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**Interreg North-West Europe 2021-2027
Cooperation Programme
under the European Territorial Cooperation Objective**

Strategic Environmental Assessment Environmental Report

for

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**Interreg North-West Europe 2021-2027
Cooperation Programme
under the European Territorial Cooperation Objective**

**Strategic Environmental Assessment
Environmental Report**

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List of abbreviations:

AQG (WHO)	Air quality guidelines
CO ₂	Carbon dioxide
CPR	Common Provisions Regulation
EAP	Environment action programme
EC	European Commission
EEA	European Environment Agency
ERDF	European Regional Development Fund
ESI	European Structural and Investment Funds (ESI Funds)
ESPON	European Spatial Observation Network
ETC	European Territorial Cooperation
EU	European Union
IJ&G	Investment in Jobs & Growth
IP	Investment Priority
NH ₃	Ammonia
NO _x	Nitrogen Oxides
PO	Policy Objective
PM	Particulate Matter
RTD&I	Research, Technological Development and Innovation
SEA	Strategic Environmental Assessment
SME	Small and Medium-Sized Enterprise
SO	Specific Objective
SOER 2020	The European environment — state and outlook
UN	United Nations
UNEP	United Nations Environment Programme
WHO	World Health Organization

Non-technical summary

Pursuant to the Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment (2001/42/EC) (hereinafter: SEA-Directive) adopted by the European Parliament and European Council, a Strategic Environmental Assessment (SEA) is required for the development and amendment of certain plans and programmes including those programmes which influence other plans and programmes (Art. 3 and Annex II SEA-Directive). Accordingly the assessment of the effects on the environment by the Interreg North-West Europe 2021-2027 Cooperation Programme (hereinafter: programme) is scheduled. Annex II of the SEA Directive stipulates the criteria for the assessment of potential environmental effects.

The environmental report is based on the Template for Interreg North West Europe 2021-2027 Cooperation Programme, version submitted 24.05.2021¹, and has been drafted alongside the development of the programme. Purpose of the SEA is the assessment of effects on the environment caused by the implementation of the programme. The SEA comprises the preparation of the environmental report as well as consultations of relevant authorities and of the public. The findings and recommendations of the assessment and of the consultations will be considered in the finalisation and approval of the programme.

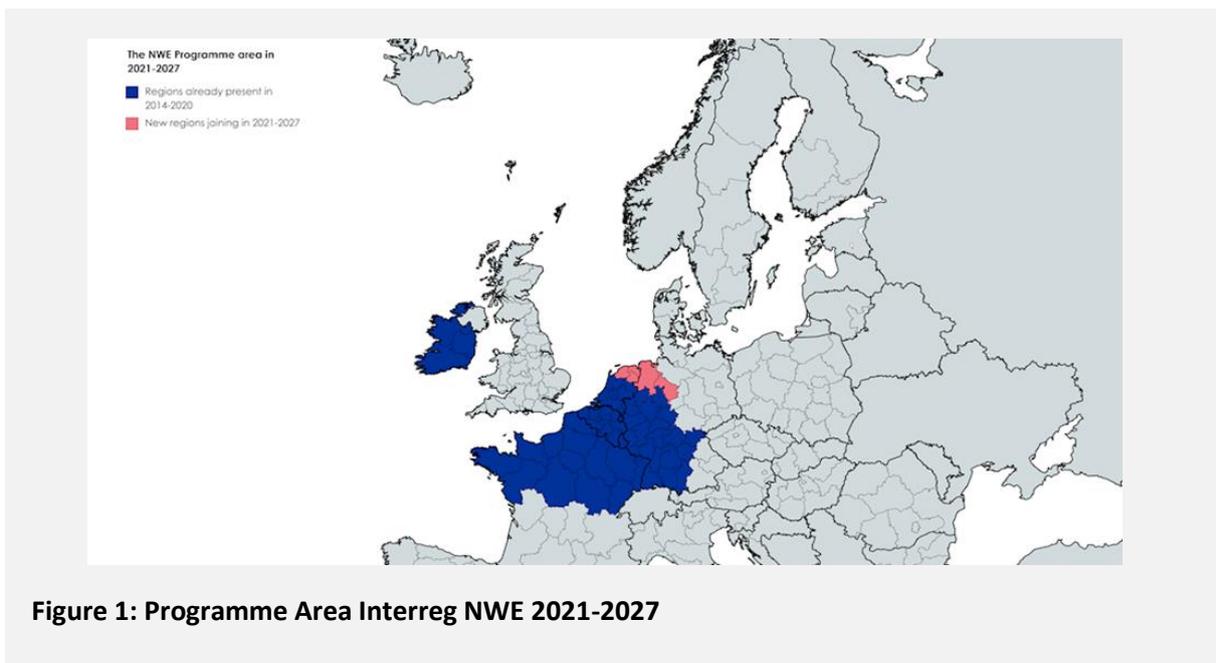


Figure 1: Programme Area Interreg NWE 2021-2027

The Programme

The area of Interreg NWE 2021-2027 Cooperation Programme covers the six countries: Belgium, France, Germany, Ireland, Luxembourg and the Netherlands. Belgium, Ireland, Luxembourg and the Netherlands entirely are part of Interreg NWE; in France and Germany, Interreg NWE covers several regions. Significant effects regarding most environmental issues cannot be expected beyond the borders of this territory. Exceptions are global climate and partly resource efficiency.

¹ Please note: In the draft version of the Interreg NWE 2021-2027 Cooperation Programme dated 27.01.2022, the numbering of two Specific Objectives and the title of two Priorities were changed. In order to consider the latest version of numbering and titles which do not influence the assessment itself and the assessment results, those changes were inserted in the final version of the environmental report on hand. To keep transparency as well, the previous numbering and formulation of titles are added in brackets each time.

The programme focuses on three of the five Policy Objectives defined in the Proposal for the Regulation on the European Regional Development Fund and the Cohesion Fund, Annex 2 (COM(2018) 372 final)². In total, nine Specific Objectives defined also in the mentioned Regulation are selected which however are unbalanced distributed to the considered Policy Objectives. The selection of Specific Objectives reflects a major contribution of the programme to the Policy Objective “A greener, low carbon Europe” and “A more social and inclusive Europe”.

Policy Objective 2: “A greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation risk prevention and management, and sustainable urban mobility” is considered by three Priorities:

- **Priority 1: Smart climate and environmental resilience of NWE territories**

Specific Objective 2.4: Promoting climate change adaptation and disaster risk prevention, resilience taking into account eco-system based approaches

Specific Objective 2.7: Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution

- **Priority 2: Smart and just energy transition**

Specific Objective 2.1: Promoting energy efficiency and reducing greenhouse gas emissions

Specific Objective 2.2: Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001[1], including the sustainability criteria set out therein

- **Priority 3: Transition towards a place-based circular economy**

Specific Objective 2.6: Promoting the transition to a circular and resource efficient economy

Policy Objective 1: “A more competitive and smarter Europe by promoting innovative and smart economic transformation and regional ICT connectivity” is considered by the Priority:

- **Priority 4: Improving territorial resilience in NWE through innovative and smart transformation** (previously: Innovation for resilient and liveable territories)

Specific Objective 1.1: Developing and enhancing research and in-novation capacities and the uptake of advanced technologies

Policy Objective 4: “A more social and inclusive Europe implementing the European Pillar of Social Rights” is considered by the Priority:

- **Priority 5: Transition towards a socially inclusive and resilient society** (previously: Just and inclusive NWE)

Specific Objective 4.1: Enhancing the effectiveness and inclusiveness of labour markets and access to quality employment through developing social infrastructure and promoting social economy

Specific Objective 4.5 (previously 4.4): Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family- and community-based care

Specific Objective 4.6 (previously 4.5): Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation

The individual Specific Objectives form the base for the implementation of the Interreg NWE, the formulated expected results the ‘corridors’ for funded types of actions. The formulated expected results

² European Regional Development Fund and Cohesion Fund (ERDF/CF) Regulation (Version dated 25.02.2021)
- Analysis of the final compromise text with a view to agreement

for each Specific Objective offer a wide range of interventions and allow a comprehensive perspective. The implementation of the programme is based on three categories of activities as

- a) Elaboration of joint strategies or action plans,
- b) Pilot actions for testing procedures, new action plans, tools and solutions, transferring good practices etc.
- c) Capacity building and awareness raising activities.

Interreg NWE is embedded in a frame of numerous European policies, programmes and strategies. As an instrument for the implementation of the EU cohesion policy, the programme contributes to the overall aim of the cohesion policy namely to reduce existing disparities between EU Member States and regions in terms of their social and economic development and environmental protection in consideration of their specific territorial and societal conditions and potentials.

Status of the environment and existing environmental problems

Despite improvements over the last years, numerous challenges concerning the environment exist which need to be solved. Due to the intensive economic activities and high population density in the NWE area, all environmental issues are still under pressure.

This holds particular to:

Biodiversity: The loss of biodiversity continued; the target to halt the loss of biodiversity by 2020 is missed.

The marine environment is under pressure as human activities at sea and on land cause pollution, seabed damage, overexploitation, biodiversity loss, ocean warming and acidification.

Especially the condition of surface water gives cause for concern: The large majority of NWE water bodies are not in good ecological status, the main pressures are agriculture, public water supply, hydropower, industry. Wetlands and floodplains are widely degraded.

The landscape of Interreg NWE is still affected by fragmentation.

Soils are under pressure by sealing and intensive land management.

Air quality: Urban air pollution concentrations are still too high causing problems on human health.

Global Climate: Although the greenhouse gas (GHG) emissions in Europe have fallen evidently, global warming however presents a considerable challenge; climate change effects are starting to become evident; adaptation is needed to protect people, buildings, infrastructure, businesses and ecosystems.

Expected significant effects on the environment

According to the character of the programme describing a highly aggregated approach, it is not possible to define alternatives except the zero scenario, meaning the non-implementation of the programme. Decisions for more or less active contribution to European environmental policies and targets particular by Priorities 4 and 5 can be made at the implementation level (project level) when applications and achievements can be capitalized in favour of more or less mainstreaming sustainability and environmental and climate protection.

