Annual Work Programme and Budget 2026

Circular Bio-based Europe Joint Undertaking

ANNEX to the Governing Board decision No. 12/2025

In accordance with the Council Regulation (EU) 2021/2085 and with Article 33 of the Financial Rules of the CBE JU.

The Work Programme was adopted on 9 December 2025, by the Governing Board Decision 12/25. The Work Programme was made publicly available after its adoption by the Governing Board.

1. CONTENTS

CBE JU 2026 call for project proposals: quick links

LIST OF ACRONYMS AND ABBREVIATIONS

AAR	Annual Activity Report
AWP	Annual Work Programme
B2B	Business-to-business
B2C	Business-to-consumer
BBI JU	Bio-based Industries Joint Undertaking
BIC	Bio-based Industries Consortium
CA	Commitment appropriations
CAS	Common Audit Service
CBE JU	Circular Bio-based Europe Joint Undertaking
CCS	Carbon capture and storage
CCU	Carbon capture and use
CEN	European Committee for Standardization
CSA	Coordination and Support Action
CIC	Common Implementation Centre
EC	European Commission
ECA	European Court of Auditors
EFTA	European Free Trade Association (Iceland, Liechtenstein, Norway, and Switzerland)
EoL	End of life
EMFAF	European Maritime, Fisheries and Aquaculture Fund
FLAG	Flagship Action
FMCG	Fast moving consumer goods
FWC	Framework contract
GB	Governing Board
HR	Human resources
IA	Innovation Action
IAS	Internal Audit Service

ICF	Internal control framework
ICS	Internal control standards
IKAA	In kind contribution to additional activities
IKOP	In kind Contribution to operational activities
MFF	Multiannual financial framework
OPEX	Operational expenditure
SRIA	Strategic Research and Innovation Agenda
SSbD	Safe and sustainable by design
TRL	Technology readiness level

FOREWORD

It is with great pleasure that I introduce the CBE JU's 2026 Annual Work Programme, as the European Commission has just set out its Strategic Framework for a Competitive and Sustainable EU Bioeconomy. With research and innovation, competitiveness and strategic autonomy at the heart of the new strategy, the work of CBE JU, together with its beneficiaries and stakeholders, clearly demonstrates that the circular bioeconomy has moved from "potential" to "results". This is also showcased in the proposal for the future EU Multiannual Financial Framework 2028-2034, where the bioeconomy is included among the top priorities of the upcoming Horizon Europe programme and in the new European Competitiveness Fund.

In this policy context, the CBE JU will continue to strengthen its project portfolio with a new round of grant agreements following the 2025 call, and by launching the 2026 call for project proposals - 13 topics will receive more than €170 million in funding and will focus on high technology readiness levels. With a growing number of running projects, the CBE JU will continue to develop its Key Performance Indicators (KPIs) monitoring system – both on the operational and financial side - to report on the projects achievements.

Showcasing the strong impact of European bio-based sector is paramount to support the European Commission and the Bio-based Industries Consortium (BIC) in their discussions about the role of the CBE JU within the Union's future financial programming. With the bioeconomy assuming a central role in EU policies, there is a need to design an instrument that addresses the challenges identified in the new EU bioeconomy strategy.

Our stakeholder community will be involved in this discussion, in particular during the second edition of CBE JU Stakeholder Forum to take place in March 2026. This important event will be fundamental to take the views on the Joint Undertaking from the European private and public sectors, the Member States, the scientific community and civil society. The forum will deliver key messages on concrete actions needed by the sector in critical areas to unleash the potential of the bioeconomy and maintain Europe's lead in this strategic sector: address regulatory barriers, tailored financial support and easier access to market.

CBE JU will continue to work with its stakeholders to establish the deployment group on finance and investments and support the working group on primary producers. These two initiatives fit very well with the new EU Bioeconomy strategy and are fundamental to unlock the financial and natural resources needed to bring the bioeconomy from "lab to fab".

The CBE JU Programme Office is ready for the challenges ahead, thanks to the experience, expertise and commitment of our staff. Counting on the strong collaboration and joint vision of the European Commission and the Bio-based Industries Consortium, we will continue to support our stakeholder community and the transition to a competitive bioeconomy for a sustainable future.

Nicoló Giacomuzzi-Moore
CBE JU Executive Director

INTRODUCTION

1.1. MISSION STATEMENT OF THE CBE JU

Advancing a competitive bioeconomy for a sustainable future is the primary mission of the Circular Bio-based Europe Joint Undertaking (CBE JU).

In the context of A Sustainable Bioeconomy for Europe, the European Green Deal and the Clean Industrial Deal, the European bio-based sector, including SMEs, regions and primary producers, should become climate neutral, more circular and more sustainable while remaining competitive on the global market. A strong, circular, resource efficient and competitive bio-based innovation ecosystem can decrease Europe's dependency on and accelerate the substitution of non-renewable fossil raw materials and mineral resources.

CBE JU is thereby supporting research and innovation activities in the field of sustainable bio-based solutions under the umbrella of Horizon Europe, the EU's research and innovation programme for the 2021-2027 period. CBE JU aims to foster the development, upscaling and deployment of new, disruptive and innovative technologies and processes by using all available sources of sustainable biomass to their full potential and turning them into sustainable and circular bio-based products. In line with the Biotechnology and Biomanufacturing Communication and the EC political guidelines for the 2024 - 2029, by replacing non-renewable fossil resources with bioresources such as crop-residues, sludge or waste and sustainably sourced biomass to produce industrial and consumer goods, the bio-based industries will help Europe become the world's first climate-neutral continent while increasing the sustainability and circularity of production and consumption systems. In this way, the bio-based industries greatly contribute to the competitiveness and sustainability of the EU bioeconomy and will play a key role in the new policy initiatives including the updated EU Bioeconomy Strategy, the EU Biotech Act and EU Circular Economy Act.

CBE JU research and innovation activities will be carried out in close collaboration with stakeholders along the entire bio-based value chain, including primary producers and processing industries, biomanufacturers, consumer brands, SMEs, research and technology centres and universities. CBE JU also aims to support the deployment of bio-based innovation at regional level with the active involvement of local actors and with a view to reviving rural, coastal and peripheral regions. International participation from third countries is welcome as an important element to advance a sustainable bioeconomy globally.

CBE JU's public-private funding scheme is boosting innovation and market deployment and paving the way for future investments. To this end, the CBE JU is organising calls for proposals aimed at supporting research, demonstration and upscaling and promoting deployment activities. To deliver on its objectives, the CBE JU should only fund projects that respect the principles of circularity, sustainability and planetary boundaries. CBE JU will build on the success and achievements of its predecessor, the Bio-based Industries Joint Undertaking (BBI JU) while enlarging its scope and addressing the remaining challenges of Europe's bio-based industries.

1.2. CBE JU OBJECTIVES AND LINK WITH THE SRIA

The CBE JU general and specific objectives defined in Article 46 of Council Regulation (EU) 2021/2085[1] of 19 November 2021 (hereinafter the Council Regulation) establishing the Joint Undertakings under Horizon Europe, are reported below in Figure 1.

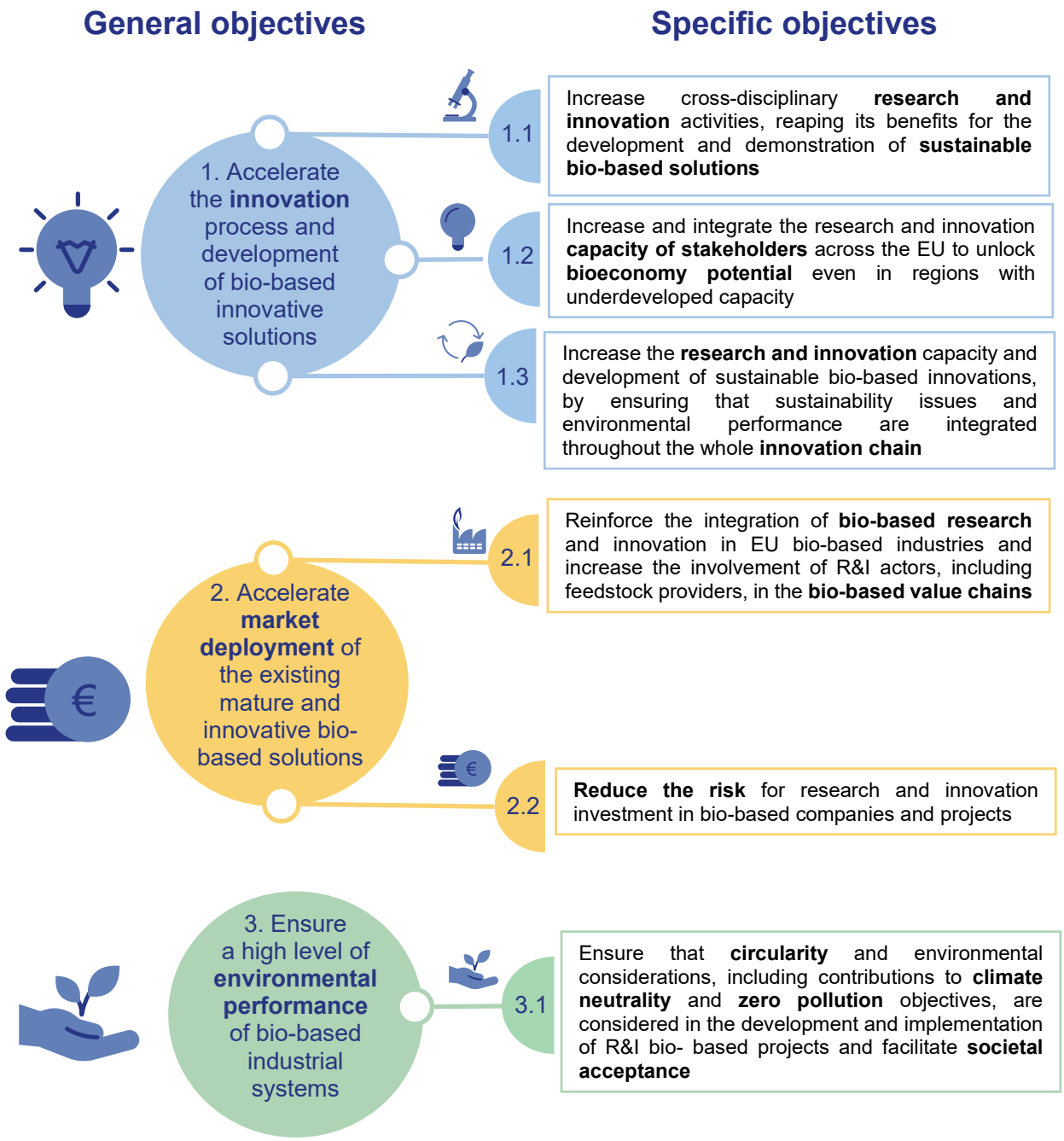

Figure 1 CBE JU general and specific objectives.

[1] Council Regulation (EU) 2021/2085 of 19 November 2021 establishing the Joint Undertakings under Horizon Europe and repealing Regulations (EC) No 219/2007, (EU) No 557/2014, (EU) No 558/2014, (EU) No 559/2014, (EU) No 560/2014, (EU) No 561/2014 and (EU) No 642/2014, OJ L 427, 30.11.2021, p. 17–119

To achieve these objectives, the CBE JU Programme Office is implementing Annual Work Programmes that support:

- the **acceleration of the innovation process and development of bio-based innovative solutions** by funding actions (ranging from CSAs to RIAs and IAs ending at TRL 6) focusing on testing and upscaling the use of novel technologies for converting bio-based feedstock into useful, innovative, environmentally sustainable and circular solutions;

- the **acceleration of market deployment of existing mature and innovative bio-based solutions** by promoting and supporting innovation actions, including Flagships, to scale up innovative bio-based processes, products and applications starting from at least TRL 5 and ending at TRL 7-8 across Europe;

- the **development of a high level of environmental performance of bio-based industrial systems** through different types of actions, ranging from CSAs to RIAs up to targeted IAs.

The strategic priorities, reported in the figure below, as set in the Strategic Research and Innovation Agenda (SRIA) for each CBE JU general and specific objective are used as baseline in each topic.

FEEDSTOCK		Strategic priority 1.1.1 - Ensure the availability and quality of sustainable bio-based feedstock
		Strategic priority 1.3.1 - Protect and enhance biodiversity and ecosystem services in bio-based feedstock supply systems
		Strategic priority 2.1.1 - Demonstrate the sustainable supply of bio-based feedstock
PROCESSING		Strategic priority 1.1.2 - Develop innovative production systems in the bio-based industry
		Strategic priority 1.3.2 - Improve environmental performances of bio-based processes
		Strategic priority 2.1.2 - Deploy innovative production technologies
PRODUCTS		Strategic priority 1.1.3 - Develop innovative bio-based products
		Strategic priority 2.1.3 – Scale-up production and market uptake of innovative bio-based products
CROSS-CUTTING	**Communication**	Strategic priority 1.2.1 - Stimulate research activities in countries and regions with underdeveloped R&I capacity for bio-based systems
		Strategic priority 1.2.2 – Increase the awareness and capacity of national and regional research support agencies for industrial bio-based systems
		Strategic priority 1.2.3 - Facilitate the development of expertise in bio-based fields by improving higher education and skills development
		Strategic priority 2.1.4 - Build policymakers' awareness and acceptance of bio-based solutions
		Strategic priority 3.1.3 – Facilitate social acceptance of bio-based applications
	Finance	Strategic priority 2.2.1 – Improve the risk profile of bio-based projects
		Strategic priority 2.2.2 - Develop investment tools and approaches that mitigate the investment risk in bio-based systems
	Environmental sustainability framework	Strategic priority 3.1.1 - Set effective and robust environmental sustainability and circularity criteria for bio-based systems
		Strategic priority 3.1.2 - Incorporate the environmental sustainability and circularity criteria in bio-based systems

Figure 2 CBE JU SRIA strategic priorities mapped along the value chain (feedstock – processing – products) and the identified cross cutting issues.

1.3. STRATEGY FOR THE IMPLEMENTATION OF THE PROGRAMME

CBE JU programming

All the CBE JU strategic and programming documents are developed jointly by both partners (EC and BIC) with the support of the CBE JU Programme Office.

In particular, a structured co-creation process is in place for the formulation of calls included in the Annual Work Programmes, based on the SRIA and the lessons learned from previous calls, as monitored and reported by the CBE JU Programme Office. The CBE JU Scientific Committee and states' representatives group is also consulted on the draft Annual Work Programmes.

Types of actions

The CBE JU calls fund three types of actions:

- **Research and Innovation Actions (RIAs)** include activities of testing, demonstrating and piloting. These activities aim to establish new knowledge or to explore the feasibility of a new or improved technology, product, process, service or solution. These may include basic and applied research, technology development and integration, testing, demonstration and validation on a small-scale prototype, in a laboratory or simulated environment.

- **Innovation Actions (IAs)** include activities of testing, demonstrating and piloting and also aim at scaling up activities from prototype, in a (near to) operational environment, industrial or otherwise, to large-scale product validation and market replication.

  Flagships[2] are an important and specific type of Innovation Action which aim to support the first application/deployment in the EU market of an innovation that has already been demonstrated but not yet applied/deployed in the EU market (first-of-its-kind innovation).

- **Coordination and Support Actions (CSAs)** address needs to i) structure stakeholder communities; ii) support dissemination and exploitation of research or innovation projects; iii) exploit synergies of scale among projects; iv) raise awareness in specific areas; v) support technological visions (e.g., road-mapping, user cases, etc.) and outreach (e.g., events, publications, etc.); vi) promote international cooperation with specific regions and/or technological areas for any of the above-mentioned activities; vii) undertake other activities similar in nature to those above (i.e., this is not an exhaustive list).

Other possible types of actions, like pre-commercial procurement action (PCPs), may also be considered if relevant to attain the objectives of the CBE JU in future Annual Work Programmes.

[2] Flagship projects are strategically relevant, with very ambitious objectives and large-scale impacts expected, and of potential substantial size with regard to the financial volume, the number of project partners and the running time.

Technological Readiness Level (TRL)

The technological readiness level scale, defined in the General Annex B of the Horizon Europe Main Work Programme, will be used as reference in the CBE JU calls to indicate the appropriate technological context as following:

- **RIAs** projects are expected to be at the level of laboratory or simulated environments and expected to deliver TRL 3-5 at the end of the projects.
- **IAs** projects are demonstration activities in relevant and operational environments and expected to deliver TRL 6-8 at the end of the projects. In particular, **Flagship** projects will need to deliver TRL 8 at the end of the projects.

The expected end TRL is specified in each RIAs and IAs topic.

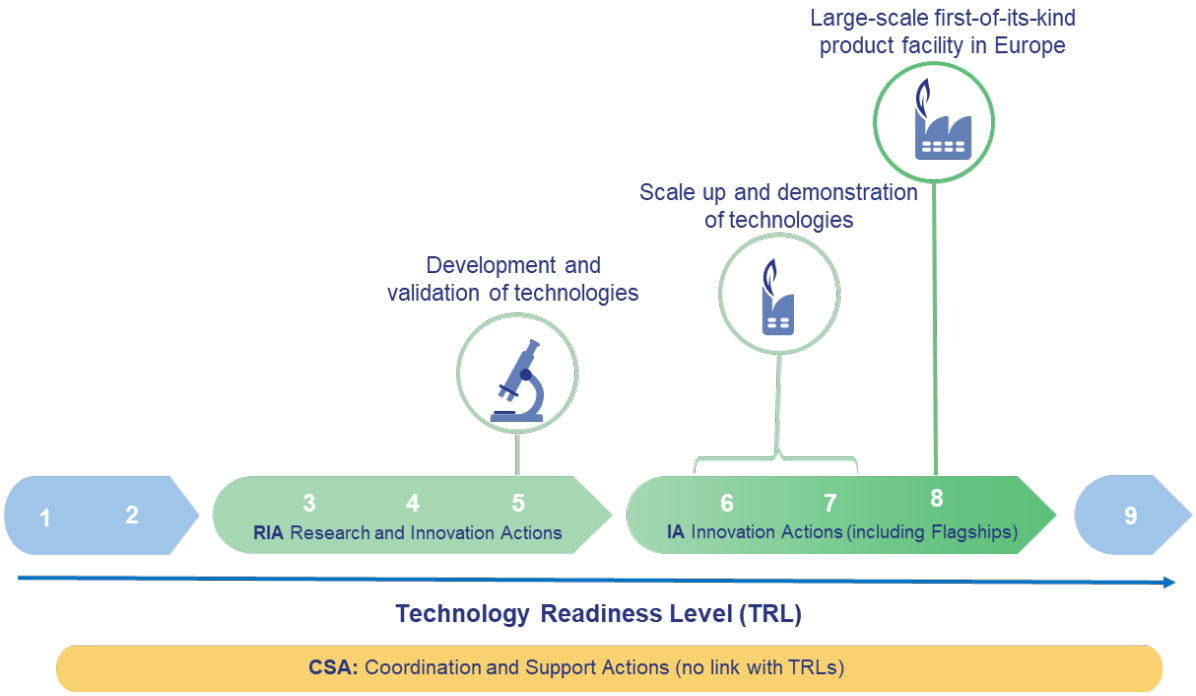

Figure 3 CBE JU types of actions along the TRL scale.

2. WORK PROGRAMME 2026

2.1. EXECUTIVE SUMMARY 2026

The CBE JU is a EUR 2 billion public-private partnership between the European Union, represented by the European Commission, and the Bio-based Industries Consortium. It is established under Horizon Europe, the EU's research and innovation programme, for the 2021-2031 period. The CBE JU is not a direct continuation of the Bio-based Industries Joint Undertaking, but rather a programme that builds on its achievements and aims at addressing its shortcomings.

The SRIA adopted by the CBE JU Governing Board (GB), identifies the strategic priorities and the essential research and innovation actions required to achieve the objectives of the CBE JU, as defined in Council Regulation (EU) 2021/2085.

The scope of CBE JU is underpinned by the updated EU Bioeconomy Strategy and is in line with the European Green Deal objectives – to produce major contributions to the EU climate targets by delivering innovative bio-based solutions and paving the way for Europe to become the first climate neutral continent by 2050; protecting and enhancing biodiversity; combating pollution; reducing and phasing-out fossil resource dependence; and deploying a just transition. Biotechnology and biomanufacturing, recognised as instrumental to increase the EU's competitiveness, strategic autonomy and resilience in the EU Biotechnology and Biomanufacturing Communication, are core to the CBE JU programme and constitute a significant part of the technologies and processes developed, scaled-up and deployed in the CBE JU projects. In line with the Clean Industrial Deal and the priorities set out in the EC political guidelines 2024-2029, by replacing non-renewable fossil resources with sustainably sourced biomass to produce industrial and consumer goods, the CBE JU will support Europe, via its funded projects, in accelerating the defossilisation and competitiveness of European industry, boosting innovation and reinforcing its resilience.

CBE JU, in particular, aims at strengthening the European bioeconomy primary sectors of the land and sea and its industries by combining the 'public' interests, pursued by the EC, and the 'private' interests of bio-based industries, such as: increasing the competitiveness of the EU economy, job creation, balanced regional development and economic cohesion, climate and environmental performance, creating better market conditions, removal of barriers, de-risking investment, increasing resource efficiency, improving circular technologies and operations while engaging all actors in the bio-based systems.

The SRIA is the basis for the CBE JU Annual Work Programmes that contain the call for proposals, developed jointly by both partners under the coordination of the Programme Office, also considering the recommendations of the advisory bodies. Six calls for proposals are foreseen during the lifetime of the partnership for a total indicative operational budget of EUR 976.5 million.

Progress towards the achievement of the CBE JU objectives are monitored through a set of Key Performance Indicators (KPIs), reported upon an annual basis and reflected in the Annual Activity Report (AAR).

Priorities for 2026

The CBE JU will work in close collaboration with the EC and BIC on the follow-up of the Biotech and Biomanufacturing initiative, including the EU Biotech Act and the updated EU Bioeconomy Strategy. In this context, the CBE JU will focus on the following priorities:

- **Successfully organise the CBE JU Stakeholder Forum 2026**. This event comes at an important moment, as new EU policy initiatives and future funding under the MFF will support the CBE JU stakeholder community to deploy the bioeconomy in the Europe Union.
- **Valorise the CBE JU projects' portfolio and collect the related KPIs**. With more than 80 CBE JU projects running, the Programme Office will present a new user-friendly dashboard hosting the outcomes and the progress towards expected impacts of the CBE JU initiative, marking the fifth year of the partnership.
- **Strengthen the monitoring and reporting of the financial contribution**: the Programme Office will set up a structured system to monitor and report on the evolution of the financial contributions from BIC members, with the aim of reaching the final CBE JU objective by the end of the initiative.
- **Contribute to the discussions on the preparation of FP10 and the European Competitiveness Fund (ECF)**, in particular regarding the evolution of the CBE JU partnership and its role in connection to the EU priorities for 2028-2034.

