LIFE PROGRAMME

LIST OF PRIORITY TOPICS FOR 2021-2024

(applicable to Standard Action Projects and Coordination and Support Actions)

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1. SUB-PROGRAMME NATURE AND BIODIVERSITY

1.1. SMART OUTCOME-BASED IMPLEMENTATION OF THE EU NATURE AND BIODIVERSITY LEGISLATION OR TARGETS OF THE EU BIODIVERSITY STRATEGY FOR 2030.

Projects to be financed must fall under at least one of the two 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 for restoring or improving natural or semi-natural habitats, or habitats of species, both within and outside existing protected areas. This may also include projects for creating additional protected areas (or improving the biodiversity focus and contribution of existing protected areas), ecological corridors or other green infrastructure, projects testing or demonstrating new site management approaches, projects acting on pressures, etc.

- **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 area-based 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 to a wide range of relevant measures, spanning from hard infrastructural works to awareness raising of stakeholders.

  Explanatory note:

  Under both areas of intervention, having clearly defined specific outcome-based biodiversity-related objectives for projects and their activities is a pre-condition for an objective prioritization of the proposals (see below).

  In order to allow for effective comparison of merits of proposals addressing different nature and biodiversity policy priorities the following principles will be applied for the prioritisation in terms of outcome-based targets under the two areas of intervention:

  - For proposals targeting species and habitats covered by the EU Habitats Directive, priority is given to those that are clearly targeting habitats or species in unfavourable and declining conservation status, 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[1].
  - For bird species, and for species and habitats not covered by EU Nature legislation, priority is given to proposals clearly targeting species or habitats that are in higher extinction risk categories (in particular: endangered or worse) in the relevant EU red lists of habitats or species (or, for EU Outermost Regions and Overseas Countries and Territories, in the Global IUCN red lists).

Further prioritisation of the proposals will be based on the policy priorities:

[1] By way of exception from the above rule, considering the 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.

1. **Priorities for LIFE support under the EU Birds and Habitats Directives**

Priority is given to proposals for improving the conservation status or trends of species and habitats of EU importance, notably where such projects are implementing objectives and measures as outlined in national or regional *Prioritized Action Frameworks (PAFs)*. In particular:

- In relation to the intervention area "Space for Nature", priority is given to projects that focus their activities on the implementation of conservation objectives for existing Natura 2000 sites, notably where such conservation objectives are clearly established, improving the condition of species and habitats for which the sites are designated.
- In relation to the intervention area "Protecting our species", priority is given to projects that focus their activities on reducing the mortality of these species (e.g. poisoning, illegal killing, by-catch), preventing stakeholder conflicts, improving acceptance and promoting co-existence with protected species.

Note:

2. In addition to the above, priority will also be given to certain habitats and species in unfavourable conservation status (including certain species listed in annex IV and V of the Habitats Directive), under the Biodiversity Strategy-related policy priority for "Implementing EU nature restoration targets for species and habitats" (see below).**Priorities for LIFE support under the Invasive Alien Species Regulation**

Priority is given to proposals addressing:

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

3. **Priorities for LIFE support under the EU Biodiversity Strategy for 2030:**

Priority is given to proposals addressing:

a) Establishing a coherent network of protected areas

The EU Biodiversity Strategy for 2030 aims at creating a coherent Trans-European Nature Network (TEN-N) that covers at least 30% of EU land and sea area and builds on the Natura 2000 network. By 2030, all protected areas should be managed effectively, have clearly defined conservation objectives and measures, and be monitored appropriately. The Strategy furthermore provides that one third, corresponding to 10% of EU land and sea area, should be strictly protected. To achieve these targets, Member States will need to designate additional protected areas (including Natura 2000 sites), improve the quality and biodiversity focus of existing protected areas and/or improve the connectivity between sites in the network and their effective management. In that regards priority will be given to:

- Proposals focused on increasing the share of EU land or marine area under protection (within the definition of "protected areas" in the relevant EU Guidance under the Biodiversity Strategy). This may in particular be achieved through additional designations or enlargements of Natura 2000 site or nationally protected

areas, or improving the biodiversity focus of existing protected areas. In addition, this may also consider alternative approaches that, while fulfilling the criteria agreed between the Commission and Member States, such as "Private land conservation" approaches, "Other effective area-based conservation measures" (OECMs), etc., will secure the sustainability of area-based activities through an appropriate long-term protection status or guarantee, to be achieved by the end of the project at the latest. In this context, priority is also given to the set-up of ecological corridors, such as green and blue infrastructure that reduce land or seascape fragmentation and pressures/threats, and that directly contribute to the resilience, effective management, and connectivity of protected areas.

- Proposals focused on increasing the share of EU land or marine area under strict protection (within the definition of "strictly protected areas" in the relevant EU Guidance under the Biodiversity Strategy). This may in particular be achieved through improving the level of protection of existing protected areas or through additional designations or enlargements of Natura 2000 site or nationally protected areas, including strict protection of remaining EU primary and old-growth forests, but may also consider alternative approaches that ensure equivalent sustainability, such as "Private land conservation" approaches, OECMs, etc. (provided this is in line with the criteria for strictly protected areas as agreed between the Commission and Member States).

b) Implementing EU nature restoration targets for species and habitats

The Biodiversity Strategy for 2030 includes the following target for habitats and species under the EU Birds and Habitats Directives: "The Commission will request and support Member States to raise the level of implementation of existing legislation within clear deadlines. It will in particular request Member States to ensure no deterioration in conservation trends and status of all protected habitats and species by 2030. In addition, Member States will have to ensure that at least 30% of species and habitats not currently in favourable status are in that category or show a strong positive trend."

- Therefore, once Member States have submitted their commitments or pledges in relation to this target, projects that are focused on implementing any such national commitments or pledges, including through trans-national or trans-boundary approaches are given priority for LIFE support.

c) Restoring degraded and carbon-rich ecosystems; prevent and reduce the impact of natural disasters

According to the EU Biodiversity Strategy, significant areas of degraded and carbon-rich ecosystems (such as primary and old-growth forests, peatlands, grasslands, wetlands, saltmarshes, mangroves, seagrass meadows and deep-sea cold seeps) need to be restored by 2030.

- Therefore, proposals with a focus on restoring degraded and/or carbon-rich ecosystems are given priority for LIFE support. For forests, this includes proposals aimed at forest restoration to primary forest structure, composition and functioning.