The general approach of Interreg NWE 2021-2027 can be described as a comprehensive strategic contribution to the EU environmental policies and targets. Within the overall aim to contribute to a balanced development across the NWE area regardless the type of territory (urban, rural, coastal, border, etc.), Interreg NWE wants to “promote a green, smart and just transition for all NWE territories with the aim to support a balanced development and make all regions more resilient” and that the imple-

mentation of the programme shall "contribute to the 'green' transition of all NWE territories to a climate-neutral, resource-efficient and sustainable society" and "contribute to preserving natural resources, enhancing nature-based solutions to climate change while supporting solutions for energy, circular and environmental transition".³

By the defined Priorities, the programme puts a focus on sustainability and environmental and climate protection. According to number of Priorities, the biggest share of the programme is dedicated to EU Policy Objective 2 ("A greener, low carbon Europe"). The other Priorities under Policy Objective 1 ("A more competitive and smarter Europe") and Policy Objective 4 ("A more social and inclusive Europe") are not directly linked to sustainability and environmental and climate protection. Nevertheless, a significant potential for contributions to these aims can be seen by application of targeted and effective selection criteria for actions.

In the programme, internal interrelations are not mentioned, neither as a general possibility to apply synergies nor as an inherent approach of the programme. In fact, mutual consideration of approaches and results of the different Priorities helps to increase the positive contributions to sustainability and environmental and climate protection. Although the interrelations can be seen as an implicit potential, the realization of such internal effects is not sufficiently exploited by the programme.

The consideration of the horizontal principle "Sustainable development" is not explicitly mentioned in the programme as an inherent goal of the programme, as a principle selection criteria for projects or as an important element of the strategic approach.

The individual output and result indicators do not set own aims for improved sustainability and environmental and climate protection and ensuring of positive and avoidance of negative contributions to EU environmental policies and targets, only by the Specific Objectives to which they refer to. Positive effects can be realized by achievement of indicators

- a) under Priorities 1, 2 or 3 as the exclusive orientation of these Priorities to environmental important topics or
- b) by application of targeted and effective project selection criteria - this counts exclusively for projects under Priorities 4 and 5 which are not aiming on environmental topics per se.

For the assessment of individual Specific Objectives the formulated expected results were considered. Principle considerations regarding potential environmental effects are described.

The expected results for Specific Objectives under Priority 1, 2 and 3 (related to EU Policy Objective 2) show high potential for positive effects according to their particular topics. Significant negative effects by achievement of the expected results are not seen or, due to the lack of information on particular type of actions, cannot be assessed. In case of expected results for Specific Objective 2.2 (Promoting renewable energy) under Priority 2 (Smart and just energy transition), the installation of regenerative energy systems might cause negative effects on the environmental issues 'flora, fauna, biodiversity', 'soil, landscape' and 'water'. Avoidance of potential negative effects needs to be ensured by application of targeted and effective project selection criteria.

The expected results formulated for Specific Objective 1.1 under Priority 4 do not particularly aim on sustainability and environmental and climate protection, except the one mentioning "*to promote sustainable consumption and production*". For this exceptional one, it can be assumed that there is an intrinsic potential for positive effects. However, due to the lack of information on particular type of actions, potential positive effects by the achievement of the expected results for this Specific Objective cannot be assessed. Same holds for potential negative effects: The lack of information on particular

³ Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021, chapter 1.2

type of actions prevents an assessment. In principle, it should be considered that an extension of digitalization and increased application of digital services cause significant increase of electricity consumption. Measures for improved energy efficiency and usage of renewable energy need to be linked to promotion of digital innovation and digital transformation.

The assessment of expected results for the Specific Objectives under Priority 5 shows different findings:

1. The expected results formulated for Specific Objective 4.1 do not particularly aim on sustainability and environmental and climate protection. No significant positive or negative effects on environmental or cross-cutting issues can be expected.
2. Regarding results formulated for Specific Objective 4.5 (previously 4.4) aiming on better access to health care services and better preparedness of the health care sector, positive effects can be seen on human health and well-being of the residents. No significant negative effects on environmental or cross-cutting issues can be expected.
3. The expected results formulated for Specific Objective 4.6 (previously 4.5) hold the potential for positive and negative effects. Potential positive effects can be seen in better preservation and rehabilitation of cultural and natural heritage as an important element of tourism promotion. Nevertheless, intensified tourism can lead to more stress on 'flora, fauna, biodiversity' and 'soil, landscape' by increased number of tourists and the construction of touristic or tourism related infrastructure. Also water bodies can be affected negatively by sports offers or touristic infrastructure. Intensified tourism can also cause increased traffic with negative effects on 'air pollution', 'greenhouse gases' or 'noise'.

For all Specific Objectives counts that kind, extent and directness of potential positive and avoidance of negative effects eventually depend on the types of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

Due to the wide range of potential contributions to EU environmental policies and targets, cumulative effects can be realized by the programme in case the implementation of projects is directed to a strict contribution to sustainability and environmental and climate protection. A consistent and strict demand in the applications can generate cumulative effects in principle.

The implementation of projects under Priorities 1, 2 and 3 can generate indirect synergetic effects. Aiming on different environmental issues, the effects generated by those projects can cause a higher positive effect than just the sum of their individual effects. The extent of those positive synergetic effects depends, as for cumulative effects as well, on the spatial location of the projects. In principle, the entire programme area of Interreg NWE can benefit from those synergetic effects.

By the character of Interreg NWE as an highly aggregated programme and the lack of spatial, technical and financial details of projects financed by the programme the focus for consideration of sustainability and environmental and climate protection is directed to the project level and thus to implementation tools of the programme as programme manual, application forms, project reports. In the existing implementation tools, the consideration of sustainability and environmental and climate protection is requested to a rather weak extent. Active contributions to environmental policies and targets and thus positive contributions to sustainability and environmental and climate protection are not consequent and obligatory requested from the project implementers. Interreg NWE as other EU-funded programmes is an appropriate mechanism to actively support the intention of the European Green Deal and should play a prominent role in the promotion of sustainability and environmental and climate protection.

Recommendations

To a large extent caused by the defined Priorities 1, 2 and 3, the NWE-programme contributes by its strategic orientation to the EU environmental policies and targets and to strengthen sustainability and environmental and climate protection. The lever for optimization of the programme's contribution, i.e. optimum enhancement of positive effects and active contributions and optimum mitigation of negative effects, lies with the implementation of the programme and its implementation mechanisms.

In both, the programme and the implementation tools, the consideration of the horizontal principle "sustainable development", the achievement of positive contributions to the EU environmental policies and targets and to support the intention of the European Green Deal should be demanded more strictly. The brochure "Supporting Sustainability Transitions under the European Green Deal with Cohesion Policy - Toolkit for national and regional decision-makers" provides approaches and recommendations for these considerations⁴.

Monitoring

The highly indirectness of potential environmental effects of the Interreg NWE 2021-2027 Cooperation Programme does not allow the identification of measures to monitor concrete possible effects on sustainability and environmental and climate protection and the programme's contributions to EU environmental policies and targets. Thus, the monitoring must aim to ensure that no adverse effects to the EU environmental policies and targets are supported and positive contributions to the EU environmental policies and targets will be realized by the programme.

Monitoring measures are settled on implementation level. They include the safeguarding of environmental criteria, assessment of application in the consideration of environmental effects, assessment of projects reports on the achievement of positive and avoidance of negative effects, regular assessment of overall realized effects by the programme's implementation. Also existing national, regional and/or local environmental monitoring systems should be used.

⁴ European Commission (2021): Supporting Sustainability Transitions under the European Green Deal with Cohesion Policy - Toolkit for national and regional decision-makers; Luxembourg: Publications Office of the European Union, 21 p.

1 Introduction

1.1 Purpose of the Strategic Environmental Assessment

Pursuant to the Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment (2001/42/EC) (hereinafter: SEA-Directive) adopted by the European Parliament and European Council, a Strategic Environmental Assessment (SEA) is required for the development and amendment of certain plans and programmes including those programmes which influence other plans and programmes (Art. 3 and Annex II SEA-Directive). Accordingly the assessment of the effects on the environment by the Interreg North-West Europe 2021-2027 Cooperation Programme (hereinafter: programme) is scheduled. Annex II of the SEA Directive stipulates the criteria for the assessment of potential environmental effects.

Purpose of the SEA is the assessment of effects on the environment caused by the implementation of the programme. The SEA comprises the preparation of the environmental report as well as consultations of relevant authorities and of the public. The findings and recommendations of the assessment and of the consultations will be considered in the finalisation and approval of the programme.

The European Green Deal requires a consequent orientation of all instruments at EU-level towards enhanced sustainability of European economy and abatement of climate change and environmental degradation. By this, the strengthening of a sustainable and ecological-sound economic development and climate and environmental protection is imposed as a commitment to all actors. The assessment has to verify how far Interreg NWE by the 2021-2027 programme supports the environmental policies and targets of the European Union and does not counteract those policies and targets as stated in relevant strategies, directives, action plans and other policies which were launched by the Commission to address sustainability and environmental and climate protection at all levels in the EU. Launching of additional ones is announced for 2021. The SEA is being carried out alongside the development of the programme in order to identify and assess likely significant environmental effects, and of any reasonable alternatives, during the preparation stage and before it is approved.

The environmental report is based on the Template for Interreg North West Europe 2021-2027 Cooperation Programme in its version submitted 24.05.2021.

Please note: In the draft version of the Interreg NWE 2021-2027 Cooperation Programme dated 27.01.2022, the numbering of two Specific Objectives and the title of two Priorities were changed. In order to consider the latest version of numbering and titles which do not influence the assessment itself and the assessment results, those changes were inserted in the final version of the environmental report on hand. To keep transparency as well, the previous numbering and formulation of titles are added in brackets each time.

1.2 The SEA-process

Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (SEA Directive)

Article 1

Objectives

The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programs which are likely to have significant effects on the environment.

The SEA is a key policy instrument to mainstream environmental considerations into plans, programmes and strategies. SEA was introduced in the EU in 2001, since the Sea-Directive is in force. The main objective of SEA is to ensure that the environmental implications of decisions are taken into account before the decisions are finally made. Consultation of competent authorities and the general public is an integral part of the SEA procedure:

- The scoping stage is mandatory under the SEA. In this stage the content and the scope of the environmental report will be defined. The scoping procedure includes the consultation of relevant authorities.
- Next stage is the preparation of the environmental report. The environmental report is detailing the likely significant environmental effects and reasonable alternatives. Environmental issues that should be considered are listed in Annex I of the SEA Directive.
- The environmental report must be made accessible for consultations of authorities with environmental responsibilities and of the general public.
- The report on environmental effects and the results of consultations shall be considered before the programme is approved.
- Once the programme and the environmental report are approved, the authorities with environmental responsibilities and the public shall be informed and the relevant information made available to them.
- In order to determine any unforeseen adverse effects as early as possible, it is necessary to ensure that the significant environmental effects of the programme are monitored.