The CBE JU Programme Office will continue to work on its core activities, in particular, the call programming, the call promotion and evaluation, the grant agreements preparation and the management of the projects selected for funding, including the monitoring of their KPIs and impacts and other important reporting, including on policy hurdles.

Several other horizontal activities will continue in 2026 such as the widening action plan implementation, the synergies strategy, the setting up of the deployment group on finance and investments with a strong involvement of the CBE JU governance and its advisory bodies.

2.2. OPERATIONAL ACTIVITIES 2026

2.2.1. Objectives, indicators and risks

Scope of the activities

As set in its SRIA, the CBE JU funds projects focused on '*the production of bio-based chemicals, materials, food and feed ingredients and soil nutrients. Biofuels, bioenergy, food and feed, pharmaceuticals and medical devices are not within the remit of the partnership'*.

While the boundary between the industrial activities that are in or out of this scope is difficult to define in a precise way because of multiple outputs from bio-based operations or multiple use of the same bio-based material or product in different applications, the guiding principles for evaluating if an industrial activity falls within the scope of the CBE JU partnership is based on:

a) an assessment of what is the main application of the bio-based product produced and if this main use falls into the scope;

b) the principle of cascading use of biological resources, aiming to best valorise the sustainable use of feedstock[3].

For example, while the production of food is excluded from the scope, processes producing food may have co-products and side streams that can be used as feedstock for producing bio-based products within the CBE JU scope. Another example is bioethanol, that can be used as biofuel, which is then excluded from the scope, but when used as an input to other chemicals' production it is included within the CBE JU scope.

In line with above, biorefineries for sustainable processing of biomass into an array of added-value products (e.g., bioactive substances, chemicals and materials) will fall under the CBE JU scope if the focus of the project is on materials and energy production is a complementary activity that improves the overall resource efficiency of the production process and it takes place in accordance with the cascading principle.

In addition, the feedstock for bio-based operations should respect local ecological limits and protect and enhance biodiversity and ecosystems services. Specific requirements on feedstock for the CBE JU 2026 call are included in the dedicated section 2.2.3.1.

All supported activities must also demonstrate the potential of bio-based solutions in terms of climate and environmental performance, and circularity. Activities that do not meet the agreed requirements of climate and environmental performance will not be supported. In line with the circularity objective, attention will be given to activities that enable the conversion of bio-waste, residues and side-streams into added-value circular bio-based solutions. Supported industrial activities should contribute to local and regional economies, while reducing the dependency on imports of natural resources.

[3] A non-exhaustive list of bio-based feedstock within the scope of CBE JU is included in Annex V of the SRIA.

CBE JU objectives and Key Performance Indicators

CBE JU contributes to the general and specific objectives set out in Council Regulation (EU) 2021/2085 (figure 1) and the main challenges described in the SRIA (figure 2), via its portfolio of funded projects. To this end, the programme will be monitored against the targets set at:

- Horizon Europe programme level
- Horizon Europe partnerships level
- Specific CBE JU level with the KPIs defined in the SRIA Annex IV and described in the CBE JU KPI Handbook

The operational monitoring is based on indicators which are common to the Horizon Europe programme and include, for example, the following: 1) time to inform (TTI) all applicants of the outcome of the evaluation of their application from the final date for submission of proposals (target TTI max: 153 calendar days); 2) time to grant (TTG) measured from the call deadline to the grant signature (target TTG < 245 days). The CBE JU will ensure the efficiency of all operations and the results of its operational monitoring will be included in the AAR.

The monitoring of the KPIs at Horizon Europe partnership level is embedded into the bi-annual monitoring mechanism managed by the EC, while the monitoring of the specific CBE JU KPIs defined in the CBE JU SRIA are monitored based on the data collected from the yearly project reporting over the course of the CBE JU programme.

The progress of all levels of KPIs against their respective targets is reported in the CBE JU AAR. In addition, the CBE Programme Office has the legal obligation to monitor, continually and systematically, the implementation of its programme, as well as to report and to disseminate the results of this monitoring on an annual basis.

CBE KPIs: Objectives and Units of measurement

		CBE JU AWP 2026 topics												
		IA-Flag01	IA-Flag02	IA-Flag03	IA-Flag04	IA-01	IA-02	IA-03	IA-04	IA-05	R-01	R-02	R-03	S-01
1	**Strategic participation and integration of feedstock producers and suppliers towards large-scale valorisation of sustainable biomass**													
1.1	N of primary producers, involved as project beneficiaries and/or engaged in value chains at project level		x			x		x						
1.2	N of bio- waste management actors, involved as project beneficiaries and/or engaged in value chains at project level					x		x						
2	**Unlock sustainable and circular bio-based feedstock for the industry**													
2	N of innovative bio-based value chains created or enabled based on sustainably-sourced biomass					x		x				x	x	
3	**Ensure environmental sustainability of feedstock**													
3.1	N of projects using feedstock generated with practices that contribute to enhance biodiversity											x		
3.2	N of projects using feedstock generated with practices aiming at zero-pollution (soil, water, air) and/or at reducing water consumption											x		
3.3	N of projects using feedstock generated with practices contributing to climate change mitigation and/or adaptation											x		
4	**Improve environmental sustainability of bio-based production processes and value chains**													
4.1	N of projects with innovative & sustainable processes that contribute to GHG emission reduction	x	x	x	x	x	x	x	x	x	x		x	
4.2	N of projects developing innovative & sustainable processes that improve on resource efficiency and zero-waste	x	x	x	x	x	x	x	x	x	x		x	
4.3	N of projects developing innovative & sustainable processes enabling to address zero pollution	x	x	x	x	x	x	x	x	x	x		x	
4.4	N of projects with innovative & sustainable processes with improved energy efficiency	x	x	x	x	x	x	x	x	x	x		x	
4.5	N of products with improved life cycle environmental performance	x	x	x	x	x	x	x	x	x	x		x	
5	**Expand circularity in bio-based value chains**													
5.1	N of innovative products that are biodegradable, compostable, recyclable, reused or upcycled (circular by design)						x		x	x	x	x	x	
5.2	N projects developing circular production practises (incl. industrial & industrial urban symbiosis)										x		x	
6	**Increase innovative bio-based outputs and products**													
6.1	N of innovative bio-based dedicated outputs, with novel or significantly improved properties vs relevant alternatives	x	x	x	x	x	x	x	x	x	x	x	x	
6.2	N of innovative bio-based drop in outputs meeting applications requirements	x	x	x	x	x	x	x	x	x	x	x		
7	**Improve the market uptake of bio-based products**													
7	N of brand owners involved as project partners and/or engaged with other mechanisms			x	x									x
8	**Attract investment on the bio-based sector**													
8	N of actions implemented at project level to attract investment and/or to create awareness in the investment/funding community													x
9	**Increase resilience and capacity in the bio-based sector**													
9	N of projects contributing to develop the skills and capacity needed by the EU bio-based sector	x	x	x	x									x
10	**Improve participation of regions and countries with high unexploited potential and strategic interest to develop it**													
10.1	N of participants from the underrepresented EU countries and region													
10.2	N of regional hubs established and operated to process bio-based feedstocks and other cooperation aspects													
10.3	N of projects with synergies with other funding programmes at EU, national or regional level													

Table 1 CBE JU KPIs - Call 2026 Topics

CBE JU's risk management

The CBE JU conducted a risk assessment exercise over the achievement of the 2026 objectives described in this work programme.

The CBE JU did not identify any critical risk that needs to be publicly disclosed with possible reservations to be made by the management towards the effective achievement of the objectives for the year. Overall, the results of the risk assessment exercise confirmed the trend of previous years and provided reasonable assurance over the capacity of the CBE JU to identify potential threats and set up, in cooperation with relevant stakeholders, adequate responsive actions to support the effective and efficient management of its core activities.

Still, the impact of the current geopolitical and economic scenarios in Europe and on the sector of intervention of the CBE JU initiative presents a significant level of risk for 2026 and beyond.. Most of the CBE JU projects are industry-driven and highly exposed to these events (out of 1.7k participations in the CBE JU projects, more than 65% are private for-profit companies and notably ~40% are SMEs) and private investment decisions or commitments into ongoing and future projects might suddenly be re-prioritised.

The CBE JU governance and management bodies are fully engaged in monitoring these risks, in fostering communication channels with projects' consortia and in maintaining the qualitative and timely achievement of the multiannual strategic objectives of the initiative.

2.2.2. Scientific priorities, challenges and expected impacts

The topics set in this Annual Work Programme continue to be highly relevant to meet the commitments set out in the European Green Deal and the Fit for 55 package and to achieve the ambitious EU targets of reducing net greenhouse gas emissions by at least 55% by 2030 (compared to 1990) and becoming the first climate neutral continent by 2050. They will contribute to the transition from a fossil-based to a sustainable bio-based economy, in line with the objectives set out in the updated EU Bioeconomy Strategy, and will support the commitments set out under the UN Sustainable Development Goals (SDGs) and the COP 21 Paris Climate Agreement. The CBE JU programme promotes the sustainable and efficient use of both terrestrial and aquatic resources, fully aligning with the objectives of the EU Blue Economy Strategy and the EU Mission Restore our Ocean and Waters and the EU Mission A Soil Deal for Europe.

In addition, they will contribute directly to the EU initiative on Biotechnology and Biomanufacturing by increasing the innovation and competitiveness of industrial biotechnology across different topics by supporting the scaling up of biotech solutions and fostering the increase of biomanufacturing capacity at European level. In particular, the following topics are expected to contribute strongly to these objectives: Flag-01 Boosting biorefinery competitiveness through biotech, Flag-04 Diversification of nutritional food ingredient sources for increased EU resilience and strategic autonomy and IA-01 Biotech routes for valorisation of residual biomass.

More specifically, this work programme supports the following scientific areas :

- **Flagship topics** (end TRL: 8) focus on the deployment of first-of-their kind biorefineries to: (i) boost biorefinery competitiveness through biotech; (ii) produce SSbD bio-based alternatives for fertilising and/or crop protection products; (iii) produce SSbD bio-based solutions for home and/or personal care; and (iv) diversify nutritional food ingredient sources for increased EU resilience and strategic autonomy.
- **Innovation action topics** (end TRL: 6-7) support the development of (i) biotech routes for valorisation of residual biomass; (ii) bio-based additives as alternatives to unlock and increase recyclability and/or biodegradability; (iii) bio-based chemicals and/or materials from woody residues; iv) high-performance, circular-by-design, bio-based thermosets; and v) films and coatings for circular packaging.
- **Research and innovation action topics** (end TRL: 4-5) aim at (i) addressing separation and purification challenges in biorefineries; ii) producing SSbD bio-based polymers from alternative sources; and iii) developing breakthrough and sustainable bio-based (man-made and/or modified natural) textile fibres.
- **Coordination and support action topic** (non-technological) focuses on supporting industry in the switch to sustainable and circular bio-based products and processes.

The scientific priorities of this Annual Work Programme are aligned with the CBE JU specific objectives and the strategic priorities, as identified in the CBE JU SRIA. As shown in Table 3, the topics of this work programme will cover all priorities identified along the three main blocks (feedstock, processing and products) and focus on cross-cutting actions notably the one dedicated to the environmental sustainability framework.

CBE JU Specific Objectives		CBE JU TOPICS AWP2026												
		IA-Flag01	IA-Flag02	IA-Flag03	IA-Flag04	IA-01	IA-02	IA-03	IA-04	IA-05	R-01	R-02	R-03	S-01
1. Accelerate the innovation process and development of bio-based innovative solutions	1.1.-Increase cross-disciplinary research and innovation activities, reaping its benefits for the development and demonstration of sustainable bio-based solutions.										x	x	x	
	1.2 - Increase and integrate the research and innovation capacity of stakeholders across the EU to unlock bioeconomy potential even in regions with underdeveloped capacity.													x
	1.3-Increase the research and innovation capacity and development sustainable bio-based innovations, by ensuring that sustainability issues and environmental performance are integrated throughout the whole innovation chain.						x		x		x	x	x	
2. Accelerate market deployment of the existing mature and innovative biobased solutions	2.1- Reinforce the integration of bio-based research and innovation in EU bio-based industries and increase the involvement of R&I actors, including feedstock providers, in the bio-based value chains.	x	x	x	x	x	x	x	x	x	x		x	
	2.2- Reduce the risk for research and innovation investment in bio-based companies and projects.													
3. Ensure a high level of environmental performance of bio-based industrial systems	3.1- Ensure that circularity and environmental considerations, including contributions to climate neutrality and zero pollution objectives, are considered in the development and implementation of R&I bio- based projects and facilitate societal acceptance.	x	x	x	x	x	x	x	x	x	x	x	x	

Table 2 Annual Work Programme (AWP) 2026 topics links to the CBE JU specific objectives

		SRIA Strategic priorities	CBE JU TOPICS AWP2026												
			IA-Flag01	IA-Flag02	IA-Flag03	IA-Flag04	IA-01	IA-02	IA-03	IA-04	IA-05	R-01	R-02	R-03	S-01
FEEDSTOCK		1.1.1 - Ensure the availability and quality of sustainable bio-based feedstock					x		x				x	x	
		1.3.1 - Protect and enhance biodiversity and ecosystem services in bio-based feedstock supply systems													
		2.1.1 - Demonstrate the sustainable supply of bio-based feedstock	x	x	x	x	x		x						
PROCESSING		1.1.2 - Develop innovative production systems in the bio-based industry					x		x			x	x	x	
		1.3.2 - Improve environmental performances of bio-based processes						x	x	x		x		x	
		2.1.2 - Deploy innovative production technologies	x	x	x	x	x	x	x		x	x		x	
PRODUCTS		1.1.3 - Develop innovative bio-based products								x			x	x	
		2.1.3 – Scale-up production and market uptake of innovative bio-based products		x	x	x		x			x				
CROSS-CUTTING	Communication	1.2.1 - Stimulate research activities in countries and regions with underdeveloped R&I capacity for bio-based systems													
		1.2.2 – Increase the awareness and capacity of national and regional research support agencies for industrial bio-based systems													
		1.2.3 - Facilitate the development of expertise in bio-based fields by improving higher education and skills development in the private sector													
		2.1.4 - Build policy makers' awareness and acceptance of bio-based solutions													
		3.1.3 – Facilitate social acceptance of bio-based applications				x					x			x	x
	Finance	2.2.1 – Improve the risk profile of bio-based projects													x
		2.2.2 - Develop investment tools and approaches that mitigate the investment risk in bio-based systems													
	Environmental sustainability framework	3.1.1 - Set effective and robust environmental sustainability and circularity criteria for bio-based systems			x									x	
		3.1.2 - Incorporate the environmental sustainability and circularity criteria in bio-based systems	x	x	x	x	x	x	x	x	x	x	x	x	

Table 3 Annual Work Programme (AWP) 2026 topics links to the SRIA strategic priorities

2.2.3. Calls for proposals

In this chapter, the topics identified for the CBE JU 2026 call are presented in section 2.2.3.2 with their expected outcomes, their scope and specific topics' requirements. In addition, the specific CBE JU requirements are presented in section 2.2.3.1 and the call conditions specified in section 2.2.3.3. Please also note that a glossary (Annex 4.2) contains the description of important terms which are included in the topics text.

2.2.3.1 Specific requirements for the CBE JU 2026 call

In addition to the requirements set at topic level, all proposals must address the CBE JU specific requirements set for the respective type of action(s). Rather than repeating these specific requirements in each topic, they are presented in this section and summarised in the following table, highlighting the part of the proposal where they should be addressed.

Specific CBE JU requirement	Type of action	Where to include it in Part B
Bio-based feedstock	RIA and IA, incl. FLAG	1.2 Methodology
Environmental performance, circularity and sustainability assessment		
a) Ex-ante assessment	RIA and IA, incl. FLAG	1.2 Methodology
b) Ex-post assessment • Dedicated task • Dedicated task or WP (LCSA)	 RIA IA, incl. FLAG	3.1 Workplan and resources
Multi-actor approach (MAA)	All types of actions	1.2 Methodology
Socio-Economic impacts	IAs, including Flagships	2.1 Project's pathways towards impact
Business case, business model and business plan • Qualitative business case • Quantified business case and business model • Executive summary of the business plan, including the underlying business case and business model • Business plan (as annex)	 RIA IA FLAG FLAG	2.2 Measures to maximise impact -Dissemination, exploitation and communication FLAG: Annex (Business plan)
Digital technologies	RIA and IA, incl. FLAG	1.2 Methodology
Cross-disciplinary aspects	All types of actions	1.2 Methodology

Table 4 CBE JU Specific Requirements for 2026 call

Bio-based feedstock

Proposals should include the following elements under Part B section 1.2. Methodology.

All RIAs and IAs, including Flagships

- **Describe the bio-based feedstock** to be used, ensuring that it is under the scope of the feedstocks foreseen in the CBE JU SRIA and its Annex V[4] where a non-exhaustive list of bio-based feedstock in the scope of the CBE JU is included.

- Include its **geographical origin.** To reinforce the EU's resilience, strategic autonomy, and competitiveness, proposals are expected to:
    - use bio-based feedstock that is both produced (or generated) and processed in EU Member States and/or countries associated to Horizon Europe (this limitation does not apply to limited samples of bio-based feedstock used for testing purposes), and
    - explain how they will contribute to strengthening the European bio-based value chains.

- Include information on how the feedstock is **produced or generated** respecting local ecological limits. For guidance, applicants can refer to the following aspects:

    a) Climate change mitigation. The production or generation of feedstock:
    i. will not impact 'Land with high carbon stock'[5]
    ii. will have low/zero ILUC risk and/or promote carbon sequestration [6]
    iii. will aim at reducing GHG emissions from the extraction and/or cultivation[7]

    b) Biodiversity protection. The production or generation of feedstock:
    i. will implement Integrated Pest Management (IPM)[8] for a reduced use of plant protection products and not apply those identified as "candidate for substitution"[9], unless safe use and existence of no alternatives are proven
    ii. will contribute to sustainable forest management practices[10]
    iii. will not have a negative impact on protected species and habitats[11]
    iv. in case of genetic backgrounds, coming from feedstock that is outside the EU/EEA/EFTA, being used for further testing, optimisation and scaling up during the project: ensure compliance with applicable EU regulations and international rules on

[4] Bio-based feedstock may include bio-waste from imported products.

[5] Article 29, paragraph 4, subparagraphs a), b) and c) of Directive 2018/2001/EU (RED II) and further amendments as per Directive 2023/2413/EU.

[6] Although the "Commission Implementing Regulation 2022/996 on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land use change-risk criteria" focuses on biofuels , the principles of 'additional biomass' eligible for low-ILUC risk certification (Articles 24, 25 and 26) may apply to the biomass used within the scope of CBE JU. See also the 'Annex VIII Minimum requirements on the process and method for certifying low indirect land-use change (ILUC) risk biomass', which includes a '*Non-exhaustive list of yield increase additionality measures*' (Table 1). Some '*Examples of essential soil management practices to promote soil carbon sequestration and promote soil quality*' are reported in Annex VI Table 1, as well. The general criteria for low-ILUC and additionality can be found in the Commission Delegated Regulation (EU) 2019/807

[7] The 'Methodology for determining the emissions from the extraction or cultivation of raw materials' is described in Annex VII of the above-mentioned Implementing Regulation 2022/996/EU.

[8] See Integrated Pest Management (IPM) - Food Safety - European Commission

[9] Commission Directive (EU) 2019/782 on products containing active substances of Group 3.

[10] According to the Biodiversity strategy for 2030 and action plan and the Forest strategy for 2030. Criteria to minimise the risk of using forest biomass derived from unsustainable production are also described in Article 29, paragraph 6, subparagraph a) of Directive 2018/2001/EU (RED II) and further amendments as in Directive 2023/2413/EU.

[11] According to Natura 2000 framework, the Staff Working Document "Criteria and guidance for protected areas designations" (SWD(2022) 23) and the Regulation 2024/1991/EU (Nature Restoration Law).

access to biological resources, such as the UN Convention on Biological Diversity and its Nagoya Protocol, their sustainable use and the fair and equitable sharing of benefits from their utilisation

v. will not introduce invasive species[12] and/or high-risk plants[13]

vi. will not negatively impact protected areas (terrestrial or marine) with high biodiversity value[14]

c) Pollution prevention (air/water/soil). The production or generation of feedstock:

i. will avoid open air burning of stubble/crop residues[15]

ii. will contribute to the reduction of chemical pesticides and more hazardous pesticides use[16]

iii. will contribute to the reduction of nutrient losses and of the overall use of fertilisers[17]

iv. will avoid leakage of contaminants in water/soil, including microplastics (e.g., from agro-plastics)

d) Water resources protection. The production or generation of feedstock:

i. will not deplete surface or groundwater resources beyond replenishment capacities[18]

Under the condition of respecting the "food first" and "cascading use" principles, agricultural biomass can be used as feedstock for CBE JU projects.

IAs, including Flagships, should in their proposal:

- clarify the amount of agricultural biomass needed for the project operations and forecast prospective volumes needed in the medium-long term after the end of the project. For Flagships, this should be aligned with the proposed business plan;
- assess if the above-mentioned forecasted prospective volumes have the potential to interfere with the food supply chain;
- describe possible actions (including project activities) to mitigate the identified risks (if any), such as alternative feedstock sources, in case of potential interference with the food supply chain in future commercial operations.

[12] Invasive alien species (IAS) are animals and plants that are introduced accidentally or deliberately into a natural environment where they are not normally found, with serious negative consequences for their new environment. The list of invasive alien species is in Annex I of the Regulation (EU) 1143/2014 on invasive alien species which entered into force on 1 January 2015.The European Alien Species Information Network (EASIN) is an online platform that aims to facilitate access to existing information on alien species from a range of sources. EASIN includes a Species Search and Mapping tool, allowing for basic and advanced search of a database including over 14 000 alien species in Europe, and showing their distribution on a map. More criteria can be found in the EU Biodiversity Strategy for 2030 which contains the commitment to manage established invasive alien species and decrease the number of Red List species they threaten by 50% by 2030.

