## LIFE PROGRAMME – LIST OF PRIORITY TOPICS FOR 2025–2027

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Acronym	Description
BRPs	Eco-design for Sustainable Products Regulation
BREFs	Best available techniques reference documents
CO2	Carbon dioxide
CSA	Community supported actions
DEEP	De-risking Energy Efficiency Platform
EED	Energy Efficiency Directive
EEFIG	Energy Efficiency Financial Institutions Group
ELVs	End-of-life vehicles
EMAS	Eco-management and audit scheme
EPCs	Energy performance certificates
EPREL	European products registry for energy labelling
ESCOs	Energy Service Companies
ESPR	Eco-design Sustainable Products Regulation
EU	European Union
EU ETS	EU Emissions Trading Scheme
ІСТ	Information and Communications Technology
IUCN	International Union for Conservation of Nature
LIFE	L'instrument financier pour l'environnement (Programme for Environment and Climate Action)
LULUCF	Land use, land-use change, and forestry
MOOCs	Massive open online courses
NEC	National emission reduction commitments
NGO	Non-governmental organization
NMVOC	Non-methane volatile organic compounds
NOx	Nitrogen oxides
OEFSRs	Organisation environmental footprint sectoral rules
OECD	Organisation for Economic Co-operation and Development
PEFCRs	Product environmental footprint category rules
PFAS	Per- and polyfluoroalkyl substances
PM	Particulate matter
RED	Renewable Energy Directive
SMEs	Small and medium-sized enterprises
SECAPs	Sustainable Energy and Climate Action Plans
SDGs	Sustainable Development Goals
SRI	Smart Readiness Indicator
SVHC	Substances of Very High Concern
UNECE	United Nations Economic Commission for Europe

#### 1. Sub-programme nature and biodiversity

#### 1.1. EU NATURE AND BIODIVERSITY

Under the priority areas "EU Nature and Biodiversity", projects to be financed have to lead to a smart and outcome-based implementation of the EU nature and biodiversity legislation<sup>1</sup> and the EU biodiversity strategy for 2030<sup>2</sup>. Only wild flora and fauna and natural and semi-natural habitats may be targeted by LIFE Nature and Biodiversity projects. They shall fall under at least one of the two following areas of intervention:

#### INTERVENTION AREA: "SPACE FOR NATURE"

Any project aimed at improving the condition of species or habitats through **area-based conservation or restoration** measures falls within the eligible scope of the intervention area "Space for Nature". This may include, for example:

- projects restoring or improving natural or semi-natural habitats, or habitats of species, both within and outside existing protected areas;
- projects creating additional protected areas or improving the biodiversity focus and contribution of existing protected areas, through conservation and management measures;
- projects creating ecological corridors or developing other green infrastructure, enhancing the resilience of the Trans-European Nature Network;
- projects testing or demonstrating new site management approaches,
- projects acting on pressures, both within and outside Natura 2000, affecting EU natural or semi-natural habitats, or habitats of protected species.

#### INTERVENTION AREA: "SAFEGUARDING OUR SPECIES"

Any project aimed at improving the condition of species (or, in the case of invasive alien species, reducing their impact) through any relevant activities other than areabased conservation or restoration measures falls within the scope of the intervention area "Safeguarding our species". Considering the broad range of threats that may act on species in addition to the degradation of their habitats, such projects may apply a wide range of relevant measures spanning from hard infrastructural works<sup>3</sup> to awareness raising of stakeholders.

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<sup>&</sup>lt;sup>1</sup> <u>Birds Directive (Directive 79/409/EEC)</u>, the <u>Habitats Directive (Council Directive 92/43/EEC)</u> and the <u>Invasive Alien Species Regulation</u> (Regulation (EU) 1143/2014).

<sup>&</sup>lt;sup>2</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives. (COM/2020/380 final).

<sup>&</sup>lt;sup>3</sup> Such as infrastructures to reduce bird mortality on electric power lines, the construction of fish passes, etc..

Under both areas of intervention, projects addressing different nature and biodiversity policy priorities are expected to have clearly defined specific outcome-based targets.

In the evaluation process the following principles will apply:

- For proposals targeting species covered by the EU Birds Directive<sup>4</sup>, priority is given to those that are considered as such by the Committee for Adaptation to Technical and Scientific Progress set up pursuant to Article 16 of the same Directive.
- For proposals targeting species and habitats covered by the EU Habitats Directive<sup>5</sup>, priority is given to:
  - those that are clearly targeting habitats or species in unfavourable and declining conservation status<sup>6</sup>, in particular when their status is unfavourable bad and declining (U2-) both in the EU and at national biogeographical region(s) level, where the project is taking place<sup>7</sup>;
  - projects that strive to minimize conflicts and promote coexistence between humans and large carnivores.
- For species and habitats not covered by EU Nature legislation, priority is given to proposals clearly targeting those that are in higher extinction risk categories (in particular: endangered or worse) in the relevant most recent EU red lists of species and habitats. In cases of species and habitats not covered by the EU red lists, the most up-to date published version of the European or Global IUCN Red Lists has to be considered as priority. The latter applies both to species groups not covered by EU red lists, and to species and habitats in ORs, OCTs and associated countries to the LIFE programme.

Further prioritisation of the proposals will be based on the policy priorities below.

#### 1.1.1 Priorities stemming from EU nature and biodiversity legislation

Priority is given to proposals for improving the conservation status or trends of species and habitats of EU interest <sup>8</sup>, notably where:

1. They are implementing objectives and measures outlined in national or regional Prioritized Action Frameworks (PAFs) under the EU Habitats Directive or national restoration plans under EU Nature Restoration Regulation<sup>9</sup> or in other plans (such as species action plans) or strategies adopted at international, national, regional or multiregional level by nature and biodiversity authorities that implement EU nature

<sup>6</sup> webtool for the biogeographical assessments of conservation status of species and habitats under Article 17 of the Habitats Directive.

<sup>&</sup>lt;sup>4</sup> Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

<sup>&</sup>lt;sup>5</sup> Council Directive 92/43/EEC

<sup>&</sup>lt;sup>7</sup> By way of exception from the above rule, considering the quite recent EU accession of Croatia and the high number of unknown status and/or trend assessments in the first Croatian national report under Article 17 (2019), only the EU biogeographical region level assessments will be considered for the prioritization of projects targeting relevant habitats and species in that Member States.

<sup>&</sup>lt;sup>8</sup> Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (C/2021/7301 final).

<sup>&</sup>lt;sup>9</sup> Regulation (EU) 2024/1991 of the European Parliament and the Council on nature restoration.

- and/or biodiversity policy or legislation and that include specific and measurable actions, or targets, with a clear timeline and budget;
- 2. Their activities focus on the implementation of conservation objectives for existing Natura 2000 sites. In the case of territories of EU Member States and associated countries to which the Birds and Habitats Directives do not apply, activities should focus on similar networks of protected areas, notably where such conservation objectives are clearly established, improving the condition of species and habitats for which the sites are designated;
- 3. Their activities focus on reducing the deliberate or accidental killing of the targeted species (e.g., poisoning, illegal killing, by-catch), preventing stakeholder conflicts, improving acceptance and promoting co-existence with protected species.

In addition, for the proposals addressing invasive alien species, priority is given to the following species:

- 4. The species included in the list of invasive alien species of Union concern pursuant to Article 4(1) of the Regulation (EU) No 1143/2014<sup>10</sup>, and/or invasive alien species of Member State or regional concern pursuant to Articles 12 and 11 of the Regulation respectively; or
- 5. other invasive alien species that negatively affect the conservation status or trends of species and habitats of EU interest, other species protected under EU legislation, or listed as threatened species in EU or global red lists (the latter for species groups and/or countries and regions not covered by EU red lists)

#### 1.1.2. Priorities stemming from the EU Biodiversity Strategy for 2030

Priority based on the EU biodiversity strategy for 2030 is given to proposals addressing the following objectives:

#### 1. Establishing a coherent network of protected areas

- a) Proposals contributing to the target of legally protecting<sup>11</sup> a minimum of 30% of the EU's land area and 30% of the EU sea area, and on integrating ecological corridors, as part of a true Trans-European Nature Network.
- b) Proposals contributing to the target of strictly protecting at least a third of the EU's protected areas, including all remaining EU primary and old-growth forests.

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<sup>&</sup>lt;sup>10</sup> Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22

<sup>11</sup> Commission Staff Working Document "Criteria and guidance for protected areas designations" SWD(2022)23 final.

## 2. Implementing EU nature restoration targets for species and habitats

- a) Proposals that are focused on implementing national commitments or pledges, for improving the status of species and habitats covered by the EU nature directives, including through trans-national or trans-boundary approaches.
- b) Proposals that contribute to the implementation of national restoration plans (NRPs) under the EU Nature Restoration Regulation<sup>12</sup>, and in particular:
  - Proposals that contribute to bringing into good condition areas of habitat types covered by the EU Nature Restoration Regulation that are currently not in good condition.
  - Proposals that help re-establish habitat types covered by the EU Nature Restoration Regulation in areas not covered by these habitat types, with the aim of reaching their favourable reference area.

## 3. Restoring degraded and carbon-rich ecosystems and/or prevent and reduce the impact of natural disasters

- a) Proposals with a focus on restoring degraded carbon-rich ecosystems. For forests, this includes proposals aimed at forest restoration to primary forest structure, composition, and functioning<sup>13</sup>.
- b) Proposals with a focus on deploying Green and Blue Infrastructure in line with the EU guidance<sup>14</sup> as well as other nature-based solutions and restoration actions that would help prevent or reduce the impact of natural disasters, including river and wetland restoration projects<sup>15</sup>. Also, proposals for restoring areas affected by desertification, that aim to improve land and water management through ecosystem-based approaches, preventing the impacts of flash floods in arid, semi-arid and dry sub-humid areas, and therefore increasing ecosystem resilience to both floods and droughts.

#### 4. Improving the health and resilience of managed forests

a) Proposals demonstrating "closer to nature forestry" practices<sup>16</sup>, meaning practices that try to achieve management objectives with necessary human intervention to preserve biodiversity, prevent wildfires and combine conservation with productivity objectives.

<sup>&</sup>lt;sup>12</sup> Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869.

<sup>&</sup>lt;sup>13</sup> Guidelines for Defining, Mapping, Monitoring and Strictly Protecting EU Primary and Old-Growth Forests (europa.eu).

<sup>&</sup>lt;sup>14</sup>EU Guidance document on a strategic framework for further supporting the deployment of EU-level green and blue infrastructure SWD(2019) 193 final

<sup>&</sup>lt;sup>15</sup> See below par. 2.2.2 of the sub-programme Circular Economy and Quality of Life for further priorities.

<sup>&</sup>lt;sup>16</sup> Guidelines on Biodiversity-Friendly Afforestation, Reforestation and Tree Planting (europa.eu).

b) Proposals ensuring reinforced sustainable forest management for climate adaptation and forest resilience. This includes financial incentives for forest owners and managers for improving the quantity and quality of EU forest.

#### 5. Reversing the decline of pollinators

- a) Proposals to support implementation of Priority II "Improving pollinator conservation and tackling the causes of their decline" of the revised EU Pollinators Initiative, and in particular the implementation of the three Action Plans for the most threatened pollinator species<sup>17</sup>.
- b) Proposals for the restoration of habitats important for the wild pollinators' lifecycle; such proposals need to outline how the improvement of their associated pollinator communities is taken into account by the project activities.
- c) Proposals that, even if they do not directly address pollinators, measure the project's success against, among others, the improvement of pollinator communities<sup>18</sup>.