For the SEA of the programme, a scoping note presenting a proposal on the extent and level of detailing of the assessment was sent to authorities with environmental responsibilities in the six Members States of Interreg NWE asking for comments and suggestions till March 15th, 2021. The received comments were assessed and remarks were provided to each comment; when relevant the comments were taken into account while developing the environmental report.⁵

⁵ For the scoping phase, Interreg NWE presented a list of possible types of actions which were used for the scoping note and the consultation with relevant authorities. Following the structure presented in the Template for Interreg NWE submitted 24.05.2021, the preliminary assessment (of the possible types of actions) became obsolete and the methodological approach was changed compared to the one proposed in the scoping note. In the Template for Interreg NWE as the actual base for the assessment, the possible types of actions are not mentioned anymore.

1.3 Assessment frame

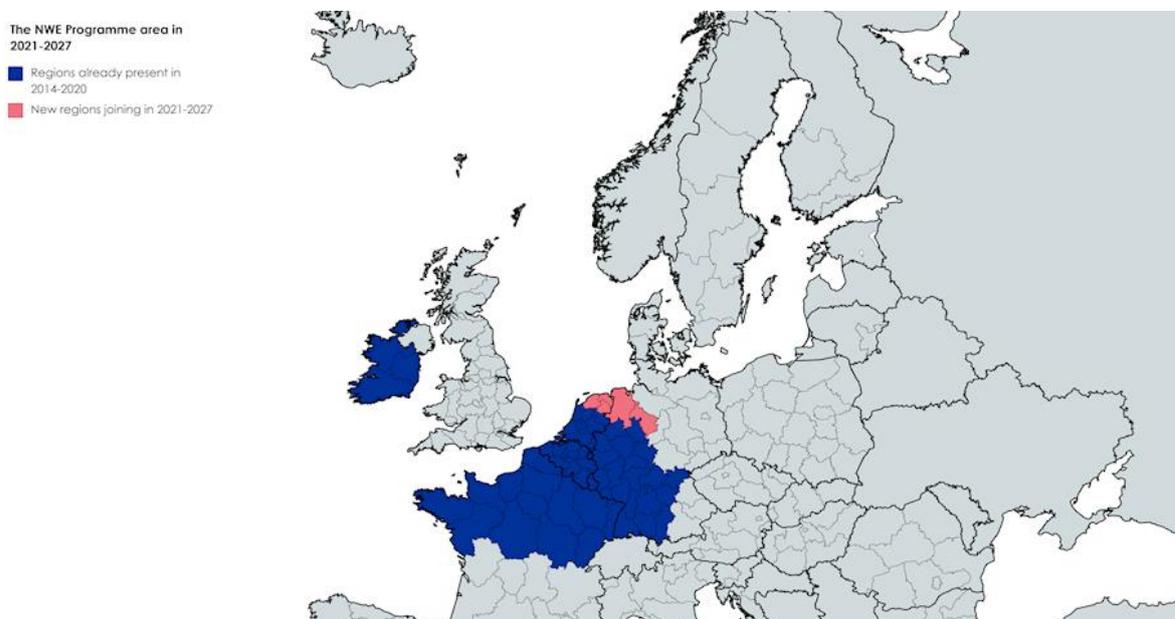
The programme covers the six countries Belgium, France, Germany, Ireland, Luxembourg and the Netherlands. Belgium, Ireland, Luxembourg and the Netherlands are part of Interreg NWE entirely; in France and Germany, Interreg NWE covers several regions (see map, Figure 1). Significant effects regarding most environmental issues cannot be expected beyond the borders of this territory. Exceptions are global climate and partly resource efficiency. The presentation of actual effective objectives for environmental protection” refers to policies at the EU level. The presentation of environmental policies and targets, characteristics of the environment, existing environmental problems and environmental trends in case of non-implementation of the programme refers to policies and targets at EU level; it is based primarily but not exclusively on information and data of the European Environmental Agency (EEA) and Eurostat.

The assessment of potential significant effects on the environment is based on the Template for Interreg North West Europe 2021-2027 Cooperation Programme in its version submitted 24.05.2021. Areas of the assessment are the strategic approach based on selected Policy Objectives, Priorities and Specific objectives, defined indicators, and expected results of Specific Objectives.

Due to the high aggregation of the programme , the consideration of environmental aspects and of the horizontal principle of sustainable development needs to be requested and assessed more in detail at the subsequent implementation level, i.e. in the application and implementation of projects.

Thus, the programme manual, project application forms, reporting templates, etc. are relevant tools for ensuring consideration of potential, intended and unintended environmental effects. Those tools are also be assessed briefly in the report at hand.

Figure 2: Programme Area Interreg NWE 2021-2027



New regions joining Interreg NWE 2021-2027:

Germany:

Bremen (DE50)

Weser-Ems (DE94)

Leine-Weser (Hannover) (DE92)

Netherlands

Groningen (NL11)

Friesland (NL12)

Drenthe (NL13)

2 The Interreg North-West Europe 2021-2027 Cooperation Programme

2.1 Concise presentation of the Programme's strategic approach

Interreg NWE 2021-2027 Cooperation Programme focuses on three of the five Policy Objectives defined in the Proposal for the Regulation on the European Regional Development Fund and the Cohesion Fund, Annex 2 (COM(2018) 372 final)⁶. In total, nine Specific Objectives are selected which however are unbalanced distributed to the considered Policy Objectives. The Specific Objectives are also defined in Annex 2 of the mentioned draft regulation.

The selection of Specific Objectives reflects a major contribution to a greener, low carbon Europe and to a more social and inclusive Europe (see also Graphic 2). According to the number of selected Specific Objectives, Policy Objective 2 receives particular attention by the programme, followed by Policy Objective 4 and Policy Objective 1.⁷

The widest thematic scope refers to the **Policy Objective 2**: "A greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation risk prevention and management, and sustainable urban mobility". In the programme, three Priorities are defined under this Policy Objective:

- **Priority 1: Smart climate and environmental resilience of NWE territories**

Specific Objective 2.4: Promoting climate change adaptation and disaster risk prevention, resilience taking into account eco-system based approaches

Specific Objective 2.7: Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution

- **Priority 2: Smart and just energy transition**

Specific Objective 2.1: Promoting energy efficiency and reducing greenhouse gas emissions

Specific Objective 2.2: Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001[1], including the sustainability criteria set out therein

- **Priority 3: Transition towards a place-based circular economy**

Specific Objective 2.6: Promoting the transition to a circular and resource efficient economy

Policy Objective 1: "A more competitive and smarter Europe by promoting innovative and smart economic transformation and regional ICT connectivity" is considered by the Priority:

- **Priority 4: Improving territorial resilience in NWE through innovative and smart transformation** (previously: Innovation for resilient and liveable territories)⁸

Specific Objective 1.1: Developing and enhancing research and in-novation capacities and the uptake of advanced technologies

⁶ European Regional Development Fund and Cohesion Fund (ERDF/CF) Regulation (Version dated 25 February 2021)
- Analysis of the final compromise text with a view to agreement

⁷ Formulation and numbering of Policy Objectives and Specific Objectives are defined in:
European Regional Development Fund and Cohesion Fund (ERDF/CF) Regulation (Version dated 25.02.2021),
- Analysis of the final compromise text with a view to agreement, Annex 2

⁸ Please see explanation in the introduction, p. 1

Policy Objective 4: “A more social and inclusive Europe implementing the European Pillar of Social Rights” is considered by the Priority:

- **Priority 5: Transition towards a socially inclusive and resilient society** (previously: Just and inclusive NWE)⁹

Specific Objective 4.1: Enhancing the effectiveness and inclusiveness of labour markets and access to quality employment through developing social infrastructure and promoting social economy

Specific Objective 4.5 (previously: 4.4)¹⁰: Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family- and community-based care

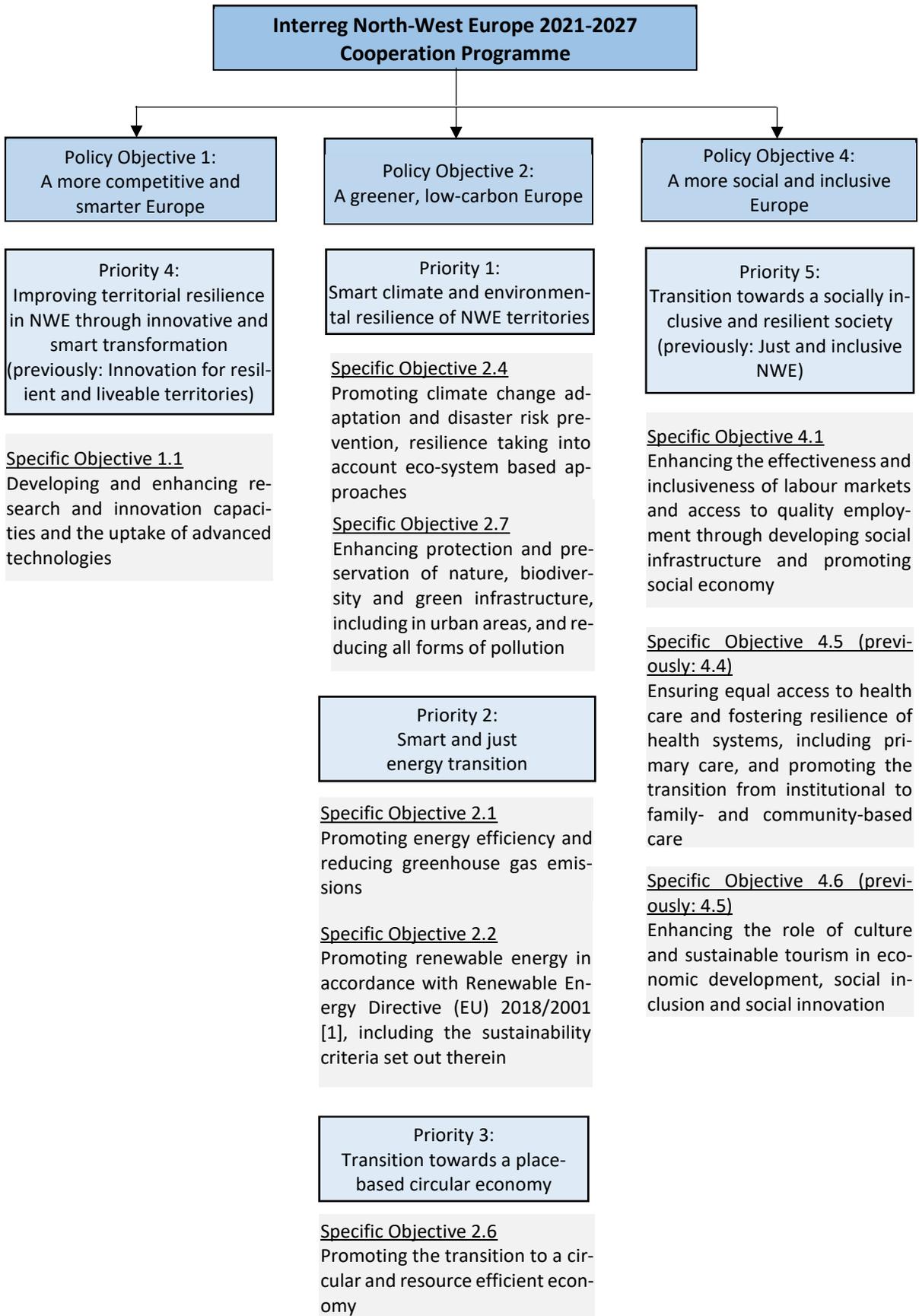
Specific Objective 4.6 (previously: 4.5)¹¹: Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation.