[13] See the updated list of high risk plants, plant products or other objects for which introduction into the Union territory shall be prohibited pending a risk assessment: Implementing regulation - EU - 2025/1422 - EN - EUR-Lex and Consolidated TEXT: 32016R1141 — EN — 07.08.2025. Please consult the EC website for updates.

[14] See RED II, Article 29, paragraph point 3, subparagraphs a), b), c) and letter d).

[15] For example, ban on burning arable stubble, except for plant health reasons (GAEC 3 Common Agricultural Policy - Annex III)

[16] See the EC webpage Sustainable use of pesticides - Food Safety - European Commission and the analysis of EU trends EU: Trends - Food Safety - European Commission.

[17] Communication 'Ensuring availability and affordability of fertilisers' and Farm to Fork Strategy and action plan.

[18] See also the definition of quantitative status in the Water Framework Directive.

Environmental performance, circularity and sustainability assessment

All RIAs and IAs, including Flagships

The proposals should include an **ex-ante assessment of environmental performance** in Part B - Section 1.2. Methodology including:

- An **identification of the environmental critical issues** early on and an explanation on how the project will steer the development process in the right direction.
- An **ex-ante estimation of the environmental sustainability performance**, including contribution to climate neutrality, resource efficiency, zero pollution (addressing the impacts on air, water, soil quality, where relevant) and circularity of the proposed biomass logistics, processes/products, compared to benchmark(s) selected by the consortium and described in the proposal. The benchmark(s) should be based on the best performing biomass logistics, processes/products and should be duly justified in the proposal. The proposal should provide a detailed justification to demonstrate how it will improve environmental performances compared to the selected benchmark(s) and if available provide relevant references and calculations.
- If applicable, a **preliminary assessment of the carbon capture, use and/or storage**[19] **potential** (e.g., carbon farming).

In addition, proposals should include as part of the **project** an **ex-post assessment** of the **environmental and social sustainability and circularity** of all the products and processes developed, including biomass logistics, and of their improvements compared with benchmark(s) and describe it in Part B - Section 3.1 Work plan and resources. More specifically:

- **RIAs**: proposals should include a dedicated task to use the early-stage data to assess the potential improvements of the environmental performances of biomass logistics, processes and/or products developed in the project, as well as a preliminary assessment of their social impacts. Clearly define the scope, assumptions and limits of the assessment.
- **IAs:** proposals should include a dedicated work package or task to assess ex-post the environmental impacts and circularity of the products and/or processes developed, including biomass logistics (e.g., transport of the bio-based feedstock from the production to the conversion site), using life-cycle-sustainability assessment (LCSA) methodologies as part of the project.
- **Flagships:** proposals should include a dedicated work package or task for full assessment of the environmental impacts and circularity of the developed products and/or processes, including biomass logistics (e.g., transport of the bio-based feedstock from the production to the conversion site), using life-cycle-sustainability assessment (LCSA) methodologies, as part of the project.

[19] The concept of carbon removal has been introduced by the Commission Communication on sustainable carbon cycles (COM(2021)800) and in Regulation 2024/3012 on the certification framework on permanent carbon removal, carbon farming and carbon storage in products, where "'*carbon storage in products' means any practice or process that captures and stores atmospheric or biogenic carbon for at least 35 years in long-lasting products, allows on-site monitoring of the carbon stored and is certified throughout the monitoring period*". See the glossary 'Carbon removal'

The **life-cycle-sustainability assessment (LCSA)** methodologies should be based on widely used standards and certifications, and they should make use of accepted and validated approaches[20]. LCSA should use, as a reference, Commission recommendations and the European norms[21], technical reports and technical specifications, but also the standards developed by CEN/TC 411 for bio-based products[22]. Applicants should consider the cradle-to-grave or cradle-to-cradle designs, justifying the choice and describing the methodology.

All IAs, including Flagships

Applicants should foresee in the proposal the publication of the outputs of LCSA assessment of environmental impacts, following the principles of open science (FAIR data and "as open as possible, as closed as needed"[23]) and use the possibilities offered by the European Open Science Cloud (EOSC) to store and give access to research data. This should be an integral part of the overall Open Science strategy of the project and therefore duly described in Part B – Section 1.2 Methodology and performed e.g., through the publication of peer-review scientific papers, and/or, whenever possible, sharing the data and the outputs with the European Knowledge Centre for Bioeconomy.

Multi-actor approach

The multi-actor approach (MAA) is a form of responsible Research & Innovation (R&I), it aims to make the R&I process and its outcomes more reliable, demand-driven, shared and relevant to society. The cross-fertilisation of skills, competencies and ideas between actors shows high potential to generate innovative findings and solutions that are more likely to be applied on a wide scale. For more information on the application of MAA applicants shall consult the Horizon Europe Cluster 6 Work Programme 2025.

All types of actions

Applicants should include the multi-actor approach in their concept and describe it in Part B under Section 1.2. Methodology.

Relevant actors under the MAA can be engaged in different levels, e.g., be consulted, and/or through an ad hoc contribution to the co-creation process, and/or as third-party providers and/or full consortium members. The MAA should be fit for purpose for the project concept and type of action.

A multi-actor project proposal should:

- Identify the relevant actors and define how the proposed concept, including the objectives, activities and planning, are targeting their needs/challenges/opportunities.

[20] See 'Life cycle thinking and the use of LCA in policies around the world', 2017

[21] For example: the Product and Organisation Environmental Footprint methods as defined in the EU Recommendation 2279/2021

[22] European Committee for Standardisation Technical Committee 411 on bio-based products

[23] Open science - European Commission

- Define and ensure a multi-actor engagement process that contributes to and speeds up the acceptability and uptake of new knowledge, solutions, approaches, tools, products, processes and/or services developed in the project.

- Explain how the project will deliver practical, tangible and/or ready to use knowledge, methodologies, tools, services and/or products, that are easily understandable/accessible.

For those actions that engage primary producers and local communities, applicants should describe how their proposal is considering and assessing the added value of the production and use of biomass, and the broader impact for the community.

Socio-Economic impacts

All IAs, including Flagships

Applicants should explain in Part B – *Section 2.1 Project's pathways towards impact* how they will contribute to creating and/or distributing socio-economic value along the whole value chain, including where bio-based feedstock is produced or generated, by delivering jobs, economic growth and territorial development. For IAs ending at TRL6-7, an estimation of future value creation and distribution, when reaching full scale, is sufficient.

Business case, business model and business plan

- **RIAs**: should include in Part B - *Section 2.2. Measures to maximise impact - Dissemination, exploitation and communication* a **qualitative business case for investment**, encompassing the relevant technical, economic, market, social, environmental and regulatory criteria, appropriately detailed.
- **IAs (excluding Flagship)**: should include in Part B - Section 2.2. Measures to maximise impact - Dissemination, exploitation and communication:
    - a **quantified business case for investment**, including the relevant technical, economic, market, social, environmental and regulatory, and
    - a **proposed business model** and an estimate of appropriate economic indicators.
- **IA-Flagships:** should include:
    - in Part B - Section 2.2. Measures to maximise impact - Dissemination, exploitation and communication, an **executive summary of the business plan, including the underlying business case and business model,**
    - in a separate Annex, a **detailed business plan,** which should include an estimate of appropriate economic indicators, including Net Present Value (NPV), with all critical underlying assumptions clearly defined and appropriately justified*.

The critical underlying assumptions *should include: accessible market size and growth, target applications, rate of market penetration, revenues, capital and operating costs based on appropriate engineering assessments, personnel levels and funding sources.*

General definitions of the business case, model and plan are reported below.

Business case: is the justification for investment in a project leading to a profitable business, typically based on pursuing an opportunity or solving a problem. The business case should demonstrate that:

- the proposed change is strategically aligned, and represents a compelling case for change
- the proposed change will create value through the whole value chain
- the proposed change is attractive to the market place, and provides convincing evidence that the proposed change is more sustainable than alternative options, is achievable in a realistic timeframe and is sufficiently significant
- the proposed change is both affordable and financially viable
- the applicants have the commitment, skills, capabilities, experience, and processes to make the proposed change a technical and commercial reality.

A business case should address the following key questions: *Does it make technical and commercial sense to invest in this project/technology? Are the resources and capabilities available to make this project/technology successful? Are the risks well understood and are mitigating measures defined?*

Business model: is a description of the way in which a commercial activity generates revenues and value for its customers/involved stakeholders. It is a strategic plan that describes how a company will offer a product to the market and drive sales. The business model should include:

- the problem or opportunity (customer need), should identify the target markets and customers, and define a solution matching the need and capabilities
- the value propositions in target markets, and identify the challenges in developing the solution
- key partners to help address the challenges
- proposed revenue generating strategies
- an understanding of the costs associated with delivering the solution
- a mechanism to test the proposed business model during the implementation of the project.

Business plan is a detailed description of how the business will be developed. The business plan should be: clear (unambiguous, leaving no room for misinterpretation), concise (short, precise), compelling (exciting, motivating), coherent (presenting a consistent investment case), comprehensive (leaving no question unanswered), credible (well-grounded with good supporting data).

A Business plan should include: Executive summary - Company strategy - Management structure - Product development strategy - Market and customer landscape - Competitive landscape - Marketing strategy - Production strategy - Risk analysis - Financial plan - Milestone plan.

A business plan should address the following key questions: *How will the project team make a success of this project/technology? What are the expected benefits (monetary and non-monetary) of this project/technology?*

Elements of the financial analysis: the financial analysis enables the financial viability of each new business opportunity to be assessed and should include the following economic indicators: projected profit (or loss), projected balance sheet, anticipated cash flow, estimated net present value (NPV).

Digital technologies

All RIAs and IAs, including Flagships

Applicants should consider applying and/or adapting existing/mature or novel digital technologies (e.g., AI, blockchain, machine learning, IoT, 6G, etc.) provided that they are instrumental to achieving the project's outcomes and scope.

IAs, including Flagships

Should consider also (real-time) process monitoring, control and optimisation (including environmental performance).

Cross-disciplinary aspects

All types of actions

Aligned with the general principle of Horizon Europe and best research and innovation practices, proposals **should foster cross-disciplinarity** between relevant fields of science. Moreover, applicants should consider, **as appropriate, the social, economic, behavioural, institutional, historical and/or cultural dimensions** of the proposed circular bio-based innovations. Applicants should ensure that contributions from the social sciences and humanities are integrated in the project, as relevant for the proposed concept and methodology.

2.2.3.2 CBE JU 2026 call topics

HORIZON-JU-CBE-2026-IAFlag-01: Boosting biorefinery competitiveness through biotech

Type of action	Innovation Action-Flagship
Indicative budget	The total indicative budget for the topic is EUR 20 million
Expected EU contribution per project	It is estimated that a contribution of EUR 20 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 8 at the end of the project
Link to CBE JU Specific Objectives	2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	2.1.1: Demonstrate the sustainable supply of bio-based feedstock 2.1.2: Deploy innovative production technologies 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems
CBE JU KPIs	4: Improve environmental sustainability of bio-based production processes and value chains 6: Increase innovative bio-based outputs and products 9: Increase resilience and capacity in the bio-based sector

Expected outcomes

Successful proposals will contribute to the implementation of the EU initiative on Biotechnology and Biomanufacturing, the EU Life Sciences Strategy, the updated EU Bioeconomy Strategy, the EU Biotechnology Act, the Clean Industrial Deal, the European Chemical Industry Action Plan and the upcoming EU Circular Economy Act.

Projects results are expected to contribute to the following expected outcomes:

- Full industrial scale biorefinery and related value chain(s) for the sustainable production of bio-based products using biotech as a key enabling technology.
- Availability of bio-based products meeting market and technical performance requirements as relevant for their respective application areas.
- Improvement of sustainability, circularity and resource efficiency compared to relevant benchmark(s).
- Contribution to increasing the EU's strategic autonomy, resilience and competitiveness.

Scope

Biorefineries integrating biotechnologies, underpinned by sustainably sourced bio-based feedstock, have a huge potential to transform the EU manufacturing landscape, spurring socio-economic growth, fostering job creation and contributing to defossilisation of the EU economy.

Europe is strong in life sciences including industrial biotechnology. However, research results often struggle to be deployed to the market; in most cases, scale-up needs de-risking and requires overcoming challenges in large-scale process and reactor design, cell productivity, efficient use of feedstock, operative condition stability, reactor sterility and efficient integration of downstream operations among others.

Proposals under this topic should:

- Demonstrate (at TRL 8) a sustainable and robust biomanufacturing route to obtain bio-based product(s). The proposal should focus on processes in which biotechnology is the key enabling technology; the integration of (upstream and/or downstream) supporting unit operations based on technologies other than biotechnology is in scope. Products in scope include chemicals, intermediates, polymers, ingredients and enzymes. Food and feed ingredients as main application are out of scope. Optimisation of selected cells, enzymes and/or microorganisms is also in scope provided that the starting TRL is at least 6.
- Demonstrate (at TRL 8) the further conversion or use of the obtained biorefinery product(s) into at least one end-product driving the business case; validate it (TRL 6 and above) in relevant market applications. Additional end-product(s) with high prospective market potential can be targeted, reaching at least TRL 6.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific Requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA), ensure adequate involvement of all key actors in the value chains relevant for this topic and across the sustainable circular bio-based system, including feedstock providers, policymakers and end users.
- Address compliance with EU regulatory frameworks as relevant for targeted products and applications, identify potential gaps and provide recommendations to overcome them. Perform a risk assessment on impacts, potentially deriving from the use of biotechnology, on human and ecosystem safety and identify adequate mitigation measures. Assess the adequacy of policy and regulatory means to manage these risks and provide recommendations to overcome potential identified bottlenecks.
- Include a task to apply the SSbD framework, developed by the European Commission, for the assessment of the production process of targeted biorefinery product(s) as well as the chosen derived end product(s). For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.
- Seek complementarities and avoid overlaps with past and ongoing R&I projects addressing similar challenges, including those funded by BBI JU/CBE JU and under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe).

HORIZON-JU-CBE-2026-IAFlag-02: SSbD bio-based alternatives for fertilising and/or crop protection products

Type of action	Innovation Action-Flagship
Indicative budget	The total indicative budget for the topic is EUR 20 million
Expected EU contribution per project	It is estimated that a contribution of EUR 20 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 8 at the end of the project
Link to CBE JU Specific Objectives	2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	2.1.1: Demonstrate the sustainable supply of bio-based feedstock 2.1.2: Deploy innovative production technologies 2.1.3: Scale up production and market uptake of innovative bio-based products 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems
CBE JU KPIs	1.1: Primary producers, involved as project beneficiaries and/or engaged in value chains at project level 4: Improve environmental sustainability of bio-based production processes and value chains 6: Increase innovative bio-based outputs and products 9: Increase resilience and capacity in the bio-based sector

Expected outcomes

Successful proposals will contribute to the updated EU Bioeconomy Strategy, Farm to Fork Strategy, the Horizon Europe Mission 'A Soil Deal for Europe', in particular the objectives: 'Reduce soil pollution and enhance restoration', the European Chemical Industry Action Plan as well as the Clean Industrial Deal.

Projects results are expected to contribute to the following expected outcomes:

- Full industrial scale biorefinery and related value chain(s) for the sustainable production of bio-based fertilisers and/or crop protection solutions.
- Increased availability of cost-competitive and SSbD bio-based alternatives for fertilising and/or crop protection products with suitable agronomic efficacy.
- Reduced reliance on synthetic/mineral agricultural chemical products.
- Increased EU strategic autonomy, resilience and competitiveness through a robust cooperation among bio-based industries and farmers.

- Increased soil health, including minimising accumulation of microplastics and pollutants in soil and water, with positive effects on quality, security and resilience of food production in agriculture.

Scope

FAO estimates that up to 40% of food crops are lost due to plant pests and diseases globally every year.[24] Chemical synthetic products are conventionally used to protect crops and other plants from pests and diseases. In parallel, the EU is largely dependent on imports of both mineral and chemical fertilisers to grow crops. In both cases, over-use of synthetic/mineral products also poses concern for soil health and food quality. Moreover, the unequal distribution and depletion of non-renewable sources risks disrupting supply chains, particularly during energy crises.

SSbD bio-based fertilising and crop protection products can offer more resilient and sustainable solutions creating an added-value partnership between agriculture and industry both upstream (for feedstock supply) and downstream (for the use of sustainable and efficient bio-based products). However, when scaling-up, challenges need to be solved in terms of process efficiency and robustness against feedstock variability, formulations stability and efficacy on the field (also in consideration of climate change effects and different soil conditions), and cost competitiveness.

Proposals under this topic should:

- Demonstrate (at TRL 8) the efficient industrial production of SSbD bio-based solutions as alternatives to current fertilising and/or crop protection products. Bioactive molecules and/or biotechnology solutions for bio-fertilisers, bio-stimulants and/or pest/disease control (e.g., bioherbicides, biopesticides, bioinsecticides), or a combination thereof, are in scope. Products in scope can be applicable at any crop(s) cycle stage.
- Validate (at TRL 6 and above) at scale the produced bio-alternatives into the formulation of end-product(s) and test their agronomic efficiency, safety and sustainability to prove the achievement of similar or improved properties compared to defined benchmarks available in the market (synthetic and/or mineral). In case of bio-based fertilisers, put in place a solid production validation procedure to ensure reduced nutrient variability of the N/P/K content in end-products.
- Test the developed product(s) with primary producers on the field (demo farms) for selected crops and monitor their effects on soil health and quality, as well as on water. Cover different climatic and soil conditions, taking into account different farming systems, including organic agriculture. If controlled release mechanisms are employed, the proposed innovations should avoid microplastics accumulation in soil.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA), ensure adequate involvement of all key actors in the value chains relevant for this topic and across the sustainable circular bio-based system, including primary producers to support the acceptance and adoption of developed products.
- Address compliance with relevant EU regulatory frameworks related to manufacturing and entry-to-market of targeted bio-based alternative(s). This includes performing a sanitary and environmental risk assessment to prevent the introduction of harmful biological and/or chemical contaminants into soil, crops and the food chain, while also safeguarding human

[24] See source information.

health and soil ecosystems. Include a task to identify potential regulatory gaps and provide recommendations to overcome potential bottlenecks.

- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted bio-based product(s). For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020 / Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-IAFlag-03: SSbD bio-based solutions for home and/or personal care

Type of action	Innovation Action-Flagship
Indicative budget	The total indicative budget for the topic is EUR 20 million
Expected EU contribution per project	It is estimated that a contribution of EUR 20 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 8 at the end of the project
Link to CBE JU Specific Objectives	2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	2.1.1: Demonstrate the sustainable supply of bio-based feedstock 2.1.2: Deploy innovative production technologies 2.1.3: Scale up production and market uptake of innovative bio-based products 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems 3.1.3: Facilitate social acceptance of bio-based applications
CBE JU KPIs	4: Improve environmental sustainability of bio-based production processes and value chains 6: Increase innovative bio-based outputs and products 7: Market uptake of bio-based products 9: Increase resilience and capacity in the bio-based sector

Expected outcomes

Successful proposals will contribute to the Chemicals Strategy for Sustainability and Ecodesign for Sustainable Products Regulation, the Chemical Industry Action Plan, the Clean Industrial Deal as well as the Horizon Europe Mission "Restore our Ocean and Waters by 2030" in particular to Objective 2: "Prevent and eliminate pollution of our oceans, Seas and waters.

Projects results are expected to contribute to the following expected outcomes:

- Full industrial scale biorefinery and related value chain(s) to produce SSbD bio-based solutions for home and/or personal care sector with significantly improved sustainability.
- Wider availability of bio-based products in home and/or personal care sector meeting both regulatory standards and technical performance requirements.
- Increased consumer/end user acceptance of bio-based solutions, facilitating market uptake.
- Contribution to the EU strategic autonomy, resilience and competitiveness, reducing the fossil feedstock dependence for chemicals production and minimising biomass imports dependencies.

Scope

The home and personal care sector, including fast-moving consumer goods (FMCG) and cosmetics, is a key industry where sustainability and performance challenges and demands are high. SSbD and competitive bio-based solutions are needed, for instance, for solvents, surfactants, preservatives, antimicrobial and antifungals agents, disinfectants, film forming agents, emulsifiers, emollients, exfoliants and abrasives, stabilisers, polymers and thickeners, conditioning agents, active ingredients, and other functional compounds.

Despite advancements at demo scale in green chemistry and biotechnologies, further effort is needed to bridge innovation gaps and demonstrate at industrial scale the production of SSbD bio-based alternatives to conventional chemicals and ingredients, while maintaining/enhancing key functional properties in end-products/ formulations, such as physical stability, shelf life, efficacy, prevention of bioaccumulation and biodegradability.

Proposals under this topic should:

- Demonstrate (at TRL 8) the production of SSbD bio-based solution(s) as an alternative to conventional chemicals, ingredients and combinations thereof, that are currently used in the formulation of home and/or personal care products (including cosmetics). SSbd bio-based chemicals/ingredients and biotechnology solutions are both in scope. Materials entering the end product formulation (e.g., granulates, powders, microbeads, micro/nano cellulose) are also in scope, while other materials related to home and personal care applications (e.g., nonwovens, other wipes, packaging) are out of scope.
- Demonstrate (at TRL 7 and above) the application of the bio-based solution(s) into the formulation of market relevant end-product(s). Assess technical performances of end-product(s), ensuring that their final properties meet market application requirements. Adding new functionalities for specific applications is also in scope. While the topic focuses primarily on home and personal care applications, the demonstrated solution(s) could also be applicable to industrial production processes. When this is the case, validation (at TRL 6) of the industrial use case should be addressed.
- Test that the release and accumulation of pollutants and harmful substances in the water is being avoided, including microplastics. When biodegradable solutions are targeted, validate biodegradability according to applicable EU/international standards, depending on the substance group and the final application(s).