#### 6. Bringing nature back to agricultural land

a) Project proposals that demonstrate innovative approaches to restoring high-biodiversity landscape features in agroecosystems that also bring benefits for farmers and communities (such as preventing soil erosion and depletion, land degradation and desertification, filtering air and water, and supporting climate adaptation) and communicate such approaches.

## 7. Recreating functional ecosystems and bringing nature back in urban and peri-urban areas

a) Project proposals for the restoration of healthy and biodiverse ecosystems in urban green areas and peri-urban areas, as well as for the development of green infrastructure and nature-based solutions that bring about significant benefits for biodiversity while providing solutions to urban challenges and increasing access to nature, especially if they implement biodiversity objectives and measures included in urban greening plans and/or in urban biodiversity strategies and plans and/or in green infrastructures strategies.

## 8. Restoring the good environmental status of marine and freshwater ecosystems

a) Proposals addressing the restoration of marine and freshwater ecosystems and improving their conservation status, including proposals for restoring free-flowing rivers, removal of obsolete barriers and floodplains restoration.

<sup>&</sup>lt;sup>17</sup> https://wikis.ec.europa.eu/display/EUPKH/Action+Plans.

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<sup>&</sup>lt;sup>18</sup> Indicators for improvement could be based, for example, on measuring changes in the diversity or abundance of Apoidea, Syrphidae, Lepidoptera or any other relevant taxonomic groups.

# 1.2. AWARENESS RAISING, COMPLIANCE ASSURANCE AND ACCESS TO JUSTICE RELATED TO NATURE AND BIODIVERSITY LEGISLATION

With regard to awareness-raising projects, priority is given to proposals **improving awareness** of the benefits of nature conservation, and in particular on the Natura 2000 network of protected sites established under the EU Birds and Habitats Directives. Proposals will need to convincingly argue how they will achieve an improved awareness<sup>19</sup> amongst the target group(s) and ensure the widest possible coverage for the specific issue(s) addressed.

In terms of projects supporting **access to justice** and **compliance assurance**, priority is given to proposals:

- 1. establishing new or, where in place, enhancing existing cross-border, national or regional networks of compliance assurance practitioners or experts<sup>20</sup>; and/or establishing or, where in place, improving professional qualifications and training<sup>21</sup> to improve compliance with binding EU legal instruments on nature and biodiversity, through promoting, checking, and enforcing compliance<sup>22</sup>, and/or
- 2. using a mix of administrative law, criminal law and environmental liability to apply the polluter pays principle, and/or
- 3. developing and implementing national actions under the revised EU action plan against wildlife trafficking in the Commission Communication COM(2022) 581 and the relevant legislation;
- 4. developing and implementing strategies and policies<sup>23</sup> and/or developing and using innovative tools and actions to promote, monitor and enforce compliance with binding EU instruments on nature and biodiversity<sup>24</sup>, or to ensure the application of the polluter pays principle through environmental liability; and/or
- 5. improving relevant information systems operated by public authorities; and/or

<sup>&</sup>lt;sup>19</sup> Awareness level is defined here as the proportion of target audience who knows of the idea/term/product/concept/environmental challenge/etc. that is the subject of the proposed LIFE project's work.

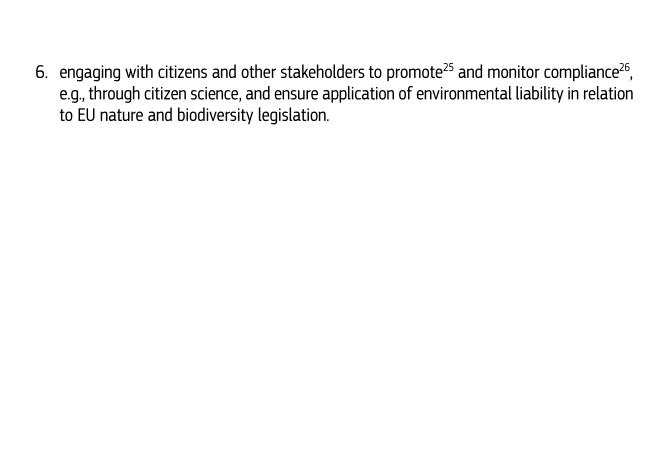
<sup>&</sup>lt;sup>20</sup> Environmental compliance assurance practitioners can include those working for authorities and bodies with compliance assurance responsibilities such as local, regional, police and customs authorities, agencies and inspectorates, supreme public audit bodies and the judiciary. They can also include non-governmental organisations and academics and researchers specialised in one or more aspects of compliance assurance.

<sup>&</sup>lt;sup>21</sup> Projects should ensure academic credentials and maximise the potential of information technology through means such as webinars and massive open online courses (MOOCs) to allow distance learning to reach as many practitioners as cost-effectively as possible.

<sup>&</sup>lt;sup>22</sup> Promotion systems and techniques could involve the use of guidance, advisory services, awareness-raising campaigns, partnership agreements, or self-monitoring systems that assist duty-holders to comply.

<sup>&</sup>lt;sup>23</sup> Strategies and policies are aimed at high-level organisation of activities and interventions, especially risk-based ones.

<sup>&</sup>lt;sup>24</sup> Monitoring systems and techniques could relate to site inspections, surveillance (including through use of satellites and drones), spot checks, intelligence-gathering, industry analysis, police investigation, data analysis and environmental audits. Follow-up and enforcement techniques can have a similarly wide coverage.



<sup>&</sup>lt;sup>25</sup> Promoting effective public participation and access to justice in nature and biodiversity policy and legislation-related matters amongst the public, lawyers, the judiciary, public administrations or other stakeholders with a view to improving knowledge, understanding and application of effective means of public participation and/or access to justice, with a particular focus on protecting nature and biodiversity via the nature, biodiversity, water and environmental liability instruments. Projects should draw on existing modules and know-how in the area of environmental law training developed by the Commission and the Commission Notice on access to justice in environmental matters and related materials.

<sup>&</sup>lt;sup>26</sup> Electronic complaint-handling systems, hot lines, citizen observatories and other citizen science platforms can all facilitate citizen engagement. Citizen science platforms may, amongst other things, allow competent national, regional and local authorities to engage citizens in state-of-the-environment and other forms of monitoring, while also generating more harmonized and useable data.

## 2. Sub-programme circular economy and quality of life

#### 2.1. CIRCULAR ECONOMY AND WASTE

A circular economy and reduction of waste are core objectives of European environmental policy and have been reinforced through the European Green Deal. In March 2020, the European Commission proposed a new Circular Economy Action Plan<sup>27</sup> resulting in many proposals for updates or new legislation, including on sustainable batteries, waste shipments, sustainable products, empowerment of consumers, revised rules for construction products, the promotion of the repair of goods, rules on green claims, and revised EU rules on packaging and packaging waste. The European Commission also revised the circular economy monitoring framework and published in 2022 a progress report of the updated EU Bioeconomy Strategy & Action Plan. New rules of sustainable batteries<sup>28</sup>, waste shipments<sup>29</sup> and Ecodesign requirements<sup>30</sup> have been adopted. An agreement in respect of packaging was reached. In the future, batteries have a low carbon footprint, use minimal harmful substances, need less raw materials from non-EU countries, and are collected, reused, and recycled to a high degree in Europe. Export of plastic waste from the EU to non-OECD countries will normally be prohibited.

Under the priority area "circular economy and waste" The LIFE Programme aims at supporting these new priorities though innovative projects and best practices under the following priority topics. Priority is given to proposals addressing a maximum of two of the following topics.

#### 2.1.1. Recovery of Resources from Waste

Priority is given to proposals addressing:

1. Implementing innovative solutions to **support the roll-out of value-added**<sup>31</sup> **recycled materials**, components, or products for the following areas:

<sup>&</sup>lt;sup>27</sup> COM(2020) 98 final.

Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020 and repealing Directive 2006/66/EC.

<sup>&</sup>lt;sup>29</sup> Regulation (EU) 2024/1157 of the European Parliament and of the Council of 11 April 2024 on shipments of waste, amending Regulations (EU) No 1257/2013 and (EU) 2020/1056 and repealing Regulation (EC) No 1013/2006.

<sup>&</sup>lt;sup>30</sup> Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of ecodesign requirements for sustainable products, amending Directive (EU) 2020/1828 and Regulation (EU) 2023/1542 and repealing Directive 2009/125/EC.

<sup>&</sup>lt;sup>31</sup> Value added refers to recycling into high quality products. For the concept see: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions 'Towards a circular economy: <u>A zero waste programme for Europe, COM(2014)</u> 398 final.

- a) Separate collection, disassembly, treatment and recycling of electrical and electronic equipment (WEEE), in particular but not limited to photovoltaic panels, smartphones, tablets and computers;
- b) Separate collection, and recycling of batteries and accumulators;
- c) Dismantling, remanufacturing and recycling of End-of-Life Vehicles (ELVs) and End-of-Life Ships;
- d) Selective collection and recycling of materials used in buildings and construction;
- e) Sorting and recycling of plastics<sup>32</sup>;
- f) Separate collection and recycling of bio-waste<sup>33</sup>;
- g) Separate collection, preparation for re-use and recycling of textiles, including mattresses and footwear;
- h) Recycling of composite and multilayer materials in particular but not limited to carbon or glass fibres;
- i) Recovering and/or reusing of critical raw materials from waste;
- j) Sorting and recycling of packaging;
- 2. Implementing innovative solutions for the **identification**<sup>34</sup>, **tracking**, **separation**, **prevention**, **and decontamination of waste containing hazardous substances**, to enable: (1) value-added recycling of the treated waste and safe disposal of the hazardous substances, or (2) a reduction in the scale of the problem. Special attention should be given to those substances considered as the most harmful for the environment and human health, also known as substances of concern<sup>35</sup>. We invite applicants to pay particular attention to asbestos and other hazardous substances from demolition waste.

#### 2.1.2. Circular Economy and the Environment

Priority is given to proposals addressing the following:

<sup>34</sup> Including characterisation and product passport approaches.

<sup>&</sup>lt;sup>32</sup> This includes plastic packaging and micro-plastic.

<sup>&</sup>lt;sup>33</sup> Including anaerobic digestion and composting.

<sup>35</sup> Substances having a chronic effect for human health or the environment (Candidate list in REACH and Annex VI to the CLP Regulation) but also those which hamper recycling for safe and high quality secondary raw materials.

- 1. The implementation of business and consumption models, systems, or solutions<sup>36</sup> to support value chains<sup>37</sup>, including bio-based ones<sup>38</sup>, particularly the key product value chains set out in the new EU Action Plan for the Circular Economy<sup>39</sup>, aiming at **reducing or preventing resource use and waste**<sup>40</sup>.
- 2. Implementation and application of **new models for improved extended producer responsibility schemes**, including eco-modulation of fees.
- 3. Implementation of **designs and plans that mitigate environmental impacts**, at unit or societal level. This can include circular design to increase the lifetime of products/units, for example through improved durability, reparability, reusability, upgradability, and to enable recycling and use of recycled content in new products or the use of sustainable biobased materials to replace fossil-based materials in new products. These designs and plans shall aim at reducing impacts holistically<sup>41</sup> by considering aspects such as: life cycle approach, wide uptake of labelling, green procurement and tracking of raw materials in components and end-user products.
- 4. Solutions (post-design) to support the implementation, transfer and/or uptake of **product durability**, reuse and repair, including upgrading, remanufacturing and the development of (digital) platforms aimed at extending the lifespan of products to facilitate their repairing, refurbishment, reuse and resale.
- 5. Solutions to support the **reduction of single-use products** and increase of reusable products.
- 6. Support to the implementation, transfer and/or uptake of one or more of the following **solutions**:
  - a) Circular business models and practices that promote value retention, limit overproduction, reduce single-use products, optimise product, asset and resource use, including product-as-a-service solutions.