⁹ Please see explanation in the introduction, p. 1

¹⁰ Please see explanation in the introduction, p. 1

¹¹ Please see explanation in the introduction, p. 1

Figure 3: Thematic Scope of Interreg NWE 2021-2027



The general financial resources and the allocation of funds to each Policy Objective, Priority and Specific Objective are not known currently. **The relative importance of each Policy Objective, Priority and Specific Objective based on assigned financial allocations cannot be taken into consideration, because the financial allocations were not yet known when the report was prepared.**

2.2 Cooperation scheme and expected results for projects to be funded by Interreg NWE 2021-2027

The implementation of the programme is based on three categories of activities as

- a) Elaboration of joint strategies or action plans,
- b) Pilot actions for testing procedures, new action plans, tools and solutions, transferring good practices etc.
- c) Capacity building and awareness raising activities.

This scheme for cooperation projects to be funded by Interreg NWE is effective for all defined Priorities and selected Specific Objectives. The cooperation projects shall be implemented through at least one of the above stated categories, but can also cover a combination of them.

In the description of the implementation scheme for each Specific Objective is also stated that cooperation projects “..... may use in addition [to the stated categories, DT] also other cooperation approaches or methods as appropriate”¹². However, it is not finally explained which other types of approaches or methods are eligible and who defines their respective appropriateness.

In the description of each Specific Objective in the programme, eligible or possible types of actions are not presented; thus, the described expected results for each Specific Objective provide hints to the direction of funded projects in a general manner and are used for assessment¹³.

POLICY OBJECTIVE 2: A GREENER, LOW-CARBON EUROPE

Priority 1: Smart climate and environmental resilience for NWE territories

Specific Objective 2.4: Promoting climate change adaptation and disaster risk prevention, resilience taking into account eco-system based approaches

Focus 1 Heat stress and air pollution

Expected results:

The programme expects to contribute to making the NWE communities more resilient and able to adapt to and mitigate the effect of climate change in the long term, aiming in particular to reduce the incidence of heat stress and of human activities on air quality, to reduce air pollution, to improve the preparedness to adverse weather phenomena (such as flooding and heavy rain events, draught in rural areas) and to reduce their negative effects.

To achieve these desired changes, the following results are expected:

¹² Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021, chapter 2

¹³ For the scoping phase, Interreg NWE presented a list of possible types of actions which were used for the scoping note and the consultation with relevant authorities. Following the structure presented in the Template for Interreg NWE submitted 24.05.2021, the preliminary assessment (of the possible types of actions) became obsolete and the methodological approach was changed compared to the one proposed in the scoping note. In the Template for Interreg NWE as the actual base for the assessment, the possible types of actions are not mentioned anymore.

- key aspects of climate resilience, adaptation and mitigation better embedded into territorial strategies and local initiatives with specific attention to heat stress and air pollution and the reduction or prevention of the severe negative effects of weather phenomena;
- climate and environmental resilience, adaptation and mitigation ensured through integrated place-based solutions and enhanced spatial planning processes;
- increased knowledge and capacity of stakeholders to translate climate change resilience, adaptation and mitigation into policies and actions (e.g. by systematically including climate variability as a key issue to consider during policy design and in the development of decision-making processes, as well as in the planning and adaptation of new and existing infrastructure);
- innovative technologies, solutions, products and services that benefit regional climate change adaptation are taken up aiming to prevent or reduce heat stress and air pollution as well as the severe negative effects of weather phenomena, ensuring coherence between the proposed approaches and local/regional needs;
- citizens have better knowledge and capacity leading to their increased involvement and active role in climate and natural risks resilience.

Focus 2 Water management

Expected results:

Expected programme results

The programme wants to contribute to making the NWE area communities more resilient and able to adapt to and mitigate the effect of climate change in the long term, aiming in particular to improve the water management approach in the NWE area and to address water quality and availability related issues for the NWE surface and groundwater bodies.

In particular, the programme aims to improve water quality and availability in the NWE territories, as well as shift to a water management that is in line with climate change resilience, adaptation and mitigation and prevents natural risks. The adoption of integrated measures can lead to significant improvements in the participating regions.

To achieve these desired changes, the following results are expected:

- key aspects of climate resilience and adaptation better embedded into territorial strategies and local initiatives, with specific attention to improving water management in relation to quality and availability;
- increased knowledge and capacity of stakeholders to adopt innovative solutions concerning water management;
- stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to water management among cities, rural, coastal or intermediate areas dealing with similar issues (water quality and/or availability);
- establishment of long-lasting place-based collaborations between decision makers, businesses, citizens and researchers to exploit the existing scientific and technological know-how and to disseminate innovative solutions and collect more reliable data for monitoring, managing, preventing and responding to natural and climate-related risks.

Specific Objective 2.7: Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution

Expected results:

The programme wants to increase the capacity of communities to maintain and enhance green/blue infrastructure and ecosystem services in the NWE regions. The programme expects to contribute to embedding blue and green corridors, biodiversity and natural capital concepts in strategic ecosystem-based approaches and solutions. The programme intends to show the benefits of sound green/blue infrastructure not only to preserve biodiversity but also to combat climate change effects, e.g. with eco-system based services.

To achieve these desired changes, the following results are expected:

- key aspects of biodiversity preservation and green/blue infrastructure better embedded into territorial strategies and local initiatives;

- increased knowledge and capacity of stakeholders about green/blue infrastructure and biodiversity-enhancing / nature-friendly practices (through dissemination);
- increased capacity of stakeholders to manage and maintain green/blue infrastructure and biodiversity through integrated territorial policies;
- increased knowledge and skills on data management and new technologies in the field of biodiversity preservation and green/blue infrastructure;
- innovative solutions that benefit biodiversity and the maintenance and enhancement of green/blue infrastructure taken up ensuring coherence between the proposed approaches and local/regional needs;
- stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to biodiversity and green/blue infrastructure among urban, rural, coastal and intermediate areas dealing with similar issues;
- establishment of long-lasting collaborations between policy makers, businesses, researchers and citizens contributing to the demonstration and testing of innovative solutions for protecting and enhancing natural heritage.

Priority 2: Smart and just energy transition

Specific Objective 2.1: Promoting energy efficiency and reducing greenhouse gas emissions

Expected results:

The programme intends to contribute to increasing the capacity of communities to exploit potential for improving energy efficiency and to reduce energy consumption and GHG emissions by identifying opportunities that increase the energy performance of e.g. dwellings and public buildings, transport/mobility, of district heating and cooling network lines.

To achieve the desired changes, the following results are expected:

- key principles guiding energy transition better embedded into territorial strategies and local initiatives, with a specific attention to energy efficiency improvements in different settings, promotion of smart energy systems (storage and distribution), prevention of exclusion and energy poverty;
- increased knowledge and capacity of stakeholders to translate energy efficiency principles into policies, services, products and actions (e.g. by systematically including energy efficiency as a key issue to be considered in decision-making processes, as well as in the planning and adaptation of new and existing infrastructure, by increasing competences of workers in the building sector and others - transports, industries, etc.);
- innovative technologies, solutions, products and services that improve energy efficiency in different settings and avoid exclusion and energy poverty are taken up ensuring coherence between the proposed approaches and local/regional needs;
- citizens, consumers and local communities more interested and better empowered and engaged in more efficient energy consumption.

Specific Objective 2.2: Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001[1], including the sustainability criteria set out therein

Expected results:

The programme wants to contribute to increasing the capacity of communities to exploit potential to improve the renewable energy production and consumption mix. To achieve the desired changes, the following results are expected:

- key principles guiding energy transition better embedded into territorial strategies and local initiatives with specific attention to promoting the production and use of energy from renewable sources in different settings (e.g. by supporting SMEs as technology developers, by supporting decentralised RES production, by introducing new financing and procurement schemes);

- innovative technologies, solutions, products and services to increase use and production of renewable energies are taken up ensuring coherence between the proposed approaches and local/regional needs;
- citizens, consumers and local communities and businesses are more interested, better empowered and engaged in the green energy transition.

Priority 3: Transition towards a place-based circular economy

Specific Objective 2.6: Promoting the transition to a circular and resource efficient economy

Expected results:

The programme wants to promote a more effective and balanced transition towards a circular economy by increasing the capacity of communities to develop circular approaches and benefit from the transition to a circular economy and identifying opportunities that reduce waste, use resources more efficiently, limit the use of raw materials (e.g. recycle critical raw materials from co-products, biomass, fluids, composites, etc.), replace fossil-based resources, increase the capacity for waste collection and recycling, stimulate service, processes and product innovation, while at the same time contribute positively to the inclusive and sustainable development of all territories.