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA), involve end-users, including brand owners and consumers when applicable, starting from the early stages to assess market acceptance of the targeted end-products and incorporate insights into product development.
- Assess the safety of targeted bio-based solutions and end-products adopting standards and protocols in line with EU regulatory requirements for the selected application sector(s).
- Include a task to identify potential regulatory gaps and provide recommendations to overcome potential bottlenecks.
- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted chemicals/solutions and derived bio-based product(s). For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-IAFlag-04: Diversification of nutritional food ingredient sources for increased EU resilience and strategic autonomy

Type of action	Innovation Action-Flagship
Indicative budget	The total indicative budget for the topic is EUR 20 million
Expected EU contribution per project	It is estimated that a contribution of EUR 20 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 8 at the end of the project
Link to CBE JU Specific Objectives	2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	2.1.1: Demonstrate the sustainable supply of bio-based feedstock 2.1.2: Deploy innovative production technologies 2.1.3: Scale up production and market uptake of innovative bio-based products 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems 3.1.3: Facilitate social acceptance of bio-based applications
CBE JU KPIs	4: Improve environmental sustainability of bio-based production processes and value chains 6: Increase innovative bio-based outputs and products 7: Market uptake of bio-based products 9: Increase resilience and capacity in the bio-based sector

Expected outcomes

Successful proposals will contribute to the implementation of the EU initiative on Biotechnology and Biomanufacturing and the EU Life Sciences Strategy as well as the updated EU Bioeconomy Strategy, the upcoming EU Biotechnology Act and EU Circular Economy Act.

Projects' results are expected to contribute to the following expected outcomes:

- Full industrial scale biorefinery and related value chain(s) for the production of nutritional food ingredients.
- Resilience and strategic autonomy of EU food sectors via diversification of nutritional food ingredient sources.
- Increased environmental sustainability of food sectors (e.g. addressing issues like land use, water use, energy consumption, nitrogen cycle, other nutrients, etc.).
- Improved consumers awareness and acceptance of nutritional food ingredients from alternative sources, contributing to sustainable healthy diets.

Scope

Human nutrition is a key area where the bio-based industries can play an important role in addressing the present societal and climate challenges. Considerable attention is given to the utilisation of alternative sources of proteins, fibres and oils/fats, due to the increasing world population and the pressure on finite natural resources. Many sources for food ingredients, alternative to agricultural crops, exist and have been successfully piloted across the EU. However, efforts are needed to scale up sustainable processes to achieve adequate or even improved nutritional properties, ensure safety and consumers/end users acceptance, while achieving cost competitiveness.

Proposals under this topic should:

- Demonstrate (at TRL 8) the efficient production of nutritional ingredients for food applications. Proteins, lipids, specialty carbohydrates, and fibres are in scope. Target at least one of these as the main product driving the business case. Structural or functional ingredients such as colourants, preservatives, stabilisers, texturisers, enzymes are not in scope as the main product.

  Synergistic co-production of multiple and different food and feed ingredients and other bio-based products is also in scope following the cascading approach.

  All sources of bio-based feedstock[25] are in scope. Direct production of food from food crops, livestock, fisheries and aquaculture is not in scope. The use of industrial grade feedstock[26] from agricultural crops is in scope for conversion into food grade ingredients.

- Validate (at TRL 6 and above) the use of the obtained nutritional food ingredient(s) into the formulation of at least 1 food product proving quality, stability, nutritional and sensorial properties. Additional aspects related to prevention of intolerances/allergies, improved palatability and digestibility, health benefits, etc. are also in scope depending on the ingredient(s), formulation(s) and product(s) developed.

- Address resource efficiency and circularity aspects to increase economic and socio-environmental added value. When pursuing circular models, ensure that neither pathogens nor contaminants are injected back in the loop, to avoid negative toxicological effects.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- Assess the safety of developed nutritional food ingredients, in line with EU regulatory requirements and EFSA guidance documents. Moreover, identify potential EU regulatory gaps and propose recommendations to relevant EU policymakers on how to better support food ingredient companies (including startups and scaleups) in addressing EFSA risk assessment.

- As part of the multi-actor approach (MAA), involve end-users (including consumers) and other relevant actors starting from the early stages to gather input, raise awareness and ultimately foster market acceptance of the targeted end-products and incorporate insights into product development.

- Ensure complementarities and avoid overlaps with past and ongoing R&I projects addressing similar challenges funded under CBE JU and Horizon Europe topics.

[25] Examples include: plants, invertebrates, microorganisms, fungi, aquatic biomass (including micro and macro algae, seagrass, aquaculture and fishery residues), fermentation of bio-based feedstock (including biogenic gaseous carbon), residues from agriculture, farming (including livestock) and forestry, urban and/or industrial waste streams (including from the food industry)

[26] For example starch, sugars, oils

HORIZON-JU-CBE-2026-IA-01: Biotech routes for valorisation of residual biomass

Type of action	Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 14 million
Expected EU contribution per project	It is estimated that a contribution of EUR 7 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 6-7 at the end of the project
Link to CBE JU Specific Objectives	1.1: Increase the intensity of cross-disciplinary research and innovation activities 2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	1.1.1: Ensure the availability and quality of sustainable bio-based feedstock 1.1.2: Develop innovative production systems in the bio-based industry 2.1.1: Demonstrate the sustainable supply of bio-based feedstock 2.1.2: Deploy innovative production technologies 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems
CBE JU KPIs	1: Strategic participation and integration of feedstock producers and suppliers towards large-scale valorisation of sustainable biomass 2: Innovative bio-based value chains created or enabled based on sustainably sourced biomass 4: Improve environmental sustainability of bio-based production processes and value chains 6: Increase innovative bio-based outputs and products

Expected outcomes

Successful proposals will contribute to the implementation of the EU initiative on Biotechnology and Biomanufacturing and the EU Life Sciences Strategy as well as the updated EU Bioeconomy Strategy, the Clean Industrial Deal, the European Chemical Industry Action Plan, the upcoming EU Biotechnology and Circular Economy Acts.

Projects results are expected to contribute to the following expected outcomes:

- Increased added value of residual biomass for biorefinery applications.
- Availability of a wider portfolio of sustainable bio-based products via industrial biotech.
- Robust, scalable and efficient biotech process(es) applicable to residual biomass.

Scope

Diversifying biomass feedstock resources for bio-based products is key to contribute to resilience and strategic autonomy of bio-based operations. Industrial biotechnologies have showcased that they can play a key role to address residual biomass into valuable bio-based products. However, scaling up from research to demo scale requires addressing systemic and technical challenges. This entails the integration of adequate pretreatment and conversion processes, tailored to the targeted residual biomass and its composition variability, in order to achieve high yield, titre and selectivity. At the same time, it requires that these processes are scalable and sustainable. Moreover, effective logistics are needed to mobilise the residual biomass, requiring cooperation with primary producers, waste management operators and other biomass providers.

Proposals under this topic should:

- Demonstrate (at least TRL 6) efficient biotechnology based processes to convert residual biomass streams into bio-based chemicals, intermediates, polymers, materials, ingredients[27] and/or enzymes. The topic focuses on processes in which biotechnology is the key enabling technology; the integration of supporting unit operations based on technologies other than biotechnology is in scope. Optimisation of selected cells, enzymes and/or microorganisms, including microbiomes, is also in scope.

  The feedstock in scope includes:

  - Forestry and agricultural residues and/or side streams from the processing of forestry and agricultural biomass (including livestock-based ones such as manure and animal byproducts),
  - residues from aquatic biomass, including from fisheries, micro/macro algae production and aquaculture,
  - urban and/or industrial bio-based waste and side-streams (including food industry waste and side-streams, cellulose from post-consumer and post-industrial waste, urban biowaste and sewage sludge, and other bio-based waste/side-streams from industrial operations including wood and pulp and paper industry)
  - mixed streams from the above.
- Integrate optimised biomass pretreatment/fractionation processes tailored to selected residual biomass and optimise (energy)-efficient separation and/or purification process step(s) across the value chain. The valorisation of by-products and side streams across the value chain via the cascading approach is in scope.
- Validate (at TRL 5 and above) conversion (or use) of biorefinery product(s) into end-products proving to fulfil market requirements for selected applications sectors.
- Address resource efficiency and circularity. When pursuing circular models, ensure that neither pathogens nor contaminants are injected back in the loop, to avoid negative effects on human health and the environment.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- Under the multi-actor approach (MAA), ensure the sufficient involvement of feedstock producers/managers for residual feedstock supply.

[27] Ingredients in scope include feed/food ingredients, bioactives, ingredients for cosmetics, home and/or personal care, nutraceutical sectors, fertilisers including biostimulants.

- Optimise logistic models (including sourcing, storage and transport) of residual feedstock, minimising distances and costs. Ensure seamless integration with biomass providers, while promoting win-win business models.
- Perform a risk assessment on impacts, potentially deriving from the use of biotechnology, on human safety, biodiversity as well as environmental safety and identify adequate mitigation measures. Assess the adequacy of policy and regulatory means to manage these risks and provide recommendations to overcome potential identified bottlenecks.
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-IA-02: Bio-based additives as alternatives to unlock and increase recyclability and/or biodegradability

Type of action	Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 14 million
Expected EU contribution per project	It is estimated that a contribution of EUR 7 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 6-7 at the end of the project
Link to CBE JU Specific Objectives	1.3 Increase and integrate the research and innovation capacity for addressing environmental challenges and development of more sustainable bio-based innovations 2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	1.3.2: Improve environmental performances of bio-based processes 2.1.2: Deploy innovative production technologies 2.1.3: Scale up production and market uptake of innovative bio-based products 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems
CBE JU KPIs	4: Improve environmental sustainability of bio-based production processes and value chains 5.1: Innovative products that are circular by design 6: Increase innovative bio-based outputs and product

Expected outcomes

Successful proposals will contribute to the implementation of the Zero Pollution Action Plan, the Circular Economy Action Plan, the Ecodesign for Sustainable Products Regulation, the Chemicals Strategy for Sustainability and the Chemical Industry Action Plan. They will provide solutions in line with the objectives of the EU legislation on waste but also the Horizon Europe Mission "Restore our Ocean and Waters by 2030" in particular to Objective 2: "Prevent and eliminate pollution of our oceans, Seas and waters" as well as the Horizon Europe Mission "A Soil Deal for Europe", in particular objectives "Reduce soil pollution and enhance restoration".

Projects results are expected to contribute to the following expected outcomes:

- Wider availability of bio-based additives targeting high functional properties, stability and compatibility with polymers/matrices.
- Contribution to improved circularity of end products in relevant market sectors.
- Potential replicability into other industrial sectors to widen market opportunity.

- Reduction or avoidance of environmental impacts related to life cycle of additives and additive-containing materials and/or products.

Scope

While additives are often necessary to confer specific properties to materials and/or products, their presence can hinder their circular EoL (including – depending on the application – recycling and/or biodegradation). Risks upon recycling and biodegradation encompass the release into the environment of harmful substances, e.g., release of persistent organic pollutants (POPs), volatile organic compounds (VOCs), toxic metals, microplastics. Proposals under this topic should:

- Demonstrate (at least at TRL 6) innovative processes for the synthesis of bio-based SSbD additives that:

  i) Enable a circular EoL for materials and/or products that are currently not recyclable and/or not biodegradable, or

  ii) Improve circularity of materials and/or products, e.g., by requiring resources/energy efficient and safe conditions for recycling or facilitating biodegradation.

  In the context of this topic, circular EoL includes recycling and/or biodegradation. Justify the choice of the proposed solution(s) in addressing existing bottlenecks in the circular EoL of targeted materials and/or products including where embedded additives play a fundamental role in hindering circularity.

  Provide alternative solutions that prevent the release of harmful chemicals during the product life cycle (including from products produced from recyclates) of materials and/or products, while enabling the relevant EoL options. Application of the demonstrated bio-based additives could be relevant for bio-based, partly bio-based or non-bio-based end products.

- Demonstrate (at least at TRL 6) the compatibility and processability of SSbD bio-based additives within the formulation/manufacturing of materials and/or products. Validate the technical performances of materials/products incorporating the novel bio-based additive(s) and proving to fulfil market requirements for selected application sector(s). Target at least two distinct market sectors in cooperation with end-users.

- If targeting biodegradability of end-products, assess that the additives, as well as the end-product, biodegrade safely in different environments (soil and water) according to existing EU/International standards, methods and protocols.

- If targeting recyclability as the EoL, test and validate it, including assessing the effect of the additives on the waste management system (encompassing sorting, separation and recycling). Any recycling route is in scope: mechanical, chemical, organic, enzymatic (including their possible combination).

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA) approach, involve waste management, product manufacturers, brand owners and consumers, when applicable, starting from the early

stages to assess market acceptance and incorporate insights into process/product development.

- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted chemicals/materials and derived bio-based product(s). For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-IA-03: Bio-based chemicals and/or materials from woody residues

Type of action	Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 14 million
Expected EU contribution per project	It is estimated that a contribution of EUR 7 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 6-7 at the end of the project
Link to CBE JU Specific Objectives	1.1: Increase the intensity of cross-disciplinary research and innovation activities 1.3 Increase and integrate the research and innovation capacity for addressing environmental challenges and development of more sustainable bio-based innovations 2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	1.1.1: Ensure the availability and quality of sustainable bio-based feedstock 1.1.2: Develop innovative production systems in the bio-based industry 1.3.2: Improve environmental performances of bio-based processes 2.1.1: Demonstrate the sustainable supply of bio-based feedstock 2.1.2: Deploy innovative production technologies 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems
CBE JU KPIs	1: Strategic participation and integration of feedstock producers and suppliers towards large-scale valorisation of sustainable biomass 2: Innovative bio-based value chains created or enabled based on sustainably sourced biomass 4: Improve environmental sustainability of bio-based production processes and value chains 6: Increase innovative bio-based outputs and products

Expected outcomes

Successful proposals will contribute to the EU Forest Strategy for 2030, the EU Biodiversity Strategy 2030, the Carbon Removal Certification Framework Regulation, the updated EU Bioeconomy Strategy and the upcoming Circular Economy Act.

Projects' results are expected to contribute to the following expected outcomes:

- Increased availability of bio-based chemicals and/or bio-based materials from woody residues.

- Increased sustainability of forest-based value chains in cooperation with local forestry owners/cooperatives.
- Improved end-of-life (EoL) of bio-based products from woody residues.

Scope

Besides thin branches, leaves and needles, which are usually left on the soil to maintain the long-term viability of the forest and soil in good condition, forestry and forest industry operations generate large amounts of woody residues which are typically used for energy or low value applications. Established process technologies for round wood and wood chips are not well suited for other streams from the forest industry which are abundantly available at production sites and could be exploited as a source of feedstock for the bio-based industries. Thus, there is the need to demonstrate techno-economic feasibility of innovative valorisation pathways to increase the value which can be derived from residues from the wood and forest-based industries while also improving sustainability compared to state-of the art valorisation routes.

Proposals under this topic should:

- Demonstrate (TRL 6 and above) innovative technologies to obtain bio-based chemicals and/or materials from woody residues. Feedstock in scope includes woody residues generated at forestry and/or at industrial processing sites, including, but not limited to, bark, sawdust or residues from wood harvesting and processing. Demonstration should cover the optimal combination of innovative and scalable technologies aimed at maximising yield, selectivity and productivity across upstream pretreatment/fractionation, further conversion into chemicals/materials, separation/purification processes. The proposed technologies should address flexibility to feedstock quality variability.
- Validate (TRL 5 and above) the obtained chemicals/materials into end products. Assess the products' performance and ensure that they fulfil technical performance requirements according to the end market application(s).
- Apply the eco-design principles, in line with the Ecodesign for Sustainable Products Regulation, to the end-product(s) for sustainable EoL and test it at TRL5 and above. Incineration is not in scope.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA), ensure close collaboration with local forest owners and managers, including cooperatives and/or sectorial associations.
- Optimise biomass supply chain models, including sourcing, storage and/or transport as relevant for selected woody residues.
- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted chemicals/materials and derived bio-based product(s). For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-IA-04 High-performance, circular-by-design, bio-based thermosets

Type of action	Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 14 million
Expected EU contribution per project	It is estimated that a contribution of EUR 7 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 6-7 at the end of the project
Link to CBE JU Specific Objectives	1.1: Increase the intensity of cross-disciplinary research and innovation activities 1.3 Increase and integrate the research and innovation capacity for addressing environmental challenges and development of more sustainable bio-based innovations 2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	1.1.3: Develop innovative bio-based products 1.3.2: Improve environmental performances of bio-based processes 2.1.2: Deploy innovative production technologies 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems
CBE JU KPIs	4: Improve environmental sustainability of bio-based production processes and value chains 5.1: Number of innovative products that are biodegradable, compostable, recyclable, reused or upcycled (circular by design) 6: Increase innovative bio-based outputs and products

Expected outcomes

Successful proposals will contribute to the Circular Economy Action Plan, the Chemicals Strategy for Sustainability, the Ecodesign for Sustainable Products Regulation, the Chemical Industry Action Plan, and the Clean Industrial Deal. Projects results are expected to contribute to the following expected outcomes:

- Wider availability of bio-based thermoset materials meeting high technical performance requirements.
- Improved circularity of thermosets and downstream application(s) against specified market benchmarks taking into account production, use and EoL.

Scope

Bio-based thermosets have a proven capability to achieve challenging technical performances for high demanding applications including transport, energy, electronics, among others. However, due to their cross-linking nature, the recycling of thermoset materials (including composites) is more challenging without compromising the technical performances. Thus, eco-designing bio-based thermoset materials to be both circular and high-performing remains a significant challenge in scaling-up towards competitiveness and higher sustainability.

Some of the key challenges to address for bio-based thermosets include processability during manufacturing (including aspects of thermal stability), technical performance (e.g., mechanical properties, fire resistance, corrosion resistance, durability) of the end-product along its life cycle, durability, EoL and circularity, including recycling, re-using or upcycling solutions.

Proposals under this topic should:

- Demonstrate (at least at TRL 6) the resource-efficient production of innovative bio-based thermosets, targeting both high performances and circularity. Functionalisation by introducing bio- or non-bio-based additives is also in scope.
- Demonstrate (at least at TRL 6) the developed bio-based thermosets conversion into circular end-products, proving that technical performance (e.g., mechanical and thermal stability properties, fire resistance, corrosion resistance, durability, etc.) meets market requirements and is compatible with existing manufacturing equipment.
- Apply eco-design principles, in line with the Ecodesign for Sustainable Products Regulation, to enable circularity of the thermoset materials, addressing major challenges of EoL for the targeted end-use.
- Test the selected EoL alternatives (at TRL 5 and above). Landfilling or incineration are out of scope.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA), involve end-users, including consumers when applicable, starting from the early stages to assess market acceptance of the targeted end-products and incorporate insights into product development.
- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted bio-based thermosets and derived products. For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-IA-05: Films and coatings for circular packaging

Type of action	Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 14 million
Expected EU contribution per project	It is estimated that a contribution of EUR 7 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 6-7 at the end of the project
Link to CBE JU Specific Objectives	2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	2.1.2: Deploy innovative production technologies 2.1.3: Scale up production and market uptake of innovative bio-based products 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems 3.1.3: Facilitate social acceptance of bio-based applications
CBE JU KPIs	4: Improve environmental sustainability of bio-based production processes and value chains 5.1: Innovative products that are biodegradable, compostable, recyclable, reused or upcycled (circular by design) 6: Increase innovative bio-based outputs and products

Expected outcomes:

Successful proposals will contribute to the Circular Economy Action Plan, the Chemicals Strategy for Sustainability and the Ecodesign for Sustainable Products Regulation.

Projects results are expected to contribute to the following expected outcomes:

- Wider availability of bio-based films and coatings for packaging products.
- Improved technical performances of packaging products compared to fossil based and/or bio-based benchmarks.
- Improved circularity of packaging products against specified market benchmarks taking into account production, use and EoL.

Scope

Many research projects have focused on developing and piloting bio-based coatings and films for application in food and non-food packaging. When targeting packaging, a primary challenge is achieving adequate barrier properties (against oxygen, moisture, grease and volatiles), as bio-based materials are typically more hydrophilic than conventional plastics like PE or PET. Processing methods, including bio-based coating deposition, face scalability and reproducibility

issues. Coatings must adhere well to substrates while maintaining technical properties and not hindering sustainable EoL. Printability is another concern, as bio-based surfaces can cause ink issues like smudging or poor adhesion. Durability under stress and operating conditions is still a challenge for certain bio-based applications. Finally, design for sustainability and sustainable EoL are critical to reduce over-packaging, avoid littering and increase circularity, according to the principles set out in the Ecodesign for Sustainable Products Regulation.

Proposals under this topic should:

- Demonstrate (at least TRL 6) innovative technologies for obtaining bio-based films and/or coatings suitable for improving performance of packaging products. Both food and non-food packaging are in scope. At least one non-food packaging application should be addressed. While coatings and films must be bio-based, any (bio-based and/or non-bio based) material is in scope as a substrate.

- Demonstrate (at least TRL 6) the applicability of the developed solution(s) in the manufacturing of packaging product prototypes, ensuring compatibility with industrial packaging manufacturing processes.

- Assess targeted products properties according to the intended application(s) under conditions occurring during the use phases, including transport and storage. Such properties may include mechanical, barrier, surface properties, resistance to low or high temperatures, weathering, moisture and/or corrosion; compatibility with food contact requirements (when addressing food packaging), printability.

- Apply the eco-design principles, in line with the Ecodesign for Sustainable Products Regulation, to reduce overpackaging and enable/facilitate sustainable at EoL.

- Test the selected EoL alternatives (at TRL 5 and above). Circular EoL includes mechanical, chemical and/or enzymatic recycling, and composting and their possible combinations. Re-use and remanufacturing are also in scope when compatible with the application and common practices. Landfilling or incineration are out of scope.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA), involve end users and engage consumers (when applicable) starting from the early stages to assess market acceptance of the targeted end-products and incorporate insights into product development.

- Assess the compatibility with the regulatory framework, in particular the Single Use Plastics Directive (SUP) and the Packaging and Packaging Waste Regulation (PPWR), identify opportunities for bio-based products and/or potential bottlenecks and provide recommendations for addressing them.

- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted bio-based films and coatings. For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.

- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-RIA-01: Addressing separation and purification challenges in biorefineries

Type of action	Research and Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 6.5 million
Expected EU contribution per project	It is estimated that a contribution of EUR 3.25 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 5 at the end of the project
Link to CBE JU Specific Objectives	1.1: Increase the intensity of cross-disciplinary research and innovation activities 1.3 Increase and integrate the research and innovation capacity for addressing environmental challenges and development of more sustainable bio-based innovations 2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance
Link to CBE JU SRIA	1.1.2: Develop innovative production systems in the bio-based industry 1.3.2: Improve environmental performances of bio-based processes 2.1.2: Deploy innovative production technologies 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems
CBE JU KPIs	4 - Improve environmental sustainability of bio-based production processes and value chains 5 - Expand circularity in bio-based value chains 6 - Increase innovative bio-based outputs and products

Expected outcomes

Successful proposals will contribute to the updated EU Bioeconomy Strategy, the Circular Economy Act, the Clean Industrial Deal, the European Chemical Industry Action Plan and the Chemicals Strategy for Sustainability.