The EU Biodiversity Strategy also emphasises the need for restoration actions to contribute to the prevention of natural disasters (such as floods and wildfires for example) or the reduction of their impacts. It further notes the importance of green and blue infrastructure and nature-based solutions in mitigating the impact of natural disasters.

- Therefore, proposals with a focus on deploying Green and Blue Infrastructure in line with the EU guidance[2] as well as other nature-based solutions and restoration actions that would help prevent or reduce the impact of natural disasters, including river restoration projects, are given priority for LIFE support.

d) Improving the health and resilience of managed forests

According to the Biodiversity Strategy for 2030, biodiversity-friendly practices such as closer-to-nature-forestry should continue and be further developed. To support this, the Commission will develop guidelines on biodiversity-friendly afforestation and reforestation and closer-to-nature-forestry practices.

- Therefore, project proposals for demonstrating "closer to nature forestry" practices, meaning practices that try to achieve management objectives with minimum necessary human intervention and combine conservation with productivity objectives, are given priority for LIFE support; these are also defined as continuous cover forestry, reduced impact logging, retention forestry, mimicking natural disturbances. EU guidelines developed pursuant to the Biodiversity Strategy for 2030, once available, will be the reference for closer-to-nature forestry.

e) Reversing the decline of pollinators

Project proposals for the restoration of habitats where pollination by animals plays an important role, need to outline how the improvement of their associated pollinator communities is taken into account by the project activities.

Furthermore, even where proposals do not directly address pollinators, applicants are invited to measure the project's success against, among others, the improvement of pollinator communities. 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.

- Therefore, project proposals that have a positive impact on pollinator communities[3] based on at least one of the above requirements are given priority for LIFE support.

f) Bringing nature back to agricultural land

To provide space for wild animals, plants, pollinators and natural pest regulators, the EU Biodiversity Strategy includes a commitment to bring back at least 10% of agricultural area under high-diversity landscape features. These include, inter alia, buffer strips, rotational or non-rotational fallow land, hedges, non-productive trees, terrace walls, and ponds. Member States will need to translate the 10% EU target to a lower geographical scale to ensure connectivity among habitats, especially through the CAP instruments and CAP Strategic Plans, in line with the Farm to Fork Strategy, and through the implementation of the Habitats Directive.

- Therefore, 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, filtering air and water, and supporting climate adaptation) and communicate such approaches, are given priority for LIFE support.

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2 See: EU Guidance document on a strategic framework for further supporting the deployment of EU-level green and blue infrastructure SWD(2019) 193 final

3 The focus is exclusively on wild pollinator species. Activities addressing domesticated species are not eligible.

g) Greening urban and peri-urban areas

The EU Biodiversity Strategy for 2030 "aims to reverse the loss of urban biodiversity and of the ecosystem services that urban green areas provide.

- Therefore, project proposals for the restoration of healthy and biodiverse ecosystems in urban green 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, are given priority for LIFE support, especially if they implement biodiversity objectives and measures in urban greening plans.

h) Measuring and integrating the value of nature

The EU Biodiversity Strategy for 2030 states that biodiversity need to be better integrated into public and business decision-making at all levels, including public accounting systems, and that the Commission will develop methods, criteria and standards to describe the essential features of biodiversity, its services, values and sustainable use. This will supplement and build on existing EU guidance on integrating ecosystems and their services into decision-making[4]

Therefore, project proposals that lead to an effective accounting, measurement and integration of biodiversity values into public and private decision-making applying the guidance, methods, criteria and standards developed by the Commission are given priority for LIFE support. Indicated under Circular economy

[4] SWD(2019) 305 final

The following matrix summarises the scoping and prioritization for Standard Action Projects for Nature and Biodiversity:

<table>
<tr><td colspan="2"></td><td colspan="2">EU policy priorities for Nature and Biodiversity</td></tr>
<tr><td colspan="2"></td><td>Priority 1: The extent to which the proposal contributes to the objectives of EU Nature and Biodiversity legislation in particular under the EU Birds and Habitats Directive (incl. Natura 2000) and the Regulation 1143/2014 on Invasive Alien Species</td><td>Priority 2: The extent to which the proposal contributes to the targets of the EU Biodiversity Strategy for 2030 for a Trans-European Nature Network and the EU Restoration Plan</td></tr>
<tr><td rowspan="2">Two areas of intervention that require specific and measurable (SMART) outcome based objectives</td><td>1: "Space for nature": area-based conservation and restoration measures</td><td colspan="2" rowspan="2">Any proposal that falls into at least one of the two areas of intervention <u>and</u> at least one of the two policy priorities could be financed through a Standard Action Project under LIFE Nature and Biodiversity</td></tr>
<tr><td>2: "Safeguarding our species": measures targeting specific species</td></tr>
</table>

1.2. EU NATURE AND BIODIVERSITY-LEGISLATION RELATED COMPLIANCE ASSURANCE AND ACCESS TO JUSTICE

- Supporting compliance assurance by
  - establishing new or, where in place, enhancing existing cross-border, national or regional networks of compliance assurance practitioners or experts; and/or establishing or, where in place, improving professional qualifications and training to improve compliance with binding EU legal instruments on nature and biodiversity, through promoting, checking and enforcing compliance, or
  - applying the polluter pays principle, using a mix of administrative law, criminal law and environmental liability; and/or
  - by developing and implementing strategies and policies and/or developing and using innovative tools and actions to promote, monitor and enforce compliance with binding EU instruments on nature and biodiversity, or ensure application of the polluter pays principles through environmental liability; and/or
  - improving relevant information systems operated by public authorities; and/or
  - engaging with citizens and others to promote and monitor compliance, and ensure application of environmental liability in relation to EU nature and biodiversity legislation.

Explanatory notes:

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. With regard to professional qualifications and training, 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. 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. Strategies and policies are aimed at high-level organization of activities and interventions, especially risk-based ones. 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. 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.

- Promoting effective public participation and access to justice in nature and biodiversity policy and legislation-related 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 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.

