

reduced environmental footprint measured by qualitative and quantitative indicators. Contribution to achieving the objectives of the EIP on Raw Materials.

Type of action: Research and innovation actions

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

#### **WASTE-4-2014/2015: Towards near-zero waste at European and global level<sup>10</sup>**

Specific Challenge: The complexity and heterogeneity of waste streams require coordination and networking between researchers, entrepreneurs and public authorities to harmonise technologies, processes and services, to profit from benchmarking, sharing best practices, and gender mainstreaming, and to use or develop standards. Insufficient cooperation between different value chain players in several raw materials sectors results in lower recycling rates or suboptimal use of raw materials from an environmental and socio-economic point of view. Improved cooperation within or along different value chains and among stakeholders, including a participatory role of citizens, representing the wider society, and civil society organisations, can lead to more efficient use of raw materials and to waste reduction.

The global nature of the waste management challenge requires coordination, pooling of resources and support to the definition of global objectives and strategies, and holds a potential for export of eco-innovative solutions and seizing new markets. Dissemination at international level of knowledge on waste management, including environmental regulations and standards, can contribute to turning waste into a resource at global level and to setting up resource efficient waste management systems and technologies and services, particularly in developing countries and emerging economies. To this end, enhanced forms of participatory processes for all stakeholders are needed.

Scope: Proposals shall address only one of the following issues:

a) [2014] **An EU near-zero waste stakeholder platform<sup>11</sup>:** Creation of a stakeholder platform for defining an integrated strategic research and innovation agenda, including systemic eco-innovation and business models, for waste prevention and management in the EU, defining areas of waste technologies to be clustered, and proposing actions for strengthening links between research funding programmes across the EU. Synergies with relevant EU Initiatives on waste should be considered. Roadmaps addressing specific waste streams, including the electronic waste coming from the ICT sector, should be developed. Proposals should help foster synergies between relevant stakeholders and value chains while identifying new market opportunities. They should provide for participatory and proactive social engagement of citizens and education as well as gender balance and sensitivity specific issues.

<sup>10</sup> This topic responds to EU research priorities identified in the Seventh Framework Programme project VOICES under the thematic areas 'education and communication', 'model business and consumer behaviour', 'product /production design', and 'policy', including European waste management best practices, benchmarks and standards, and proactive social engagement of citizens and education.

<sup>11</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to EASME and will be implemented by the Commission services.

b) [2014] **Global waste dimension**<sup>12</sup>: Development of a strategy for global dissemination and uptake of European waste management best practices, benchmarks and standards, thereby raising awareness on behavioural, social, political, cultural and institutional aspects in solid waste management, and paving the way to new market opportunities. In line with the EU's strategy for international cooperation in research and innovation<sup>13</sup> actions will contribute to the commitments of Rio+20 and UNEP's Global Partnership on Waste Management and will follow up on the on-going international activities such as the EU-Africa pilot project on waste, aiming at developing a roadmap of potential joint European-African research and innovation actions, including knowledge transfer in the field of waste management<sup>4</sup>.

c) [2014] **Secondary raw materials inventory**: Establishment of an EU network of relevant institutions (such as environmental agencies, research organisations, etc.) for enhancing knowledge in order to improve the sustainable supply of raw materials through an inventory component of an EU knowledge base with data and information on secondary raw materials, in particular critical raw materials, and their flows, maps and evaluation of European stocks. It should improve data collection on secondary raw materials from different types of waste (such as mining waste, wood-based, industrial, municipal waste, waste electrical and electronic equipment (WEEE) and others) at national and regional level in the EU and Associated Countries and subsequent access to data, and help identify the need for additional EU-wide waste statistics. Compatibility with relevant EU or global standards and interoperability with national databases and other relevant databases (e.g. from Seventh Framework Programme projects) should be ensured. Close cooperation with other on-going activities related to the EU knowledge base should be provided. If appropriate, the development of new standards should be examined. The action shall support implementation of the European Innovation Partnership (EIP) on Raw Materials.