<sup>37</sup> This also included bio-based value chains. See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'A sustainable Bioeconomy for Europe: Strengthening the connection between economy, society and the environment' (COM/2018/673 final)

<sup>&</sup>lt;sup>36</sup> Circular districts involving creation of circular value chains to boost urban economies whilst producing urban and territorial regeneration will be as well considered.

<sup>&</sup>lt;sup>38</sup> See also Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'A sustainable Bioeconomy for Europe: Strengthening the connection between economy, society and the environment' (COM/2018/673 final)

<sup>&</sup>lt;sup>39</sup> A new circular economy action plan for a cleaner and more competitive Europe, COM/2020/98 final. The action plan present the following key product value chains: Packaging, Electronics and ICT, Batteries and Vehicles, Plastics, Textiles, Construction and building, Food, Water and nutrients.

<sup>&</sup>lt;sup>40</sup> The projects dealing in particular with waste prevention, should, as part of their actions and where relevant, involve citizens, through information and awareness on: a) the environmental performance associated with proposed solution throughout its life cycle (to encourage more informed purchases), b) the return, collection and recovery systems available and with respect to the meaning of the labels related to ecological performance and recycling affixed on the products.

<sup>&</sup>lt;sup>41</sup> If the concept requires to apply life cycle assessment, projects have to use the Product Environmental Footprint method. The method is an annex to the <u>Commission Recommendation 2013/179/EU</u> and is expected to be updated through policy based on the version <a href="https://eplca.irc.ec.europa.eu/permalink/PEF">https://eplca.irc.ec.europa.eu/permalink/PEF</a> method.pdf.

- b) Implementation of approaches to increase the demand for secondary raw materials, including through market instruments and incorporation of recycled materials in new products.
- c) Industrial symbiosis and creation of circular value chains, better tracking resources and matching surplus or by-product materials or recyclable waste across industrial sectors.
- d) Application of the Digital Product Passport to enable circular valueretention and optimisation actions, particularly in priority intermediary and end-use product groups<sup>42</sup> based on the reinforcement of knowledge of the value chains for groups of priority products.

The models and/or solutions proposed should ideally consider the environmental performance of the whole value chain<sup>43</sup>, but can equally focus on any specific stage and/or resource (e.g. the water footprint) in the value chain<sup>44</sup>. Particular attention should be given to the involvement and active participation of SMEs.

Priority will be given to projects that minimise or eliminate environmental impact, without simply shifting negative impacts elsewhere or to other stages of the product lifecycle.

## 2.2. ZERO POLLUTION AND SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES<sup>45</sup>

As part of the European Green Deal, and follow up to the Zero Pollution Action Plan, the European Commission proposed many actions to support zero pollution and the sustainable management of natural resources. These include a revision of the Industrial Emissions Directive<sup>46</sup>, a revision of the European Pollutant Release and Transfer Register, a revision of the Ambient Air Quality and Cleaner Air Directive<sup>47</sup> and proposals to reduce microplastics pollution. Even though, negotiations between co-legislators are ongoing, reinforced rules in these areas can be expected.

The LIFE Programme supports innovative solutions to reduce pollution in air, water, soil as well as reduction in exposure to noise, chemicals and industrial emissions. In the priority

<sup>&</sup>lt;sup>42</sup> The EU Digital Product Passport will, as part of the Ecodesign for Sustainable Products Regulation, oblige products to have a scannable data carrier, and for those placing them on the market to make certain data relating to circularity and sustainability available via that data carrier. The objective is to enable circular actions on a B2B, B2C and B2G basis that has previously been impeded by lack of data. Priority product groups will be first in line for delegated acts to establish such requirements.

<sup>&</sup>lt;sup>43</sup> This is directly reflecting the Sustainable Development Goal #12, which calls for sustainable consumption and production patterns. The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provided a shared blueprint for peace and prosperity for people and the planet, at its heart are the 17 Sustainable Development Goals (SDGs): https://sustainabledevelopment.un.org/?menu=1300

<sup>&</sup>lt;sup>44</sup> Projects may include, as an element, the development of data to support value chain thinking. For the development of data on the environmental impacts of different processes, to test the impact of alternative solutions, please refer to previous footnote 31 on Product Environmental Footprint method for life cycle related data.

<sup>&</sup>lt;sup>45</sup> Except nature and biodiversity included in chapter 1

<sup>&</sup>lt;sup>46</sup> <u>Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)</u>

<sup>&</sup>lt;sup>47</sup> Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe

area "zero pollution and sustainable management of natural resources", priority is given to proposals addressing a maximum of two of the following topics.

#### 2.2.1. Air

Projects under this thematic priority should reinforce the implementation of air quality legislation and the National Emission reduction Commitments under the NEC Directive<sup>48</sup>. Projects should refer to reducing air pollutants, particularly particulate matter (PM), nitrogen oxides (NOx), and/or ammonia. If reducing emissions of carbon dioxide (CO<sub>2</sub>) is the primary objective, the projects should be submitted under the sub-programme for Climate Mitigation and Adaptation.

Where not explicitly stated otherwise, air quality projects should generally focus on urban areas, or on approaches for rural areas with a large replicability potential in the EU, in order to cover as many people as possible.

Priority is given to the proposals targeting the following:

- 1. Air quality improvement and emission reduction of PM in areas:
  - a) with high use of solid fuel like biomass, coal, and peat for domestic heating, or
  - b) with high emissions of PM from (re)construction, quarrying, mining, mineral handling, or other dust generating activities, if not covered by the Industrial Emissions Directive, under the condition that they implement one or more of the following:
    - technical<sup>49</sup>,
    - management,
    - innovative regulatory and/or
    - innovative incentive-based solutions<sup>50</sup>.
- 2. **Sustainable road transport mobility** aiming at reducing emissions of air pollutants whose reduction is essential to meet air quality standards and focusing on one or more of the following:
  - a) reduction of emissions of air pollutants during real world driving conditions (e.g. technical measures for vehicles, eco-driving, measurement and surveillance technology);

<sup>&</sup>lt;sup>48</sup> Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC.

<sup>&</sup>lt;sup>49</sup> E.g., fuel pre-treatment, ultra-low dust technologies, high efficiency and clean combustion and control technologies, combinations with no-emission renewable energy, heat storage, lower emission fuel options.

<sup>&</sup>lt;sup>50</sup> Please note that the direct payment of incentives in the form of financial support to third parties is subject to restrictions according to the requirements set in the LIFE model Grant Agreement.

- b) zero-emission two or three wheelers and/or analysis for and implementation on a test scale of related infrastructure needs;
- c) zero-emission vehicles and related infrastructure needs;
- d) innovative use of alternative fuels:
- e) innovative retrofit programmes for vehicles<sup>51</sup>;
- f) alternative drivetrain technology<sup>52</sup>;
- g) innovative technologies to reduce emissions from wear and tear (e.g., brakes, tyres, road surface);
- h) high-impact traffic access systems (such as Low and Zero Emission Zones and road pricing schemes) through advanced access criteria and/or labels, e.g., promoting zero-emission vehicles. Priority will be given to projects in urban areas in order to improve the situation for a maximum number of persons;
- i) the use of innovative logistic or passenger mobility platforms<sup>53</sup>;
- j) innovative solutions to implement and increase low emission transport modes and alternatives such as active mobility (e.g., walking, cycling).
- 3. **Sustainable mobility, other than road transport,** including maritime transport, ports, aviation, and Non-Road Mobile Machinery (NRMM) mobility<sup>54</sup>, including their supporting infrastructure and logistics, propulsion and/or cargo<sup>55</sup>.
- 4. **Reduction of ammonia, non-methane volatile organic compounds (NMVOC), methane and PM emissions from agriculture** in support of the implementation of the UNECE Code of Good Practice for reducing emissions from agriculture<sup>56</sup> and for the emission reduction objectives in Directive 2016/2284<sup>57</sup>.

#### 2.2.2. Water

Taking into account the ongoing revision of EU water legislation, including the Urban Wastewater Treatment Directive<sup>58</sup> and the legislation on water pollutants<sup>59</sup>, the focus of water actions, both legislative and non-legislative, will be on **increasing "water** 

<sup>57</sup> Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC.

<sup>&</sup>lt;sup>51</sup> Products envisaged include cars as well as motorised two-wheelers and three-wheelers.

<sup>&</sup>lt;sup>52</sup> As for example electro-mobility and hydrogen-based mobility.

<sup>&</sup>lt;sup>53</sup> E.g., for last mile delivery of goods or urban intermodal passenger mobility.

<sup>&</sup>lt;sup>54</sup> If aiming at reducing emissions from NRMM, projects can address existing NRMM not covered by Regulation (EU) 2016/162823, and/or address improvements to reduce emissions from NRMM already covered by the NRMM Regulation beyond the legal requirements mentioned in it.

<sup>55</sup> E.g., for cargo: avoiding leakages of air pollutants or dangerous substances into the atmosphere, degassing.

<sup>&</sup>lt;sup>56</sup> http://www.unece.org/index.php?id=41358.

<sup>58</sup> Proposal for a Directive of the European Parliament and of the Council concerning urban wastewater treatment (recast) (COM(2022) 541 final).

<sup>&</sup>lt;sup>59</sup> Proposal for a Directive of the European Parliament and of the Council amending Directive 2000/60/EC establishing a framework for Community action in the field of water policy, Directive 2006/118/EC on the protection of groundwater against pollution and deterioration and Directive 2008/105/EC on environmental quality standards in the field of water policy (COM(2022) 540 final).

**resilience**", i.e., our capacity to warrant safe, clean and affordable water for all, while protecting against the wider ecological, economic and social impacts of droughts and flood risks. It involves the **integrated freshwater resource management** as regards both quality and quantity management, as well as the management of coastal, transitional and marine waters and increasing the capacity, the quality and robustness of water services. These themes are detailed in sub-sections below. The priorities are also inspired by the European Union's "List of voluntary commitments for the Water Action Agenda," as presented at the UN 2023 Water Conference<sup>60</sup>.

Priority will be given to proposals targeting the following:

- 1. Integrated approaches for the implementation of the EU Water Framework Directive<sup>61</sup>;
- 2. Actions targeted at the implementation of the Floods Directive<sup>62</sup>;
- 3. Actions targeted at the implementation of the Marine Strategy Framework Directive<sup>63</sup>, including a better alignment with the parallel implementation of the Water Framework Directive<sup>64</sup>;
- 4. Actions aiming at improving collection and treating of wastewater, moving towards energy and climate neutrality in urban wastewater management in line with the Commission proposal on Urban Wastewater Treatment Directive<sup>65</sup>;
- 5. Activities to ensure safe and efficient use of water resources, including for energy production, irrigation, and for protecting nature and biodiversity, for improving the monitoring of freshwater quality and quantity, for improving quantitative and qualitative water management, for higher water reuse, and for a preserved or restored high quality of water. This could be done through nature-based solutions for flood risk management; sustainable agricultural, aquacultural and forestry practices that enhance water management; as well as actions aimed at abating or avoiding water pollution, and avoiding misuse and deterioration of water resources;

The following sections elaborate the overall rationale of "water resilience" and the priorities listed above through addressing the specific challenges related to water quantity and quality, marine and coastal water management and water services respectively.