2. SUB-PROGRAMME CIRCULAR ECONOMY AND QUALITY OF LIFE

2.1. CIRCULAR ECONOMY AND WASTE

2.1.1. Recovery of Resources from Waste

- Implementation of innovative solutions to support value-added[5] recycled materials, components or products for the following areas:
    - Separate collection and recycling of waste electrical and electronic equipment (WEEE) in particular but not limited to photovoltaic panels, smartphones, tablets and computers;
    - Separate collection and recycling of batteries and accumulators;

[5] Value added means 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: A zero waste programme for Europe, COM(2014) 398 final of 02.07.2014, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52014DC0398. Where relevant, the quality of recycled materials or performance of recycling process may be assessed through Environmental Technology Verification: see https://ec.europa.eu/environment/ecoap/etv_en

- Dismantling, remanufacturing and recycling of End of Life Vehicles (ELVs) and End-of-Life Ships;
- Selective separation and recycling of construction works or buildings;
- Sorting and recycling of plastics[6];
- Separate collection and recycling of bio-waste[7];
- Separate collection and recycling of textiles;
- Recycling of composite and multilayer materials in particular but not limited to carbon or glass fibres. Special attention should be given to face-masks used by the general public for COVID protection purposes, in such case also best practice solutions will be considered;
- Recovering critical raw materials from waste
- Sorting and recycling of packaging.

- Implementation of innovative solutions for the identification[8], tracking, separation, prevention and decontamination of waste containing hazardous substances, to enable value-added recycling of the treated waste and safe disposal of the hazardous substances or reducing the scale of the problem within the framework of the project. 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[9].

2.1.2. Circular Economy and the Environment

- Implementation of business and consumption models or solutions[10] to support value chains, particularly the key product value chains set out in the new EU Action Plan for the Circular Economy[11], aiming at reducing or preventing resource use and waste including one or more of the following:
  - Implementation of design for the environment solutions, including circular design, to improve durability, reparability, reusability, upgradability, recycling and use of recycled content in new products;
    These solutions shall aim at reducing impacts holistically[12] by considering aspects such as: life cycle approach, wide uptake of labelling, green procurement and tracking of raw materials in components and products;

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6 This includes plastic packaging and micro-plastic.

7 Including anaerobic digestion and composting

8 Including characterisation and product passport approaches.

9 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.

10 Where relevant, the performance of innovative technological solutions may be assessed through Environmental Technology Verification: see https://ec.europa.eu/environment/ecoap/etv_en. Circular districts involving creation of circular value chains to boost urban economies whilst producing urban and territorial regeneration will be as well considered.

11 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.

12 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 Commission Recommendation 2013/179/EU and is

- Solutions (post-design) to support the implementation, transfer and/or uptake of product durability, reuse and repair, including upgrading and remanufacturing;
- Support to the implementation, transfer and/or uptake of one or more of the following:
  a) Product-as-a-service solutions and other business models or technologies to optimise asset use,
  b) Industrial symbiosis and creation of circular value chains, better tracking resources and matching surplus or by-product materials or recyclable waste across industrial sectors,
  c) Digital product passports[13].

The models and/or solutions proposed should ideally consider the environmental performance of the whole value chain[14], but can equally focus on any specific stage of the value chain. Projects may include, as an element, the development of data to support value chain thinking[15]. 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.

Those 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.

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expected to be updated through policy based on the version https://eplca.jrc.ec.europa.eu/permalink/PEF_method.pdf.

[13] A digital product passport (DPP) is gathering data on a product (including its environmental characteristics, from the origin of the materials to environmental performance, durability, reparability, and chemicals of concern…) and its value chain. It contributes to appropriate and efficient value-retaining and value-recovering actions. For both public and private agents, and for individual consumers, the DPP helps to make informed sustainable decisions, and also facilitates market surveillance and access to available information regarding product's compliance with applicable EU legislation. The European Green Deal and the New Circular Economy Action Plan identify the DPP as a way to contribute to effective product policy.

[14] 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

[15] Development of data on the environmental impacts of different processes, to test the impact of alternative solutions, please refer to previous footnote on Product Environmental Footprint method for life cycle related data.

2.2. AIR

The thematic priority "Air" focuses on the implementation of air quality legislation and a comprehensive approach to related urban, industrial and rural environmental problems. Effective implementation of clean air legislation forms an essential contribution to 'a zero pollution ambition for a toxic-free environment' announced by the Commission in the European Green Deal and related initiatives. Air pollution remains the most serious environmental health problem in Europe, with a mortality rate more than ten times that from traffic accidents, and it also has a significant impact on ecosystems. Projects should refer to reducing air pollutants, particularly PM, NOx, and/or ammonia. If reducing emissions of CO2 is the primary objective, the project should be submitted under the sub-programme for Climate Mitigation and Adaptation.

The Industrial Emissions Directive (IED) is a key instrument for pollution prevention and control from large point sources. Experience with implementation of the IED has allowed for identifying additional needs in terms of public information and the introduction of emerging techniques.

2.2.1. Air quality legislation and the NEC Directive

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.

- **Air quality improvement and emission reduction of particulate matter** (PM) in areas:
    - with high use of solid fuel like biomass, coal, and peat for domestic heating, or
    - with high emissions of PM from (re)construction, quarrying, mining, mineral handling, or other dust generating activities, if not covered by the IED

Such projects shall implement one or more of the following:

- technical[16],
- management,
- innovative regulatory and/or
- innovative incentive based solutions[17].

- **Sustainable road transport mobility** aiming at emissions of air pollutants, the reduction of which is essential for helping meet air quality standards, focusing on one or more of the following:
    - Reduction of emissions of air pollutants during real world driving conditions (e.g. technical measures for vehicles, eco-driving, measurement and surveillance technology)
    - zero-emission two- or three wheelers and/or analysis for and implementation on a test scale of related infrastructure needs;
    - zero- emission vehicles and related infrastructure needs;

[16] 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.

[17] 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.

- the innovative use of alternative fuels;
- innovative retrofit programmes for vehicles[18];
- alternative drivetrain technology[19];
- innovative technologies to reduce emissions from wear and tear (e.g. brakes, tyres, road surface);
- 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;
- the use of innovative logistic or passenger mobility platforms[20].

- Sustainable mobility, other than road transport, including maritime transport, ports, aviation and Non Road Mobile Machinery (NRMM) mobility, including their supporting infrastructureand logistics. If aiming at reducing emissions from NRMM, projects can address existing NRMM not covered (yet) by Regulation (EU) 2016/1628[21], and/or address improvements to reduce emissions from NRMM already covered by the NRMM Regulation beyond the legal requirements mentioned in it.

- Reduction of ammonia, methane and PM emissions from agriculture in support of the implementation of the upgraded UNECE Code of Good Practice for reducing emissions from agriculture[22].

2.2.2. Industrial Emissions Directive

- Application of pollution prevention and abatement techniques 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 BREFs review process. Projects will focus on the reduction of air pollutants and should notably address PM2.5, NOx, SO2, NH3 and/or NMVOCs generated by industrial installations regulated by the Industrial Emissions Directive (IED).