To achieve these desired changes, the following results are expected:

- key principles of circular economy better embedded into territorial strategies, community-led initiatives, manufacturing processes or business models, with specific attention to waste reduction, a limited use of raw materials and an increased capacity for waste collection and recycling;
- citizens are more engaged in supporting the transition to a circular economy;
- stakeholders (both public and private) are more capable to adopt innovative solutions for supporting the transition to a circular economy (e.g. re-thinking planning production / service delivery processes in key sectors such as building, manufacturing or agri-food to achieve circularity);
- innovative solutions for supporting the transition to a circular economy, contributing in particular to waste reduction, a more limited use of raw materials and an increased capacity for waste collection and recycling, tailored to the needs of territories to ensure that the approaches proposed correspond to local or regional needs;
- innovative technologies, solutions, products and services that enable a more circular economy are taken up by different sectors;
- eco-design approaches are better supported and promoted in different economic sectors or across sectors through territorial approaches to eco-design.

POLICY OBJECTIVE 1: A MORE COMPETITIVE AND SMARTER EUROPE

Priority 4: Improving territorial resilience in NWE through innovative and smart transformation (previously: Innovation for resilient and liveable territories)¹⁴

Specific Objective 1.1: Developing and enhancing research and innovation capacities and the uptake of advanced technologies

Expected results:

The Programme wants projects to build on the potential of advanced technologies, innovative solutions and digitalization. Innovation shall be an enabler for balanced territorial development and territorial resilience. Types of innovations can refer, for example, to territorial uptake of new techniques, new approaches or new uses of technology in specific territorial settings, innovative use of technology and data to inform and influence

¹⁴ Please see explanation in the introduction, p. 1

decision-making and planning, innovation of processes through social innovation, empowerment and co-creation, service delivery innovations, financial innovations, territorial governance innovations and organizational innovations. Projects should be developed with an implicit motive to benefit citizens and territories.

To achieve these desired changes, the following results are expected:

- Strengthened territorial, social and economic resilience through creative governance approaches, behavioural shifts and mobilising creativity.
- Newly developed integrated approaches to ensure liveability and accessibility of territories.
- Solutions to increase citizen engagement in territorial development processes.
- More solutions to promote sustainable consumption and production schemes and strengthen local markets.
- More solutions to assist territorial innovation systems to recover from previous shocks and crises.
- More capacities to better exploit Smart Specialization and Digital Innovation in NWE as a means to contribute to territorial innovation and resilience.
- New solutions and approaches for territories to benefit from digital transformation.

POLICY OBJECTIVE 4: A MORE SOCIAL AND INCLUSIVE EUROPE

Priority 5: Transition towards a socially inclusive and resilient society (previously: Just and inclusive NWE)¹⁵

Specific Objective 4.1: Enhancing the effectiveness and inclusiveness of labour markets and access to quality employment through developing social infrastructure and promoting social economy

Expected results:

The programme expects to increase the capacities of NWE communities to include “vulnerable” groups by enhancing the effectiveness and inclusiveness of labour markets as well as the access to quality employment.

To achieve these desired changes, the following results are expected:

- More and better strategies to develop conditions for place-based, relevant and quality employment and skills;
- Offer of online and physical training and digital skills, tools and facilities is expanded and improved to address local needs and economic sectors under pressure, including principles of social economy, entrepreneurship, business takeover and transfer, etc.,
- Employability is increased and leads to more social/ societal integration of labour as well as balanced territories.
- Business models and business support programmes, including entrepreneurship, business takeover / transfer and principles of the social economy, are transferred, adapted or newly developed to become more inclusive and place-based (e.g. by focusing on NEETs, disabled persons, marginalised persons).
- Skilled workers are attracted and retained in the NWE.
- Increased knowledge and skills on data management and new technologies in the field of quality employment and its pertaining public services.
- Stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to quality employment and its pertaining public services among cities, rural, coastal or intermediate areas dealing with similar issues.

¹⁵ Please see explanation in the introduction, p.1

Specific Objective 4.5 (previously: 4.4)¹⁶: Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family- and community-based careExpected results

The programme expects to increase the capacities of NWE communities to include “vulnerable” groups (e.g., elderly people, chronically ill people, disabled persons or single-parent families...) by reducing imbalances in the field of health and care access.

To achieve these desired changes, the following results are expected:

- Key aspects of health, care, prevention and well-being in general better embedded into territorial strategies and local initiative.
- Better access to health and care services, especially in “disadvantaged” territories of NWE (i.e. rural and peripheral areas, deprived urban neighbourhoods, rural, underequipped areas, ...).
- Uptake of innovative solutions benefiting local communities and promoting the maintenance or enhancement of innovative place-based health and care practices, tools and solutions.
- Better assistance to vulnerable population groups in improving their situation of health and well-being.
- Increased knowledge and capacity of stakeholders (incl. professionals and carers) to adopt innovative solutions concerning health and care and provide better assistance and access.
- Stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to health and care among cities, rural, coastal or intermediate areas dealing with similar issues.
- Better preparedness of the NWE with respect to health challenges associated with population growth/depopulation (e.g., further ageing of urban and rural population) as well as with unexpected large-scale events seriously affecting the population’s health.

Specific Objective 4.6 (previously: 4.5)¹⁷: Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovationExpected results

The programme expects to contribute to a sustainable, inclusive and balanced development by enhancing the capacities of NWE communities to multiply the potential of culture and tourism.

To achieve these desired changes, the following results are expected:

- More sustainable and territorially balanced tourism in NWE, reconciling the interests of touristic and cultural organisations, of inhabitants and of visitors, and encouraging joint local engagement.
- Key aspects of tourism and culture better embedded into territorial strategies and local initiatives.
- Higher transnational visibility of local specificities existing in the NWE territories (i.e. natural and cultural heritage assets, incl. gastronomy).
- A better access of “vulnerable” person groups (old, disabled, unemployed, young people, single parents, NEETs, people living in a rural, intermediate or urban area....) to tourism and culture as well as their stronger direct involvement in local development initiatives.
- A stronger empowerment of local authorities, academics, businesses and inhabitants allowing them to better valorise local hidden or unknown assets, also involving enhanced territory-related skills and networking in tourism and cultural development.
- Renovated or better preserved and more accessible natural and cultural heritage potentials, also including eco-friendlier access, tools and approaches to valuable natural landscapes and built assets.
- More inclusive and place-based business models and business support programmes, including entrepreneurship, and principles of sustainable tourism.

¹⁶ Please see explanation in the introduction, p. 1

¹⁷ Please see explanation in the introduction, p. 1

- Stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to tourism and culture among cities, rural, coastal or intermediate areas dealing with similar issues

2.3 Relations to other relevant programmes and strategies

The NWE-Programme is embedded in a frame of numerous European policies, programmes and strategies. Additionally, specific recommendations for ETC-programmes by Member States complement the complex context of this programme. In the programme is emphasized that synergies with other EU Programmes are not effectively exploited yet¹⁸.

As an instrument for the implementation of the EU cohesion policy, Interreg NWE contributes to the overall aim of the cohesion policy namely to reduce existing disparities between EU Member States and regions in terms of their social and economic development and environmental protection in consideration of their specific territorial and societal conditions and potentials.

The programme is directly linked to a number of EU policy documents which are developed in order to support the objectives of the European Green Deal. Furthermore, the programme shows linkages to several EU Directives and Strategies aiming on sustainability and environmental and climate protection.

Country specific recommendations describe particular needs of Member States which should be dealt with by transnational cooperation.

The area of the programme is also partly included into sea-basin and macro-regional strategies:

- The Atlantic Sea-basin Strategy includes France and Ireland.
- The Danube Macro-Region Strategy includes parts of Germany (Baden-Württemberg and parts of Bavaria).

Beside EU policies and programmes, the Programme has also relations to regional policies and programmes which development and implementation will be supported. It can be stated that the programme forms a kind of interregional facilitating mechanism to enhance the contributions to EU policies and targets by improving operational capacities in the regions. Thus, it shows more an indirect rather than a direct competence for these contributions.

Due to its strategic and operational orientation, Interreg NWE shows complementarities and connections to a number of other EU-financed programmes:

- Smart Specialisation Strategies (S3) - providing space for experimentation, learning and generation of good practice and building capacities for S3 implementation
- Regional and national programmes under the Investment for Jobs and Growth (IJ&G)
- Single Market Programme 2021-2027
- InvestEU Fund
- Interregional Innovation Investment Instrument
- EU Urban Mobility Package
- Digital Europe Programme
- Health Programme
- Horizon Europe
- Resource Efficient Europe Flagship Initiative

¹⁸ Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021, chapter 1.2

- Circular Economy Package
- Erasmus+ Programme
- Life Programme
- EU Biodiversity Strategy
- EU Strategy on Green Infrastructure
- Territorial Agenda 2030

Links to national and regional programmes and strategies exist towards smart specialisation strategies, low-carbon strategies, energy strategies, climate strategies as well as the regional ERDF programmes and other Interreg programmes.

2.4 Horizontal principles

The consideration of the three horizontal principles “sustainable development”, “equal opportunities and non-discrimination” as well as “equality between men and women” is obligatory for programmes co-funded by European Structural and Investment Funds (ESI-funds) following Articles 7 and 8 of the Common Provisions Regulation (CPR).

In the submitted Template for Interreg 2021-2027, no reference is taken to the three horizontal principles “sustainable development”, “equal opportunities and non-discrimination” as well as “equality between men and women”. The duly consideration of the horizontal principles is not explicitly stated as a guiding principle for the selection of projects.

According to the number of selected Specific Objectives, Interreg NWE’s main thematic orientation is on Policy Objective 2 “A greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate change mitigation and adaptation risk prevention and management, and sustainable urban mobility” (see also Graphic 2). This thematic orientation directly addresses the horizontal principle “sustainable development”, all projects will consider one or more aspects of sustainable development as an intrinsic element.

3 Environmental Policies and Targets, State and Outlook

In the following chapters, the relevant EU policies and targets for the environmental issues is presented briefly. The status and outlook of the environment are then also summarized concisely. Basically, reference is made to the report of the EAP “The European environment - state and outlook 2020” (2019) (hereafter “SOER 2020”). This report provides a comprehensive assessment of European’s environment on the basis of the EU policies and targets valid till 2020.

In its conclusion, the report emphasises that “in 2020 Europe faces environmental challenges of unprecedented scale and urgency. Although EU environment and climate policies have delivered substantial benefits over recent decades, Europe faces persistent problems in areas such as biodiversity loss, resource use, climate change impacts and environmental risks to health and well-being. Global megatrends such as demographic change are intensifying many environmental challenges, while rapid technological change brings new risks and uncertainties” (SOER 2020 p. 9). It is also stated that “despite the successes of European environmental governance, persistent problems remain and the outlook for Europe’s environment in the coming decades is discouraging” (SOER 2020 p. 12).