For sub-topic c, the Commission considers that proposals requesting a contribution from the EU of up to EUR 2.5 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

d) [2015] **Raw materials partnerships**: Creation of a common multi-stakeholder platform focused on a limited number of key raw materials across their whole value chain. This should involve partners from across the value chain, including mining, processing, recycling, application, public sectors (national/regional/local) and civil society, while respecting the conditions of each value chain. The action shall support implementation of the EIP on Raw Materials.

Expected impact:

a) and b) Improved knowledge and metrics of specific waste streams and waste management methods and technologies in Europe, and a coordinated and integrated strategic research and innovation agenda, contributing to harmonised and optimised innovative waste management systems, best practices and standards and increased

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<sup>12</sup> This activity directly aimed at supporting the promotion of coherent and effective cooperation with third countries is excluded from the delegation to EASME and will be implemented by the Commission services.

<sup>13</sup> COM(2012)497

recycling rates in the medium term. Significant improvement in the knowledge of costs and performances along value chains, informing a pricing policy for waste management in line with the waste hierarchy. Support to the implementation of the Waste Framework Directive (Dir. 2008/98/EC) and achievement of Europe 2020 strategy reduction targets for greenhouse gas emissions. Support to the implementation of the outcome of Rio+20 and the UNEP's Global Partnership on Waste Management and to the implementation of environmentally sound waste management systems, in line with the Basel Convention. New market opportunities for European businesses.

c) and d) In the medium term, better-informed decision-making at EU and national level as well as by industry. Increased EU raw materials knowledge and transparency of EU raw materials information, for the benefit of various stakeholders. Boosting the raw material sector through an interdisciplinary and transnational cooperation allowing matching the supply and demand from the EU downstream industries. In the longer term, improving availability of key raw materials, while creating greater added value to the economy and more jobs. Facilitation of exchange of information and increased knowledge and use of the most advanced, economically effective and innovative technologies in the whole value chain of raw materials. Contribution to the implementation of the EIP on Raw Materials.

Type of action: Coordination and support actions

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

#### **WASTE-5-2014: Preparing and promoting innovation procurement for resource efficiency**

Specific Challenge: Through innovation-oriented public procurement, the public sector can foster lead markets and generate critical mass of demand for eco-innovative solutions, thus providing an important boost to resource efficiency and to waste prevention, reuse and recycling. Public purchasing of innovative solutions for resource efficiency and waste management and prevention has not yet been deployed on a large scale. It can lead to a sharing of the additional risks and costs involved in buying and using eco-innovative solutions and to a more rapid market uptake of such solutions. Barriers to public procurement of innovative solutions include the absence of cross-border coordination and lack of access to best practices and to knowledge of close-to-market innovative solutions.

Scope: Proposals should lead to the establishment of a buyers' group of public procurers to overcome the fragmentation of demand for eco-innovative solutions for resource efficiency and waste management and prevention in the EU and to reinforce their early deployment. The buyers' group will be responsible for drawing common specifications (including needs assessment, financial modelling of different approaches market consultation involving the supply chain, drafting of specifications, risk management plan), and should prepare for a joint or coordinated procurement. The feasibility of launching a joint or coordinated public procurement of innovation (PPI) should be assessed and tested. Preparation activities for the joint or coordinated PPI will be supported, not the costs of the procurement resulting from any PPI procedures.

ecosystem and socio-ecological research; research infrastructures for environmental hydraulic research)

- SFS 2 - 2014/2015: Sustainable crop production
- SFS 8 - 2014/2015: Resource-efficient eco-innovative food production and processing
- SFS 11 - 2014/2015: Implementation of an Ecosystem-based approach for European aquaculture
- ISIB 4 - 2014/2015: Improved data and management models for sustainable forestry
- ISIB 5 - 2014: Renewable oil crops as a source of bio-based products

Proposals are invited against the following topics:

**WATER-1-2014/2015: Bridging the gap: from innovative water solutions to market replication**

Specific challenge: One of the main factors hampering the market uptake of innovative solutions in the field of water is the lack of real scale demonstration of their long term viability. In addition, highly promising and sustainable eco-innovative water solutions (technologies, processes, products, services etc.) often do not reach the market due to pre-commercialisation challenges and the residual risk linked to scaling-up.