2.3. WATER

One of the aims of the new Green Deal[23] is to restore natural functions of ground and surface water. This is essential to preserve and restore biodiversity in lakes, rivers, wetlands, marine ecosystem, and estuaries, and to prevent and limit damage from floods. Implementing the Farm to Fork' Strategy will contribute to reducing pollution

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18 Products envisaged include cars as well as motorised two-wheelers and three-wheelers.

19 As, for example, electro-mobility and hydrogen-based mobility.

20 E.g. for last mile delivery of goods or urban intermodal passenger mobility.

21 E.g. from Maritime and Inland Waterway Transport, port infrastructure and construction sites. This may include fuel switching (including electricity), low emission fuel (e.g. aviation fuel resulting in low Particle Number emissions), retrofitting with emission reduction technologies or actions to reduce PM from wear and tear (e.g. brakes or railway tracks). Actions can be complemented by the implementation of related urban policies, regulatory approaches and planning. The actions should result in measurable emission reduction of air pollutants such as PM and NOx.

22 http://www.unece.org/index.php?id=41358

23 https://ec.europa.eu/info/files/communication-european-green-deal_en

from excess nutrients. In addition, the Commission will propose measures to address pollution from urban runoff and from new or particularly harmful sources of pollution such as micro plastics and hazardous chemicals, including pharmaceuticals. There is also a need to address the combined effects of different pollutants.

Green Deal strategies may support: reduction of pollution through the Farm to Fork Strategy and the Zero Pollution Action Plan, restoration of aquatic nature through the Biodiversity Strategy, addressing sources of chemicals pollution through the Circular Economy Action Plan and the Chemicals Strategy, shift to renewables (except small hydropower) as a result of stepped up climate action, etc.

Taking into account and following up on the findings of the Fitness Check of EU water legislation and the evaluation of the Urban Waste Water Treatment Directive, the focus of water actions, both legislative and non-legislative, will be on both water quality and quantity management, as well as coastal and marine waters management:

- integrated approaches for the implementation of the EU Water Framework Directive[24];
- actions targeted at the implementation of Floods Directive[25];
- actions targeted at the implementation of Marine Strategy Framework Directive[26];
- activities to ensure safe and efficient use of water resources, improving quantitative water management and resilience, preserving a high level of water quality and avoiding misuse and deterioration of water resources.

Addressing water quality and quantity in a cost efficient way is a challenge within the EU. Responding to the challenges and opportunities in the water sector requires a holistic approach across a number of actors.

In line with the implementation of the Water Framework Directive and the Flood Directive, projects should focus on developing and particularly implementing actions which can help Member States move to genuinely integrate water resource management, reduce pressures on water quality and quantity, promoting Nature Based Solutions and supporting the EU Biodiversity Strategy where relevant.

Regarding topics of actions targeted at the implementation of the Marine Strategy Framework Directive, particular emphasis should be placed on the main pressures and impacts, as well as actions applying Maritime Spatial Planning Directive[27] that lead to better integrated coastal zone management and maritime spatial planning.

Regarding topics of actions targeted at the implementation of the Urban Waste Water

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[24] 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
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2000:327:0001:0072:EN:PDF

[25] Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:288:0027:0034:EN:PDF

[26] 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)
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF

[27] Directive 2014/89/EU - Maritime Spatial Planning

Treatment Directive and the revised Drinking Water Directive, new technologies and processes used to ensure the provision of water services (i.e. production of high quality drinking water and improved treatment of wastewater) need to reach maturity.

2.3.1. Water quality & quantity

- Improvement of water quality via one or both of the following:
  - Integrated management of nutrients and organic pollution of human (urban) and/or agricultural origin by directly removing pollution. The solutions foreseen should be innovative and should be identified as a result of a comprehensive gap analysis[28] defining the measures needed on a river basin scale or catchment scale to allow for the achievement of the Water Framework Directive and Marine Strategy Framework Directive requirements, taking into account what has been delivered via the Urban Waste Water Treatment Directive[29], Nitrates Directive[30], Bathing Water Directive[31] and Groundwater Directive[32] requirements.
  - Innovative solutions for the reduction of pressures from chemical pollutants in the water environment by reducing emissions of priority substances[33] and other chemicals identified as river basin specific pollutants at source, through the use of appropriate substitutes[34] or alternative technologies. This should include, where relevant, other pollutants such as pharmaceuticals and (micro) plastics.
- Implementation of flood and/or drought risk management actions by applying at least one of the following:

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28 An analysis of the gap between the current status of water bodies and the reduction in pressures necessary to reach the good status objective as derived from derives from Art. 11(1) of the Water Framework Directive, according to which Member States have to establish programmes of measures "taking account of the results of the analyses required under Article 5" (analysis of pressures and impacts), "in order to achieve the objectives established under Article 4" (good status). Art. 11(8) also specifies that the programmes of measures have to be reviewed every six years. For more see the WFD Reporting Guidance 2016, http://cdr.eionet.europa.eu/help/WFD/WFD_521_2016/Guidance/WFD_ReportingGuidance.pdf, in particular chapter 10.1.8.2, p. 245 (description of what Member States have to report in terms of gap indicators for each significant pressure type or chemical substance) and sections 10.1.4 and 10.1.5.

29 Council Directive 91/271/EEC of 21 May 1991 on urban waste-water treatment (OJ L 135, 30.5.1991, p. 40–52).

30 Council Directive 91/676/EEC of 12 December 1991 on the protection of waters against pollution caused by nitrates from agricultural sources (OJ L 375, 31.12.1991, p. 1–8).

31 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 (OJ L 64, 4.3.2006, p. 37–51).

32 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 (OJ L 372, 27.12.2006, p. 19–31).

33 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 (OJ L 226, 24.8.2013, p. 1–17)

34 'Appropriate substitutes' are other chemical substances, which produce the same desired effects with a reduced environmental impact.

- Nature-based solutions consisting in natural water retention measures that increase infiltration and storage of water and remove pollutants through natural or "natural-like" processes including re-naturalisation of river, lake, estuary and coastal morphology and/or re-creation of associated habitats including flood- and marsh plains;
- Innovative prevention and protection tools and techniques for support of policy, land use planning, risk reduction, post-event resilience and emergency management and/or
- Innovative integrated risk assessment and management approaches taking into account social vulnerability and aiming at improved resilience while ensuring social acceptance.

