

Sector: Environment and Circular Economy

Areas of Intervention & Priorities 2021-2027

Areas of Intervention	Priorities
4.1 Waste Management	4.1.1. Management and development of systems for the segregation of different types and distinct waste and residue streams – solid, liquid and gaseous (e.g. agricultural and livestock waste, marine litter, forestry, toxic, polymer, industrial, electronic, textile, packaging, construction and demolition waste, etc.).
	4.1.2. Developing methods and implementing systems for waste/residue treatment, and their upcycling into added-value products
	4.1.3. Developing and implementing innovative waste management technologies, infrastructures and systems using digital tools to optimize collection and treatment.
	4.1.4. Promoting waste prevention and reuse of materials practices
4.2 Soil and Water Health	4.2.1. Soil degradation and (sea, coastal, inland) water pollution prevention and mitigation systems
	4.2.2. Soil and (sea, coastal, inland) water remediation systems
	4.2.3. Integrated management systems (identification, monitoring, response) for prevailing phenomena of natural resources degradation (salinity, nutrients, heavy metals, etc.).
	4.2.4. Integrated management systems (identification, monitoring, response) for emerging contaminants (including PFAS) and micro-plastics in natural resources.
	4.2.5. Implementing innovative solutions to improve quality of soil resources and protect water resources by using natural / treated materials.
4.3 Air Pollution	4.3.1. Improving air quality monitoring (establishment of new, or expansion and specialization of existing, networks).
	4.3.2. Developing existing and new sensors and integrated parameter-recording systems for air quality.
	4.3.3. Developing air quality forecast and pollutant source identification methods and infrastructures using terrestrial and satellite measurements.
	4.3.4. Quantitative monitoring of gaseous pollutant and aerosol emissions from land and maritime transport / manufacturing industries / households, of the various sources' share of emissions, and developing/implementing mitigation technologies

	4.3.5. Exploring technological and non-technological solutions to address air pollution in conjunction with climate change mitigation and adaptation actions.
	4.3.6. Innovative exhaust gas treating processes
4.4 Biodiversity Protection, Enhancement and Sustainable Management	4.4.1. Developing practices and methods, using nature-based solutions (NBS), to preserve/enhance biodiversity, boost the economy and improve public health protection; Surveying their impacts on implementation areas.
	4.4.2. Establishing and developing gene banks and collections (including for microorganisms), using total DNA-sequenced culture collections in selected species; Developing related institutional framework.
	4.4.3. Bioprospecting and development of high added-value products.
4.5 Climate Change Mitigation and Adaptation and Natural Disaster Response	4.5.1. Climate change impact assessment and response actions based on existing and emerging low-environmental-footprint technologies
	4.5.2. Developing/Improving monitoring of greenhouse gas emissions and atmospheric concentrations.
	4.5.3. Actions for assessing and strengthening the resilience of critical cyber-physical infrastructures and systems against natural/man-made disasters and pressures due to climate change.
	4.5.4. Response actions to address impacts of natural/man-made disasters on the physical environment and the socio-technical systems with an emphasis on social resilience.
	4.5.5. Development and implementation of advanced CO2 capture and safe long-term storage or utilization technologies by existing industrial and other facilities, also taking into account the role of forest systems in reducing CO2.
4.6 Environment Observatories – Ecosystem-based Approach to Sustainable Development	4.6.1. Developing permanent environment observatories for environmental / socio-economic big data (climate parameters, biodiversity, historic and cultural aspects, etc.) with an aim of conducting long-term and high-frequency measurements in different contexts; Interoperability with similar observatories is desirable.
	4.6.2. Developing computational models for utilization of big data collected by observatories, including foresight, life-cycle analysis and digital twin approaches.
	4.6.3. Analysis/management of satellite data on the environment and natural disasters (natural and man-made environment, special-interest areas).
	4.6.4. Certification of measurements-results based on processing and analysis of environmental parameter monitoring big data (including satellite, biodiversity data, etc.)