There is therefore a need to take action to accelerate the commercialisation of eco-innovative water solutions with a view to stimulating sustainable economic growth, business and job creation in the water sector.

The EIP on Water<sup>27</sup> has identified 8 priority areas: 5 thematic priorities (water reuse and recycling; water and waste water treatment, including recovery of resources; water and energy integration; flood and drought risk management; and the role of ecosystem services in the provision of water related services) and 3 cross-cutting priorities (water governance; decision support systems and monitoring; and financing for innovation). According to the EIP on Water, these are areas which show high potential for innovation and market uptake.

Scope: Proposals shall address only one of the following:

- a) [2014] First application and market replication of near-market water solutions, addressing the thematic priorities identified in the EIP on Water.

The Commission considers that proposals requesting a contribution from the EU of between EUR 2 and 4 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

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<sup>27</sup> <http://ec.europa.eu/environment/water/innovationpartnership/>

b) [2015] Demonstration/pilot activities of new or improved innovative water solutions in a real environment, with a focus on the cross cutting priorities identified in the EIP on Water, while addressing the thematic priorities.

The Commission considers that proposals requesting a contribution from the EU of between EUR 6 and 8 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Proposals may also aim to help process industries become less water dependant while ensuring efficient management of other resources (e.g. raw materials and energy), and/or exploiting untapped potential of ICT by developing and deploying advanced ICT solutions for water resources management in agriculture and urban areas.

Complex issues should be addressed with innovative, creative solutions with a globally positive environmental impact demonstrated by life cycle analysis. Social, institutional, economic and governance aspects ensuring a more rapid uptake of solutions as well as aspects affecting market deployment and uptake, such as, standardisation and regulatory issues, market assessment and business plan, should be considered where appropriate. Proposals should include the participation of SMEs, as far as possible.

Expected impact: Wide and fast deployment of sustainable innovative solutions in the water management sector. Contribution to the implementation of the EIP 'Water'. Support to the objectives of the Sustainable Process Industries Public-private Partnership (SPIRE PPP), in particular helping process industries and consumers to socially accept water as a highly valuable resource rather than a cheap consumable. Market penetration and demonstration, long-term application and sustained use of successful and sustainable innovative solutions by various end-users. Creation of new market opportunities both inside and outside Europe. Increased resource efficiency and environmental performance of the water sector, inter alia through synergies between public water authorities, water utilities, various economic actors and sectors, major companies and industries, SMEs and research organisations. Significant reduction in water use. More than 50% reduction of energy demand in water supply, treatment and transportation. Development and uptake of water efficiency standards in urban, agricultural and industrial areas, including the promotion of interoperability between water information systems at EU and national levels and their harmonisation with the INSPIRE Directive. Support to the implementation and evaluation of technology verification schemes, including the EU Environmental Technology Verification Pilot (ETV) programme<sup>28</sup>.

Type of action: Innovation actions

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

#### **WATER-2-2014/2015: Integrated approaches to water and climate change**

Specific challenge: The rising demands of a growing world population for food, water, materials and energy will put increasing pressures on land use, water resources and

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<sup>28</sup> <http://iet.jrc.ec.europa.eu/etv/>

need to grow rapidly (and be shared) if the full potential offered by restoration is to be achieved.

Scope: Proposals should develop for conceptually coherent ecosystem types tools, approaches, methodologies and methods to assess and predict the effectiveness relative to their stated objectives – including both cost-effectiveness and benefits in relation to biodiversity and ecosystem services – of environmental restoration measures. They should engage the whole restoration community (business, academia, including social sciences and humanities, public administrations and civil society) in a major initiative to exchange experiences, identify strengths, weaknesses and best practices, encourage new techniques and technologies, and share information, knowledge and know-how in order to promote effective and sustainable restoration activities across the EU.

Proposals should use pilot projects or case studies, including a demonstration phase.