- Innovative projects addressing hydro morphological pressures identified in River Basin Management Plans and originating from land or water uses in order to achieve good water status or potential as required by the Water Framework Directive objectives and 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.
- Implementation of innovative **water saving measures** in order to reduce the quantitative and qualitative pressures on water bodies/resources. This includes measures for reduction of over-abstraction of water taking into account circular economy measures.

2.3.2. Marine and coastal water management

- Application of innovative solutions (tools, technologies or practices) to ensure the protection and conservation of the seas, oceans and their coasts, by fostering sustainable human activities within the marine environment. This would include 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:
  - underwater noise,
  - marine litter and/or contaminants (addressed at source or in the sea - giving priority to prevention rather than clean-up),
  - disturbance of and damage to the sea floor,
  - examination and reduction of impacts of deep sea exploitation and exploration ,
  - over-fishing and/or incidental by-catch,
  - nutrient and organic matter inputs from agriculture or aquaculture and/or
  - navigation (e.g. from dredging navigation channels, from shipping highways).

2.3.3. Water services

- Application of innovative technologies and tools for drinking water and urban wastewater treatment systems, through at least one of the following:

- the use of resource efficient processes for the provision of water services[35],
- the use of processes to diminish the presence of pollutants of emerging concern,
- the treatment of drinking water and/or waste water for reuse that can ensure highest safety levels, e.g. treatment efficacy for pathogen (viruses, bacteria) removal.

- Application of innovative tools ensuring the resource efficient provision of water services compliant with the revised Drinking Water Directive and the Urban Waste Water Treatment Directive to population living in rural areas[36].
- Improvement of the efficiency and effectiveness of innovative solutions and/or innovative treatment options regarding recycled/reclaimed water, implementing one or more of the following:
  - Concepts for (alternative) water supply, wastewater treatment, reuse (where applicable, in accordance to Regulation (EU) 2020/741 of the European Parliament and of the Council of 25 May 2020 on minimum requirements for water reuse PE/12/2020/INIT) recovery and recycling of resources[37];
  - Source control methods and on-site technologies for decreased discharges of pollutants of emerging concern (e.g. pharmaceuticals[13], nanoparticles, textile fibres) and/or pathogens with wastewater effluent;
  - Systematic approaches to avoid loss of water, energy and resources in industrial production and/or in provision of water services.

2.4. SOIL

Contribute to the soil-related commitments set in the EU Biodiversity Strategy towards 2030:

- Implementation of actions to protect the quality of EU's soil, including innovative actions:
  - encourage transition to sustainable practices of soil and land management, promote and scale up innovative soil and land management techniques and scale-up the implementation of the sustainable soil management with a view to eliminate and prevent adverse effects (erosion, pollution, loss of soil organic carbon, etc.) and negative impacts on provided soil ecosystem services and/or,
  - prepare for extreme weather events and combat desertification, in order to increase resilience of agricultural and tourism sectors to climate threats (e.g. floods, soil erosion and droughts) by scaling up the implementation of effective nature based solutions.

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35 E.g. aiming to reduce energy consumption for the treatment and management of water and water losses.

36 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: http://ec.europa.eu/eurostat/statistics-explained/index.php/Urban-rural_typology.

37 E.g. land nutrients (P, K, N) and organic compounds.

- Restoration, protection and improvement of soil health and prevention of soil degradation including soil loss also through innovative actions:
  - sustain soil fertility and soil biodiversity, restore them after pollution and enhance their capacity to improve water quality,
  - apply cost-effective investigation, assessment and remediation solutions for point-source and diffuse soil contamination,
  - support to sustainable soil and land management practices, including those specifically intended to remove CO2,
  - address soil degradation including soil loss to preserve land resources ('land degradation neutrality') and/or,
  - apply cost-effective solutions to unseal already sealed areas.

2.5. NOISE

Under this heading, priority will be given to projects in urban areas in order to improve the situation for a maximum number of persons.

- Substantial reduction of noise inside densely populated urban areas through solutions with high environmental and economic sustainability; for instance, by using 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.

2.6. CHEMICALS

- Prevention and Reduction of the impact on the environment or human health, of hazardous substances, in particular at least one of the following:
  - Substances identified as being of concern (including endocrine disruptors and persistent substances)[38];
  - combination effects of substances;
  - nanomaterials;
  - biocidal products and/or pesticides;
  - PFAS (Per- and polyfluoroalkyl substances).

  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 concern.
- Prevention and Reduction of the impact on the environment or human health of chemical production and use across the value chain to promote:
  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

[38] 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).

- Digital innovations for advanced tools, methods and models, and data analysis capacities to also move away from animal testing.
- Implementation of safe- and sustainable-by-design solutions, including through the development, commercialisation, deployment and uptake of safe- and sustainable-by-design substances, material and product. 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.
- Facilitation of the implementation of the Seveso III Directive (Directive 2012/18/EU) 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.

2.7. ENVIRONMENTAL GOVERNANCE

2.7.1. Activities in support of public administrations' decision-making and voluntary approaches

- Improving the capacity of public administration to implement a holistic vision of the environment, including managing, monitoring, assessing environmental plans, programmes and initiatives, by involving responsible authorities, also through institutional collaboration at different territorial level and/or where appropriate in partnership with private entities, with a view to develop synergies, to reduce administrative burden and/or to optimise environmental outcomes. These activities will contribute, where applicable, to the implementation of the UN 2030 Agenda on Sustainable Development Goals.

  One or more of the following shall be targeted:

  - <u>Plans, programmes, initiatives, analyses, reviews and assessments</u>
    - National air pollution control programmes[39];
    - Air Quality Plans
    - Programmes of measures, analyses and reviews associated with the River Basin Management Plans;
    - Flood risk management plans[40];
    - Nitrate action plans[41];
    - Waste management plans;
    - National or Regional Circular Economy Action Plans, Strategies, Roadmaps or similar[42];

[39] Directive 2016/2284/EU on the reduction of national emissions of certain atmospheric pollutants, OJL 344, 17.12.2016, p. 1.

[40] Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (OJ L 288, 6.11.2007, p. 27–34).

[41] Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources, OJL 375, p. 31.12.1991, p 1.

- Actions, Measures and Plans to implement the Green City Accord[43] ;
- National Radon Action Plans[44]

and/or

- Decisions related to:
  - industrial emissions;
  - waste management;
  - water pollution and water abstraction[45].

- Development, promotion, implementation and/or harmonisation of one or more of the following voluntary instruments and approaches and their use by entities aiming at reducing the environmental impact of their activities, products and services:
  - Third-party verification of the performance of innovative technologies when they are ready for the market such as Environmental Technology Verification (ETV)[46];
  - Product environmental footprint category rules (PEFCR) and/or organisation environmental footprint sectoral rules (OEFSR) 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[47] and the latest available guidance[48];

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42 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.

