool) to automatically assess which procurement is to be analysed for GPP criteria	Implementation of GPP criteria or environmental specifications where applicable	100%

V. Supporting biodiversity

Output	Indicator	Target
Biodiversity – Action to improve biodiversity, such as insect hotels, planting trees, etc.	Number of actions	+50% ⁹ of 2019 results ¹⁴

¹⁴ Baseline 2019 – Geel: 1 - Ispra: 10 – Karlsruhe: 0 – Petten: 2 – Seville: 1 – All JRC sites: 14