The Commission considers that proposals requesting a contribution from the EU of between EUR 5 and 7 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected impact: In the mid-term, improved design of restoration/rehabilitation measures and incentives; more effective integration of the 'restoration agenda' into the delivery of major policy objectives related to growth, job creation, urban and rural development, resilience to climate change, conservation and enhancement of natural capital; innovative policy mechanisms that can facilitate restoration; contribution to advances in green infrastructure; contribution to the objectives of the EU 2020 Biodiversity Strategy<sup>53</sup> and the EU Water Framework Directive; better assessment of potential benefits of establishing restoration site networks allowing for long-term observations and sharing of experiences for different types of ecosystems and pressures.

Type of action: Research and innovation actions

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

#### **SC5-8-2014: Preparing and promoting innovation procurement for soil decontamination<sup>54</sup>**

Specific Challenge: Soil contamination is typically caused by industrial activity, mining and smelting practices, agricultural chemicals or improper disposal of waste and is increasingly becoming a very serious environmental and health problem. Member States are making efforts to establish national decontamination/remediation strategies which are generally very costly. It is therefore crucial for public authorities to be able to identify the most fit-for-purpose and cost-effective solutions.

Scope: Proposals should establish and promote a network of public procurers in the area of soil decontamination/remediation, with a focus on sustainable methods which in

<sup>53</sup> COM(2011) 244 final

<sup>54</sup> This activity directly aimed at supporting the development and implementation of evidence base for R&I policies and supporting various groups of stakeholders is excluded from the delegation to EASME and will be implemented by the Commission services.

particular avoid 'dig and dump', in order to raise awareness, share knowledge, debate common procurement needs and draw up common specifications, taking into account longer-term public sector requirements and socio-economic aspects, with the aim of investigating the feasibility of launching joint pre-commercial procurement (PCP) to find common innovative solutions in the field.

Expected impact: In the mid-term, leverage of additional investment in research, development and innovation in the area of soil decontamination and provision of innovative solutions to address associated challenges. In the medium/long term, promotion of innovation in the sector from the demand side at reduced costs. Over the medium/long term, creation of new markets in the area of soil decontamination/remediation. Increased competitiveness of SMEs and industrial partners in this area.

Type of action: Coordination and support actions

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

#### **SC5-9-2014: Consolidating the European Research Area on biodiversity and ecosystem services**

Specific challenge: Biodiversity is our life insurance providing us with various (ecosystem) services and its deterioration and loss jeopardises the provision of these services. The challenge is to advance towards completing the European Research Area in this field and to develop further the common vision and activities currently undertaken by Member States, enhancing coordination and thereby the overall impact of research and innovation in this domain. Ultimately, a unified and open biodiversity research area that promotes free circulation of scientific knowledge and technology and strengthens competitiveness needs to be created.

Scope: Proposals should pool the necessary financial resources from the participating national (or regional) research programmes with a view to implementing a joint call for proposals resulting in grants to third parties with EU co-funding in this area, based on a joint vision and a common strategic research agenda for biodiversity and ecosystem services, involving also social sciences and humanities as appropriate. The joint call should be implemented in cooperation with non-EU countries where relevant, and by developing links with appropriate research infrastructures. In line with the EU's strategy for international cooperation in research and innovation<sup>55</sup> international cooperation with international partners is encouraged. Proposers should also consider implementing other joint activities, including the establishment of a pan-European network of funding agencies and other key players in Europe, building on previous experience and avoiding overlaps with other initiatives, support to mutual learning and training, exchange of good practice, researcher mobility and equal opportunities (e.g. through EURAXESS) and better careers in the field as well as additional joint calls without EU co-funding.

Expected impact: Effective trans-national, pan-European research networking and synergies among national/regional and EU research programmes in the area of biodiversity and ecosystem services to promote sustainable development. New

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<sup>55</sup> COM(2012)497

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

## ENSURING THE SUSTAINABLE SUPPLY OF NON-ENERGY AND NON-AGRICULTURAL RAW MATERIALS

### SC5-11-2014/2015: New solutions for sustainable production of raw materials

Specific challenge: The EU is highly dependent on imports of raw materials that are crucial for a strong European industrial base, an essential building block of the EU's growth and competitiveness. However, Europe is confronted with a number of challenges along the entire raw materials value chain, starting with exploration, to secure a sustainable access to raw materials, including Critical Raw Materials (CRM).