43 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.

44 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

45 Including the analysis necessary to establish effective water pricing policies.

46 See https://ec.europa.eu/environment/ecoap/etv_en

47 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, OJ 124/1, 4.5.2013, p. 1–210. See also https://eplca.jrc.ec.europa.eu/permalink/PEF_method.pdf and https://eplca.jrc.ec.europa.eu/permalink/OEF_method.pdf

48 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.jrc.ec.europa.eu/permalink/PEF_method.pdf and https://eplca.jrc.ec.europa See https://ec.europa.eu/environment/ecoap/etv_en

48 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, OJ 124/1, 4.5.2013, p. 1–210. See also https://eplca.jrc.ec.europa.eu/permalink/PEF_method.pdf and https://eplca.jrc.ec.europa.eu/permalink/OEF_method.pdf

48 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.eu/permalink/OEF_method.pdf

- The EU Ecolabel[49], for the promotion of products (goods and services) with excellent environmental performance, in all sectors concerned and in particular in tourism and finance, and as a tool to promote sustainable consumption patterns and lifestyles. In a broader perspective, fostering the use of officially recognised ecolabels[50] ;
- Actions, services, networks and innovative business models for fostering the use of reused, repaired, refurbished, remanufactured also linked to product durability and planned obsolescence[51]; Development of indicators linked to product policy.
- Green and Circular Public Procurement[52]: 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;
- Linking regulatory, financial or reputational incentives to environmental performance by using EMAS[53];
- Assessment and reporting of the sustainability performance of buildings[54], using Level(s), the building framework with core indicators[55].

2.7.2. Environmental compliance assurance and access to justice

- Supporting environmental compliance assurance by
  - establishing new or, where in place, enhancing existing cross-border, national or regional networks of environmental compliance assurance practitioners or experts; and/or establishing or, where in place, improving professional qualifications and training[56] 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[57]; and/or
  - by developing and implementing strategies and policies and/or developing and using innovative tools and actions to promote, monitor 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

49 https://ec.europa.eu/environment/ecolabel/

50 https://ec.europa.eu/environment/ecolabel/useful-links.html

51 E.g. with a usage counter, a reduced VAT for repair, extension of the legal guarantee, etc.

52 https://ec.europa.eu/environment/gpp/index_en.htm

53 https://ec.europa.eu/environment/emas/index_en.htm

54 http://susproc.jrc.ec.europa.eu/Efficient_Buildings/

55 https://ec.europa.eu/environment/topics/circular-economy/levels_en

56 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.

57 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.

- engaging with citizens and others to promote and monitor compliance, and ensure application of environmental liability[58].

Explanatory note:

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. With regard to professional qualifications and training, 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. 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. Strategies and policies are aimed at high-level organization of activities and interventions, especially risk-based ones. 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. 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 harmonised and useable data.

- Promoting effective public participation and access to justice in environmental matters[59] 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[60] 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[61];
- 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.[62]

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58 See Vade Mecum on complaint-handling and citizen engagement, adopted by the Environmental Compliance and Governance Forum in 2019, and summary guide for national administrations.

59 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 (2017/2616, OJ C 275, 18.8.2017, p. 1-39.)

60 Using for example online platforms.

61 The Environmental Liability Directive is relevant for access to justice.

62 http://ec.europa.eu/environment/legal/law/training_package.htm

2.7.3. Behavioral change and awareness-raising initiatives

The geographical scope of behavioural change and awareness-raising initiatives will be taken into account in the assessment of the European added value of proposed projects.

Raising awareness on environmental problems, EU environmental policies, tools and/or legislation among the relevant target audiences, aiming to change their perceptions and fostering the adoption of environmentally friendly behaviours and practices and/or direct citizen's engagement. Applicants need to provide substantial evidence that a change of awareness levels[63] 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. The awareness-raising activities should have the widest coverage relevant for the specific issue targeted[64]. These activities will contribute, where applicable, to the implementation of the UN 2030 Agenda on Sustainable Development Goals. The environmental problems, EU environmental policies, tools and/or legislation targeted should be directly linked to one or more of the priorities included in:

- The European Green Deal to raise awareness on the environmental impacts to underpin the transformative changes towards more sustainable food, energy, mobility and building systems and to mainstream environmental considerations across policies and activities in line with the EGD oath to do no harm;
- The Circular Economy Action Plan to ensure 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 use most resources and pose higher sustainability challenges, namely textiles, chemicals (including plastics), construction and buildings, electronics and ICT, batteries and vehicles;
- 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, sustainability in the use and management of chemicals and promoting clean air.

2.8. A NEW EUROPEAN BAUHAUS

On January 2021, the Commission launched the New European Bauhaus (NEB) initiative, an environmental, economic and cultural project to combine design, sustainability, accessibility and affordability in order to help deliver the European Green Deal. There is a potential for supporting this initiative under LIFE Circular economy and quality of life and LIFE Nature and Biodiversity.

In particular, the following project proposals that contribute to the implementation of the New European Bauhaus initiative will be given priority for LIFE support:

[63] 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.

[64] 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.

- Proposals focussed on a holistic reduction[65] of environmental impacts of new buildings;
- Proposals on circular districts involving creation of circular value chains to boost urban economies whilst producing urban and territorial regeneration.
- Proposals for maintaining or restoring biodiversity that contribute to the implementation of the New European Bauhaus initiative. This may include, for example, demonstrating biodiversity friendly practise for the energetic isolation of buildings, innovative architectural approaches for wildlife-friendly buildings, etc.

[65] Considering aspects such as life cycle approach and green procurement

3. SUB-PROGRAMME CLIMATE MITIGATION AND ADAPTATION

3.1 CHANGE MITIGATION

- Actions to reduce greenhouse gas emissions in the sectors not covered by the EU Emissions Trading System, including the reduction of use of fluorinated greenhouse gases and ozone-depleting substances.
- Actions which enhance the functioning of the Emissions Trading System and which have an impact on energy and greenhouse gas intensive industrial production;
- 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 Clean Energy Transition sub-programme);
- The development of land and sea management practices which have an impact on emissions and removals of emissions, conservation and enhancement of natural carbon sinks;

3.2. CLIMATE CHANGE ADAPTATION

- Adaptation policy development, and adaptation strategies and plans;
- State-of-the art tools and solutions for adaptation;
- Nature-based solutions in the management of land, coasts and marine areas;
- Adapting cities and regions to climate change, climate-proofing and resilience of infrastructure and buildings
- Water management;
- Preparedness for extreme weather events;
- Financial instruments, innovative solutions and public private collaboration on insurance and loss data.