Until 2020 EU environmental policies are guided by three thematic policy priorities in the 7th EAP (SOER 2020 p. 12):

1. to protect, conserve and enhance the EU's natural capital;
2. to turn the EU into a resource-efficient, green and competitive low-carbon economy; and
3. to safeguard the EU's citizens from environment-related pressures and risks to their health and well-being.

Since 2020 the European Green Deal sets new benchmarks by “designing a set of deeply transformative policies” for clean energy supply across the economy, industry, production and consumption, large-scale infrastructure, transport, food and agriculture, construction, taxation and social benefits.¹⁹ The Annex “Roadmap -Key actions” of the Green Deal shows a timetable with Actions planned from 2019 to 2021, with proposals for revisions of relevant legislative measures and policies, new strategies, directives and other policies to realize a sustainable transformation of Europe's economy and society.

In this respect, the European Green Deal requires a paradigm change. Instead of a defensive climate and environmental policy, the natural resources are now to be retained offensively and by a fundamental change in economic activity. This also represents a challenge for the EU's funding programs.

The report “Territorial Analysis of the NWE cooperation area - DRAFT REPORT –THEMATIC ANALYSIS”²⁰ analyses the situation of the program region NW Europe. Here, among other themes, the aspects energy, climate change adaptation, risk prevention and disaster resilience, Greenhouse emissions and air quality, Green infrastructure in urban environment and reduced pollution, water efficiency, and Circular economy will be considered in more detail. For a more detailed discussion of these topics, please refer to this report.

Please note: The following description of the relevant policies is not intended to present a complete documentation. However, it is supposed to present as concisely as possible the policies and targets that are important for an assessment of the program.

The description of the state of the environment is a compromised overview. Due to the complexity of the respective topics, no claim to completeness can be made. For more detailed information, please refer to the respective EU publications on the single environmental issues and the report “*The European environment - state and outlook 2020 - Knowledge for transition to a sustainable Europe*” (EAP 2019).

The following overview is limited to the EU level and only specifies the national level by way of example. This serves the purpose of conciseness, especially since a more detailed description of the specific aspects could have no influence on the assessment of the programme's expected results, which are kept quite general.

3.1 Human Health and Well-Being

Human health is closely linked to environmental conditions. Clean air, clean water and healthy food for example are crucial for our well-being, as is an intact natural environment for leisure and recreation.

Europe has achieved some success in reducing the environmental risks for human health and well-being. So, drinking and bathing water are generally of high quality throughout Europe. But some persistent and mobile chemicals resist drinking water treatment. Although the overall emission of air

¹⁹ European Commission (2019): The European Green Deal p. 4

²⁰ Spatial Foresight GmbH (2020): Territorial Analysis of the NWE area - DRAFT REPORT –THEMATIC ANALYSIS

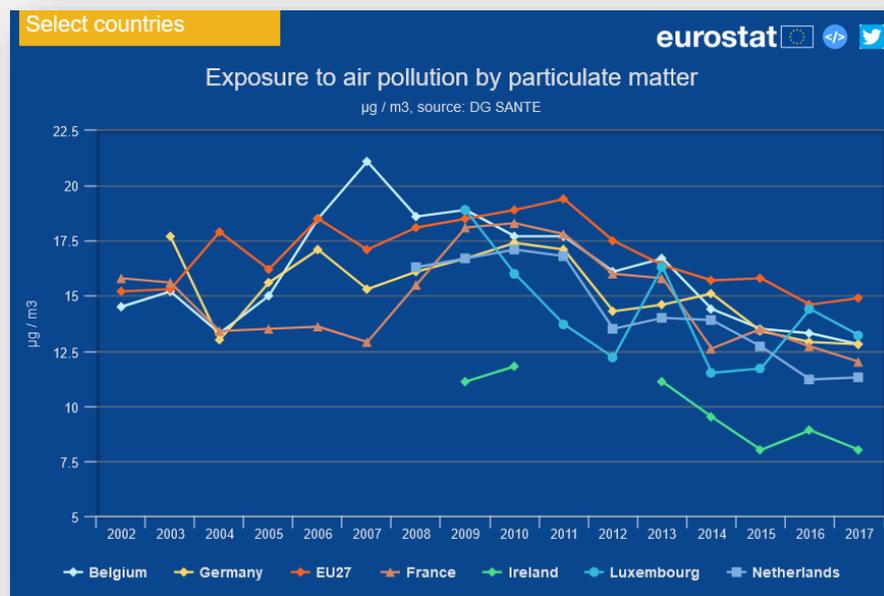


Figure 4: Exposure to air pollution by particulate matter in NWE countries

Source: Eurostat Website May 2021 <https://ec.europa.eu/eurostat/web/sdi/good-health-and-well-being>

pollutants has declined, almost 20% of the urban population of the EU still lives in areas with concentrations of air pollutants above at least one EU air quality standard.

Furthermore, human health is affected by noise, hazardous chemicals and climate change. (SOER 2020 p. 13)

Some population groups are more exposed or vulnerable to environmental hazards: lower socio-economic groups, elderly people, pregnant women, children and those with pre-existing health conditions.

3.1.1 Air Pollution

Air pollution is the single largest environmental health risk. (SOER 2020 p. 190) The exposure to air pollution may lead to adverse health effects, as premature mortality and morbidity. Poor air quality-related health problems, such as respiratory diseases, cardiovascular diseases, asthma and allergy, are considered a very serious problem by European citizens.

Europe's most serious pollutants, in terms of harm to human health, are particulate matter (PM), NO₂ and ground-level ozone (O₃).²¹

Policies and targets

Thematic Strategy on air pollution (COM/2005/0446 final) formulates the long-term EU objective: "to achieve levels of air quality that do not result in unacceptable impacts on, and risks to, human health and the environment."²²

The EU's air quality directives (2008/50/EC Directive on Ambient Air Quality and Cleaner Air for Europe and 2004/107/EC Directive on heavy metals and polycyclic aromatic hydrocarbons in ambient

²¹ EEA (2020): Air quality in Europe- 2020 report, p. 9

²² EU Website May 2021: 2011-2013 Review of the EU Clean Air policy https://ec.europa.eu/environment/air/clean_air/review.htm

air) set pollutant concentrations thresholds that shall not be exceeded in a given period of time. In case of exceedances, authorities must develop and implement air quality management plans. These plans should aim to bring concentrations of air pollutants to levels below the limit and target values.²³ Further Legislations you can find in Textbox 1 below.

In 2018 the Commission adopted the Communication "A Europe that protects: Clean air for all" (COM(2018) 330 final) that provides national, regional and local actors with practical help to improve air quality in Europe.

As air pollution declined in Europe in the last decades, a significant difference between the quality standards of the EU and the quality guidelines of the WHO can be seen. With respect to the more stringent WHO guideline value, a much larger proportion of the urban population was exposed to critical concentrations of Fine Particulate Matter (PM2.5), Particulate Matter (PM10) and Nitrogen dioxide (NO2). "The WHO AQGs are designed to offer guidance on reducing the health impacts of air pollution and are based on expert evaluation of current scientific evidence. The EU standards are a political compromise that also take into account what is technically and economically feasible and the cost versus the benefit"²⁴.

The European Green Deal aims a zero-pollution ambition, for a toxic-free environment. To reach this ambition, the Commission will adopt a zero-pollution action plan for air, water and soil in 2021 and provides a review of the European air quality standards in line with the World Health Organization guidelines.

Initiatives as the Renovation Wave, more stringent air pollutant emission standards for vehicles, the revision of the Industrial Emissions Directive and all actions that contribute to a climate neutral and resource-decoupled economy by 2050 will help to mainstream the reduction of air pollution in all sectors.²⁵

Textbox 1: Air Quality - Existing Legislation

Directive 2008/50/EC on ambient air quality and cleaner air for Europe including the following elements:

- The merging of most of existing legislation into a single directive (except for the Fourth Daughter Directive) with no change to existing air quality objectives.
- New air quality objectives for PM2.5 (fine particles) including the limit value and exposure related objectives.
- The possibility to discount natural sources of pollution when assessing compliance against limit values.
- The possibility for time extensions of three years (PM10) or up to five years (NO2, benzene) for complying with limit values.

Directive 2004/107/EC of the European Parliament and of the Council relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air (Fourth Daughter Directive).

Directive 2015/1480/EC of 28 August 2015 amending several annexes to Directives 2004/107/EC and 2008/50/EC of the European Parliament and of the Council laying down the rules concerning reference methods, data validation and location of sampling points for the assessment of ambient air quality

Commission Implementing Decision 2011/850/EU: Commission Implementing Decision of 12 December 2011 laying down rules for Directives 2004/107/EC and 2008/50/EC of the European Parliament and of the Council as regards the reciprocal exchange of information and reporting on ambient air quality (notified under document C(2011) 9068)

EU Website May 2021: Air Quality - Existing Legislation https://ec.europa.eu/environment/air/quality/existing_leg.htm

State and outlook

²³ EEA website May 2021: Air quality standards <https://www.eea.europa.eu/themes/air/air-quality-concentrations/air-quality-standards>

²⁴ EEA (2020): Air quality in Europe - 2020 report p. 98

²⁵ EU: The second clean air outlook COM(2021) 3 final, p. 17-18

The EEA 'Air quality in Europe -2020 report' published in November 2020 states that, although emissions of most air pollutants have declined in the EU in recent decades, air pollution continues to be a significant problem and is still the single largest environmental health risk in Europe.

This decrease of air pollutants did not happen at the same pace in all countries and regions and not in all sectors. For instance, the emission of sulphur oxides from energy production and distribution decreased in Europe by 77 % (2000-2017). Ammonia emissions from agriculture have even increased by about 3 % from 2013 to 2017. Reductions were comparably less for fine particulate matter, the pollutant that poses the greatest threat to human health. (SOER 2020 p.190) (see also Figure 5)

With the implementation of the current emission abatement policies, air pollutant concentrations above the WHO guidelines are expected to be almost eliminated by 2030. The current number of more than 400 000 premature deaths caused by air pollution in the EU28 is expected to decline by more than a half by 2030, while the reduction in the impacts on ecosystems is expected to be smaller. Therefore, to further improve air quality, additional measures are needed to reduce emissions, especially from agriculture, transport and domestic heating. (SOER 2020 p.190)

The Report Territorial Analysis of the NWE area (2020 p. 66) states, that in 2018, the Commission decided to refer France and Germany to the Court of Justice of the EU for failure to respect limit values for nitrogen dioxide (NO₂), and for failing to take appropriate measures to keep exceedance periods as short as possible. The zones located in the NWE area where annual concentrations were exceeded include Köln and Stuttgart (Germany), Paris (France). The results of the analysis for the countries of NWE are shown in Textbox 2 below.