Projects results are expected to contribute to the following expected outcomes:

- Enhancing competitiveness, efficiency, sustainability, circularity and safety of industrial biorefineries.
- Efficient, selective and scalable separation and purification technology platform(s) with high potential to be integrated within existing and/or new biorefineries.
- Purity and stability of targeted intermediates/product(s) compatible with further conversion requirements.

Scope

While significant advancements have been made in recent years in the development of core biorefinery processes, challenges remain in separation and purification steps.

Separation and purification, both upstream and downstream of biorefinery processes, play a key role in determining quality and purity of the intermediates and products. They usually account for a significant share of the whole process costs and are often a relevant bottleneck towards full-scale deployment and commercialisation of bio-based products (including intermediates, chemicals, ingredients, materials). It is therefore crucial to develop new technologies to improve separation and purification performances, while at the same time improving resource efficiency and reducing costs.

Proposals under this topic should:

- Develop scalable separation and purification technologies and test the developed innovative solutions on at least 3 use cases from biorefinery processes at industrial or demo scale. Each technology should address at least two of the following:
    - increase efficiency when using available green solvents (including water), or develop novel ones and in both cases minimise the use of harsh solvents;
    - applying process intensification including through reduction of process steps;
    - reducing thermal and/or electric energy and water consumption.
- Address compatibility of the innovative separation and purification solutions with existing upstream technologies or develop solutions that address simultaneously the upstream and downstream challenges.
- Test and validate the performance of targeted technologies and their effect on selected bio-based product(s). Both novel (not yet available on the market) and well-established bio-based products are in scope.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted biorefinery products obtained using the developed separation and purification processes. For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-RIA-02- SSbD bio-based polymers from alternative sources

Type of action	Research and Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 6.5 million
Expected EU contribution per project	It is estimated that a contribution of EUR 3.25 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 5 at the end of the project
Link to CBE JU Specific Objectives	1.1: Increase the intensity of cross-disciplinary research and innovation activities 1.3: Increase the research and innovation capacity and development sustainable bio-based innovations, by ensuring that sustainability issues and environmental performance are integrated throughout the whole innovation chain 3.1. Ensure that circularity and environmental considerations, including contributions to climate neutrality and zero pollution objectives, are considered in the development and implementation of R&I bio-based projects and facilitate societal acceptance
Link to CBE JU SRIA	1.1.1: Ensure the availability and quality of sustainable bio-based feedstock 1.1.2: Develop innovative production systems in the bio-based industry 1.1.3: Develop innovative bio-based products 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems
CBE JU KPIs	2: Innovative bio-based value chains created or enabled based on sustainably sourced biomass 3: Ensure environmental sustainability of feedstock 5.1: Innovative products that are biodegradable, compostable, recyclable, reused or upcycled (circular by design) 6: Increase innovative bio-based outputs and products

Expected outcomes

Successful proposals will contribute to the Circular Economy Action Plan, the Chemicals Strategy for Sustainability, the Ecodesign for Sustainable Products Regulation, the Chemical Industry Action Plan, and the Clean Industrial Deal.

Projects results are expected to contribute to the following expected outcomes:

- Sustainable feedstock diversification for the production of bio-based polymers.
- Scalable process(es) for obtaining SSbD bio-based polymers from bio-based feedstock alternative to primary biomass.
- Enlarge the portfolio of performant bio-based polymers, opening up new market applications.

Scope

Emerging alternative sources of bio-based polymers are gaining more and more attention as substitutes for primary biomass from agriculture and forestry. Additional R&I effort is needed to study innovative and scalable processes where bio-based polymers from unexplored/alternative resources are the main products.

Proposals under this topic should:

- Develop (at TRL 5) efficient processes for synthesis and/or extraction of bio-based polymer(s) from the alternative sources in scope, targeting high yield and selectivity.

  Primary biomass from agriculture and forestry is out of scope; for other applicable feedstock the CBE JU SRIA and its Annex V can be consulted.

  When relevant, develop adequate pretreatment/fractionation of targeted feedstock. Both new bio-based polymers and already established ones (but currently produced at scale from primary feedstock) are in scope.

- Integrate further isolation and purification (when relevant) of obtained bio-based polymer(s) according to specific application requirements. Functionalisation of purified bio-based polymers to achieve targeted properties is also in scope.

- Test (at least at TRL 4) the suitability of obtained bio-based polymers in circular-by-design final applications targeting at least two market sectors. Validate the technical performances of developed bio-based polymers materials/products and proving to fulfil market requirements for selected application sector(s).

- Test (at least at TRL 4) for suitable, safe and sustainable EoL options (recycling, biodegradation, re-use and/or re-manufacturing). When targeting biodegradable bio-based polymers, test biodegradability according to existing standards and methods.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA), involve bio-based feedstock providers and waste management operators, end-users in targeted application sector(s) and consumers (if targeting consumer products).
- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted bio-based polymers. For more information on the SSbD framework and criteria, refer to Safe and sustainable by design.
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and other Clusters of Horizon Europe) and BBI JU/CBE JU projects.

HORIZON-JU-CBE-2026-RIA-03-Develop breakthrough and sustainable bio-based textile fibres

Type of action	Research and Innovation Action
Indicative budget	The total indicative budget for the topic is EUR 6.5 million
Expected EU contribution per project	It is estimated that a contribution of EUR 3.25 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
TRL	TRL 5 at the end of the project
Link to CBE JU Specific Objectives	1.1: Increase the intensity of cross-disciplinary research and innovation activities 1.3 Increase and integrate the research and innovation capacity for addressing environmental challenges and development of more sustainable bio-based innovations 2.1: Reinforce the integration of bio-based research and innovation throughout industrial bio-based systems and increase the involvement of R&I actors including feedstock providers in the bio-based value chains 3.1: Ensure the integration of circularity and environmental sustainability requirements, contribution to climate neutrality and zero pollution ambition in the development and implementation of bio-based research and innovation and facilitate societal acceptance.
Link to CBE JU SRIA	1.1.1: Ensure the availability and quality of sustainable bio-based feedstock 1.1.2: Develop innovative production systems in the bio-based industry 1.1.3: Develop innovative bio-based products 1.3.2: Improve environmental performances of bio-based processes 2.1.2: Deploy innovative production technologies 3.1.1: Set effective and robust environmental sustainability and circularity criteria for bio-based systems 3.1.2: Incorporate the environmental sustainability and circularity criteria in bio-based systems 3.1.3: Facilitate social acceptance of bio-based applications
CBE JU KPIs	2 - Unlock sustainable and circular bio-based feedstock for the industry 4 - Improve environmental sustainability of bio-based production processes and value chains 5 - Expand circularity in bio-based value chains 6 - Increase innovative bio-based outputs and products

Expected outcomes

Successful proposals will contribute to the updated EU Bioeconomy Strategy, the Chemicals Strategy for Sustainability, the EU Strategy for Sustainable and Circular Textiles, the Clean Industrial Deal, and the Ecodesign Sustainable Products Regulation. Indirect contribution is expected towards the objectives of the Horizon Europe Mission "Restore our Ocean and Waters by 2030" in particular to Obj 2: "Prevent and eliminate pollution of our oceans, seas and waters".

Projects results are expected to contribute to the following expected outcomes:

- Wider availability of natural and/or man-made bio-based fibres meeting market requirements.
- Scalable production processes for novel man-made and/or modified natural fibres.
- Enhanced circularity and prevent microplastics release compared to benchmarks.

Scope

Fossil-based synthetic textile fibre production has grown significantly, reaching 67% of the global market in 2023.[28] Among bio-based fibres, cotton plays a prominent role as it is the second most produced fibre at global level; however, it bears serious environmental concerns due to its massive land use and water consumption; moreover, the EU holds a minor share of the global cotton production (around 2%) and it is expected to remain a net importer in the future. Novel sustainable sources of natural fibres require significant improvements in some steps of textile production such as retting/degumming, spinning, modification and treatment. Man-made (synthetic and semi-synthetic) bio-based fibres are also slightly increasing their current market share, however there is a need to improve their technical performances to meet the requirements of final textile applications.

Proposals under this topic should:

- Develop breakthrough processes to yield bio-based textile fibres from sustainably sourced biomass feedstock. Bio-based textile waste is eligible as feedstock. Bio-based man-made (synthetic and semi-synthetic) fibres and/or the extraction, refinement and functionalisation of natural fibres are in scope.
- Ensure compatibility with existing textile manufacturing processes and equipment to facilitate market penetration.
- Design the bio-based fibre(s) to improve specific technical requirements against state-of-the-art benchmarks, e.g., tenacity, flexibility, spinning quality, elasticity/plasticity, thermal resistance, flammability and durability. Test these properties according to existing standards/methods to assess the compatibility with end-products requirements.
- Design the bio-based textile fibres for sustainable end of life. Assess the actual feasibility of the targeted end of life option(s) . Prevent release of microplastics and other harmful substances along the whole product life cycle.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- As part of the multi-actor approach (MAA), ensure adequate involvement of all key actors in the value chains relevant for this topic, including textiles manufacturers, feedstock suppliers, end users and/or consumers.
- Include a task to apply the SSbD framework, developed by the European Commission for the assessment of targeted textile fibres. For more information on the SSbD framework and criteria, refer to Safe and sustainable by design
- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe (under Cluster 6 and Cluster 4 of Horizon Europe, including the partnership ‘Textiles of the Future’) and BBI JU/CBE JU projects.

28 HARMSEN, P., SKRIFVARS, M. and MAGNOLFI, V., Bio-based textiles in a sustainable and circular bioeconomy, BORZACCHIELLO, M.T. (editor), European Commission, Ispra, 2025, JRC140676.

HORIZON-JU-CBE-2026-CSA-01: Supporting industry in the switch to sustainable and circular bio-based products and processes

Type of action	Coordination and Support Action
Indicative budget	The total indicative budget for the topic is EUR 1.2 million
Expected EU contribution per project	It is estimated that a contribution of EUR 1.2 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts
Link to CBE JU Specific Objectives	1.2: Increase and integrate the research and innovation capacity of stakeholders across the Union
Link to CBE JU SRIA	2.2.1: Improve the risk profile of bio-based projects 3.1.3: Facilitate social acceptance of bio-based applications
CBE JU KPIs	7 Improve the market uptake of bio-based products 8 Attract investment on the bio-based sector 9 Increase resilience and capacity in the bio-based sector

Expected outcomes

Successful proposals will contribute to updated EU Bioeconomy Strategy, the Clean Industrial Deal, the European Chemical Industry Action Plan and the upcoming Circular Economy Act.

Projects results are expected to contribute to the following expected outcomes:

- Identification of technical, market and regulatory barriers and possible solutions for industry to 'switch to bio-based'.
- Contribution to filling the gap between bio-based sectors and the broader industrial landscape.

Scope

While the share of bio-based products and processes in traditionally non-bio-based markets has been growing substantially in recent years, many non-bio-based, partially bio-based and more traditional bio-based industries (such as food industry) still perceive market and regulatory situations as uncertain and may therefore be reluctant to invest in new bio-based value chains. These uncertainties may relate to cost competition versus fossil-based counterparts, first-mover hesitation, lack of investment attractiveness, regulatory issues, uncertainties in feedstock quality and availability, lack of knowledge, shortage of relevant skills, etc.. Notwithstanding these challenges, industries recognise the opportunity of 'switching to bio-based' to improve their sustainability profile and meet consumers' expectations.

Proposals under this topic should:

- Perform a consultation among non-bio-based and partially bio-based industries to identify barriers preventing them to adopt/diversify bio-based feedstock and processes in their operations. Include at least 3 industrial sectors that are critical for the green transition. Make sure to include a representative sample of industries with different size (including SMEs and startups) and position in the value chain and covering regions with different specialisations.

- Analyse the outcomes from the consultation to identify barriers to bio-based transition and propose possible solutions. Validate the results with end users/consumers to include their perspectives.
- Identify case studies and success stories showcasing best practises leading to adoption of bio-based solutions and assess their replication potential in the non-bio-based and partially bio-based sectors in scope.
- Create a forum bringing together bio-based industries, feedstock providers, non-bio-based and partially bio-based industries, investors, policymakers, demand-side actors (e.g., large retailers, end-users, public procurers, etc.) as well as existing or upcoming stakeholders' groups under the CBE JU, to facilitate the dialogue among the stakeholders and identify possible pathways for cooperation.
- Develop and publish sectoral and cross-sectoral roadmaps towards the 'switch to bio-based' for the (at least 3) targeted non-bio-based or partially bio-based industrial sectors, also identifying de-risking opportunities.

In addition to the specific requirements applicable for the type of action, as described in section 2.2.3.1 Specific requirements for the CBE JU 2026 call, proposals under this topic should:

- Ensure complementarities with past and ongoing R&I projects addressing similar challenges, including projects funded under Horizon 2020/Horizon Europe, BBI JU/CBE JU projects as well as COST actions.

Indicative budget per topic - call HORIZON-JU-CBE-2026

Topic	Topic budget in Million EUR	Indicative EU contribution per project in Million EUR	Indicative number of projects expected to be funded
Innovation Actions – Flagship			
HORIZON-JU-CBE-2026-IAFlag-01 - Boosting biorefinery competitiveness through biotech	20	20	1
HORIZON-JU-CBE-2026-IAFlag-02 - SSbD bio-based alternatives for fertilising and/or crop protection products	20	20	1
HORIZON-JU-CBE-2026-IAFlag-03 - SSbD bio-based solutions for home and/or personal care	20	20	1
HORIZON-JU-CBE-2026-IAFlag-04 - Diversification of nutritional food ingredient sources for increased EU resilience and strategic autonomy	20	20	1
Innovation Actions			
HORIZON-JU-CBE-2026-IA-01 - Biotech routes for valorisation of residual biomass	14	7	2
HORIZON-JU-CBE-2026-IA-02 - Bio-based additives as alternatives to unlock and increase recyclability and/or biodegradability	14	7	2
HORIZON-JU-CBE-2026-IA-03 - Bio-based chemicals and/or materials from woody residues	14	7	2
HORIZON-JU-CBE-2026-IA-04 - High-performance, circular-by-design, bio-based thermosets	14	7	2
HORIZON-JU-CBE-2026-IA-05 - Films and coatings for circular packaging	14	7	2
Research and Innovation Actions			
HORIZON-JU-CBE-2026-RIA-01 - Addressing separation and purification challenges in biorefineries	6.5	3.25	2
HORIZON-JU-CBE-2026-RIA-02 - SSbD bio-based polymers from alternative sources	6.5	3.25	2
HORIZON-JU-CBE-2026-RIA-03 - Develop breakthrough and sustainable bio-based (man-made and/or modified natural) textile fibres	6.5	3.25	2
Coordination and Support Actions			
HORIZON-JU-CBE-2026-CSA-01 - Supporting industry in the switch to sustainable and circular bio-based products and processes	1.2	1.2	1
TOTAL	**170.7**		

2.2.3.3 Call management and general conditions

Call identifier: HORIZON-JU-CBE-2026

Call opening: 23 April 2026[29]

Call deadline: 22 September 2026 17:00:00 (Brussels local time) - (single stage call)

Indicative budget: EUR 170.7 million

This section sets the general conditions applicable to calls and topics for grants under this Annual Work Programme. It also describes the evaluation and award procedures and other criteria.

In terms of general conditions, the call included in this Annual Work Programme will follow General Annexes A to F of the General Annexes of Horizon Europe Main Work Programme 2026-2027 mutatis mutandis (subject to additional conditions or derogations reflected in the section below). If any additional derogation or exception applies, it is indicated in the specific conditions table for the topic. There is no derogation from the Horizon Europe Rules for Participation.

Admissibility

The conditions are described in Annex A of the General Annexes of Horizon Europe Main Work Programme 2026-2027 which shall apply mutatis mutandis to the actions covered in this Annual Work Programme, taking into consideration the following:

Page limits

- **Innovation Actions, including Flagships**: the page limit of the application is 70 pages (Part B).
- **Research and Innovation Actions**: the page limit of the application is 50 pages (Part B).

Dissemination and Exploitation plan

- **All types of Actions:** A first version of the 'plan for the dissemination and exploitation including communication activities' of the project's results should be included in Part B of the proposal in line the standard HE application forms.

Eligibility

The conditions, including countries eligible for funding, type of actions and definition of TRL are described in Annex B of General Annexes of Horizon Europe Main Work Programme 2026-2027 which shall apply mutatis mutandis to the actions covered in this Work Programme.

[29] The Executive Director may decide to open the call up to one month prior to or after the envisaged date of publication.

Financial and operational capacity and exclusion criteria

The criteria are described in Annex C of the General Annexes of Horizon Europe Main Work Programme 2026-2027 which shall apply mutatis mutandis to the actions covered in this Work Programme.

Award criteria

If admissible and eligible, the proposals will be evaluated and ranked, depending on the type of action, against the award criteria reported in the table below.

- **Innovation Actions, including Flagships, and Research and Innovation Actions:** the additional sub-criterion that will be used for Innovation Actions, including Flagships, and Research and Innovation Actions is highlighted in bold in the table below.

	Excellence	Impact	Quality and efficiency of the implementation
Coordination and support actions (CSA)	- Clarity and pertinence of the project's objectives. - Quality of the proposed coordination and/or support measures, including soundness of methodology.	- Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme, and the likely scale and significance of the contributions from the project. - Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.	- Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall. - Capacity and role of each participant, and the extent to which the consortium as a whole brings together the necessary expertise.
Research and innovation actions (RIA) **Innovation actions (IA), including Flagships**	- Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious and goes beyond the state of the art. - Soundness of the proposed methodology, including the underlying concepts, models, assumptions, inter-disciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end-users where appropriate.		
Research and innovation actions (RIA) **Innovation actions (IA), including Flagships**		- **Ability to ensure the level of in-kind contribution to operational activities (IKOP)[30] defined in the call/topic as % of total projects eligible costs (RIAs 5%, IAs 15%, IA-Flagship 20%)[31].**	

[30] Contributions by private members, constituent entities or the affiliated entities of either, by international organisations and by contributing partners, consisting of the eligible costs incurred by them in implementing indirect actions less the contribution of that joint undertaking and of the participating states of that joint undertaking to those costs.

[31] Please refer to the Annexes to be included in the proposal described below.

Scores and weighting

Evaluation scores will be awarded for the criteria, and not for the different aspects listed in the table above. For full applications, each criterion will be scored out of 5.

- **All types of actions:** For the criteria 'excellence' and 'implementation' the threshold will be 3, whereas for the criterion 'impact' the threshold will be 4. The overall threshold, applying to the sum of the three individual scores, will be 11.
- **Innovation Actions, including Flagships:** to determine the ranking for all 'Innovation actions' including Flagships, the score for 'Impact' will be given a weight of 1.5.

Proposals that pass the individual threshold AND the overall threshold will be considered for funding, within the limits of the available call budget. Other proposals will be rejected.

Documents

The documents including the submission of proposals are described in Annex E of the General Annexes of Horizon Europe Main Work Programme 2026-2027 which shall apply mutatis mutandis to the actions covered in this Work Programme, taking into consideration the following:

Annexes

The following separate annexes should be included in the proposal.

- **Innovation Actions, including Flagships, and Research and Innovation Actions:** For all legal entities that are members of the BIC consortium, a certification from BIC attesting to this fact should be included in the proposal[32].
- **Only for Flagship topics:** a detailed business plan.

Evaluation procedure and ranking

The entire evaluation procedure, including the indicative timetable for evaluation and for signature of the grant agreement, and ranking are described in Annex F of the General Annexes of Horizon Europe Main Work Programme 2026-2027 which shall apply mutatis mutandis to the actions covered in this Work Programme, taking into consideration the following:

Hearings

- **Only for Flagship topics:** As part of the panel review, the CBE JU will organise hearings with applicants of all Flagships proposals. Each hearing consists of a presentation by the proposal representatives focussed only on clarifying aspects of the business plan, as defined in the section 2.2.3.1 – CBE JU specific requirements, followed by a Q&A with the panel of expert-evaluators.

[32] Each entity participating in the proposal with a PIC number has to provide a separate certificate.

Indicative timetable for evaluation and for signature of the grant agreement

Unless otherwise stated in the specific call conditions, the timing for evaluation and grant preparation is as follows:

- information on the outcome of the evaluation: around 5 months from the deadline for submission;
- indicative date for the signing of grant agreements: around 8 months from the deadline for submission.

Legal and financial set-up of the grant agreements

The legal and financial set-up of the grant agreements, including funding rates, are described in Annex G of the General Annexes of Horizon Europe Main Work Programme 2026-2027 which shall apply mutatis mutandis to the actions covered in this Work Programme, taking into consideration the following:

Funding rate

- **Innovation actions: up to 60% of the eligible costs** (except for non-profit legal entities, where the funding rate is up to 100% of the total eligible costs).

STEP (Sovereignty) Seal

The Strategic Technologies for Europe Platform (STEP) aims to boost investments in Europe in critical technologies: clean and resource efficient technologies, digital and deep innovation technologies and biotechnologies. STEP aims to mobilise resources from existing EU programmes to support the development and manufacturing of these critical technologies, while safeguarding and strengthening the respective value chains, as well as associated services and skills critical for and specific to the development and manufacturing of the final products. In line with Article 2 of the STEP Regulation, the European Commission issued a Guidance Note in May 2024 where by industrial bio-based sectors, key sectors under the remit of the CBE JU, were included among sectors of application for biotechnologies within the scope of STEP.

- **Innovation Actions, including Flagships, and Research:** the STEP Seal (so called "Sovereignty Seal" under the STEP Regulation) is applicable to all CBE JU IAs topics including Flagship, and will be awarded to proposals exceeding all of the evaluation thresholds set out in this Annual Work Programme.

The STEP Seal is a label, which aims to increase the visibility of quality proposals and projects and help attract alternative and cumulative funding for quality proposals and projects, and simultaneously to provide a potential project pipeline for regional and national programmes[33].

[33] Strategic Technologies for Europe Platform

Specific provisions

Without prejudice to the provisions established in the Model Grant Agreement (MGA), future CBE JU projects need to consider the following:

IPR-CBE JU right to object

In order to protect the interests of the Union, and according to the Horizon Europe rules, and as foreseen in Article 16 of the Grant Agreement, , CBE JU has the right to object to the transfer of results or the granting of exclusive licenses. The provisions set out in General Annex G to the Horizon Europe work programmes on the right to object apply. It should be noted that in accordance with the Council Regulation and the MGA, the right to object applies also to participants that have not received funding from the JU and for the periods set therein.