3.3. CLIMATE GOVERNANCE AND INFORMATION

- Support to the operation of the European Climate Pact;
- Incentivising behavioural change, mainstream emission reduction and energy efficiency actions;
- Awareness-raising activities addressing adaptation and mitigation needs
- Activities linked to the implementation of the Sustainable Finance activities;
- Greenhouse gas monitoring and reporting;
- Implementation/further development of national 2030 climate and energy strategies and/or mid-century strategies and their integration in other national strategies;
- Development and implementation of greenhouse gas accounting and climate change mitigation in the land use and maritime sector;
- Assessment of the functioning of the EU ETS;
- Building capacity, raising awareness among end-users and the equipment distribution chain of fluorinated greenhouse gases;
- Climate policy monitoring, assessment and ex-post evaluation.

4 SUB-PROGRAMME CLEAN ENERGY TRANSITION

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

4.1.1. Capacity building in public authorities

- Support regional and local authorities in developing/upgrading ambitious energy and climate transition plans/strategies for 2030 and 2050, and foster their coherence with EU and national targets, initiatives and reporting frameworks, including vulnerable groups affected by the clean energy transition.
- Develop and implement innovative mutual learning programmes on specific clean energy transition actions. Facilitate large-scale roll out (replicating/upscaling) of successful capacity-building initiatives funded locally, nationally or by EU programmes.
- Involve public authorities in the clean energy transition by supporting matchmaking, networking and development of support services and shared knowledge bases of good practices.
- Mobilise and empower local agents of change to act as local drivers of the clean energy transition.
- Support public authorities in the design and transformation of energy efficient and multi-functional public spaces.
- Consolidate the role of local and regional energy agencies as key supporters of cities and regions in the energy transition.

4.1.2. Supporting the enabling provisions of EU legislation and strategies

- Establish and support approaches that help Member States 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 as well as relevant energy policy initiatives, such as the Smart Energy Sector Integration Strategy and the Offshore Renewable Energy Strategy.

  This means inter alia actions to promote exchange and sharing of best practices within and across Member States, to build capacity and to provide support and tools for putting in place enabling policy and regulatory frameworks. This includes support for the contextualisation of requirements, for assessing implementation options and impacts, including non-energy impacts, and for the surveillance, enforcement, monitoring and evaluation of specific policy measures. Moreover, 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.

4.1.3. Governance and support to EU policy making

- Support the development and effective implementation of energy and climate policies through the whole policy cycle at all governance levels.

- 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.
- 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.
- 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. Policy evaluation, both through ex-ante testing via pilot experiments and ex-post assessments and analyses.
- 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.
- Deliver robust and consistent reporting mechanisms integrating vertical and horizontal administrative layers and innovative holistic monitoring and verification schemes.

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[66]

- 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.
- Enhance construction of new high energy performance buildings. Remove market and legislative barriers for energy efficiency driven renovations.
- Enable further harmonisation in calculation of energy performance and certification of buildings, and coherent cost-effective methods to assess achieved energy performance in use.

4.2.2. Supporting the energy transition in industry and tertiary sectors

- Foster the market uptake of cost-effective energy efficiency measures and renewable energy among large and small companies across EU.
- Develop capacity-building programmes supporting the actual implementation of energy audits recommendations.
- Facilitate and accelerate the deployment of industrial and urban-industrial energy clustering, as well as industrial symbiosis.
- Foster collaboration between actors in the same value chain to increase energy efficiency and renewable energy use associated to their products/services.

[66] The Renovation Wave (https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en) is a new EU strategy to boost renovation launched as part of the European Green Deal. It aims to double annual energy renovation rates in the next ten years, opening the path for a broad range of actions: legislative and non-legislative measures and enabling tools, financing and non-financing aspects, taking into account different levels of action at EU, national and local or regional level.

- Support the development and implementation of industrial strategies and partnerships to accelerate the clean energy transition in industry and in the tertiary sector.
- Address non-technological barriers facilitating the electrification of the industry and services sectors.

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

- Further development of the BUILD UP Skills initiative launched in 2011.
- Update of the skills gap analysis and road-mapping exercise carried out in the first phases of the BUILD UP Skills initiative[67].
- Facilitate the market uptake of innovative, tailored training, qualification and recognition solutions for professionals at all levels of the building value chain, with a special emphasis on skills needed for energy renovation, new nearly-zero energy buildings, smart buildings, as well as digital skills.
- Support the pooling and accessibility of training materials, tools and services from previous EU and national projects supporting the upskilling of building professionals in the area of energy efficiency and sustainability, including through innovative ICT solutions.
- Boost the demand for 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 climate neutrality of heating and cooling

Propose market uptake measures accelerating the climate neutrality of heating and cooling at the local, regional and national level, and reducing the costs of energy consumption to affordable levels for all. This may include:

- 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, including through new and existing as well as integrated district heating and cooling networks;
- New services and measures to strengthen heating and cooling markets and facilitate sector and system integration.

4.2.5. Enabling innovative, smart and sector integrating services for the clean energy transition

- Support the development and deployment of service models that enhance the business case of energy efficiency services by integrating elements that increase the value and diversify revenue streams, including from non-energy services and across sectors; in this, support the use of innovative contractual models and measurement and verification schemes.

[67] 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.

- Support the conceptualisation of service models that allow energy efficiency to take part in the organised energy markets or in portfolio optimisation of utilities.
- Support mechanisms and spaces that facilitate cooperation and build trust across different types of service providers or between service providers and costumers; support cooperation models and platforms that accommodate data sharing across market and system actors, thus enabling integration of market signals.
- Support the implementation of a favourable policy and regulatory framework for smart services by connecting demand-side and supply-side actors.

4.2.6. Digitalisation enabling the energy transition: enhancing effective policy implementation and market surveillance through innovative digital means.

- Enable the integration of various sectors such as buildings, transport and industry into an increasingly complex energy system through digital solutions.
- Remove barriers and facilitate the deployment of existing solutions in the areas of sector integration, such as the integration of waste heat in district heating networks and the integration of data centers in the energy system.
- Demonstrate the business case of demand side flexibility, raise awareness, remove barriers and facilitate the deployment of technical solutions.
- Support the uptake of smart buildings, by removing barriers and promoting the market penetration of smart building devices.
- Support the uptake of the Smart Readiness Indicator.
- Facilitate the collection and valorisation of high-quality data of the EU building stock.
- Support the development and wider use of modern digital tools based on innovative technologies such as webcrawlers, crowd data sourcing or Artificial Intelligence to facilitate market surveillance authorities' work to ensure compliance with ecodesign and EU energy labelling rules.