<sup>&</sup>lt;sup>60</sup> See <a href="https://environment.ec.europa.eu/topics/water/eu-efforts-global-water-agenda-beyond-un-2023-water-conference\_en, including the "List of voluntary commitments for the Water Action Agenda presented by the European Union for the UN 2023 Water Conference (New York, 22-24 March 2023)".</a>

<sup>&</sup>lt;sup>61</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

<sup>&</sup>lt;sup>62</sup> <u>Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks.</u>

<sup>&</sup>lt;sup>63</sup> <u>Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive).</u>

<sup>&</sup>lt;sup>64</sup> Water Framework Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000

<sup>65</sup> Urban Waste Water Treatment Directive - 91/271.

#### 2.2.2.1. Water quality & quantity

Addressing water quality and quantity issues in a cost-efficient way is a challenge within the EU, exacerbated by the need to adapt to a changing climate. Responding to the challenges and opportunities in the water sector requires a holistic approach across several actors.

In line with the implementation of the Water Framework Directive, including its daughter Directives and Regulation<sup>66</sup>, and of the Flood Directive, projects should focus on developing and particularly implementing actions that can help Member States move to genuinely integrated water resource management, thus contributing to meeting the overall environmental objectives of both Directives. Such actions may help improving monitoring water use and water pollution, reducing pressures on water quality and quantity, including through promoting nature-based solutions and sustainable agricultural, aquacultural and forestry practices that enhance water management and support the EU Biodiversity Strategy where relevant.

As regards the implementation of the Urban Wastewater Treatment Directive, the Regulation on Water Use<sup>67</sup>, as well as the revised Drinking Water Directive<sup>68</sup>, the actions should bring to maturity the available new technologies and processes that aim to ensure the cost effective provision of these water services in the context of adapting to the climate change effects on water availability (i.e., to the production of high quality drinking water and to improved treatment of wastewater in a close to energy-neutral manner and compatible with resource extraction and water reuse).

Priority is given to proposals contributing to:

- 1. The improvement of water quality via one or both of the following:
  - a) Integrated management of nutrients and organic pollution of human (urban) and/or agricultural origin through directly removing the pollution at source (prevention), at treatment plant level or in the water bodies (remediation). The foreseen solutions should be innovative and they should be identified as a measure in the River Basin Management Plan, either at a river basin scale or catchment scale, as part of the set of measures aimed at meeting the environmental objectives of the Water Framework Directive and Marine Strategy Framework Directive in a cost-effective manner, taking into account what has been delivered via the Urban Wastewater Treatment

<sup>&</sup>lt;sup>66</sup> Groundwater Directive (Directive 2006/118/EC), Environmental Quality Standards Directive (Directive 2008/105/EC) and Water Reuse Regulation (Regulation 2020/741).

<sup>&</sup>lt;sup>67</sup> Water Reuse Regulation - Regulation 2020/741 of the European Parliament and of the Council of 25 May 2020

<sup>&</sup>lt;sup>68</sup> Directive (EU) 2020/2184 of the European Parliament and of the Council of 16 December 2020 on the quality of water intended for human consumption

- Directive<sup>69</sup>, Nitrates Directive<sup>70</sup>, Bathing Water Directive<sup>71</sup> and Groundwater Directive<sup>72</sup> requirements.
- b) Innovative solutions for the reduction of the pressures from chemical pollutants, including their combined effects in aquatic environments, through reducing at source the emissions of priority substances<sup>73</sup>, and other chemicals identified as river basin specific pollutants under the risk assessments carried out under the Drinking Water Directive, through the use of appropriate substitutes<sup>74</sup> or alternative technologies. This should include, where relevant, other pollutants of emerging concern such as pharmaceuticals, PFASs, pesticides, endocrine disruptors and (micro) plastics.
- 2. The implementation of flood and/or water scarcity and drought risk management actions (see also above point 3. under chapter 1.1.2 of the Nature and Biodiversity sub-programme) and the future integrated management plans under the future revised Urban Wastewater Treatment Directive by applying at least one of the following:
  - a) Nature-based solutions consisting in natural water retention measures that increase the storage and infiltration of water in the soil and remove pollutants through natural or "natural like" processes including the renaturalisation of river, lake, estuary and coastal morphology and/or the recreation of associated habitats, including flood- and marsh plains;
  - b) Sustainable Drainage Systems in urban areas as well as solutions to deal with storm overflows and urban runoff;
  - c) Innovative tools and approaches to optimise the management and operation of the existing infrastructure in line with the Urban Wastewater Treatment Directive based on digital solutions allowing to better track water quantities and quality in the collection and storage networks as discharges released through storm water overflows;
  - d) Innovative integrated risk assessment and management approaches taking

<sup>&</sup>lt;sup>69</sup> Council Directive 91/271/EEC of 21 May 1991 on urban waste-water treatment.

<sup>&</sup>lt;sup>70</sup> Council Directive 91/676/EEC of 12 December 1991 on the protection of waters against pollution caused by nitrates from agricultural sources.

<sup>&</sup>lt;sup>71</sup> Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 on the management of bathing water quality and repealing Directive 76/160/EEC.

<sup>&</sup>lt;sup>72</sup> <u>Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration.</u>

<sup>&</sup>lt;sup>73</sup> Directive 2013/39/EU of the European Parliament and of the Council of 12 August 2013 amending Directives 2000/60/EC and 2008/105/EC as regards priority substances in the field of water policy.

<sup>74 &#</sup>x27;Appropriate substitutes' are other chemical substances, which produce the same desired effects with a reduced environmental impact.

into account social vulnerability and aiming at improved resilience while ensuring social acceptance.

- 3. The reduction of hydro-morphological pressures originating from land or water uses as identified in River Basin Management Plans, in order to achieve good water status or potential as required by the Water Framework Directive objectives and to attain the objectives of the EU Biodiversity Strategy. This could include projects working on development of sediment transport management techniques and solutions, ensuring ecological flow, removal of obstacles, etc. Projects should apply at least one of the following:
  - a) The implementation of innovative water saving measures in order to reduce the quantitative and qualitative pressures on water bodies/resources in line with the revised Drinking Water Directive. This includes measures for the assessment of water leakages due to the supply network and their reduction, as well as the reduction of over-abstraction of water taking into account circular economy approaches, and measures addressing at the same time one of the priority topics under soil (see 2.2.3);
  - b) The implementation of integrated actions aiming at the integrated management of water quality and quantities in cities in line with the proposal on the revision of the Urban Wastewater Treatment Directive;
  - c) The implementation of innovative solutions to reduce the energy use in the urban wastewater treatment plants with to the ultimate goal of reaching energy neutrality of the sanitation sector in line with the proposal on the revision of the Urban Wastewater Treatment Directive, and to increase the production of renewables;
  - d) The implementation of innovative measures and best practices in the Drought Management Plans. They could address disruptions in the "green water cycle," such as approaches to include vital nature areas into a water allocation mechanism, as well as measures focused on restoring the natural water retention of soil and vegetation (in nature areas or agricultural areal). Alternatively, it could be about coordinating water demand among different sectors (e.g., agriculture, livestock, fisheries, forestry, aquaculture, energy) with a view of handling potential water shortages and therefore contributing to the shift from reactive to proactive drought management.

#### 2.2.2.2. Marine and coastal water management

Priority is given to proposals targeting the application of innovative solutions to **ensure the protection and conservation of the seas, oceans and their coasts**, by fostering sustainable human activities within the marine environment including, where relevant, by incorporating the use of remote sensing and satellite data (e.g., from Copernicus).

Regarding proposals targeted at the implementation of the Marine Strategy Framework Directive<sup>75</sup>, particular emphasis should be placed on reducing the main pressures and impacts, as well as actions applying the Maritime Spatial Planning Directive<sup>76</sup>, leading to strengthening an ecosystem-based approach in coastal zone management and maritime spatial planning and co-existence between nature and human activities at sea.

This includes, for example, initiatives aimed at reducing the pressure of human activities on the marine environment, and addressing at least one of the following topics of high concern:

- 1. underwater noise.
- 2. marine litter and/or contaminants (addressed at source or in the sea giving priority to prevention rather than clean-up),
- 3. disturbance of and damage to the sea floor (including damage from brine discharges from desalination plants),
- 4. examination and reduction of impacts of deep-sea exploitation and exploration,
- 5. over-fishing and/or incidental by-catch,
- 6. nutrient and organic matter inputs from agriculture or aquaculture,
- 7. navigation (e.g., from dredging navigation channels, from shipping highways);
- 8. impacts of offshore renewable energy, in particular offshore wind energy.

#### 2.2.2.3. **Water services**

As regards the implementation of the Urban Wastewater Treatment Directive, the Regulation on the minimum requirements for water reuse<sup>77</sup>, as well as the revised Drinking Water Directive, the actions should bring to maturity the available new technologies and processes that aim to ensure the cost-effective provision of these water services in the context of adapting to the climate change effects on water availability (i.e. to the production of high quality drinking water and to improved treatment of wastewater in a close to energy-neutral manner and compatible with resource extraction and water reuse).

Proposals on the following topics are given priority:

- 1. Application of innovative technologies and tools for drinking water and urban wastewater treatment systems, through at least one of the following:
  - a) the use of resource efficient processes for the provision of water services<sup>78</sup>;
  - b) the use of processes to diminish the presence of pollutants of emerging concern;

<sup>75</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)

<sup>76</sup> Directive 2014/89/EU - Maritime Spatial Planning

<sup>77</sup> Regulation (EU) 2020/741 of the European Parliament and of the Council of 25 May 2020 on minimum requirements for water reuse

<sup>&</sup>lt;sup>78</sup> E.g. aiming to reduce energy consumption for the treatment and management of water and water losses.

- c) the treatment of wastewater for reuse that can ensure highest safety levels, e.g., treatment efficacy for pathogen (viruses, bacteria) removal.
- 2. Application of innovative tools ensuring the efficient and sustainable provision of water services compliant with the revised Drinking Water Directive and the Urban Wastewater Treatment Directive to population living in rural areas<sup>79</sup>.
- 3. Application of innovative solutions, implementing one or more of the following:
  - a) Concepts for (alternative) water supply, wastewater treatment, water reuse (where applicable, in accordance with Regulation (EU) 2020/741<sup>80</sup> on minimum requirements for water reuse), and for the recovery and recycling of resources (including critical raw materials and the recovery of valuable minerals, metals, and acids from desalination brine while concurrently minimising the damage to marine ecosystems)<sup>81</sup>;
  - b) Source control methods and on-site technologies for decreased discharges of pollutants of emerging concern (e.g., pharmaceuticals, nanoparticles, textile fibres) and/or pathogens with wastewater effluent;
  - c) Systematic approaches to avoid loss of water, energy, and resources in industrial production and/or in provision of water services.
- 4. Implementation of sustainable water management solutions for private businesses, specific sectors, national/regional/local authorities based on water footprint assessments.

#### 2.2.3. Soil

Healthy soils and soils organisms are crucial for our food systems, water regulation, nutrient cycles, biodiversity, climate change mitigation and resilience to droughts and other natural disasters. Taking into account the ongoing negotiations on the proposal for a Soil Monitoring Law, the LIFE Programme will give priority to the following proposals:

- 1. Implementing actions to **maintain or enhance soil health**, including innovative actions to address one or more of the following:
  - a) encourage the transition to sustainable soil management and promote, scale-up and implement innovative soil management practices and techniques to prevent and restore soil degradation (salinisation, erosion, loss of soil organic carbon, compaction, excess nutrients, contamination, water filtration and reduction of water retention capacity, acidification, loss of soil biodiversity, land take and sealing) and to protect the capacity of the soil to provide ecosystem services and/or;

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<sup>&</sup>lt;sup>79</sup> Population living in rural areas is the population living outside urban areas. Urban areas are identified through the following method: 1. a population density threshold (300 inhabitants per km²) applied to grid cells of 1 km²; 2. a minimum size threshold (5,000 inhabitants) applied to grouped grid cells above the density threshold. For more information see: <a href="http://ec.europa.eu/eurostat/statistics-explained/index.php/Urban-rural\_typology">http://ec.europa.eu/eurostat/statistics-explained/index.php/Urban-rural\_typology</a>.