Consortium agreement (Article 7 of the Horizon Europe Model Grant Agreement)

In line with the Horizon Europe MGA, the consortia of the proposals selected for funding must have internal arrangements set out in a written consortium agreement between the beneficiaries regarding their operation and coordination, to ensure that the action is implemented properly.

Contribution to the monitoring framework of the CBE JU – KPIs projects' reporting

For monitoring the contribution of each project to the CBE JU objectives and indicators, as described in the SRIA, all projects will have to report on an annual basis their KPIs progress during the course of Horizon Europe.

The reporting shall consist of filling a template questionnaire in a secure online data collection platform managed by the CBE JU. The projects will need to submit all information including the questionnaire(s) relevant for their type of action. The submission of the questionnaire(s) shall be integrated as a specific annual deliverable in the grant agreement. The template questionnaire(s) with the KPIs Handbook will be made available online at the time of the publication of this Annual Work Programme .

2.2.4. Cooperation, synergies and cross-cutting themes and activities

CBE JU Synergies strategy

Council Regulation (EU) 2021/2085 and the CBE JU SRIA establish strong grounds for synergies and cooperation between Joint Undertakings and other relevant initiatives to achieve maximum scientific, socio-economic and environmental impacts.

In 2025, CBE JU published its new CBE JU Synergies Strategy setting out how the priorities for the CBE JU programme in terms of synergies and cooperation with other European, national and regional initiatives. The strategy provides a clear framework for linking CBE JU research and innovation efforts with other funding programmes with the aim of strengthening the scale-up and deployment of bio-based solutions in the European Union.

In particular, the CBE JU is planning to foster synergies at:

1) **European level** with:
   - other parts of the Horizon Europe programme, including the Horizon Europe Missions, relevant co-programmed/co-funded and institutionalised partnerships, Cluster 6 activities, etc.
   - other Union programmes and funding instruments, especially those supporting the deployment of innovative solutions, education and regional development, in order to increase economic and social cohesion;

2) **National and regional level** with relevant programmes such as cohesion policy funds, and the National Recovery and Resilience Plans.

Synergies with European programmes and/or other EU instruments can take different forms and can range from simple information exchange to strategic coordination and co-programming.

To maximise the synergies and cooperation, the CBE JU plans to implement specific actions in 2026 with the following programmes and mechanisms.

1. Synergies at European level with other parts of Horizon Europe programme

- **Horizon Europe missions:** CBE JU will continue strengthening synergies at both programming and projects level with Restore our Ocean and Waters and A Soil Deal for Europe missions to ensure thematic alignment of the respective work programmes and avoiding overlaps, as well as to foster mutual learning, networking, multistakeholder engagement and capacity building.
- **Horizon Europe Pillar I – Marie Skłodowska-Curie Actions (MSCA):** CBE JU will continue to foster **synergies** with the MSCA Staff Exchange programme that funds short-term inter-sectoral exchanges of staff members involved in research and innovation activities with the aim to develop sustainable collaboration between academic and industries (in particular SMEs).
- **Horizon Europe Pillar II**

- ***Cluster 6 - Food, bioeconomy, natural resources, agriculture and environment:*** Cooperation and synergies between CBE JU and Cluster 6 are paramount to reach the expected impacts of the underlying policy priorities and are mainly implemented at programming level as well as at portfolio management level, via strategic alignment, information sharing and joint initiatives. Specific actions aimed at fostering exchange of information with relevant executive agencies on projects in similar areas of interventions are currently ongoing in relevant sectors, i.e. textile. Also, the CBE JU will continue to contribute to the activities of the JRC Knowledge Centre for Bioeconomy, in particular by actively participating in the relevant expert workshops organised by the JRC and sharing achievements and results of the CBE JU-funded projects.
- ***Horizon Europe partnerships*:** Cooperation with relevant Horizon Europe partnerships aims to ensure alignment of the respective objectives and SRIAs, identify areas for complementary calls to address more effectively and efficiently common challenges, as well as promote knowledge exchange and mutual learning among partnerships.

  In this spirit, the CBE JU will continue to foster cooperation to ensure strategic alignment with co-programmed partnerships such as Processes4Planet, as well as the forthcoming European Partnership on Textiles of the Future. The CBE JU will also aim to further strengthen collaboration with the co-funded partnerships that fall within the scope of Horizon Europe Cluster 6 - Food, bioeconomy, natural resources, agriculture and environment, such as Sustainable Blue Economy Partnership, Safe and Sustainable Food Systems, and Accelerating Farming Systems Transition. Also, cooperation with relevant EIT Knowledge and Innovation Communities (KICs), such as EIT Food, will be sought.

- **Horizon Europe Pillar III - European Innovation Council (EIC)**: The CBE JU will continue to foster synergies with the EIC Accelerator instrument to promote opportunities for funding highly innovative SMEs aiming to scale-up bio-based solutions, focusing on key clusters of common interest (such as packaging, bioplastics, bio-based chemicals and construction), and to further explore common interest/synergy between the two programmes.

- **Horizon Europe Horizontal Pillar - European Cooperation in Science and Technology (COST)**: Synergies and cooperation have been established and will continue with COST, an EU-funded intergovernmental framework composed of 41 member countries, to support the CBE JU Widening participation strategy and encourage excellent researchers and innovators from widening countries to apply to future CBE JU calls, create networking opportunities and promote capacity building.

The CBE JU will also organise on a yearly base projects' **cluster workshops** on strategic areas and applications such as bio-based materials, bio-based chemicals, food & feed ingredients, etc., to foster cross-programme synergies at programme and project level by involving the most relevant CBE JU-funded projects and inviting relevant projects managed by the executive agencies (i.e., REA, EISMEA, CINEA, HaDEA). The first one took place in June 2025 and focused on advancing innovation and industrial up-scale in bio-based materials for agriculture and packaging solutions.

2. Synergies at European level with other EU programme and funding instruments

The **Innovation Fund** is the EU fund for climate policy which aims at bringing to the market solutions to decarbonise European industry and support its transition to climate neutrality while fostering its competitiveness. The CBE JU will continue to engage with the Innovation Fund in order to identify common obstacles to deployment, trends for future funding, as well as to ensure capacity building and promote mutual knowledge of the programmes across beneficiaries.

3. Synergies with national and regional programmes

The CBE JU will continue to interact with Member States through the states' representatives group to explore possible funding synergies at regional level with the European Structural and Investment Funds (ERDF, ESF+, CF, EAFRD and EMFAF) and at national level with the National Recovery and Resilience Plans, while continuing to strengthen the adoption of policy and funding initiatives in the bioeconomy field.

In particular, the CBE JU will conduct a mapping exercise to showcase major opportunities at national/regional level that are coherent with the scope of CBE JU, with the aim of leveraging the active participation of the states' representatives group members, as well as NCPs and other relevant stakeholders.

While continuing to discuss and address problems that are hindering effective synergies among the different funding sources at national and regional level, the CBE JU Programme Office will identify potential best practices in the use of national and regional funding in the bio-based sector that can be further worked out within the scope of the CBE JU Synergies strategy.

In addition, it will foster the **Strategic Technologies for Europe Platform (STEP).** For more information on how the STEP Seal (so called "Sovereignty Seal" under the STEP Regulation) will be awarded in the CBE JU please see section 2.2.3 of this Annual Work Programme.

CBE JU Widening participation strategy

Since 2023, the CBE JU developed and launched a **CBE JU Widening participation strategy**, with the two-fold objective of (i) stepping up the participation of less represented countries and regions in the CBE JU programme and ensuring their meaningful involvement in JU-funded actions; and (ii) stimulating research and innovation in countries and regions with less mature bio-based systems.

The CBE JU Widening participation strategy has been implemented with two **Action Plans**:

- one for the 2023-2024 period and
- a more recent one, based on the lessons learnt over 2023-2024 and on the assessment of CBE JU call 2024, covering **2025-2027**.

As a result, the CBE JU will continue to promote stakeholder's engagement and foster capacity building, via a country-centred approach. In particular, while some actions such as national info days, meetings with local industries and industries' sites visits, training for SMEs and advisory support service, will remain available for all widening countries, other actions will be implemented for one or more countries or clusters. For instance, for countries that have reached good success rates in the CBE JU funding programme, the focus will be on hosting a FLAG. For those with a low participation rate in the programme, actions will be geared at stakeholders' mobilisation at all levels, while tailored NCP support will be offered to widening entities that struggle with success rates.

The Widening participation strategy will also continue to be implemented at programming level whenever relevant, by promoting potential synergies in specific topics. Moreover, throughout 2025-2027, the CBE JU will be able to count on the multiplier effect and contribution of two strategic CSAs: BioINSouth focusing on some key widening countries and regions from Southern Europe, as well as BIO-INSPIRE, which brings together regional bioeconomy clusters from seven widening countries. Both projects will help support the mobilisation of the R&I ecosystems in widening countries and thus contribute to the key aims of the CBE JU Widening participation strategy.

2.3. SUPPORT TO OPERATIONS

2.3.1. Communication, dissemination and exploitation

CBE JU communication: a strategic approach

The annual communication work programme supports the CBE JU strategic objectives based on the **multi-annual CBE JU communication policy and strategy**.

In 2026, communication activities will focus on **reinforcing CBE JU's position as a key enabler of Europe's circular and bio-based economy**. Marking the fifth anniversary of the CBE JU, the partnership will celebrate and communicate its impact on EU's competitiveness, innovation, regional development and sustainability goals. The second edition of the CBE JU Stakeholder Forum (CBESF26) will be a major milestone of the year and a strategic focus of communications efforts.

Campaigns will also promote the 2026 call for project proposals, showcase project results and actively engage stakeholders across Europe. The CBE JU will invest in improving its digital tools, increasing accessibility of information and reinforcing its presence through social and mainstream media. Communication activities will remain flexible to respond to emerging opportunities, policy priorities and stakeholder needs.

Communication priorities in 2026

Supporting CBE JU's core business

Promotion of the 2026 call for project proposals will be a core communication activity. This will include:

- A dedicated website section and SEO-enhanced content.
- An interactive online info day and a targeted in-person networking event.
- A networking platform supporting matchmaking around the call topics.
- Boosted outreach in Member States currently showing lower participation in the programme.

A separate campaign will promote the **projects selected in the 2025 call for proposals**. This will include creating a dedicated project page on the CBE JU website, promoting the projects through a several-month-long campaign on social media and potentially other digital communication channels, as well as engaging with project communication teams and the CBE JU's communicators' network for a higher impact.

The CBE JU will update the publication providing an overview on the programme, as well as maps showing all CBE JU-funded flagship and demonstration plants. The CBE JU will also work on a range of additional publications and digital assets to highlight the programme's impact, showcase project results and provide accessible information for stakeholders and the public.

Promoting the CBE JU impact

The **CBE JU Stakeholder Forum 2026** on 24 March will bring together over 400 bioeconomy stakeholders for a discussion on how to turn Europe's bio-based innovations into large-scale competitive industrial solutions. An exhibition will showcase groundbreaking bio-based innovations developed by CBE JU-funded projects.

In the last quarter of the year, the CBE JU will mark its **fifth anniversary through a narrative centred on impact, innovation and community** with a dedicated campaign, audiovisual content and stakeholder engagement.

The **digital version of the 2025 Annual Activity Report highlights** will be a key communication asset supporting communication on the CBE JU achievements.

The CBE JU stakeholder study results will help monitor how the joint undertaking has been delivering on its goals and adjusting the communication activities where needed.

A video and a series of articles on CBE JU-funded project achievements will bring visibility to project milestones and real-world impact they have created, from market uptake to circular solutions and rural development.

Communication tools and channels

Stakeholder engagement via events, exhibitions and campaigns will remain a communication priority in 2026.

The CBE JU will continue **improving its website** via a user study, enhanced achievements filtering and enriched content on the programme's impacts and contribution to key EU policy goals.

The CBE JU **newsletter and social media** accounts (LinkedIn, Facebook) will drive CBE JU's digital communication and support campaigns. The CBE JU will work on achieving a stronger engagement, including multipliers and influencers, and diversifying the content with videos and infographics. The CBE JU will also explore opportunities for expanding presence on relevant platforms, adopting new content management tools and using paid promotion strategically.

The CBE JU will embrace the opportunity to connect with its community, reach out to new audiences and showcase the partnership at **key bioeconomy and related events**, such as the EU Green Week, the Global Bioeconomy Summit, EUBCE, and IFIB. Participation in other European and international events relevant to the circular bioeconomy will be considered.

A number of **publications and videos** will support CBE JU's communication campaigns. This will include content linked to major milestones and initiatives throughout the year.

The CBE JU will collaborate with its vast **network of multipliers** (governing and advisory bodies, national contact points, project teams and CBE JU communicators' network) to share the messages with their audiences.

A **stronger engagement with media**, including potential partnerships, will help raising awareness about the role of the CBE JU and bioeconomy in the EU's sustainable growth.

2.3.2. Indicative list of events

Event	Date(s)	Place	CBE JU role
CBE JU Info Day	12 March	Online	Organiser
BIOKET	17-19 March	Fribourg, Switzerland	Speaker (TBC)
CBE JU Stakeholder Forum	24 March	Brussels, Belgium	Organiser
CBE JU 2026 call networking event	23 April (TBD)	Brussels, Belgium	Organiser
EUBCE	19-22 May	The Hague, Netherlands	Speaker, session organiser
EU Green Week	June	Brussels, Belgium	Exhibitor, speaker (TBC)
IFIB	September	TBC	Speaker (TBC)
EUCYS award ceremony	September	TBC	Sponsor of the bio-based economy award

2.3.3. Procurement and contracts

For the year 2026, the CBE JU will implement its administrative budget also by means of procurement procedures and contracts, supporting the administrative and operations services in accordance with its financial rules. As was the case in previous years, it is essential that the CBE JU makes the most efficient use of its resources by using existing framework contracts and service level agreements (SLAs) with EC services.

2.3.4. Other support operations

IT and cybersecurity

The CBE JU will support the IT back-office-arrangements (BOA) by finalising the project for a fully-fledged hybrid equipment in the common meeting rooms in the White Atrium building.

Supporting the IHI JU, which is in the lead of the cybersecurity service, the CBE JU will also continue to timely implement the provisions of the Cybersecurity Regulation as far as the common part of the IT infrastructure is involved.

Regarding the implementation of the non-common part of the IT infrastructure, the CBE JU will continuously improve its maturity and cybersecurity posture. This will include setting up necessary monitoring systems, enhancing network security and performing regular vulnerability assessments relying on services provided by CERT-EU (red team exercises, penetration test, phishing drills).

The CBE JU will finalise cloud migration and will complete the transition of its data storage infrastructure from traditional on-premises servers to cloud-based services for enhanced efficiency, scalability and disaster recovery capabilities.

The CBE JU will increase its training offer related to AI and cybersecurity.

In line with the Commission's strategy towards digital sovereignty, the CBE JU will conduct a preliminary study on sovereign alternatives to current corporate solutions. The outcome of the study will be a set of recommendations for suitable improvements to the CBE JU infrastructure.

The CBE JU drew lessons from the testing phase of its local AI solutions and will set up a production server (not on the cloud) to also support internal operations like IT inventory and monitoring of critical systems.

The CBE JU will continue close coordination with key IT stakeholder groups such as ICTAC, DIGIT DSF and the EUAN Working Group on AI.

Human resources

HR management

The CBE JU pursues its objectives through a comprehensive HR strategy designed to ensure the effectiveness of recruitment process, the proper allocation and administration of resources, and the development, motivation, and retention of highly qualified personnel, while maintaining an optimal and efficient working environment.

In quarter one of 2026, the CBE JU will be fully staffed. The priority will be for the HR office to provide the necessary conditions for staff to perform in their roles and to ensure the effective management of an increasing workload. To this end, the HR office will strengthen the training offer regarding all core activities of the CBE JU as well as on HR-related matters, providing clear and consistent guidance on the HR legal framework applicable to the CBE JU.

Staff implementation and recruitment

As mentioned above, in 2026, CBE JU will be fully staffed in line with its staff establishment plan including the addition of one FTE due to the Horizon Europe third countries contribution. Therefore, additional recruitment will be limited to turnover.

As in previous years, the CBE JU will give the opportunity to trainees to acquire first-hand professional experience as well as an understanding of the objectives and activities of the JU. It will also extend the practice to the Finance and administration unit. Thanks to this initiative, the CBE JU will benefit from the input of enthusiastic young graduates, who can give a fresh point of view and up-to-date academic knowledge, which will further enhance the everyday work of the JU.

The recourse to external staff (interim and intra-muros) will be limited to cover needs caused either by exceptional peak periods of workload, specific projects (e.g., communication) or to cover gaps in case of departing staff.

Legal matters and HR management

In 2026, the CBE JU will continue to develop and update its internal guidelines and strengthen its legal framework in accordance with the Commission rules and guidance.

Learning and development opportunities for better efficiency and staff engagement and motivation

The CBE JU is committed to the continuous development of its staff, ensuring that they acquire the necessary competencies to perform effectively and to address the challenges of a rapidly evolving environment. Providing learning and development opportunities is essential to fostering staff engagement, supporting professional growth and strengthening long-term commitment. In this context, the HR office developed in 2025 a new Learning and Development Plan, which forms an integral part of the CBE JU's human resources policy and advances the interests of both the individual and the organisation.

In 2026, the HR office will proceed with its full implementation, focusing on the following priorities:

- **Workshops on the CBE JU corporate values** in order to reinforce staff cohesion and sense of belonging.
- **Collaborative and knowledge-sharing** to favour effective teamwork across the whole organisation.
- **Vision, leadership** and effective **management** of people, projects and processes in an increasingly complex world, with increasing pressure on staff.
- **Staff well-being** to foster the quality and safety of the staff in the working environment and to maintain their wellbeing while teleworking from home in the context of hybrid working. Staff well-being is a key factor in determining the CBE JU long term effectiveness.

The HR office will continue to organise coaching opportunities for specific key functions and team coaching to help staff to develop their growth and potential within the organisation. Moreover, teambuilding activities will be organised to foster and promote team spirit and strengthen the collaboration among staff members. In addition, several common learning events will be organised in-house to build common working methods. Tailor-made training will be proposed wherever needed to reinforce the knowledge and use of IT tools as part of the digitalisation of our processes. The HR office will further improve the CBE JU Intranet to facilitate communication among the teams and access to key documents for staff. As in previous years, a staff engagement survey will be launched to gain insights into job satisfaction, employee commitment, engagement and motivation. The aim of this survey is to use the insight gained to address possible issues and to propose targeted actions, where necessary.

In 2026, the HR office will continue digitising HR processes and will actively follow the latest developments of the HR Transition programme led by the European Commission.

In its capacity as lead on the BOA HR, the CBE JU will continue to coordinate the network of HR officers and implement the actions foreseen in the multi-annual work plan adopted by the BOA HR Steering Committee.

Strategy for achieving efficiency gains and synergies through back office arrangements

BOA HR support

According to Council Regulation (EU) 2021/2085, JUs shall achieve synergies via the establishment of back-office arrangements (BOA), operating in some identified areas. Article 13 identifies Human Resources support among the areas where a common BOA could be set up. In this context, the CBE JU is the lead JU for the BOA HR, with IHI JU as "back-up JU".

The BOA HR implements actions in three main areas of HR support: recruitment, HR legal framework and HR digitalisation. Its objective is to maximise synergies among the JU's, harmonise procedures by valorising best practices, ensure coherent HR support services, achieve efficiencies and economies of scale, increase the negotiation power of JU's operating under the Council Regulation (EU) 2021/2085 towards contractors and service providers.

The JUs established under Council Regulation (EU) 2021/2085 will contribute to BOA HR support, together with the EuroHPC JU and the SESAR JU that will participate on specific initiatives in line with their internal priorities and according to their own specificities[34]

Scope of the BOA HR support

In line with the proposal of an enhanced coordination of the Network of JUs' HR officers, the conclusion of a Service Level Agreement (SLA) among the JUs has been deemed necessary since a clear commitment to the execution of the BOA HR Annual Work Plans must be made by the JUs under the coordination of the lead JU.

Established in 2024, the BOA HR will build on the achievements of its first two years and will continue in 2026 to focus on the following key areas of HR support, while further developing new projects and activities:

Recruitment

- ***Alignment and harmonisation of the JUs' recruitment process***:
  Following its finalisation in 2025, the common selection process guidelines, designed in accordance with best practices and the applicable legal framework, will be implemented across all JUs, ensuring a consistent and transparent approach whenever a selection procedure is launched.

- ***Organisation of joint selection procedures* to increase efficiency gains**:
  The JUs will strive to organise joint selection procedures for common profiles with same grades. This practice is already in place but will be further strengthened in 2026.

- ***Establishment and sharing of reserve lists:***

[34] SESAR JU, despite being part of the SBA, is exempted by the provisions related to the back-office arrangements

Where appropriate, the JUs will continue to share their reserve lists to shorten their recruitment process and time-to-recruit.

- ***Inter-JU competency framework***
  The BOA HR will continue to work on the common inter-JU competency framework and harmonisation of job profiles, reinforcing consistency and clarity across all roles and supporting more effective HR management in the JUs.

HR legal framework

The JUs share a common legal framework in the HR domain, therefore, additional synergies can be achieved by enhancing the existing collaboration in this area. The focus in 2026 will be on:

- ***Staff well-being and conflict prevention:***
  Expanded in 2025 with four additional members following a new call for expression of interest, the JUs will continue to offer the staff of the JUs a common network of Confidential Counsellors. Information campaigns and joint actions will be launched to promote staff well-being, raise awareness about psychological and sexual harassment and implement preventive measures aimed at mitigating workplace conflicts. In this context, the JUs will also increase the visibility of mediation services to staff of the JUs.

- ***Collaboration with the EU Agencies Network (EUAN) and the EC***:
  The JUs will continue to attend EUAN meetings, including possible ad-hoc participation of the HR officers to different working groups.

  The JUs will continue strengthening their collaboration with DG HR/PMO on common HR matters. Notably, building on the recent reinforcement of the collaboration with DG HR, the JUs and DG HR will explore the feasibility of working on new synergies, the possibility for JUs to join the Standing Working Party, access to the newly developed modules of the HRT platform of DG HR and a more agile sharing of reserve lists among EU bodies, including executive agencies.