The major challenges are the geological uncertainty, technological and economic feasibility of mine development, and high and growing costs for exploration. In Europe, additional challenges include difficult operation in densely populated areas (access to land) and the fact that the majority of new deposits in Europe will be found at greater depths or in extreme environments such as the Arctic and the oceans.

Europe is also facing the fact that it has been actively mined over many centuries so easy-to-access mineral deposits are mostly exhausted, and exploration activity in the past decades was too low to enable the identification of a sufficient amount of new resources. The major opportunities to access the fresh raw materials within the EU are in greater depths or in smaller deposits where larger mining operations may not be feasible.

In the processing step, the available primary and secondary raw materials feeds are becoming more complex and low grade, and they may also vary in composition over time and contain different size of particles from coarse to very fine grains. Efficient processing requires a series of complex and integrated solutions leading to high investment installations, that will only be economically viable when operating at certain size (economy of scale) and for a predictably-sufficient long time taking into consideration volatility of metal prices. The production process also faces challenges related to water and sediment pollution, atmospheric dispersion, transport and deposition of toxic particles, noise, transport of ores etc.

This specific challenge is identified in the Priority Area 'Technologies for primary and secondary raw materials' production of the European Innovation Partnership (EIP) on Raw Materials.

Scope: Proposals shall address only one of the following issues. All proposals should facilitate the market uptake of solutions developed through industrially-driven multidisciplinary consortia.

The Commission considers that proposals requesting a contribution from the EU of between EUR 2 and 8 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts. Related environmental and safety risks should be assessed for all proposed actions.



Proposals should develop solutions, proving concept and feasibility at the level of Technology Readiness Levels (TRL) 4-6; please see part G of the General Annex.

**a) [2014] Mining of small and complex deposits and alternative mining**

Proposals should develop new sustainable concepts and technological solutions, including alternative approaches, for mining of small, complex or difficult to access mineral deposits, including mining wastes and abandoned mining sites, particularly addressing the challenges of accessibility, industrial viability and environmental impacts. Proposals should include the participation of SMEs, as far as possible.

**b) [2014] Flexible processing technologies**

Proposals should develop new integrated sustainable processing concepts and systems with higher technical, economic, energy, health, safety and environmental performance and flexibility, versatility, and where appropriate mobility and modularity, for processing and refining of different raw materials from low grade and/or complex feeds with changing composition and logistically distributed material sources along all processing steps to refining. Proposals should focus on processing and refining of feeds containing ores, industrial and construction minerals, and wood-based fibres, if justified also with secondary materials feeds.

**c) [2015] Deep mining on continent and in sea-bed**

Proposals should develop new highly-automated technological sustainable solutions for deep mining on the continent and in the sea bed combined with *in-situ* processing of minerals, particularly addressing the challenge of industrial viability, the exposure of workers underground and the impact on the continental and marine environment and reducing the amount of waste rock to be transported. Related raw materials, marine and maritime policies are to be taken into account.

**d) [2015] New sustainable exploration technologies and geomodels**

Proposals shall address one or both of the following issues:

- develop new or improved highly efficient and cost-effective, sustainable exploration technologies, such as new drilling techniques, integrated drilling and analytical technologies, down-hole and cross-hole sensing, 3D and 4D geochemical and geophysical (seismic, gravimetric, magnetic, electrical and electromagnetic), automation, robotics, and other relevant tools;
- develop new geo-models of mineral deposits or belts formation, interpreting in a useful form the data and information obtained from integrated geological, geophysical, geochemical and other methods, with the aim of increasing knowledge on mineral deposit/belt types and decreasing exploration costs (such as the number of expensive deep drills needed).