<sup>80</sup> Regulation on Minimum requirements for water reuse - 2020/741

<sup>81</sup> E.g., land nutrients (P, K, N) and organic compounds.

- b) prepare and respond to extreme weather events, drought, heat, wildfires, and floods in order to increase resilience of soils to climate-related threats by scaling-up the implementation of nature-based solutions and sustainable soil management practices that enhance water retention, nutrient availability, soil structure, soil biodiversity and carbon sequestration and/or;
- c) mitigate and reverse desertification through integrated water and land management, the implementation of practices tackling soil and land degradation in arid, semi-arid and dry sub-humid areas, and the development of better land use planning;
- d) ensure food security and safety in the long-term and increase the resilience of the EU food system by promoting and scaling up innovative solutions to secure soil fertility, natural pest resistance and nutritional food quality while applying sustainable soil management and/or;
- e) protect human health and well-being by ensuring that soils can continue to provide safe and nutritious food, filter contaminants, reduce heat, preserve water quality, and support nature, green infrastructure and biodiversity.
- 2. Addressing the **restoration, protection and improvement of soil health and prevention of soil degradation** including soil loss also through innovative actions to:
  - a) apply cost-effective investigation and remediation solutions for pointsource and diffuse soil contamination of contaminated sites;
  - b) facilitate the certification of soil health, support the exploitation of soil health data for other certification systems (e.g., carbon removal certification) and the payments for ecosystem services provided by healthy soil;
  - c) apply cost-effective solutions to unseal already sealed areas.

Proposal focusing on soil are encouraged to apply in their monitoring solutions to monitor and assess soil health (and particularly soil biodiversity) in a cost-efficient manner (e.g., through remote sensing, modelling, artificial intelligence, digital sensors, etc.) and to collect, analyse and present soil health data in georeferenced format.

#### 2.2.4. Noise

In order to improve the situation for a maximum number of persons, priority is given to projects targeting a **substantial reduction of noise inside densely populated urban areas** through solutions with high environmental and economic sustainability. Examples

include the use of low noise surfaces and/or tyres having life cycle costs comparable to those of standard surfaces and/or tyres, low height barriers with low landscape impact and eco-friendly materials, or lowering noise from railway traffic or airports. Another priority is the reduction of noise and vibration which could be harmful for human health and/or ecosystems on land and/or in water, e.g., noise and vibrations from wind turbines.

#### 2.2.5. Chemicals

In line with the EU's Chemicals Strategy for Sustainability Towards a Toxic-Free Environment<sup>82</sup> and follow-up actions, in the area of chemicals proposals are given priority if they address:

- 1. Prevention and reduction of the impact on the environment or human health of hazardous substances, in particular at least one of the following:
  - a) substances of Very High Concern (SVHC) or substances that fulfil the criteria for SVHCs (including endocrine disruptors and persistent substances)<sup>83</sup>;
  - b) combination effects of substances;
  - c) nanomaterials;
  - d) biocidal products and/or plant protection products;
  - e) per- and polyfluoroalkyl substances (PFAS);
  - f) substitution of SVHCs or substances that fulfil the criteria for SVHCs by non-chemical alternatives;
  - g) asbestos, particularly in recycled materials and objects after preparation for reuse,

This shall be reached through innovation for safe and sustainable by design approaches for chemicals, materials and products and promotion of the phasing out of substances of very high concern or substances that fulfil the criteria for SVHCs.

- 2. Prevention and Reduction of the impact on the environment or human health of chemical production and use across the value chain to promote in particular at least one of the following:
  - a) the development of green and digital/smart technologies;
  - b) advanced materials;
  - c) low-carbon and low environmental impact industrial production and use of chemicals.

<sup>82</sup> COM(2020) 667 final.

<sup>&</sup>lt;sup>83</sup> Substances identified as having a chronic effect for human health or the environment (*inter alia* Candidate list in REACH and Annex VI to the CLP Regulation).

- 3. Digital innovations for advanced tools, methods and models, and data analysis capacities to also move away from animal testing.
- 4. Implementation of safe- and sustainable-by-design solutions, including through the development, commercialisation, deployment and uptake of safe- and sustainable-by-design substances, materials and products. The overall sustainability should be ensured by minimising the whole environmental footprint in particular on climate change, resource use, ecosystems and biodiversity from a life cycle perspective.

#### 2.2.6. Industrial Emissions and Safety:

Priorities will be given to proposals focusing on one of the following:

- 1. Addressing the application of **pollution prevention and abatement techniques** including through reuse referred to in the Industrial Emissions Directive as emerging techniques or development and application of pollution prevention and abatement techniques, which could qualify as candidate emerging techniques under the Industrial Emissions Directive's Best Available Techniques Reference Documents BREFs review process. Projects will focus on the reduction of air pollutants addressing notably PM<sub>2.5</sub>, NOx, SO<sub>2</sub>, NH<sub>3</sub> and/or NMVOCs and of methane, raw materials, water or energy used by industrial installations regulated by the Industrial Emissions Directive.
- 2. Facilitating the implementation of the Seveso III Directive<sup>84</sup> on the **control of major-accident hazards involving dangerous substances** through deployment of particularly cost-effective methodological tools for carrying out human health and environmental risk mapping, and for addressing domino effects. Projects shall foresee the demonstrative application of these tools by different duty holders and implement risk preventing or reducing measures on their basis.

#### 2.2.7.A New European Bauhaus

The following proposals that contribute to the implementation of the New European Bauhaus are given priority:

- 1. Proposals focused on a holistic reduction<sup>85</sup> of environmental impacts of new buildings and urbanisation while promoting social inclusion, in a wide sustainability perspective;
- 2. Proposals focused on reducing the environmental impact at the building stock level by reducing the demand for new buildings. At the same time proposals should, provide the requested functions by citizens and apply different kinds of

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<sup>&</sup>lt;sup>84</sup> Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC.

<sup>85</sup> Considering aspects such as life cycle approach and green procurement.

- sufficiency measures such as making use of currently un/under-occupied buildings as well as prioritising renovation, repair and maintenance over demolition and new construction;
- 3. Proposals aimed at increasing the sustainability of fashion while meeting demands related to aesthetics and inclusivity;
- 4. Proposals on circular districts involving creation of circular value chains to boost urban economies whilst producing urban and territorial regeneration and/or resilience to climate change effects;
- 5. Proposals for maintaining or restoring biodiversity that contribute to the implementation of the New European Bauhaus initiative, including through nature-based solutions. This may include, for example, demonstrating biodiversity friendly practices for the energetic isolation of buildings, innovative architectural and urbanisation approaches for wildlife-friendly buildings, climate-proof architecture and urbanisation, etc.

#### 2.3. ENVIRONMENTAL GOVERNANCE

In the environmental domain, much progress can be achieved through environmental governance. This is reflected in the priority area "environmental governance" and its priority topics as outlined below.

## 2.3.1. Activities in support of public administrations' decision-making and voluntary approaches for the public and the private sector

Priority will be given to project proposals directed to:

- 1. Improve the capacity of public administration to manage, monitor and/or assess complex initiatives, while structuring, where relevant, institutional collaboration at different territorial level and/or partnership with private entities and promoting a holistic vision of the environment. This should be done with a view to develop synergies, to reduce administrative burden and/or to optimise environmental outcomes which promote an approach of Policy Coherence for Sustainable Development towards the 2030 Agenda Framework<sup>86</sup>. Proposals shall target one or more of the following:
  - a) Plans, programmes, initiatives, analyses, reviews and assessments

<sup>&</sup>lt;sup>86</sup> OECD Recommendation on Policy Coherence for Sustainable Development, promoting the implementation of Sustainable Development Goals (SDGs) as an integrated and coherent set, addressing interactions between economic, social and environmental goals in a balanced manner, while avoiding negative effects on the wellbeing of people here and now, elsewhere and later.

- National air pollution control programmes<sup>87</sup>;
- Air Roadmaps and Air Quality Plans<sup>88</sup>;
- Sustainable Urban Mobility Plans with the primary objective to reduce substantially air pollution and/or noise;
- Programmes of measures, analyses and reviews associated with the River Basin Management Plans;
- Noise Action Plans<sup>89</sup>;
- Flood Risk Management Plans<sup>90</sup>;
- Nitrate Action Plans<sup>91</sup>;
- Waste Management Plans and Waste Prevention Programmes;
- National or Regional Circular Economy Action Plans, Strategies, Roadmaps or similar<sup>92</sup>;
- National or Regional Plastics Action Plans, Strategies, Roadmaps or similar<sup>93</sup>;
- National of Regional Sustainable Development Action Plans, Strategies, Roadmaps or similar, in particular those which also integrate or create synergies with the other documents mentioned under this point;
- Actions, Measures and Plans to implement the Green City Accord<sup>94</sup>;
- National Radon Action Plans<sup>95</sup>;

#### and/or

b) EU Decisions related to:

<sup>87 &</sup>lt;u>Directive 2016/2284/EU on the reduction of national emissions of certain atmospheric pollutants.</u>

<sup>88 &</sup>lt;u>Directive (EU) 2024/2881 of the European Parliament and of the Council of 23 October 2024 on ambient air quality and cleaner air for Europe (recast).</u>

<sup>&</sup>lt;sup>89</sup> Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise.

<sup>90</sup> Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood

<sup>&</sup>lt;sup>91</sup> Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources

<sup>&</sup>lt;sup>92</sup> Such Plans, Strategies, Roadmaps or similar shall be officially approved, include specific and measurable actions, or targets, with a clear timetable and be in line with or complement the objectives of the EU Circular Economy Action Plan.

<sup>&</sup>lt;sup>93</sup> Such Plans, Strategies, Roadmaps or similar shall be officially approved, include specific and measurable actions, or targets, with a clear timetable and be in line with or complement the objectives of the EU Plastics Strategy.

<sup>&</sup>lt;sup>94</sup> Under the Green City Accord, EU Local authorities commit to making their cities, greener, cleaner and healthier by achieving the following five goals by 2030: 1) A significant improvement in air quality, 2) important progress in improving water quality and efficiency of water use, 3) considerable progress in conserving and enhancing urban biodiversity, 4) significant improvement in the management of municipal waste, reduction in waste generation and landfilling, increase in re-use, repair and recycling thereby advancing the Circular Economy, 5) a significant reduction in noise pollution.

<sup>&</sup>lt;sup>95</sup> Council Directive 2013/59/EURATOM, of 5 December 2013, laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation.