- **BOA HR network**:
  The JUs HR officers will continue their strong collaboration via a new multi-annual work plan which will include inter-JU new projects, and activities will be developed and adopted by the BOA HR Steering Committee**.**

After two years of existence, the BOA HR will take stock of its experience and will reflect on the modalities of its governance.

HR digitalisation

In 2026, the JUs will continue to move towards a digitalisation of HR processes. The BOA HR will continue to share good practices in the use of HR IT systems.

BOA Procurement

In 2026-2027, the back office arrangements in procurement (BOA Procurement) will continue to create synergies among it members as reflected in the endorsed Steering Committee Joint Public Procurement Planning (JPPP).

Among the inter-institutional tender procedures planned for the 2026–2027 period, the renewal of a framework service contract for managed IT services is the highest strategic priority.

It has been proven that by pooling the negotiation powers of the JUs, the BOA joint administrative calls for tenders draws the attention of a higher number of economic operators, ensuring competitive bids and robust market responses.

Finally, in 2026 the BOA will further prioritise the digitalisation of contract management processes with a strong focus on streamlining its operating framework.

BOA Accounting

The CBE JU implements its financial rules following the Governing Board Decision 12/19 of 29 November 2021, which define, inter alia, powers and responsibility of Europe's Rail's Accounting Officer. They also make an explicit reference to the possibility that this function could be attributed to the Accounting Officer of the European Commission, and such option was effectively put in practice by the JU in the past.

However, in October 2021 the European Commission announced the intention to terminate their role of Accounting Officer of the JU, except for the treasury function, which became effective as of 1 December 2022.

The resulting situation was tackled by applying the back-office arrangements solution for the accounting function of the JUs. In fact, within this solution, the Europe's Rail JU is now performing the role of the lead JU and is also, being one of the respective three JUs (with the Clean Aviation JU and the SESAR 3 JU) acting in the role of the accounting service provider.

BOA Building Management

During 2026, the BOA Facility Management will start functioning. The concept note is expected to be adopted by the Governing Boards of the JUs having their seat at the White Atrium building in Brussels, and the relevant Service Level Agreement (SLA) will be signed.

In the previous years, the activities related to the White Atrium building facility management were carried out by informal arrangements by a single JU (Clean Hydrogen JU until 2024 and Chips JU afterwards).

To align with Article 13 of the Single Basic Act, a BOA Facility Management has been proposed.

BOA ICT

Continuing the long-lasting coordination and collaboration practice on information and communication technology (ICT), and following the signature of the SLA of the BOA ICT in January 2025, the JUs have developed and approved a common IT annual work plan for 2026. This plan identifies seven action lines covering four service areas for 2026:

- Service area 1: Governance:
    - Common governance, decision-making and budget monitoring: in this area, the implementation of the IT annual work plan and budget for 2026 will be monitored, and the common annual work plan for 2027 will be prepared in view of an adoption by the BOA ICT Steering Committee before the end of 2026
    - Management of shared infrastructure, which includes in particular the delivery of Infrastructure-as-a-service (IaaS) under MS 365 technology
    - Assessment of AI implementation for the JUs
- Service area 2: Management of shared infrastructure
    - Service delivery and monitoring of the service contract
    - Preparation of a procurement procedure for the establishment of a FWC for ICT managed services, in coordination with the BOA Procurement
- Service area 3: Workplace services provision
    - Workplace service delivery and monitoring of the service contract
    - Continuous improvement of infrastructure in the White Atrium building (especially the meeting rooms)
- Service area 4: Security and compliance management, which includes continuing the implementation of the requirements of the Cybersecurity Regulation, and follow-up of other security requirements. This also includes the monitoring of the common business continuity plan and disaster recovery plan (BCP/DRP).

Ten JUs are signatories to the BOA ICT, co-lead by the Clean Hydrogen JU and the IHI JU. The common work plan identifies, for each action, a specific lead JU responsible for implementing the action.

In addition to common actions defined in the BOA ICT common IT annual work plan, the JUs continue their collaboration with other Commission services and other EU bodies, and implement their own specific actions as described in Section. 2.3.3.1 ICT Management.

Staff establishment plan

Function group and grade	2025				2026	
	Authorised budget		Actually filled as of 31/12/2025		Authorised budget	
	Permanent posts	Temporary posts	Permanent posts	Temporary posts	Permanent posts	Temporary posts
AD 16						
AD 15						
AD 14		1		1		1
AD 13						
AD 12		1		1		2
AD 11		1		1		
AD 10		2		1		2
AD 9		4		3		3
AD 8						1
AD 7		1		2		1
AD 6						
AD 5				1		
TOTAL AD		10		10		10
AST 11						
AST10						
AST 9						
AST 8						
AST 7						
AST 6						1
AST 5		1		1		1
AST 4		1		1		
AST 3		1		1		1
AST 2						
AST 1						
TOTAL AST		3		3		3
AST/SC 6						
AST/SC 5						
AST/SC 4						
AST/SC 3						
AST/SC 2						
AST/SC 1						
TOTAL AST/SC						
TOTAL AD+AST+AST/SC						
GRAND TOTAL	13		13		13	

Contract Agents	FTE corresponding to the authorised budget 2025	Executed FTE as of 31/12/2025	Headcount as of 31/12/2025	FTE corresponding to the authorised budget 2026	FTE corresponding to the third party appropriations
Function Group IV	10	10	10	10	1
Function Group III	6	5	5	6	
Function Group II					
Function Group I					
Sub-Total	16	15	15	16	1
Grand - TOTAL	16	15	15	17[35]	

Seconded National Experts	FTE corresponding to the authorised budget 2025	Executed FTE as of 31/12/2025	Headcount as of 31/12/2025	FTE corresponding to the authorised budget 2026	FTE corresponding to the authorised budget 2026
TOTAL					

Recruitment forecast for 2026 following retirement/mobility or new requested posts					
Job title in the JU	Type of contract (Official, CA, TA)		TA/Official		CA
			Function group/grade of recruitment internal (Brackets) and external (single grade) foreseen for publication		Recruitment Function Group (I, II, III and IV)
	Due to foreseen retirement/ mobility	New post requested due to additional tasks [36]	Internal (brackets)	External (brackets)	
TOTAL					

[35] This total corresponds to the sum of the FTE on the authorised budget and the FTE stemming from the third party appropriations.

[36] As included in the legal and financial statement of Council Regulation (EU) 2021/2085 of 19 November.

2.4. GOVERNANCE ACTIVITIES

2.4.1. Governing Board

CBE JU's Governing Board (GB) has an overall responsibility for the strategic orientation and the operations of the CBE JU and shall supervise the implementation of its activities in accordance with Article 17 of Council Regulation (EU) 2021/2085.

The GB is composed of five representatives of the EC on behalf of the EU, and five representatives of BIC.

The indicative key decisions of the GB in the year 2026 are listed below:

Key decisions in 2026 – timetable	Quarter (Q1, Q2, Q3, Q4)
Approval of the evaluation outcome for the 2025 call	Q1
Assessment of the Annual Activity Report 2025	Q2
Adoption of the Annual Work Programme 2027	Q4

2.4.2. Executive Director

The Executive Director is the chief executive responsible for the day-to-day management of the CBE JU in accordance with the decisions of the Governing Board.

2.4.3. States' representatives group

The states' representatives group (SRG) is one of the advisory bodies of CBE JU. In accordance with Article 20 of Council Regulation (EU) 2021/2085, the SRG provides recommendations and the opinion of EU's Member States and associated countries on the CBE JU, including: the progress of the programme implementation, the draft annual work programmes, the AAR, as well as other measures taken to address specific objectives of the initiative.

During 2026, at least two SRG meetings are planned: first in Q2 and the second in Q4. Additional meetings may take place, if needed. In all meetings, SRG members will be invited to report on national and regional activities and initiatives linked to the CBE JU with a view to ensuring complementarities and identify areas of cooperation with the CBE JU.

SRG timetable for 2026	
9th SRG meeting will focus on: discussing the SRG's comments to the 1st draft of the CBE JU Annual Work Programme 2027; presenting the results from the 2025 call evaluation and information on the granted projects; presenting the CBE JU programme progress and achievements and other updates from EC and BIC on relevant initiatives for CBE JU.	Q2
10th SRG meeting will focus on: discussing the final draft of the CBE JU Annual Work Programme 2027; presenting the 2026 call submission statistics; and presenting the CBE JU programme progress and achievements and other updates from EC and BIC on relevant initiatives for CBE JU, among any other relevant activities.	Q4

2.4.4. Scientific Committee

The Scientific Committee (SC) is one of the advisory bodies of CBE JU. According to Article 21 and 55 of Council Regulation (EU) 2021/2085, the SC provides advice to the Governing Board on the scientific priorities to be addressed in the annual work programmes and feedback on the scientific achievements described in the AAR. It will suggest, in view of the progress of the SIRA and individual actions, corrective measures or re-orientations to the Governing Board, where necessary; and will provide independent advice and scientific analysis on specific issues as requested by the Governing Board.

The SC is composed of 15 independent experts with a balanced representation of world-wide recognised experts from academia, industry, SMEs, non-governmental organisations and regulatory bodies. During 2026, at least two SC meetings are planned: one in Q1 and the second in Q4. Additional meetings may take place, if needed.

SC timetable for 2026	
9th SC meeting will focus on: discussing the SC's comments to the 1st draft of the CBE JU Annual Work Programme 2027, presenting the results from the 2025 call, presenting the CBE JU programme progress achievements and discussing EC and BIC initiatives and activities relevant to CBE JU.	Q1
10th SC meeting will focus on: discussing the final draft CBE JU Annual Work Programme 2027, presenting the 2026 call submission statistics, presenting the CBE JU programme progress and discussing EC and BIC initiatives and activities relevant to CBE JU.	Q3

2.4.5. CBE JU Deployment Group on Finance & Investment

In accordance with Article 22 and 56 of Council Regulation (EU) 2021/2085, the CBE JU Deployment Group is a body that will play a key role in the creation of favourable conditions for the deployment of sustainable circular bio-based solutions in their thematic area. It is established to advise the CBE JU Governing Board on issues critical to market uptake of bio-based innovation and are expected to provide their opinion on request from the Governing Board, but it may also act on its own initiative.

Without prejudging any future decision of the Governing Board, the **Deployment Group on Finance & Investment (DEG F&I)** will be established in phases:

- in 2024-2025, the European Investment Bank (EIB) commissioned and completed a study to identify challenges for access to finance, investment barriers and perceived funding gaps. The study sets the scene and offers contextual background to support the establishment of the DEG F&I identifying the relevant stakeholders to be involved.

- In 2025-2026, strategic actions to advance the establishment of the group are being planned such as events aiming at identifying the need of the financial institutions and their interest to join the group.

2.4.6. Working Group on Primary Producers

The CBE JU Working Group on Primary Producers was set up in accordance with Article 17(2)(x) of the Council Regulation (EU) 2021/2085 in 2025.

The CBE JU Governing Board appointed the first list of members in April 2025, including primary producers from the agriculture, forestry, aquaculture and fisheries sectors. The official establishment of the group took place on 11 June 2025 in Warsaw (Poland), on the margins of a high level conference on research and innovation organised by Polish Presidency of the Council of the EU.

The working group has the mandate to prepare and implement an action plan over the next three years with the support of the CSA project RootLinks. The ultimate goal is to empower primary producers to play an active and rewarding role in circular bio-based value chains and ensure they benefit from the economic, social and environmental opportunities these systems offer.

During 2026, the working group will deliver the first draft of the action plan and begin its implementation, including actions on communication and awareness, capacity building, networking, cooperation, etc.

2.5. STRATEGY AND PLANS FOR THE ORGANISATIONAL MANAGEMENT AND INTERNAL CONTROL SYSTEMS

The Internal Control Framework (ICF), approved in 2019, provides reasonable assurance to the GB regarding the achievement of BBI JU's objectives as well as those of the CBE JU. In line with the requirements provided for in the CBE JU Financial Rules and in the EU Financial Regulation[37], it shall:

- Ensure that operational activities are effective and efficient. The CBE JU meets its objectives defined in the Annual Work Programme using the adequate human and financial resources.
- Ensure that legal and regulatory requirements are met. The CBE JU operates in full accordance with all legal and regulatory requirements.
- Ensure that reporting is reliable. The CBE JU management produces regular, reliable and easily accessible management information on financial management, use of resources and progress on the achievement of operational objectives.
- Ensure that assets and information are safeguarded. The CBE JU managers take the measures necessary to ensure the completeness and preserve the integrity of the data on which management decisions are taken and reports are issued.

All the CBE JU management processes and functions align with these four objectives, granting the largest possible preventive, detective and corrective controls in line with the available resources.

In 2026, the CBE JU will continue to run its operations by improving the quality level of programme implementation while integrating the corrective actions that were identified in the past:

- Report on compliance and effectiveness of internal control in the AAR.
- Carry out a periodic review of risks at least yearly in the context of preparing the Annual Work Programme.
- Coordinate visits of the European Court of Auditors and the external auditor of the CBE JU accounts.
- Liaise with the auditors of the Internal Audit Service (IAS).
- Follow up on the implementation of action plans on audit recommendations and on observations of the discharge authority.
- Ensure a smooth implementation of the findings of the ex-post audit strategy and optimise the JU's specific audit efforts based on the analysis of the ex-post audits and of the specificities of the CBE JU beneficiaries.

[37] Regulation (EU, Euratom) 2018/1046 of the European Parliament and of the Council of 18 July 2018 on the financial rules applicable to the general budget of the Union, amending Regulations (EU) No 1296/2013, (EU) No 1301/2013, (EU) No 1303/2013, (EU) No 1304/2013, (EU) No 1309/2013, (EU) No 1316/2013, (EU) No 223/2014, (EU) No 283/2014, and Decision No 541/2014/EU and repealing Regulation (EU, Euratom) No 966/2012.

2.5.1. Financial procedures

In 2026, the CBE JU will continue to improve its financial procedures in both the administrative and grant management areas, in line with its Manual of Financial Procedures as well as the general EU financial regulatory framework and IT tools used for financial transactions performed by the CBE JU.

For grants, transactions will mainly continue via the corporate tools COMPASS/SYGMA, with certain grant-related transactions being performed directly in the EC accounting system or, for the first time in 2026, completed in SUMMA following initiation in other tools (e.g., COMPASS/SYGMA). Staff will continue receiving relevant training to ensure competence in the use of the IT tools as well as in the performance of the financial project tasks (e.g., grant amendments, bankruptcies, the Mutual Insurance Mechanism, recoveries).

The IKAA IT tool will be subject to a particular focus to ensure the timely completion of the planning exercise of the IKAA linked to the 2025 call projects as well as of the reporting session of IKAA linked to projects related to previous calls.

For the administrative budget, the CBE JU will implement the newly designed procedures following the onboarding in SUMMA on 1 January 2026. There will be continued monitoring of these procedures to evaluate their efficiency and fine-tune or update them where necessary. In addition to the training received during quarter 3 of 2025, staff will continue receiving relevant training to ensure competence in the use of SUMMA during 2026.

The CBE JU will continue to coordinate with corporate services to ensure a coherent understanding and implementation of the financial rules. This will also ensure the speedy and efficient verification and validation of all transactions.

2.5.2. Ex ante and ex-post controls

Ex-ante controls

The existing full set of processes and procedures will provide, as was the case in previous years, reasonable assurance that the principles of sound financial management are applied to each transaction.

In 2026, the CBE JU will finalise its risk-based control framework for Horizon Europe payments, taking into account risk-based and cost-effectiveness considerations. To that end, it will also take stock of the experience acquired related to Horizon Europe payments which started to be paid in March 2025 and for which new controls had already been defined in compliance with the Horizon Europe ex ante strategy.

In 2026, the CBE JU will, in addition, collaborate with the other JUs on a common ex ante controls guidance.

In 2026, the CBE JU will continue to cooperate with the Fraud and Irregularities in Research (FAIR) Committee of the R&I family as well as with the CAS, in line with the H2020 working arrangements

for OLAF cases. Relevant CBE JU staff have received training on fraud detection and prevention; the possibility to deepen the knowledge in this field will continue to be promoted within the learning and development framework of the CBE JU.

In relation to the prevention of possible double funding, the CBE JU will continue to collaborate with EC services and the Research Executive Agency (REA) in order to detect at an early stage possible overlapping during the grant agreement preparation, subsequent to the adoption of the ranking list by the Governing Board. Any possible overlapping at the level of topic definition is monitored by EC services responsible for the preparation of relevant work programmes. Regarding possible double funding controls, the grant management tools automatically launch a double funding and plagiarism check during GAP, in addition, to the checks done during the project implementation and the Programme Office implements any appropriate measure in accordance.

Ex-post controls

In 2026, *ex-post* controls of operational expenditure will continue to be implemented in line with the Horizon 2020 and Horizon Europe audit strategies. The Common Implementation Centre (CIC) of the European Commission developed the latter in cooperation with the entities implementing the Horizon 2020 budget namely the EC services, executive agencies and JUs.

The main objective of the *ex-post* controls is to provide the individual Authorising Officers with the necessary elements of assurance in a timely manner, thus allowing them to report on the budget expenditure for which they are responsible. Ex-post controls on operational expenditure contribute, in particular, to:

- Assessing the legality and regularity of expenditure on a multi-annual basis.
- Providing an indication of the effectiveness of the related ex-ante controls.
- Providing the basis for corrective and recovery mechanisms, if necessary.

The Common Audit Service (CAS) of the European Commission is the part of the CIC serving all Horizon Europe stakeholders in the implementation of the audit strategy. Its mission is to deliver a corporate approach for the audit cycle: audit selection, planning, application of rules, relations with beneficiaries and management information on the audit process.

The CBE JU is effectively integrated into this control chain: it participates in the audit process definition and in the monitoring of its implementation in continuous collaboration with CAS and its clients. The main objectives of the cooperation are to align operations and exploit synergies on the common audit effort. The efficiency gains should reduce the audit costs and the administrative burden on auditees, always in line with the specific objectives for ex-post controls explained above.

In 2026, the CBE JU will continue to implement the results of the ex-post audits on its beneficiaries and will report through the budget discharge process.

2.5.3. Audits

The audit environment is an accountability pillar within the CBE JU's internal control framework since it provides reasonable assurance about the state of effectiveness of risk management and control processes and serves as a building block for the annual Declaration of Assurance of the Executive Director. In 2026, the CBE JU will continue to ensure the coordination and support to the audits carried out by the IAS and the European Court of Auditors (ECA) and by the external auditor of the CBE JU accounts. The CBE JU will also continue to follow up and confirm the implementation of the relevant recommendations.

3. BUDGET YEAR 2026

The 2026 budget covers all administrative needs for 2026 as well as Horizon 2020 and Horizon Europe operational activities. The budget of the JU shall be adapted to take into account the amount of the Union contribution as laid down in the budget of the Union. A reduction in the EU contribution 4,488 million EUR should be implemented in 2026 following a reallocation of appropriations inside Horizon Europe to contribute to the AI gigafactories initiative.

The 2026 EFTA rates in use are 2.19% for BBI JU remaining C1 budget ('frontloaded' by the European Commission from the previous MFF), and 2.60% for CBE JU for 2026.

STATEMENT OF REVENUE (EUR)

Heading	Item	Budget 2026 CA	Budget 2026 PA	Amended budget 2025 CA	Amended budget 2025 PA	Executed budget 2024 CA	Executed budget 2024 PA
EU contribution (excl. third countries contribution/EFTA)		**128.699.561**	**134,165,410**	**117,088,457**	**153,408,608**	**144,173,389**	**153,717,118**
of which administrative (BBI)	1001	0	0	0	0	0	0
of which administrative (CBE)	1007	2,832,117	2,832,117	2,443,500	2,443,500	1,691,126	1,691,126
of which operational (BBI)	1002	0	3.481,874	0	0	0	0
of which operational (CBE)[38]	1007	125,867,444	127,851,419	114,644,957	150,965,108	142,482,263	152,025,992
Third countries contribution (including EFTA)[39]		**28,096,189**	**28,474,025**	**28,219,933**	**4,268,737**	**5,103,738**	**5,441,586**
of which operational (CBE) third countries contribution	1008	24,700,000	24,950,000	24,950,000	0	0	0
of which administrative (CBE) third countries contribution	1007	50,000	50,000	50,000	50,000	0	0
of which administrative EFTA (CBE)	1007	73,635	73,635	67,196	67,196	59,866	59,866
of which operational EFTA (BBI)	1002	0	76,253	0	0	0	0
of which operational EFTA (CBE)	1008	3,272,554	3,324,137	3,152,736	4,151,540	5,043,872	5,381,720
Industry (financial) contribution		**2,955,752**	**2,955,752**	**2,560,696**	2,560,697	**1,750,991**	**1,750,991**
of which administrative (BBI)	1003	0	0	0	0	0	0
of which administrative (CBE)	1009	2,955,752	2,955,752	2,560,696	2,560,697	1,750,991	1,750,991
Other		0	0	0	0	0	0
SUB-TOTAL revenues		**159,751,502**	**165,595,187**	**147,869,086**	**160,238,041**	**151,028,118**	**160,909,695**

[38] For 2026 operational payment appropriations (including EFTA) include EUR 1,338,750 for the budget of the expert evaluators for the CBE Call 2026 (managed by REA on behalf of the CBE JU) – moved from Title 2 under BBI JU to Title 3 under the CBE JU.

[39] The budget figures consider an EFTA rate of 2.19% used for BBI JU remaining budget for 2026, as well as a rate of 2.60% for the 2026 EU administrative and operational contribution to the CBE JU.