Textbox 2: Air quality in NWE

Belgium is performing well with regards to air emissions. In 2017, for the selected air pollutants (NH₃, NMVOC, NO_x, PM_{2.5} and SO₂) it met the current emissions ceilings of the National Emissions Ceiling Directive. However, for NO₂ a percentage of the population (3.5%) was exposed to concentrations above the EU standards.

France is performing well with regards to air emissions. In 2017, for the selected air pollutants (NH₃, NMVOC, NO_x, PM_{2.5} and SO₂) it met the current emissions ceilings of the National Emissions Ceiling Directive. However, as for the reduction of several pollutants, France gives cause for severe concern, and additional efforts are needed to attain the emission reduction commitments for NO₂, O₃ and PM₁₀, as a percentage of the population was exposed to concentrations above the EU standards, respectively 2%, 6.9% and 0.4%.

Air quality in **Germany** gives serious cause for concern, as the country is still failing to meet EU air quality standards, notably for NO₂ limit values. Traffic accounts for about 60% of harmful NO_x emissions in urban areas, and of this 72.5% is caused by diesel vehicles. Vehicles running on alternative fuels have seen the steepest increase in new registrations, but the numbers remain far below the target value of one million electric cars by 2020 set by the government.

In 2017, **Ireland** met the current emissions ceilings of the National Emissions Ceiling Directive or all the selected air pollutants but or NH₃. With regard to air quality, no percentage of the population was exposed to concentrations above the EU standards.

Luxembourg is performing well with regards to air emissions. In 2017, for all the selected air pollutants (NH₃, NMVOC, NO_x, PM_{2.5} and SO₂) it met the current emissions ceilings of the National Emissions Ceiling Directive. However, with regards to air quality, for NO₂ a percentage of the population (4.6%) was exposed to concentrations above the EU standards.

The Netherlands are underperforming with regards to air emissions. In 2017, it met the current emissions ceilings of the National Emissions Ceiling Directive for NO_x, PM_{2.5} and SO₂, but not those for NH₃ and NMVOC, mainly due to emissions caused by the agriculture and industry sectors. With regards to air quality, 2% of the population was exposed to NO₂ concentrations above the EU standards.

Source: Spatial Foresight GmbH (2020): Territorial Analysis of the NWE Cooperation DRAFT REPORT –THEMATIC ANALYSIS. P. 62-63

Theme	Past trends and outlook		Prospects of meeting policy objectives/targets	
	Past trends (10-15 years)	Outlook to 2030	2020	2030
Emissions of air pollutants	Trends show a mixed picture	Trends show a mixed picture	<input checked="" type="checkbox"/> Largely on track	<input type="checkbox"/> Partly on track
Concentrations of air pollutants	Improving trends dominate	Trends show a mixed picture	<input type="checkbox"/> Largely not on track	<input checked="" type="checkbox"/> Largely on track
Air pollution impacts on human health and well-being	Improving trends dominate	Trends show a mixed picture		<input checked="" type="checkbox"/> Largely on track
Air pollution and impacts on ecosystems	Trends show a mixed picture	Trends show a mixed picture	<input type="checkbox"/> Partly on track	<input type="checkbox"/> Partly on track

Figure 5: Air Pollution in the EU: Trends and Outlook

Source: SOER 2020 p. 190

3.1.2 Noise

Noise pollution is a major environmental problem. The EEA report “Environmental noise in Europe – 2020” figures out, that at least 20 % of the EU population lives in areas where traffic noise levels are harmful to health. The report describes the following human health effects: “Long-term exposure to environmental noise is estimated to cause 12 000 premature deaths and contribute to 48 000 new cases of ischaemic heart disease per year in the European territory. It is estimated that 22 million people suffer chronic high annoyance and 6.5 million people suffer chronic high sleep disturbance. As a result of aircraft noise, 12 500 schoolchildren are estimated to suffer learning impairment in school.”

However, one must assume that the health effects are underestimated. This is due to the fact that “new World Health Organization evidence demonstrating effects at levels below the obligatory Environmental Noise Directive (END) reporting thresholds. In addition, the END does not comprehensively cover all urban areas, roads, railways and airports across Europe.”²⁶

Road traffic is the most dominant source of environmental noise, railways, air traffic and industry are also major sources of noise.

Policies and targets

The *Directive 2002/49/ relating to the assessment and management of environmental noise* is the main EU instrument to identify noise pollution levels and to trigger the necessary action both at Member States and at EU level.

To pursue its stated aims, the Environmental Noise Directive focuses on three action areas:

- the determination of exposure to environmental noise
- ensuring that information on environmental noise and its effects is made available to the public
- preventing and reducing environmental noise where necessary and preserving environmental noise quality where it is good.²⁷

Therefore, Member States must prepare noise maps every 5 years to determine exposure to environmental noise from transport and industry sources. These noise maps serve as the basis for adopting action plans designed to prevent and reduce harmful exposure in areas affected by noise from roads,

²⁶EEA (2019): Environmental noise in Europe - 2020. EEA Report No 22/2019

²⁷ EU: Directive 2002/49/EC - Environmental Noise Directive https://ec.europa.eu/environment/noise/directive_en.htm

railways, airports and industry. The plans should also aim to protect quiet areas against an increase in noise. (SOER 2020 p. 256)

The 7th EAP²⁸ targets until 2020 are:

- to reduce noise pollution significantly in the EU moving closer to WHO recommended levels.
- To implement measures to reduce noise at source and including improvements in city design.

The WHO (2018)²⁹ has classified traffic noise, including road, rail and air traffic, as the second most important cause of ill health in Western Europe, behind only air pollution caused by very fine particulate matter. Specific recommendations have been formulated for road traffic noise, railway noise, aircraft noise, wind turbine noise and leisure noise, which go beyond the requirements of the EU.

Figure 6 shows that among the NWE countries the population of Germany and the Netherlands are the most affected by noise and the people living in Ireland are the least affected.

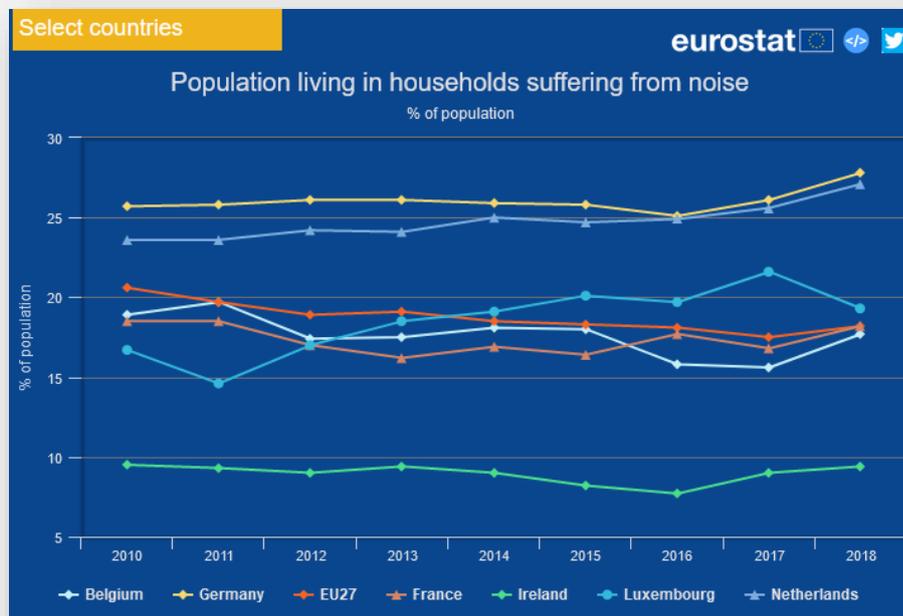


Figure 6: Population living in households suffering from noise in the NWE countries

Source: Eurostat Website May 2021 <https://ec.europa.eu/eurostat/web/sdi/good-health-and-well-being>

State and outlook

As the number of people exposed to high levels of noise since 2012 has broadly remained stable, the 7th EAP objective of significantly reducing noise pollution in the EU, moving closer to the WHO's recommended levels by 2020, will not be achieved. However, an increase in the population exposed to environmental noise is projected as a result of future urban growth and increased mobility demand. In its report SOER 2020 the EEA draws following conclusion: "The implementation of the Environmental Noise Directive, introduced in 2002, has not yet achieved its full potential. It would be

²⁸ DECISION No 1386/2013/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet'.

²⁹ WHO (2018): Environmental Noise Guidelines for the European Region.

achieved if Member States implemented it fully, particularly with respect to completeness, comparability and timeliness of reporting, as well as implementing action plans that include the protection of quiet area". (SOER 2020 p. 255) As Figure 7 also shows, Europe is not on the track to meet its 2020 objectives and targets and the outlook beyond 2030 also makes it evident that considerable efforts are still needed to achieve the targets.

Theme	Past trends and outlook		Prospects of meeting policy objectives/targets
	Past trends (10-15 years)	Outlook to 2030	2020
Population exposure to environmental noise and impacts on human health	Trends show a mixed picture	Deteriorating developments dominate	☒ Largely not on track
Preservation of quiet areas	Trends show a mixed picture	Developments show a mixed picture	☒ Largely not on track

Figure 7: Thematic summary assessment Noise: Trends and Outlook

Source: SOER 2020: p. 254

3.1.3 Chemical Pollution

Chemicals are everywhere as an essential component of our daily lives, but some chemicals can severely damage human health or the environment. Latent and irreversible damage to human health is of particular concern. (SOER 2020 p. 232)

Policies and targets

The Eu has comprehensive chemicals legislation, spearheaded by *REACH* and *CLP*, which aims to ensure a high level of protection of human health and the environment:

- REACH (EC 1907/2006) aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.
- The Regulation on the Classification, Labelling and Packaging of Substances and Mixtures (CLP) (Regulation (EC) No 1272/2008)³⁰

As a part of the European Green Deal the European Commission published a *Chemicals Strategy* in October 2020. This strategy aims to:

- better protect citizens and the environment
- boost innovation for safe and sustainable chemicals.³¹

The recent EU chemicals strategy for sustainability aims to ensure that chemicals make a positive contribution to society without harming the environment and people's health. To make products safer and more sustainable they should be assessed at the design stage of product development. This would reduce risks from chemical pollution and support Europe's transition to a circular and low-carbon economy.