4.7 Circular Economy / Strategies, Operating Models	4.7.1. Analysis (characteristics, comparison) and implementation of circular economy concepts, such as Circular Economy, Reverse Logistics, C2C, Regenerative Design, etc.
	4.7.2. Circular, Smart and Healthy Cities with a low environmental footprint based on circular economy principles; Infrastructure development to enable circularity using innovative technologies for digitalization and implementation of advanced material/waste stream collection and reuse systems.
	4.7.3. Developing methods for smart use of products (intensification of product use, sharing / multi-operability planning).
	4.7.4. Developing product life cycle-extending methods (reuse, repair, remanufacture, repurposing, etc.).
	4.7.5. Developing methods for usable applications of materials through raw material recycling and recovery.
	4.7.6. Development of circular economy and bio-economy business models.
	4.7.7. Development and optimization of full life-cycle value chains (food products, plastics, constructions, materials, etc.) with the involvement of citizens, environmental and other civil society organizations.
	4.7.8. Building platforms for product and service provision sharing, as well as for circular economy advisory support
	4.7.9. Building platforms and systems to enable seamless participation of citizens and businesses in the circularity of material streams and product production/consumption; Studying new forms of social solidarity economy and infrastructure sharing (collaborative economy), entrepreneurship and social life/organization.
	4.7.10. Improving natural resource management in urban areas (water, soil, space, transports, urban agriculture, urban green spaces) and implementing circularity in urban planning
	4.7.11. Design and refurbishment of new or existing buildings under the “Renovation Wave” initiative (using RES, recycled and bio-materials) using tools to optimize these procedures.
	4.7.12. Promoting low environmental footprint sustainable technologies through reuse of resources in island and coastal areas.
4.8 Industrial Symbiosis / Secondary Raw Materials	4.8.1. Industrial symbiosis actions aimed at conserving resources, protecting the environment and boosting the competitiveness of the Greek economy.
	4.8.2. Using residues from secondary raw material production to manufacture high added-value products.
	4.8.3. Promoting and developing low environmental footprint technologies for the production of chemical

	products, materials and fuels from CO2 generated by energy-intensive industries.
	4.8.4. Development of product manufacturing technologies from secondary materials using circular economy principles.
	4.8.5. Analysis of standards for secondary raw materials and development of product manufacturing technologies from secondary materials using circular economy principles to protect both the environment and public health.
	4.8.6. Drawing up standards for secondary raw materials to be used for end-of-waste status
	4.8.7. Industrial water reuse or promotion of a water-centric symbiosis between industry, urban areas and agricultural production
4.9 Ecological Design for safety and sustainability	4.9.1. Application of ELV depollution modelling
	4.9.2. Interaction between environmental pressures and public health, and sound management of their relation taking into account the socio-economic factors affecting it as well as environmental and social justice/equality aspects
	4.9.3. Product and material labelling (design of appropriate and easy-to-read labelling both for by-products destined for recycling, such as agricultural, forestry, livestock, aquatic biomass, and for new products, based on whether they are biodegradable or manufactured from recycled materials), and development of related certification standards.
	4.9.4. Addressing the public health and environmental hazards posed by toxic substances in a circular economy context by transitioning to safe and sustainable-by-design chemical products, including sustainable bio-based chemical products and other alternative options to replace substances of concern.
4.10 Interdisciplinary Interventions	4.10.1. Climate services to support the provided tourism product and its adaptation to climate change
	4.10.2. Actions to address the harmful effects of wildfires, heavy rainfall and flooding
	4.10.3. Actions to assess and strengthen infrastructure resilience against extreme weather focusing on the development and application of nature-based solutions
	4.10.4. Development of sustainable interventions in waste management in a circular economy context taking into account public health consequences
	4.10.5. Promoting use of secondary (refuse-derived) fuels in energy-intensive industries.
	4.10.6. Transition to a climate-neutral, sustainable and digital industry based on the principles of circular economy.
	4.10.7 Development of nature-based solutions.

	4.10.8. Utilization of the Internet of Things (IoT) and application of AI tools for integrated natural resource and waste management.
	4.10.9. Drawing-up and application of criteria for green public procurement contracts based on the principles of circular economy and corporate social responsibility (CSR).
	4.10.10. Development of sustainable interventions to drastically reduce greenhouse gas (GHG) emissions by air and maritime transport.
	4.10.11 Promotion of renewable gaseous fuel production.
	4.10.12. Utilization of AI tools in integrated natural resource management.