Heading	Item	Budget 2026 CA	Budget 2026 PA	Amended budget 2025 CA	Amended budget 2025 PA	Executed budget 2024 CA	Executed budget 2024 PA
C2 reactivation of unused appropriations from administrative expenditure[40]		**0**	**500,000**	**2,575,110**	**2,875,141**	**2,826,379**	**3,246,795**
of which from 2021 (BBI)		0	0	0	0	78,155	269,769
of which from 2022 (BBI)		0	0	0	0	729,860	1,148,627
of which from 2022 (CBE)		0	0	0	0	978,837	381,601
of which from 2022 (CBE) included at chapter level		*0*	*0*	*0*	*265,619*	0	0
of which from 2023 (BBI)		0	0	0	0	639,527	1,046,798
of which from 2023 (CBE)		0	0	431,205	1,598,726	400,000	400,000
of which from 2023 (CBE) included at chapter level		*0*	*0*	*797,920*	*532,301*	0	0
of which from 2024 (BBI)		0	0	275,317	275,317	0	0
of which from 2024 (CBE)		0	500,000	1,070,668	203,178	0	0
C2 reactivation of unused appropriations from operational expenditure[41]		**17,870,701**	**1,009,035**	**30,919,126**	**21,776,432**	**68,683,112**	**27,118,677**
of which from 2021 (voted) (BBI)	2033	0	0	0	0	18,679,114	18,589,502
of which from 2022 (voted) (BBI)	2033	0	0	0	2,580,086	3,703,998	8,000,000
of which from 2022 (voted) (CBE)	2033	0	0	19,889,574	0	43,700,000	529,175
of which from 2023 (voted) BBI	2033	0	0	5,258	4,867,482	763,799	0
of which from 2023 (voted) BBI - to reduce HE contribution	2033	3,154,101	0	0	0	0	0
of which from 2023 (voted) CBE	2033	1,733,766	0	3,742,859	4,192,533	1,836,201	
of which from 2024 (voted) (BBI)	2033	0	1,009,035	0	6,500,000	0	0
of which from 2024 (voted) (BBI) - to reduce HE contribution	2033	2,014,694	0	0	0	0	0

[40] Unused budgetary commitment and payment appropriations from prior years' administrative budget, which can be reactivated in the budgets of up to 3 subsequent years following the year of origin, in accordance with the 'N+3' rule.

[41] Unused budgetary commitment and payment appropriations from prior years' operational budget, which can be reactivated in the budgets of up to 3 subsequent years following the year of origin, in accordance with the 'N+3' rule applicable to Joint Undertakings.

Heading	Item	Budget 2026 CA	Budget 2026 PA	Amended budget 2025 CA	Amended budget 2025 PA	Executed budget 2024 CA	Executed budget 2024 PA
of which from 2024 (voted) CBE	2033	1,821,387	0	7,281,435	3,636,332	0	0
of which from 2025 BBI	2033	5,258	0	0	0	0	0
of which from 2025 (voted) CBE	2033	9,141,495	0	0	0	0	0
SUB-TOTAL reactivations		**17,870,701**	**1,509,035**	**33,494,236**	**24,651,573**	**71,509,491**	**30,365,472**
OTHER (ad hoc recoveries)		**0**	**0**	**0**	**0**	**462,273**	**462,273**
TOTAL REVENUES		**177,622,203**	**167,104,222**	**181,363,322**	**184,889,614**	**222,999,882**	**191,737,440**

STATEMENT OF EXPENDITURE (EUR)

Title/ chapter	Heading	Budget 2026 CA	Budget 2026 PA	Amended budget 2025 CA	Amended budget 2025 PA	Executed budget 2024 CA	Executed budget 2024 PA
1	**Staff expenditure**	**3,807,142**	**3,807,142**	**3,721,540**	**3,721,540**	**3,311,902**	**3,185,466**
11	Staff in active employment	3,365,642	3,365,642	3,308,840	3,308,840	2,920,011	2,911,811
12	Staff recruitment / Miscellaneous expenditure	25,000	25,000	55,000	55,000	3,977	977
13	Mission and duty travels	60,000	60,000	75,000	75,000	117,797	64,650
14	Other staff costs (socio-medical structure)	346,500	346,500	272,700	272,700	262,346	200,227
15	Entertainment and representation expenses	10,000	10,000	10,000	10,000	7,771	7,800
2	**Other administrative expenditure**	**2,104,362**	**2,104,362**	**2,197,773**	**2,197,773**	**2,076,583**	**2,648,554**
20	Rental of buildings and associated costs	357,000	357,000	400,000	400,000	333,754	333,236
21	Administrative information technology	810,000	810,000	613,393	613,393	648,310	777,258
22	Movable property and associated costs	5,000	5,000	5,000	5,000	0	0
23	Current administrative expenditure	7,500	7,500	24,000	24,000	11,418	13,724
24	Telecommunications and postal charges	41,500	41,500	37,000	37,000	9,420	2,969
25	Expenditure on formal meetings	68,862	68,862	74,380	74,380	33,715	32,964
26	External communication, information, publicity	384,500	384,500	417,000	417,000	473,915	1,009,260
27	Service contracts	245,000	245,000	452,000	452,000	366,051	332,057
29	Expert reviewers	185,000	185,000	175,000	175,000	200,000	147,085
	Reactivations of prior year unused administrative budget[42]	**0**	**500,000**	**2,575,110**	**2,875,141**	**0**	**0**
	of which from 2022 (CBE) included at chapter level	0	0	*0*	*265,619*	0	0

[42] Unused budgetary commitment and payment appropriations from prior years administrative budget, which can be reactivated in the budgets of up to 3 subsequent years following the year of origin, in accordance with the 'N+3' rule applicable to Joint Undertakings. Figures shown in italics are already included at chapter level in Titles 1 and 2.

Title/ chapter	Heading	Budget 2026 CA	Budget 2026 PA	Amended budget 2025 CA	Amended budget 2025 PA	Executed budget 2024 CA	Executed budget 2024 PA
	of which from 2023 (CBE) included at chapter level	0	0	*797,920*	*532,301*	0	0
	of which from 2023 (CBE)	0	0	431,205	1,598,726	0	0
	of which from 2024 (BBI)	0	0	275,317	275,317	0	0
	of which from 2024 (CBE)	0	500,000	1,070,668	203,178	0	0
3	**Operational expenditure**	**153,839,998**	**159,683,683**	**142,747,693**	**155,116,648**	**208,398,637**	**152,346,864**
32	Expert evaluators	950,000	950,000	1,198,125	1,198,125	718,565	718,565
30	Previous years' calls BBI	0	3,558,127	0	0	0	19,479,004
	Previous years' calls CBE	0	155,175,556	0	153,918,523	0	0
31	Current year's call (s) CBE	152,889,998	0	141,549,568	0	207,680,072	132,149,295
	Reactivations of prior year unused operational budget [43]	**17,870,701**	**1,009,035**	**30,919,126**	**21,776,432**	**0**	**0**
	of which from 2022 (BBI)	0	0	0	2,580,086	0	0
	of which from 2022 (CBE)	0	0	19,889,574	0	0	0
	of which from 2023 (BBI)	3,154,101	0	5,258	4,867,482	0	0
	of which from 2023 (CBE)	1,733,766	0	3,742,859	4,192,533	0	0
	of which from 2024 (BBI)	2,014,694	1,009,035	0	6,500,000	0	0
	of which from 2024 (CBE)	1,821,387	0	7,281,435	3,636,332	0	0
	of which from 2025 (BBI)	5,258	0	0	0	0	0
	of which from 2025 (CBE)	9,141,495	0	0	0	0	0
	SUB-TOTAL reactivations	**17,870,701**	**1,509,035**	**33,494,236**	**24,651,573**	**0**	**0**
	TOTAL EXPENDITURE	**177,622,203**	**167,104,222**	**181,363,322**	**184,889,614**	**213,787,123**	**158,180,883**

[43] Unused budgetary commitment and payment appropriations from prior years operational budget, which can be reactivated in the budgets of up to 3 subsequent years following the year of origin, in accordance with the 'N+3' rule applicable to Joint Undertakings.

4. ANNEXES

4.1. IKAA PLAN

As stated in Article 51 of Council Regulation 2021/2085, the additional activities are those directly linked to projects and activities of the CBE JU, including in particular:

(a) Investments in new facilities demonstrating a new value chain, including investments in durable equipment, tools and accompanying infrastructure, in particular related to regional deployment and its sustainability verification.
(b) Investments in a new innovative and sustainable production plant or flagship.
(c) Investments in new research and innovation and justified infrastructure, including facilities, tools, durable equipment or pilot plants (research centres).
(d) Standardisation activities.
(e) Communication, dissemination and awareness-raising activities.

The investments directly linked to projects are in particular:

(a) Non-eligible investments needed for the implementation of a CBE JU project during the duration of that project.
(b) Investment made in parallel with a CBE JU project, complementing the results of the project and bringing it to a higher TRL.
(c) Investments needed for the deployment of a CBE JU project's results following the closure of the project until the winding up of the CBE JU. In justified cases, the investment related to deployment of results of projects from the preceding initiative (BBI JU) may be taken into account.

As the IKAA is directly linked to the project portfolio of CBE JU, multi annual IKAA plans are formulated after each CBE JU call, and for the first time in 2026 the IKAA IT tool will fully facilitate this process.

The Work Programme will be amended during quarter 2 of 2026 to reflect the planned IKAA for projects linked to the 2025 call.

4.2. GLOSSARY

Added-value product = a product with a significantly increased value from a technical, economic and/or environmental perspective, compared with the starting material or feedstock from which the product is obtained.

B2B product = a product destined to be sold by one business entity to another business entity.

B2C product = a product destined to be sold by one business entity directly to the end consumers.

Benchmark = a standard product/process/service representative of a specific technological field or market application, used as reference with which features of another product, process or service developed are compared. Depending on the bio-based output developed, the benchmark can be fossil- and/or bio-based.

Bio-based = derived from biomass.

Biodiversity enhancement (coming on top of biodiversity protection) = refers to reporting practices, methodologies and tool improvements about the integration and improvement of biodiversity aspects related to bio-based systems. Note that the EC will put forward a proposal for legally binding EU nature restoration targets[44]. Restoring EU's ecosystems will help to increase biodiversity, mitigate and adapt to climate change, and prevent and reduce the impacts of natural disasters.

Biodiversity protection (see also biodiversity enhancement) = is expected to be a starting condition for all CBE JU projects (100 % of projects should comply). Several drivers for biodiversity protection should be accounted for: climate change mitigation, LULUCF, sea/freshwater pollution, soil pollution, invasive alien species, direct exploitation of endangered plants, animals, other organisms, and their habitats, and respective ecosystems services.

Bioeconomy = the activities that deliver sustainable solutions based on biological resources to create added value[45]. .

Biogenic = derived from biomass. Such as 'biogenic carbon cycle': the natural carbon cycle.

Biomass = material of biological origin excluding material embedded in geological formations and/or fossilised.

Bio-based content = The overall recommendation is that CBE JU projects strive to fully bio-based solutions. Nonetheless, it is recognised that minor (%) parts of inorganic components and/or fossil-based carbon may be justified for functionality, safety and sustainability and therefore are allowed. Moreover, the non-bio-based carbon and/or inorganic content must not affect the safety,

[44] The EU Nature Restoration Law (europa.eu)

[45] Bioeconomy Strategy

sustainability and circularity of the product. The exact % may vary, depending on the end application. Higher % bio-based composition is expected, the higher the end TRL (going from RIA, to IA to FLAG). For the bio-based content, please refer to available standards which cover the measurement of bio-based carbon content. Any non-bio-based content must described, quantified and justified.

(Bio-based) dedicated chemicals = Bio-based chemicals that are produced via a dedicated pathway and do not have an identical fossil-based counterpart. As such, they can be used to produce products that cannot be obtained through traditional chemical reactions and products that may offer unique and superior properties that are unattainable with fossil-based alternatives.

(Bio-based) drop-in chemicals = Bio-based versions of existing petrochemicals which have established markets. They are chemically identical to existing fossil-based chemicals.

Bio-based product = a product wholly or partly bio-based.

(Bio-based) smart drop-in chemicals = a special sub-group of drop-in chemicals. They are chemically identical to existing chemicals derived from fossil resources, but their bio-based production pathways provide advantages compared to the conventional pathways.

Biodegradation = complete breakdown of an organic matter by microorganisms, in the presence of oxygen (aerobic biodegradation) into carbon dioxide, water, and mineral salts of any other elements present (mineralisation) plus new biomass, **or** in the absence of oxygen (anaerobic biodegradation) into carbon dioxide, methane, mineral salts, plus new biomass.

Biodegradable = a material or product is biodegradable if it can, under specific environmental conditions and with the help of microorganisms, naturally break down into basic components (e.g., water, carbon dioxide and biomass).

Bio-based polymer = a polymer comprised, at least in part, of building blocks called monomers, produced from renewable feedstock. Bio-based polymers can lead to a number of products like bio-based plastics.

Biomanufacturing = The use and conversion of biotechnology and biological resources into chemicals, products and energy[46]. In the context of the CBE JU Annual Work Programme, the interpretation of biomanufacturing refers to biotechnology or other enabling technologies to produce and/or convert biological resources into bio-based products (energy applications are excluded).

Bio-waste = defined as biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants[47]. It does not include forestry or agricultural residues, manure, sewage sludge, or other biodegradable waste such as natural textiles, paper or processed wood. It also excludes those by-products of food production that never become waste.

[46] Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU, COM(2024) 137 final
[47] Waste Framework Directive

Brand owners = refer to industrial stakeholders selling commodities under a registered brand. They may be existing or new stakeholders of bio-based value chains, contributing thus to the market uptake of bio-based products.

Building block = a molecule which can be converted to various secondary chemicals and intermediates and, in turn, into a broad range of different downstream uses. Examples of large markets for bio-based chemical building blocks are in the production of bio-based polymers, fibres, surfactants and solvents.

Carbon removal = the carbon removals described in the Communication on Sustainable Carbon Cycles[48] include '*recycle carbon from waste streams, from sustainable sources of biomass…to use it in place of fossil carbon in the sectors of the economy that will inevitably remain carbon dependent…promote technological solutions for carbon capture and use (CCU) and the production of sustainable synthetic fuels or other non-fossil based carbon products… upscale carbon removal solutions that capture CO_2 from the atmosphere and store it for the long term, either in ecosystems through nature protection and carbon farming solutions or in other storage forms through industrial solutions*'.

Cascading use of biomass = The cascading use of biomass entails maximising the resource-use efficiency by prioritising the processing steps by value creation[49]. In the context of the CBE JU topics, this means: while maximising the value creation and resource efficiency for the biomass conversion route(s) in scope of the topic, it also addresses valorisation of any fraction(s) of the biomass feedstock not converted by the main conversion route(s) and/or of residual streams in order to maximise the valorisation of the biomass feedstock and minimise waste.

Please also consider the "Guidance on cascading use of biomass, with selected good practice examples on woody biomass" and especially the five guiding principles. 1) resource efficiency, 2) sustainability ('Any cascading solution to promote the highest economic added value must consider its impact on the other two pillars of sustainability: the social and environmental aspects'), 3) circularity in every stream and at every step, 4) new products and new markets ('Stimulate uses of biomass with high added value by making new products and new markets'), and 5) subsidiarity ('Cascading should respect not only national contexts but also regional and local ones in assessing the most economically viable use of biomass').

CAGR = Compound Annual Growth Rate.

CCS = Carbon dioxide capture and storage. The geological storage is ruled by Directive 2009/31/EC. Other storage is mentioned in the Communication on Sustainable Carbon Cycles. See the European Commission framework for carbon capture, use and storage.

[48] The concept of carbon removal has been introduced by the Commission Communication on sustainable carbon cycles (COM(2021)800) and in the Commission proposal for a Regulation on an EU certification for carbon removals. See the Glossary 'Carbon removal'"

[49] cf. definition on p. 21 of the SRIA

CCU = Carbon dioxide capture and use[50].

Circular bio-based system = a full operational system, from feedstock intake through market application and use of resultant bio-based products, and their end-of-life handling to close the circle (cradle-to-cradle).

Circular-by-design = including circular economy considerations at the design stage of a product and/or business model considering their lifecycle. It aims to minimise resource consumption intensity, waste generation, extend the lifetime of products and optimise production and logistics.

Circular economy = a business concept aiming to create a closed-loop system and maintain the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste. In this economic system, 'waste' can become a feedstock source for another process or value chain.

Climate change adaptation = is the process of adapting to climate change, taking action to prepare for and adjust to both the current effects of climate change the predicted impacts in the future.

Climate change mitigation = consists of actions to limit global warming and its related effects. This involves reductions in human emissions of greenhouse gases (GHGs) as well as activities that reduce their concentration in the atmosphere. It is one of the ways to respond to climate change, along with adaptation.

Ecosystem services = the benefits that people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services, such as nutrient cycling, that maintain the conditions for life on Earth' (Millennium Ecosystem Assessment). An ecosystem service could also include practices that prevent or cut down pollution. People describe, for example, the green biorefinery to have an ecosystem service function by cutting down the run-off of nutrients that could otherwise have polluted the surrounding waters.

Emissions (Scope 1, 2 and 3) = Scope 1 greenhouse gas emissions are emissions coming directly from a company and its controlled entities (including process emissions). Scope 2 emissions come indirectly from the generation of purchased energy. Scope 3 emissions are all indirect emissions that are not included in Scope 2 and occur in the value chain of the reporting entity, including both upstream and downstream emissions.

Feedstock = any unprocessed/raw material fed into a manufacturing/conversion process.

FMCG = Fast-moving consumer goods.

Fossil-based = made from fossil resources.

[50] See the European Commission framework for carbon capture, use and storage.

GHG emissions = GHGs comprise carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4) and fluorinated gases. There are direct and indirect emissions that need to be monitored and addressed (see also emissions (scope 1, scope 2 and scope 3)).

Indirect land use change (ILUC) = displacement of agricultural production into non-croplands (e.g., grasslands and forests) due to the destination of croplands previously used for food agricultural production having been shifted to the production of non-food bio-based products (e.g., biofuels). Indirect land use change risks causing an increase in greenhouse gas emissions because non-croplands such as grasslands and forests typically absorb high levels of CO_2. By converting these land types to cropland, negative environmental effects may occur, including increase of atmospheric CO_2 levels and biodiversity loss.

Industrial symbiosis/Industrial-urban symbiosis = the concept affects both material and energy flows. It refers, partly, to a process by which waste or by-products of an industry or an industrial process become the raw material for another. Application of this concept allows for materials to be used in a more sustainable way and can contribute to circular (bio)economy. Industrial symbiosis creates an interconnected network that strives to mimic the functioning of ecological systems within which energy and materials cycles operate in a continuous mode, without waste products. Deploying industrial and/or industrial-urban symbiosis solutions for energy, water and waste and other by-products can also contribute to the regional development of circular bio-based systems.

Intermediate product = a product (e.g., material) requiring further processing or conversion steps to obtain the final product.

Life cycle assessment (LCA) = assessment of the environmental impacts of a product, process or service throughout the entire life cycle. The main references for LCA methodologies are the international standards ISO 14040 and ISO 14044. **Environmental LCA** is complemented by **life cycle costing assessment** (LCCA), which aims to assess the economic impacts of a product/process/service, and by **social life cycle assessment** (S-LCA), which aims to evaluate social implications of a product/process/service.

Life cycle sustainability assessment (LCSA) = assessment of the environmental, economic, and social impacts of a product, process, or service throughout the entire life cycle.

Marginal land = Low quality land the value of whose production barely covers its cultivation costs[51].

Material = a substance or a mixture of substances also resulting from a production process, constituting one of the components which more complex products are made by.

Multi-material, multi-layered products = products composed of multiple layers where the choice on material per layer depends on the final product technical characteristics (e.g., providing barrier properties, mechanical strength, heat resistance, etc.).

[51] Source: EEA.

Multi-material products, composites = materials composed of at least two materials of different properties. When combined they provide unique and superior properties (e.g., strength and lightweight characteristics), compared to those of the individual constituents. The individual components do not dissolve or blend into each other, with one material being the matrix and combined an additional material (the reinforcement).

Nature-based solutions = Nature-based solutions are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.

New = refers to a product or a process that entails clearly described innovative and/or advanced properties or enhancements compared to existing benchmarks (e.g., a 'new material' does not mean that such types of material currently do not exist on the market, but it means that the material has properties that are unmatched by existing benchmark products available on the market).

Novel = novel technologies are such as new, emerging, so far unused for bio-based feedstock conversion; novel bio-based feedstock.

Organisational innovation = an idea, a new product, a new method, a new service, a new process, a new technology, or a new strategy adopted by an organisation.

Outputs = referring to the following product categories: i) chemicals (platform chemicals, additives, solvents, surfactants), ii) materials, iii) other products related with end use. Use established classification for reporting, e.g., as per the EU Biorefinery outlook 2030.

Plastic = any synthetic or semisynthetic organic polymer entailing the property of plasticity, i.e., the ability to deform without breaking. For example, thermoplastics and thermosetting polymers are the two types of plastic.

Platform chemicals = intermediate molecules which can be converted into a range of chemicals or materials.

Primary biomass producers = biomass feedstock suppliers (primary and/or secondary biomass), including the following sectors: agriculture, forestry, fisheries and aquaculture.

Resource efficiency = means using the Earth's limited resources in a sustainable manner while minimising impacts on the environment. It allows us to create more with less and to deliver greater value with less input. Improved energy efficiency addresses technoeconomic feasibility but also environmental sustainability aspects. Resource efficiency aspects addressed in bio-based processes covers biomass feedstock valorisation efficiency but also encompasses the other resources such as water, solvents, (bio)catalysts and other auxiliaries, etc.

SSbD = safe and sustainable by design.

Secondary bio-based feedstock = waste, residues and side-streams that can be reused/remanufactured/recycled in a circular economy and are injected back into the economy as

secondary raw materials. In this context, secondary bio-based feedstock is any waste, residues and side-streams that can be used in bio-based processes.

Soil health: the continued capacity of soils to support ecosystem services assessed through a set of measurable indicators[52].

Sustainable = this refers to a product/process/system that enhances and creates benefits for the environment, economy and society. In a broad sense, sustainability has four dimensions: environmental sustainability, productivity, fairness and macroeconomic stability[53] .

Waste hierarchy = (a) prevention; (b) preparing for re-use; (c) recycling; (d) other recovery, e.g., energy recovery; and (e) disposal, as in the Waste Framework Directive 2008/98.

Zero-pollution ambition = on 12 May 2021, the European Commission adopted the EU Action Plan: "Towards a Zero Pollution for Air, Water and Soil" (and annexes) - a key deliverable of the European Green Deal. The action plan aims to strengthen the EU green, digital and economic leadership, whilst creating a healthier, socially fairer Europe and planet. It provides a compass to mainstream pollution prevention in all relevant EU policies, to step up implementation of the relevant EU legislation and to identify possible gaps.

Zero waste = preserving the natural resources and significantly reducing/eliminating waste during production but also across the value chain.

[52] Source: Soil Mission Implementation Plan.
[53] European Commission, 'Annual Sustainable Growth Strategy 2020', COM(2019) 650 final, 17 December 2019.