- industrial emissions;
- waste management;
- water pollution and water abstraction<sup>96</sup>.
- 2. Development of approaches to promote, implement and/or harmonise one or more of the following voluntary instruments aiming at reducing the environmental impact of entities' activities, products and services:
  - a) Product environmental footprint category rules (PEFCRs) and/or organisation environmental footprint sectoral rules (OEFSRs) at European level for products and sectors not yet covered by the existing PEFCRs/OEFSRs and related high-quality data bases, based on the latest available version of the European environmental footprint methods<sup>97</sup> and the latest available guidance<sup>98</sup>.
  - b) The EU Ecolabel<sup>99</sup>, for the promotion of products (goods and services) with excellent environmental performance, in all sectors concerned and in particular in tourism and personal care sectors, and as a tool to promote sustainable consumption patterns and lifestyles. Provision of support to increase the EU Ecolabel uptake by industry, including SMEs. This can include awareness raising campaigns, networking, education, training of trainers etc. In a broader perspective, fostering the use of credible environmental ecolabels<sup>100</sup>.
  - c) Actions, services, networks and innovative business models for fostering the use of reused, repaired, refurbished, remanufactured products also linked to product durability and planned obsolescence<sup>101</sup>.
  - d) Development and implementation of indicators linked to product policy and monitoring of implementation of Ecodesign for Sustainable Products Regulation<sup>102</sup> (ESPR).

<sup>&</sup>lt;sup>96</sup> Including the analysis necessary to establish effective water pricing policies.

<sup>&</sup>lt;sup>97</sup> Commission Recommendation of 9 April 2013 on the use of common methods to measure and communicate the life cycle environmental performance of products and organizations. See also <a href="https://eplca.jrc.ec.europa.eu/permalink/PEF\_method.pdf">https://eplca.jrc.ec.europa.eu/permalink/PEF\_method.pdf</a> and <a href="https://eplca.jrc.ec.europa.eu/permalink/OEF\_method.pdf">https://eplca.jrc.ec.europa.eu/permalink/OEF\_method.pdf</a>.

<sup>98</sup> https://webgate.ec.europa.eu/fpfis/wikis/display/EUENVFP/Documents+of+common+interest. The development of PEFCRs and OEFSRs has to respect processes established at EU level for developing them. Projects will only be accepted if there are open opportunities (e.g. calls for volunteers/expression of interest) for the development of PEFCRs/OEFSRs. See https://eplca.irc.ec.europa.eu/permalink/PEF method.pdf.

<sup>&</sup>lt;sup>98</sup> Commission Recommendation of 9 April 2013 on the use of common methods to measure and communicate the life cycle environmental performance of products and organizations. See also https://eplca.jrc.ec.europa.eu/permalink/PEF\_method.pdf and https://eplca.jrc.ec.europa.eu/permalink/OEF\_method.pdf.

<sup>&</sup>lt;sup>98</sup> The development of PEFCRs and OEFSRs has to respect processes established at EU level for developing them. Projects will only be accepted if there are open opportunities (e.g. calls for volunteers/expression of interest).

<sup>99</sup> https://ec.europa.eu/environment/ecolabel/.

<sup>100</sup> https://ec.europa.eu/environment/ecolabel/useful-links.html.

<sup>&</sup>lt;sup>101</sup> E.g. with a usage counter, a reduced VAT for repair, extension of the legal guarantee, etc.

<sup>&</sup>lt;sup>102</sup> Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products (recast).

- e) Green and Circular Public Procurement<sup>103</sup> through common tender specifications and/or uptake monitoring tools for public authorities with similar purchasing needs, in order to foster uptake. The option of making public procurement green compulsory should be considered, as enabled through ESPR.
- f) Communication, promotion and uptake of the Eco-Management and Audit Scheme (EMAS) with an aim to reduce the environmental footprint of the public and private sector, including SMEs, by registering to EMAS<sup>52</sup>. This can include support to advisory services for companies, promotion campaigns, training for potential beneficiaries and awareness raising on the benefits of the scheme.
- g) Assessment and reporting of the sustainability performance of buildings<sup>104</sup>, using Level(s), the building framework with core indicators<sup>105</sup>.
- 3. Implementation of innovative solutions in the private and/or public sectors for addressing zero pollution based on:
  - a) Modelling and forecasting tools for air pollution and/or water pollution.
  - b) Use of innovative data management related to air, noise, water, marine, soil and industrial emissions, for example innovative use of sensors, artificial intelligence, as well as the European satellite monitoring system (Copernicus) or other forms of earth observation.
- 4. Actions targeted at the implementation of proactive drought management, including the exchange of experience on drought risk management in the EU, capacity building and dialogue through the European and Global Drought Observatories of the Copernicus Emergency Management Service.

#### 2.3.2. Environmental compliance assurance and access to justice

Projects supporting environmental compliance assurance and access to justice have a priority if they aim at:

1. establishing new or, where in place, enhancing existing cross-border, national or regional networks of environmental compliance assurance practitioners<sup>106</sup> or

<sup>103</sup> https://ec.europa.eu/environment/gpp/index en.htm.

<sup>104</sup> http://susproc.jrc.ec.europa.eu/Efficient\_Buildings/.

<sup>105</sup> https://ec.europa.eu/environment/topics/circular-economy/levels en.

<sup>&</sup>lt;sup>106</sup> Environmental compliance assurance practitioners can include those working for authorities and bodies with compliance assurance responsibilities such as local, regional, police and customs authorities, environment agencies and inspectorates, supreme public audit bodies and the judiciary. They can also include non-governmental organisations and academics and researchers specialised in one or more aspects of compliance assurance.

experts; and/or establishing or, where in place, improving professional qualifications and training<sup>107</sup> to improve compliance with binding EU environmental instruments (other than on nature and biodiversity), through promoting, checking and enforcing compliance, and applying the polluter pays principle, using a mix of administrative law, criminal law and environmental liability<sup>108</sup>; and/or

- 2. developing and implementing strategies<sup>109</sup> and policies and/or developing and using innovative tools and actions to promote<sup>110</sup>, monitor<sup>111</sup> and enforce compliance with binding EU environmental instruments (other than on nature and biodiversity), and ensure application of the polluter pays principles through environmental liability; and/or
- 3. engaging with citizens and others<sup>112</sup> to promote and monitor compliance<sup>113</sup>, and to contribute to the application of environmental liability<sup>114</sup>.

#### 2.3.3. Behavioural change and awareness-raising initiatives

Priority is given to proposals presenting substantial evidence that a change of awareness levels<sup>115</sup> in the field(s) addressed by the project is a crucial factor supporting correct implementation and/or future development of EU environmental policies tools and/or legislation in a wider sustainability perspective. The awareness-raising activities should have the widest coverage relevant for the specific issue targeted<sup>116</sup>. The environmental

<sup>&</sup>lt;sup>107</sup> Projects should ensure the academic credentials of the qualifications and training and maximise the potential of information technology through means such as webinars and massive open online courses (MOOCs) to allow distance learning reach as many practitioners as cost-effectively as possible.

They should draw on existing modules and know-how in the area of environmental law training developed by the Commission and the Commission Notice on access to justice in environmental matters and related materials. See <a href="http://ec.europa.eu/environment/legal/law/training\_package.htm">http://ec.europa.eu/environment/legal/law/training\_package.htm</a>.

<sup>&</sup>lt;sup>108</sup> See in particular the Environmental Liability Directive, Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage, OJL 143, 30.4.2004, p. 56–75.

<sup>109</sup> Strategies and policies are aimed at high-level organisation of activities and interventions, especially risk-based ones.

<sup>&</sup>lt;sup>110</sup> Promotion systems and techniques could involve the use of guidance, advisory services, awareness-raising campaigns, partnership agreements, or self-monitoring systems that assist duty-holders to comply.

Monitoring systems and techniques could relate to site inspections, surveillance (including through use of satellites and drones), spot checks, intelligence-gathering, industry analysis, police investigation, data analysis and environmental audits. Follow-up and enforcement techniques can have a similarly wide coverage.

<sup>&</sup>lt;sup>112</sup> Promoting effective public participation and access to justice in environmental matters amongst the public, NGOs, lawyers, the judiciary, public administrations or other stakeholders with a view to improving knowledge, understanding and application of effective means of public participation and/or access to justice, with a particular focus on protecting people's health and well-being and protecting the quality of the environment via the requirements of EU air, water and waste and environmental liability instruments. See in particular, Commission Communication on Improving Access to justice environmental matters (COM(2020) 64) and the Commission Notice on access to justice in environmental matters.

<sup>&</sup>lt;sup>113</sup> Electronic complaint-handling systems, hot lines, citizen observatories and other citizen science platforms can all facilitate citizen engagement. Citizen science platforms may, amongst other things, allow competent national, regional and local authorities to engage citizens in environmental monitoring.

<sup>&</sup>lt;sup>114</sup> See VadeMecum on complaint-handling and citizen engagement, adopted by the Environmental Compliance and Governance Forum in 2019, and summary guide for national administrations.

Awareness level is defined here as the proportion of target audience who knows of the idea/term/product/concept/environmental challenge/etc. that is the subject of the proposed LIFE project's work.

<sup>&</sup>lt;sup>116</sup> As a general principle, these proposals should therefore, e.g. fully target a Member State, several Member States or the entire EU, a whole market sector, a major metropolitan area.

problems, EU environmental policies, tools and/or legislation targeted should be directly linked to one or more of the priorities included in:

- 1. The European Green Deal, by raising awareness on environmental impacts, in order to underpin transformative change towards more sustainable food, water, energy, mobility and building systems and to mainstream environmental considerations across policies and activities in line with the European Green Deal oath to "do no harm":
- 2. The Circular Economy Action Plan which ensures waste prevention and reduction; sustainable production; sustainable products, services and business models; sustainable consumption and transformation of consumption patterns, in particular in the sectors that were identified as key for the transition to a circular economy in the Action Plan, namely electronics and Information and Communication Technologies, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients. On these topics, proposals should support education, peer-to-peer learning, training, and awareness raising solutions, such as creation of sector-specific training contents and best practices manuals.
- 3. The Zero Pollution Action Plan addressing the protection of citizens from environmental pressures and risks to health as a result of Europe's zero-pollution ambition and measures for a toxic-free environment including, in particular, promoting clean air, clean water and clean soil and sustainability in the use and management of chemicals.

# 3. Sub-programme climate change mitigation and adaptation

This section sets out the areas of intervention of the annual calls for proposals, divided by the following priority areas: "Climate Change Mitigation", "Climate Change Adaptation" and "Climate Governance and Information".

The priority topics under each area of intervention will be indicated in the annual calls for proposals.

#### 3.1 CLIMATE CHANGE MITIGATION

- 1. Recovery, recycle and reclamation of ozone-depleting substances in foams and suitability of alternatives to fluorinated greenhouse gases and their recovery, reclamation and recycling;
- 2. Actions to support the shift to zero-emission mobility in road transport;
- 3. Decarbonising other transport modes, fostering intermodality and modal shift;
- 4. Increase the generation and use of renewable energy and improvement of energy efficiency (as far as not covered by specific calls for proposals under the sub-programme Clean Energy Transition);
- 5. Actions which reduce energy use and greenhouse gas emissions in industrial production and waste management;
- 6. Development and implementation of land and coastal management practices which have an impact on emissions and carbon removals, including the conservation and enhancement of natural carbon sinks in soils and forests and the storage of carbon in long-lasting products.
- 7. Development and implementation of industrial solutions for carbon removal, carbon capture and use and/or storage.

#### 3.2. CLIMATE CHANGE ADAPTATION

- 1. Support to the implementation of climate adaptation policies and the revision of national, regional or local climate adaptation strategies and plans;
- 2. Implementing<sup>117</sup> state-of-the-art tools for climate risk assessments or selection of cost-effective adaptation measures for dealing with climate threats and solutions for adaptation;

<sup>117</sup> Existing state of the art tools might need to be further developed and adapted to fit specific local or regional situations.

- 3. Development and implementation of nature-based solutions for different types of areas (rural, urban and coastal);
- 4. Climate-proofing and resilience of infrastructure and buildings;
- 5. Adaptation solutions for agriculture, aquaculture and forestry;
- 6. Water management;
- 7. Climate adaptation and health;
- 8. Preparedness for compound risks and cascading risks;
- 9. Financial instruments, innovative solutions and public private collaboration on insurance and loss data.