**e) [2015] New metallurgical systems**

Proposals should develop a design and elements of an integrated sustainable metallurgical system (including pyro-, hydro-, bio-, electro-chemistry) for metals processing and refining, maximising metal recovery yield and minimising energy consumption and the environmental footprint, while ensuring the economic viability of the entire process. Upstream (pre-processing) and down-stream (treatment/use of metallurgical wastes such as slags, dusts, effluents) interfaces should also be considered.

**Expected impact:** In the longer term pushing the EU to the forefront in the areas of sustainable exploration, mining and processing technologies and solutions. Improved competitiveness and creation of added value and new jobs in materials producing and downstream industries. Unlocking a substantial volume of various raw materials within the EU. In the short to medium term enabling the better efficiency of exploitation of raw materials' resources and increasing the range and yields of recovered raw materials. Reduced exploration costs for the industry through new cost-effective exploration technologies. Improved competitiveness and creation of numerous new jobs in mining and equipment manufacturing industries. Improved economic viability and investment security of mining operations. Increased process efficiency (including water and energy consumption) and reduced environmental footprint. Contribution to achieving the objectives of the EIP on Raw Materials.

**Type of action:** Research and innovation actions

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

**SC5-12-2014/2015: Innovative and sustainable solutions leading to substitution of raw materials**

**Specific challenge:** High-tech products, including electric and electronic equipment, green energy technologies or extreme applications, contain substantial amounts of certain Critical Raw Materials (CRM). Although the amount of CRM per product in general is very low, the huge number of products manufactured makes the total amounts very impressive. The prices and availability of CRM varies in time. There is therefore a need to find alternative solutions to replace certain CRM in concrete applications, or to diversify the supply of raw materials sources. Substitution of CRMs can also increase the recyclability of waste products, allowing for more efficient processes and reduce environmental impacts.

This specific challenge is identified in the Priority Area 'Substitution of raw materials' of the European Innovation Partnership (EIP) on Raw Materials.

**Scope:** Proposals should develop solutions proving concept and feasibility at the level of TRL 3-5; please see part G of the General Annexes.

Related environmental and safety risks should be assessed for all proposed actions.

The Commission considers that proposals requesting a contribution from the EU of between EUR 2 to 5 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Proposals shall address only one of the following issues:

**a) [2014] Materials for electronic devices:** development of innovative and sustainable solutions for the appropriate substitution of critical and scarce raw materials in electronic devices, including substitution of indium in transparent conductive layers and substitution of CRMs in light sources, targeting appropriately materials and applications that are difficult to recycle and where there are limited prospects to increase primary supply within the EU. Proposals should actively involve end users from a variety of concerned sectors such as touch screen, flexible electronics, solar energy, lighting and the

provision and effective communication of trustworthy and timely science-based information. Enhanced impact of research and innovation activities through better identification of R&I priorities, improved coordination of EU and Member State research and innovation programmes and funded activities, and synergies with international research and innovation programmes. Evidence-based R&I policy-making at EU and national/ regional as well as international levels; knowledge-based support to business management decisions; synergy between international, EU, national and regional programmes; recommendations for European Semester.

Type of action: Coordination and support actions

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*

### **SC5-20-2014/2015: Boosting the potential of small businesses for eco-innovation and a sustainable supply of raw materials**

Specific challenge: Innovative SMEs have been recognised as being able to become the engine of the green economy and to facilitate the transition to a resource efficient, circular economy. They can play an important role in helping the EU to exit from the economic crises and in job creation. The potential of commercialising innovative solutions from SMEs is however hindered by several barriers including the absence of the proof of concept, the difficulty to access risk finance, the lack of prototyping, insufficient scale-up studies, etc. Growth therefore needs to be stimulated by increasing the levels of innovation in SMEs, covering their different innovation needs over the whole innovation cycle.

Innovative SMEs should be supported and guided to reach and accelerate their full green growth potential. This topic is targeted at all types of eco-innovative<sup>70</sup> SMEs in all areas addressing the climate action, environment, resource efficiency and raw materials challenge, focusing on SMEs showing a strong ambition to develop, grow and internationalise. All kinds of promising ideas, products, processes, services and business models, notably across sectors and disciplines, for commercialisation both in a business-to-business (B2B) and a business-to-customer (B2C) context, are eligible.