4.3. ATTRACTING PRIVATE FINANCE FOR SUSTAINABLE ENERGY

4.3.1. Mainstreaming sustainable energy finance

- 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 approaches filling well identified gaps.
- Build on recommendations and findings of the Energy Efficiency Financial Institutions Group (EEFIG)[68] and the Platform on Sustainable Finance[69].
- Support access to private finance and capital markets for energy efficiency investments, by increasing investors' confidence and capacity, including through better data collection (e.g: De-risking Energy Efficiency Platform - DEEP)[70] and use, simplification of the investment process, adaptation of regulatory frameworks, and integration of long-termism and sustainability risks into the decision-making of investors.

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68 https://ec.europa.eu/eefig/index_en

69 https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance/platform-sustainable-finance_en

70 https://deep.eefig.eu

- Accelerate compliance and best practices regarding the EU sustainable finance requirements by public and private investors.
- 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.

4.3.2. Developing innovative financing offer for sustainable energy

- Create the conditions for adequate supply of private finance for sustainable energy investments and enhanced engagement of private investors.
- Establish new financing schemes or replicate and/or scale up successful and effective financing solutions for sustainable energy investments at local, regional or national level, which are innovative, additional and tailored in relation to the targeted region(s), market segment(s) and particular investment profile(s), operational and ready to finance sustainable energy investments and aligned with relevant EU Sustainable Finance policy and legislation[71] and specifically the related EU Taxonomy[72].

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

4.4.1. Developing innovative integrated service offers

- Improve market conditions and develop integrated services offers to facilitate sustainable energy use by EU citizens.
- Make home energy retrofitting and the access to climate neutral heating and cooling technologies and solutions as simple as possible for homeowners by developing "integrated home renovation services" and contributing towards the European Green Deal's Renovation Wave:
    - create, coordinate and/or optimise services covering the whole "customer journey";
    - engage all actors in the value chain and build capacity;
    - improve awareness and trust towards such integrated services, notably through clear policies on liability, quality assurance and consumer protection;
    - 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;
    - support the streamlining of standards and practices into consistent and transparent processes investors can rely on, and overall improve financing conditions.

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[71] https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance_en

[72] https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en

4.4.2. Procurement as a driver towards the Clean Energy Transition

- Support public authorities, the buildings, industry and mobility sectors to endorse/use public procurement as a strategic and needs-driven instrument to achieve their 2030 and 2050 energy and climate targets, as well as the objective of a just transition.
- Address technical, organizational and financial capacity gaps.
- Take into account the digital transformation of public procurement and the emergence of e-procurement, the need for demand side aggregation and the role of SME's as innovators.
- Support project aggregation and promote energy services and the Energy Service Companies market.
- Develop green public procurement criteria related to life cycle and climate resilience for different types of buildings (focus on office buildings, schools and hospitals) taking into consideration Level(s) and Taxonomy indicators and the Energy Efficiency First principle.
- Develop 'product as a service' business models to increase the demand for resource-efficient and energy-efficient products, services, and buildings.

4.4.3. Delivering public sector investments into sustainable energy

- Upscale 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.
- 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.
- Support public authorities in delivering public sector sustainable energy investments through smart financial instruments and schemes with more effective use of public funds, blending in 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 through the ManagEnergy initiative[73].
- Build capacity in public authorities to maximise spending of the Just Transition Mechanism into the area of clean energy transition projects.
- Assist public authorities in aligning their proposed investments with the guidance provided in the EU Sustainable Finance policy and legislation[74], in particular with the EU Taxonomy[75] criteria.

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73 https://www.managenergy.net/

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

75 https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en

4.4.4. Project Development Assistance for sustainable energy investments

- Support public and private project promoters, such as public authorities or their groupings, public/private infrastructure operators and bodies, energy service companies, large property developers/owners, SME's and industry in building technical, financial and legal capacity and skills to develop and launch substantial pipelines of sustainable energy investments and contributing notably towards the European Green Deal's Renovation Wave.
- Facilitate the systematic replication at 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 2030 energy and climate policy targets.
- 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.
- Dedicated facilities such as the European City Facility[76], which can provide targeted support to public authorities in turning their local action plans into sustainable energy investments.

4.5. INVOLVING AND EMPOWERING CITIZENS IN THE CLEAN ENERGY TRANSITION

4.5.1. Citizens involvement and education on clean energy transition

- Increase citizens' energy literacy and guide citizens in their decision-making and behaviour to reduce and optimise energy consumption.
- Set up national energy literacy campaigns and energy helpdesks for citizens, support citizen uptake of smart and energy efficient home solutions and independent comparison tools, and roll out relevant social innovation and sharing economy schemes.
- 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.
- Support energy market actors (including suppliers, providers, authorities and intermediaries) in delivering effective advice and services to consumers.
- Build younger generations' knowledge and capacity through the integration of clean energy transition and sustainable mobility in school programmes and teacher training.

4.5.2. Addressing energy poverty

- Facilitate the market uptake 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

[76] 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 https://www.eucityfacility.eu/home.html

cooling, renewable energy solutions, where appropriate, and highlighting multiple benefits.

- Support public authorities and utilities (other obligated parties established under Art.7 of the Energy Efficiency Directive[77]) in setting-up longer-term energy efficiency/renewable energy schemes to mitigate household energy poverty and in implementing the energy poverty related provisions of the Clean Energy Package.
- Facilitate energy poor household uptake of collective energy efficiency/renewable energy actions, financial support schemes, and smart solutions.
- Facilitate exchanges between different relevant stakeholders at local, regional, national and European level on energy poverty.

4.5.3. Sustainable energy communities and other citizen-led initiatives

- Support the development and implementation of citizen-led sustainable energy initiatives to increase energy efficiency and the production and/or use of renewable energy.
- Foster the collaboration between sustainable energy communities/other citizen-led initiatives and local authorities.
- Support citizen-led renovation programmes, notably at district level, contributing towards the European Green Deal's Renovation Wave and the European Union's 2030 climate and energy policy targets.
- 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.
- Facilitate collection of and access to data and information on different forms of energy communities.

[77] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2002&from=EN