#### 3.3. CLIMATE GOVERNANCE AND INFORMATION

- 1. Raising awareness, incentivising behavioural change and supporting the activities of the European Climate Pact;
- 2. Green skills & capacity building to implement climate mitigation and adaptation policies;
- 3. Building capacity, raising awareness among end-users and the equipment distribution chain of fluorinated greenhouse gases;
- 4. Support to the development, update and implementation of national, regional or local climate and energy strategies and plans;
- 5. Activities linked to the implementation of Sustainable Finance actions;
- 6. Greenhouse gas monitoring and reporting;
- 7. Development of geographically-explicit inventories for the "Land Use, Land-use Change and Forestry" (LULUCF) sector, creation of carbon removal registries and certification schemes and organisation of capacity building activities and advisory services;
- 8. Knowledge sharing and capacity building on the EU Emissions Trading System (EU ETS);
- 9. Climate policy monitoring, assessment, and ex-post evaluation.

#### 4. Sub-programme clean energy transition

The below priority areas with the relevant priority topics apply in particular to Coordination and Support Actions (CSAs) implemented under the sub-programme Clean Energy Transition.

Next to Coordination and Support Actions, the Multi-Annual Work Programme 2025-2027 for the Clean Energy Transition sub-programme foresees a preliminary indicative budgetary allocation for future Calls for Standard Actions Projects (SAPs) under the Clean Energy Transition sub-programme. Prior to the launching of such possible Calls for SAPs in the period 2025-2027, the Commission will share with the Programme Committee the draft Call text and the selected priorities for their comments.

## 4.1 BUILDING A NATIONAL, REGIONAL AND LOCAL POLICY FRAMEWORK SUPPORTING THE CLEAN ENERGY TRANSITION

#### 4.1.1. Capacity building in public authorities

- 1. Support regional and local authorities in developing/upgrading ambitious, energy and climate transition plans/strategies to deliver on 2030 Fit-for-55 energy targets and REPowerEU objectives, as well as toward 2040 and 2050, and foster their coherence with EU and national targets, initiatives and reporting frameworks.
- 2. Support regional and local authorities implementing the energy transition in a holistic manner and putting in place an integrated approach in planning and implementing.
- 3. Develop and implement innovative mutual learning programmes on specific clean energy transition actions. Facilitate large-scale roll-out (replicating/up-scaling) of successful capacity-building initiatives via local, regional, national and EU support.
- 4. Involve public authorities in the clean and sustainable energy transition by supporting matchmaking, networking and development of support services and shared knowledge bases of good practices.
- 5. Consolidate, reinforce and scale-up the role of local and regional energy agencies and other organisational structures as key supporters of cities and regions in the energy transition.
- 6. Mobilise, empower and train local agents of change to act as local drivers of the clean and sustainable energy transition.
- 7. Support public authorities in the design and transformation of energy efficient and renewable-based public spaces, integrating, where relevant, sustainable mobility planning.

## 4.1.2. Supporting the enabling provisions of EU legislation and strategies

- 1. Establish and support approaches that help Countries participating in LIFE Programme implement key energy legislation, notably the Energy Efficiency Directive, the Renewable Energy Directive, the Directive on the Energy Performance of Buildings and Energy Efficiency of Products Policies.
- 2. Establish and support approaches that mainstream and scale-up relevant energy policy initiatives and new clean and develop sustainable energy policy.
- 3. Establish and support approaches delivering on the REPowerEU Plan to phase-out EU dependence on Russian fossil fuels, in particular with regards to its two keypillars: (1) increasing energy savings and energy efficiency uptake; (2) accelerate clean energy deployment, including in particular heating decarbonisation. In this framework:
  - a) support actions to promote exchange and sharing of best practices within and across Countries participating in LIFE Programme, to build capacity and to provide support and tools for putting in place enabling policy and regulatory frameworks.
  - b) support for the contextualisation of requirements, for assessing implementation options and impacts, and for the surveillance, enforcement, monitoring and evaluation of specific policy measures.
  - c) support for integrated methodologies in areas and sectors of horizontal nature or which are addressed by several policies, for example approaches for integrated accounting, monitoring and reporting.
  - d) remove administrative and technical barriers and provide technical support and capacity building enabling the transposition and implementation of EU energy efficiency and renewable legislation, with a focus on the national level.

#### 4.1.3. Governance and support to EU policy making

- 1. Support the development and effective implementation of energy and climate policies and of the National Energy and Climate Plans (NECPs) through the whole policy cycle at all governance levels.
- 2. Enhancement of the models currently used for impact assessments to better reflect the multiple impacts of energy efficiency, consumer behaviour, new societal trends, markets and technology.
- 3. Collection of relevant data, including the creation of new data-sets or registries of data and information, and the enhancement of existing ones, including the production of relevant bottom-up statistical data.

- 4. Policy development, including mutual and international exchange of knowledge and sharing of best practices in the energy domain, as well as facilitation of policy pilot experiments, and policy evaluation, both through ex-ante testing via pilot experiments and ex-post assessments and analyses.
- 5. Foster a stronger political commitment and enhance collaboration between all relevant governance levels (such as regions, cities and communities, national governments) and stakeholders, to reinforce multilevel governance.
- 6. Deliver robust and consistent reporting mechanisms integrating vertical and horizontal administrative layers and innovative monitoring and verification schemes based on digital and data-driven solutions.

# 4.2. ACCELERATING TECHNOLOGY ROLL-OUT, DIGITALISATION, NEW SERVICES AND BUSINESS MODELS AND ENHANCEMENT OF THE RELATED PROFESSIONAL SKILLS ON THE MARKET FOR THE CLEAN ENERGY TRANSITION

## 4.2.1.Supporting the Renovation Wave and the energy transition in buildings $^{118}\,$

- 1. Reduce renovation investment costs, as well as the time needed for renovation works on site, in order to minimise disturbance of occupants. Enhance market uptake of deep renovation and integration of renewable energy sources where possible.
- 2. Remove market, legislative and administrative barriers, including permitting, for integrated energy efficiency and renewable-based renovations and support the deployment of accelerated building renovation programmes in line with REPowerEU objectives and EU climate and energy targets.
- 3. Enable further harmonisation in calculation of energy performance, certification and smartness of buildings, and support coherent, data-driven and cost-effective methods to assess achieved improvements in energy performance in use.
- 4. Improve the design, accuracy, reliability, roll-out and market up-take of instruments to increase the energy performance and smartness of buildings, such as Energy Performance Certificates (EPCs), Building Renovation Passports (BRPs) and the Smart Readiness Indicator (SRI).
- 5. Facilitate the collection and valorisation of high-quality data of the EU building stock.

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<sup>118</sup> The Renovation Wave.

6. Promoting the use and integration of digital solutions, towards making renovation more effective and towards up-grading and valorising the energy performance and smartness of buildings, as well as the use of sustainable, bio-based and circular materials as part of the energy retrofitting of buildings.

#### 4.2.2. Supporting the energy transition in industry and tertiary sectors

- 1. Foster the market up-take of energy efficiency measures and renewable energy, namely among large and small companies across EU and its different economic sectors.
- 2. Develop capacity-building and skills programmes supporting the implementation of energy audits recommendations, the use of energy audits as an effective investment planning tool, and clean energy transition in enterprises.
- 3. Remove administrative barriers to the energy transition in the EU business sector industry, manufacturing and services including those related to permitting, and support the deployment of accelerated energy transition programmes for SMEs in line with REPowerEU objectives and EU climate and energy targets.
- 4. Foster collaboration between actors in the same value chain or on energy cooperation among companies in proximity (region, cluster, industrial park/site) to increase energy efficiency and renewable energy use associated to their products/services, including by fostering sharing of sustainable energy assets and services.
- 5. Support the development and implementation of industrial strategies and partnerships to accelerate the clean energy transition in industry and in the tertiary sector.
- 6. Address non-technological barriers facilitating the decarbonisation, including electrification of the industry and services sectors.

#### 4.2.3. Ensuring the right skills on the market for the energy transition

- 1. Further development of the BUILD UP Skills initiative launched in 2011<sup>119</sup>.
- 2. Boosting skills and capacities of all professionals needed to deliver the clean energy transition.
- 3. Facilitate the market up-take of innovative and tailored training, qualification and recognition solutions for professionals at all levels of the building and energy transition value chain, with a special emphasis on skills needed for energy renovation, new nearly-zero energy buildings, smart buildings, small-scale

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<sup>&</sup>lt;sup>119</sup> Launched in 2011 by the European Commission, BUILD UP Skills is an initiative funded through open calls for proposals. Its main objective is to increase the number of trained and qualified building professionals across Europe, to deliver building renovations offering high-energy performance as well as new Nearly Zero-Energy Buildings.

- renewables and system integration, circular and bio-based construction, heat pumps, as well as digital and energy system integration skills.
- 4. Develop and support the pooling and accessibility of training materials, tools and services from previous EU and national projects supporting the up-skilling of building professionals in the area of energy efficiency and sustainability, including through innovative ICT solutions.
- 5. Design innovative and tailored trainings and networks for qualification, accreditation and certification of buildings, energy transition and energy system integration professionals, to be then scaled-up by regional, national and other EU-budget support.
- 6. Boost the demand for and related supply for a critical mass of skilled professionals in the building value chain, including through legislative changes, financial incentives and awareness raising campaigns, potentially addressing skills related to other sectors of key importance for the energy transition, such as clean energy generation and infrastructure.

## 4.2.4. Supporting the heating and cooling decarbonisation and modernisation

In line with the REPowerEU objectives to drastically reduce fossil fuels consumptions in particular for heating and cooling purposes, support market up-take measures accelerating the decarbonisation and modernisation of heating and cooling at the individual, local, regional and national level, including by increasing heating and cooling efficiency and reducing the costs of energy consumption to affordable levels for all. This may include:

- 1. New solutions and business models to moderate the demand for heating and cooling and maximise the use of renewable energy and waste heat in buildings, industry, and the tertiary sectors.
- 2. Support municipalities and operators in the modernisation of district heating and cooling systems to fulfil the criteria for "efficient district heating and cooling", and the integration of low-grade heat sources or waste heat as required under the Energy Efficiency Directive (EED) and the Renewable Energy Directive (RED)<sup>120</sup>, as well as in the deployment of new clean district heating and cooling systems.
- 3. Support the deployment of heat pumps by addressing market barriers and rollingout new business models, in line with upcoming EU Action Plan on Heat Pumps market and deployment.
- 4. New services and measures to strengthen heating and cooling markets and facilitate sector and system integration.

<sup>&</sup>lt;sup>120</sup> Directive (EU) 2018/2001 as amended Directive (EU) 2023/2413.

5. Support innovative solutions, approaches and financing model to increase the market up-take of clean and efficient heating and cooling solutions.