Scope: The SME instrument consists of three separate phases and a coaching and mentoring service for beneficiaries. Participants can apply to phase 1 with a view to applying to phase 2 at a later date, or directly to phase 2.

**In phase 1**, a feasibility study shall be developed verifying the technological/practical as well as economic viability of an innovation idea/concept with considerable novelty to the industry sector in which it is presented (new products, processes, design, services and technologies or new market applications of existing technologies). The activities could, for example, comprise risk assessment, market study, user involvement, Intellectual Property (IP) management, innovation strategy development, partner search, feasibility of concept and the like to establish a solid high-potential innovation project aligned to the enterprise strategy and with a European dimension. Bottlenecks in the ability to increase profitability of the enterprise through innovation shall be detected and analysed during

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<sup>70</sup> [http://ec.europa.eu/environment/eco-innovation/index\\_en.htm](http://ec.europa.eu/environment/eco-innovation/index_en.htm)

phase 1 and addressed during phase 2 to increase the return in investment in innovation activities. The proposal should contain an initial business plan based on the proposed idea/concept.

The proposal should give the specifications of the elaborated business plan, which is to be the outcome of the project and the criteria for success.

Funding will be provided in the form of a lump sum of EUR 50.000. Projects should last around 6 months.

**In phase 2**, innovation projects will be supported that address the Societal Challenge 'Climate action, environment, resource efficiency and raw materials' and that demonstrate high potential in terms of company competitiveness and growth underpinned by a strategic business plan. Activities should focus on innovation activities such as demonstration, testing, prototyping, piloting, scaling-up, miniaturisation, design, market replication and the like aiming to bring an innovation idea (product, process, service etc) to industrial readiness and maturity for market introduction, but may also include some research. For technological innovation a Technology Readiness Level of 6 or above (or similar for non-technological innovations) are envisaged; please see part G of the General Annexes.

Proposals shall be based on an elaborated business plan either developed through phase 1 or another means. Particular attention must be paid to IP protection and ownership; applicants will have to present convincing measures to ensure the possibility of commercial exploitation ('freedom to operate').

Proposals shall contain a specification for the outcome of the project, including a first commercialisation plan, and criteria for success.

The Commission considers that proposals requesting a contribution from the EU of between EUR 0.5 and 2.5 million would allow phase 2 to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts. Projects should last between 12 and 24 months.

In addition, in **phase 3**, SMEs can benefit from indirect support measures and services as well as access to the financial facilities supported under Access to Risk Finance of this work programme.

Successful beneficiaries will be offered coaching and mentoring support during phase 1 and phase 2. This service will be accessible via the Enterprise Europe Network and delivered by a dedicated coach through consultation and signposting to the beneficiaries. The coaches will be recruited from a central database managed by the European Commission and have all fulfilled stringent criteria with regards to business experience and competencies. Throughout the three phases of the instrument, the Network will complement the coaching support by providing access to its innovation and internationalisation service offering. This could include, for example, depending on the need of the SME, support in identifying growth potential, developing a growth plan and maximising it through internationalisation; strengthening the leadership and management skills of individuals in the senior management team and developing in-house coaching capacity; developing a marketing strategy or raising external finance.

Expected impact:

- Enhancing profitability and growth performance of SMEs by combining and transferring new and existing knowledge into innovative, disruptive and competitive solutions seizing European and global business opportunities.
- Market uptake and distribution of innovations tackling the specific Challenge of 'Climate action, environment, resource efficiency and raw materials' in a sustainable way.
- Increase of private investment in innovation, notably leverage of private co-investor and/or follow-up investments.
- The expected impact should be clearly described in qualitative and quantitative terms (e.g. on turnover, employment, market seize, IP management, sales, return on investment and profit).

Type of action: SME Instrument (70%)

*The conditions related to this topic are provided at the end of this call and in the General Annexes.*