# 4.2.5. Digitalisation for the energy transition: Enabling innovative, smart and sector integrating services and enhancing effective policy implementation

- 1. Enable the integration of various sectors such as buildings, transport and industry into the energy system through digital solutions. This includes the integration of waste heat in district heating networks and the integration of data centres in the energy system.
- Support the conceptualisation and deployment of smart and sector-integrating services, and the deployment of service models that enhance the business case of energy efficiency services by integrating elements increasing the value and diversifying revenue streams, including from non-energy services and across sectors.
- 3. Support the conceptualisation and roll-out of service models that allow energy efficiency to take part in the organised energy markets or in portfolio optimisation of utilities, including by enhancing energy savings certification, bidding and trading.
- 4. Support the conceptualisation and roll-out of solutions improving the flexibility of the energy grid in order to accommodate further energy efficiency and renewable energy solutions, the electrification of energy use and allow for the integration at scale of heat-pumps and E-vehicles, including by addressing service models that allow demand aggregators and 100% clean energy storage systems to take part in energy balance services.
- 5. Support the development and wider use of modern digital tools for data collection and analysis based on innovative technologies such as webcrawlers, crowd data sourcing or Artificial Intelligence to facilitate monitoring, reporting and evaluation, including for market surveillance authorities' work to ensure compliance with ecodesign and EU energy labelling rules, including by maximising and valorising further the use of European Products Registry for Energy Labelling (EPREL) and its data.

#### 4.3. ATTRACTING PRIVATE FINANCE FOR SUSTAINABLE ENERGY

#### 4.3.1. Mainstreaming sustainable energy finance

1. Mainstream and de-risk energy efficiency and renewable energy investments with a particular focus on private finance stakeholders, by contributing to already existing practices or through new and innovative approaches filling well identified gaps.

- 2. Build on recommendations and findings of the Energy Efficiency Financial Institutions Group (EEFIG)<sup>121</sup>, the Platform on Sustainable Finance<sup>122</sup>, the Investor Dialogue for Energy<sup>123</sup> and support the roll-out of the new European Energy Efficiency Financing Coalition<sup>124</sup>.
- 3. Support access to private finance and capital markets for energy efficiency and renewable investments, by increasing investors' confidence and capacity, including through better data collection for instance via the De-risking Energy Efficiency Platform (DEEP)<sup>125</sup> access and use.
- 4. Support access to private finance and capital markets for energy efficiency and renewable investments, by developing solutions and approaches simplifying the investment processes, adapting the regulatory frameworks, and integrating of long-termism and sustainability risks into the decision-making of investors.
- 5. Support Countries participating in LIFE Programme and market actors to develop a thriving market for green financial products for energy efficiency and renewable energy, by adopting measures promoting the market deployment and up-take of dedicated green financial products for energy efficiency and renewable energy, and by ensuring that these are offered widely and in a non-discriminatory manner by financial institutions and be visible and accessible to consumers. Accelerate compliance and best practices regarding the EU Sustainable Finance requirements by public and private investors.
- 6. Support multilateral discussion forums to deliver roadmaps with emphasis on foresight and implementation. Build capacity, share good practices, and increase literacy in the field of finance for sustainable energy amongst all relevant stakeholders at European, national, regional and local level.

#### 4.3.2. Developing innovative financing offer for sustainable energy

- 1. Create the conditions for adequate supply of private finance for sustainable energy investments and enhanced engagement of private investors, providing as well for the adequate matchmaking between the financial needs of sustainable investment projects and financial investors and stakeholders belonging to the financial "ecosystem".
- 2. Design, establish and roll-out new financing schemes and financial products or replicate and/or scale-up successful and effective financing solutions for energy efficiency and renewable energy investments at local, regional or national level and in cooperation with financial institutions, which are innovative, additional and tailored in relation to the targeted region(s), market segment(s) and particular

<sup>121</sup> https://ec.europa.eu/eefig/index\_en

<sup>122/</sup>https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance/platform-sustainable-finance en

<sup>123</sup> https://energy.ec.europa.eu/topics/funding-and-financing/investors-dialogue-energy\_en

 $<sup>{\</sup>color{blue}^{124}\, https://energy.ec.europa.eu/topics/energy-efficiency/financing/european-energy-efficiency-financing-coalition\_energy-ene$ 

<sup>125</sup> https://deep.eefig.eu

- investment profile(s), operational and ready to finance sustainable energy investments and aligned with relevant EU Sustainable Finance policy and legislation<sup>126</sup> and specifically the related EU Taxonomy<sup>127</sup>.
- 3. Promote integrated and innovative energy services able to leverage private finance and in particular the Energy Service Companies (ESCOs) market targeting residential and commercial buildings, as well as industry, SMEs and the public sector.
- 4. Support sustainable project aggregators at national, regional and local levels, and solutions and approaches that facilitate private investors' interests on both public and private investments.

## 4.4. SUPPORTING THE DEVELOPMENT OF LOCAL AND REGIONAL CLEAN ENERGY INVESTMENT PROJECTS

## 4.4.1. Developing innovative and integrated service offers for citizens and businesses

- 1. Improve market conditions and develop integrated services offers to facilitate sustainable energy use by citizens, public sectors and enterprises including by establishing and scale-up so-called "One-Stop-Shops" providing technical and financial support.
- 2. Make energy retrofitting, and the access to decarbonised and efficient heating and cooling technologies and renewable solutions, as simple as possible for sectors such as private residential buildings and their homeowners or rental housing by developing "integrated home renovation services" and contributing towards the EU energy and climate targets in particular in the area of buildings:
  - a) create, coordinate and/or optimise services covering the whole "customer journey";
  - b) engage all relevant actors in the value chain and build capacity, including, where applicable, by addressing split-incentives considerations and involving both owners and tenants in the energy renovation processes;
  - c) improve awareness and trust towards such integrated services, notably through clear policies on liability, quality assurance and consumer protection;
  - d) develop financial mechanisms to support the provision of services; foster mutual and international exchange of knowledge and sharing of best practices and contribute to dedicated policy developments;

127 https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities en

<sup>126</sup> https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance\_en.

- e) support the streamlining of standards and practices into consistent and transparent processes investors can rely on, and overall improve financing conditions.
- 3. Develop "product as a service" business models to increase the demand for resource-efficient and energy-efficient products, services, and buildings.

## 4.4.2. Delivering investments into sustainable energy at local and regional levels

- 1. Up-scale the capacity of public authorities and bodies in implementing their sustainable energy investment projects often identified in local Sustainable Energy and Climate Action Plans (SECAPs) or similar action plans, thereby illustrating the exemplary role of public administration in the clean energy transition and contributing notably towards the European Green Deal's Renovation Wave.
- 2. Develop and implement long-lasting facilitation structures that can support a larger number of public project promoters in a territory and ensure that further know-how is built, disseminated and maintained locally, leading to a faster implementation of sustainable energy and climate action plans.
- 3. Support public authorities in delivering sustainable energy investments through smart financial instruments and schemes with more effective use of public funds, blending of private finance and increased deployment of market-based instruments. Support local and regional energy agencies, which are often working closely together with public authorities, to become leaders in the clean energy transition<sup>128</sup>.
- 4. Build capacity in public authorities to maximise spending of the Just Transition Mechanism and of the Social Climate Fund into the clean and sustainable transition projects and programmes.
- 5. Support public authorities, the buildings, industry and mobility sectors to endorse/use public procurement as a strategic and needs-driven instrument to achieve their National Energy and Climate targets, as well as the objective of a Just Transition.
- 6. Assist public authorities in aligning their proposed investments with the guidance provided in the EU Sustainable Finance policy and legislation<sup>129</sup>, in particular with the EU Taxonomy<sup>130</sup> criteria.

https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance\_en.

<sup>128</sup> Including through the through the ManagEnergy initiative: https://www.managenergy.net/.

<sup>130</sup> https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities\_en.

## 4.4.3. Project Development Assistance for sustainable energy investments

- 1. Support public and private project promoters, such as public authorities or their groupings, public/private infrastructure operators and bodies, ESCOs, district heating and cooling operators, large property developers/owners, SME's and industry in building technical, financial and legal capacity and skills to develop and launch pipelines of sustainable energy investments and contributing notably towards the EU energy efficiency and renewable targets.
- 2. Facilitate the systematic replication at large scale of existing solutions, for example, through thematic and/or regional calls, thus contributing towards the European Green Deal's renovation wave and just transition dimension, and the European Union's energy and climate policy targets for 2030 and beyond toward 2040 and 2050.
- 3. Support the deployment of Project Development Assistance facilities for clean and sustainable energy investments at national and regional level, in order to fill the capacity gap and provide technical assistance to private individuals, public authorities and SMEs.
- 4. Support innovators across Europe to develop solutions that are mobilising private capital, blending public with private financing, setting up of long-term and scalable financial instruments and overcoming legal and structural barriers whilst delivering a highly ambitious sustainable energy projects pipeline.
- 5. Develop and support dedicated acceleration facilities such as the European City Facility<sup>131</sup> and the newly launched Energy Communities Facility, which can provide targeted support to increase energy efficiency up-take and renewable energy deployment, by among other supporting public authorities in turning their local action plans into sustainable energy investments and develop business plans to grow and implement sustainable energy community projects.

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<sup>&</sup>lt;sup>131</sup> The European City Facility provides tailor-made, rapid and simplified financial support (via "cascade funding" in the form of lump sums) and related services to a large number of European cities and municipalities to enable them to develop investment concepts. See <a href="https://www.eucityfacility.eu/home.html">https://www.eucityfacility.eu/home.html</a>.

## 4.5. INVOLVING AND EMPOWERING CITIZENS IN THE CLEAN ENERGY TRANSITION

#### 4.5.1. Citizens engagement on clean energy transition

- 1. Increase citizens' energy literacy and guide citizens in their decision-making and behaviour to reduce and optimise energy consumption, including via communication and awareness campaigns.
- 2. Set-up energy helpdesks for citizens, where relevant at either national, regional or local level; support citizens' up-take of smart and energy efficient home solutions and independent comparison tools, and roll-out relevant social innovation and sharing economy schemes.
- 3. Empower consumers and prosumers to take an active role in decentralised energy markets by improving contractual conditions and reducing regulatory barriers, and supporting uptake of energy storage solutions.
- 4. Support energy market actors (including suppliers, providers, authorities and intermediaries) in delivering effective advice and services to consumers.
- 5. Build younger generations' knowledge and capacity through the integration of clean energy transition and sustainable mobility in school programmes and teachers' training.

#### 4.5.2. Addressing energy poverty

- 1. Facilitate the market up-take of large-scale renovation of buildings for vulnerable districts or other groups of buildings, involving already proven measures for deep energy efficient renovation and sustainable solutions for district heating and cooling, renewable energy solutions, where appropriate, and highlighting multiple benefits.
- 2. Support public authorities in implementing provisions on energy poverty under the Energy Efficiency Directive (EED) and Energy Performance of Buildings Directive (EPBD).
- 3. Facilitate energy poor household up-take of collective energy efficiency/renewable energy actions, financial support schemes, and smart solutions.
- 4. Facilitate exchanges between different relevant stakeholders at local, regional, national, and European level on energy poverty.

#### 4.5.3. Energy communities and other citizen-led initiatives

1. Support the development and implementation of energy communities' initiatives to increase energy efficiency and the production and/or use of renewable energy.

- 2. Remove market, legislative and administrative barriers for the uptake of energy communities.
- 3. Foster the collaboration between energy communities/other citizen-led initiatives and local authorities.
- 4. Support citizen-led renovation programmes, notably at district level, contributing towards the European Green Deal's Renovation Wave and the European Union's climate and energy policy targets for 2030 and beyond toward 2040 and 2050.
- 5. Support the development and provision of integrated services for energy communities and other citizen-led initiatives, such as information, technical assistance and financial support, potentially addressing just transition contexts.
- 6. Facilitate collection of and access to data and information on different forms of energy communities.
- 7. Facilitate exchanges between different relevant stakeholders at local, regional, national and European level on energy communities.
- 8. Support public authorities in implementing provisions on Energy Communities under the Renewable Energy Directive (Directive (EU) 2018/2001 as amended Directive (EU) 2023/2413).