³⁰ EU website May 2021: Chemicals are everywhere. https://ec.europa.eu/environment/chemicals/index_en.htm

³¹ Chemicals Strategy for Sustainability - Towards a Toxic-Free Environment COM(2020) 667 final

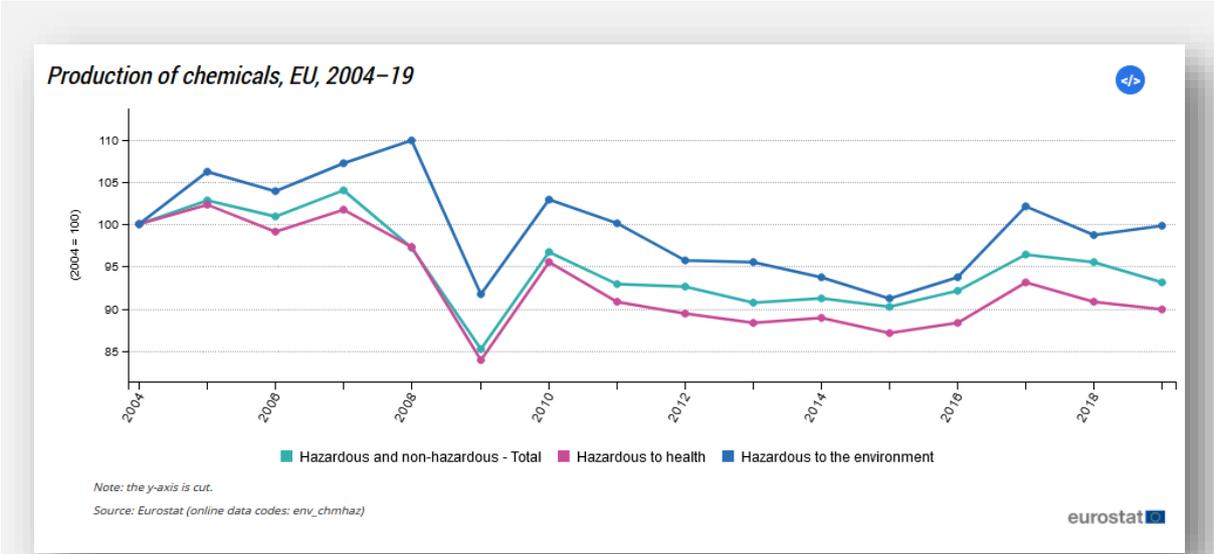


Figure 8: Production of chemicals in Europe, 2004-2019

Source: Eurostat Website May 2021 ec.europa.eu/eurostat/statistics-explained/index.php?title=Chemicals_production_and_consumption_statistics#Effective_changes_in_the_production_of_chemicals_hazardous_to_health

State and outlook

European chemical policies have contributed to improved air and surface water quality and reduced related harm to the environment and people’s health. But still exposure to chemical pollution continues to negatively affect human health and the environment. As chemical production and emissions of persistent and hazardous chemicals still increase, the prospects of meeting policy and targets of the EU are negative. It is necessary to achieve a transition to chemicals and products that are safe by design as well as using less hazardous chemicals along the entire life cycle of products. (SOER 2020 p. 232)

Theme	Past trends and outlook		Prospects of meeting policy objectives/targets
	Past trends (10-15 years)	Outlook to 2030	2020
Emissions of chemicals	Trends show a mixed picture	Deteriorating developments dominate	<input checked="" type="checkbox"/> Largely not on track
Chemical pollution and impacts on ecosystems	Trends show a mixed picture	Deteriorating developments dominate	<input checked="" type="checkbox"/> Largely not on track
Chemical pollution and risks to human health and well-being	Trends show a mixed picture	Deteriorating developments dominate	<input checked="" type="checkbox"/> Largely not on track

Figure 9: Thematic summary assessment Chemicals: Trends and Outlook

Source: SOER 2020 p. 232

Key findings from the latest State of nature report:

- Climate change is a rising threat, especially because of increased drought and lower precipitation.
- Agricultural activities, land abandonment and urbanisation are the major pressures on habitats and species, followed by pollution.
- The conservation status of only 14 % of habitats assessments and 27 % of non-bird species is 'good'. Pollinators' habitats have worse conservation status and trends than other habitats.
- The population status of almost half of the bird species in the Birds Directive is 'good'; however, the lowest number of improving trends is that for farmland birds.
- Natura 2000 sites cover 18 % of land and 10 % of marine waters in the EU.

Figure 10: Key findings from the latest State of nature report

Source: EU website May 2021 eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu

3.2 Fauna, Flora, Biodiversity

Biodiversity means the variety and variability of life on Earth. In recent decades, there has occurred a dramatic loss of animals and plants in both terrestrial and aquatic ecosystems worldwide.

The SOER 2020 report (p. 76) states: "Europe's biodiversity has been shaped by human activity more than on any other continent and is continually under pressure as a result of our use of natural capital driven by human production and consumption. ... The conclusion is that destruction and loss of biodiversity and nature is as catastrophic as climate change".³²

Policies and targets

The requirements of international conventions and agreements are the basis of the EU biodiversity strategy to 2020. The 2020 target of the strategy is "Halting the loss of biodiversity and the degradation of ecosystem services and restoring them in so far as feasible, while stepping up Europe's contribution to averting global biodiversity loss". Furthermore, the Seventh Environment Action Programme (7th EAP) fully embraces the objectives of the EU biodiversity strategy to 2020 and its 2050 vision. (SOER 2020 p.76)

The European Green Deal aims to transform the EU into a modern, resource-efficient and competitive economy. A core part of the European Green Deal is the Biodiversity Strategy 2030 as "a comprehensive, ambitious, long-term plan for protecting nature and reversing the degradation of ecosystems". Although the proposal of the 8th Environment Action Programme (EAP) requires as one of six thematic priority objectives "protecting, preserving and restoring biodiversity and enhancing natural capital, notably air, water, soil, and forest, freshwater, wetland and marine ecosystems".

³² See also the latest report of the EEA from August 2020 "State of nature in the EU - Results from reporting under the nature directives 2013-2018"

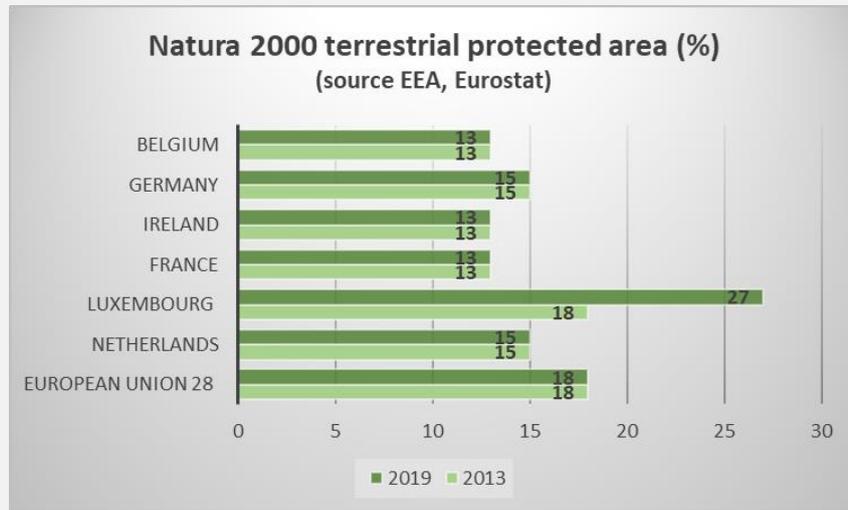


Figure 11: Natura 2000 terrestrial protected area in NWE countries

Source: Eurostat website may 2021 https://ec.europa.eu/eurostat/databrowser/view/env_bio1/default/table?lang=en

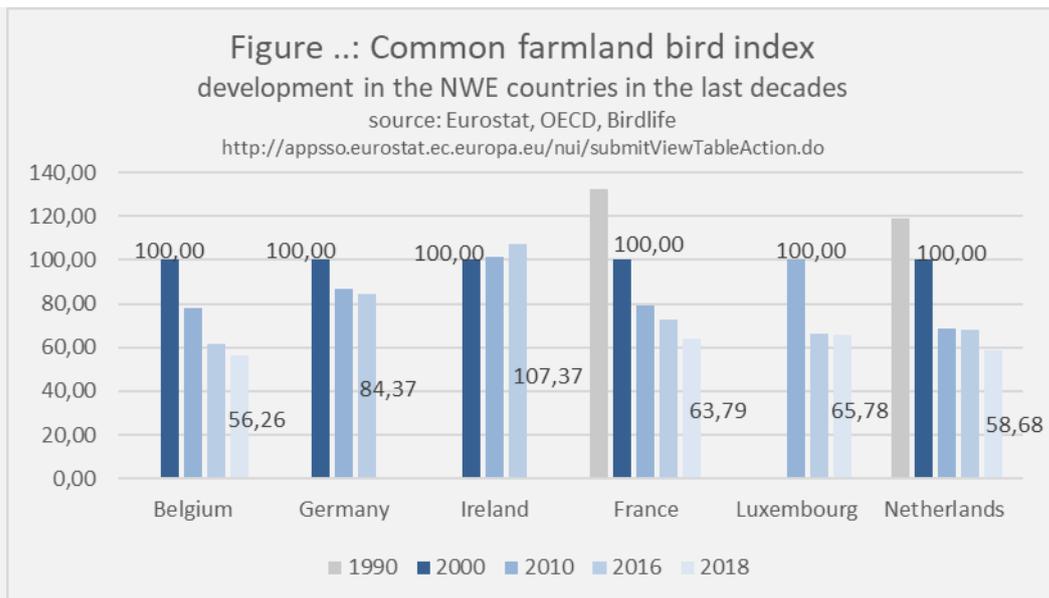


Figure 12: Common farmland bird Index

State and outlook

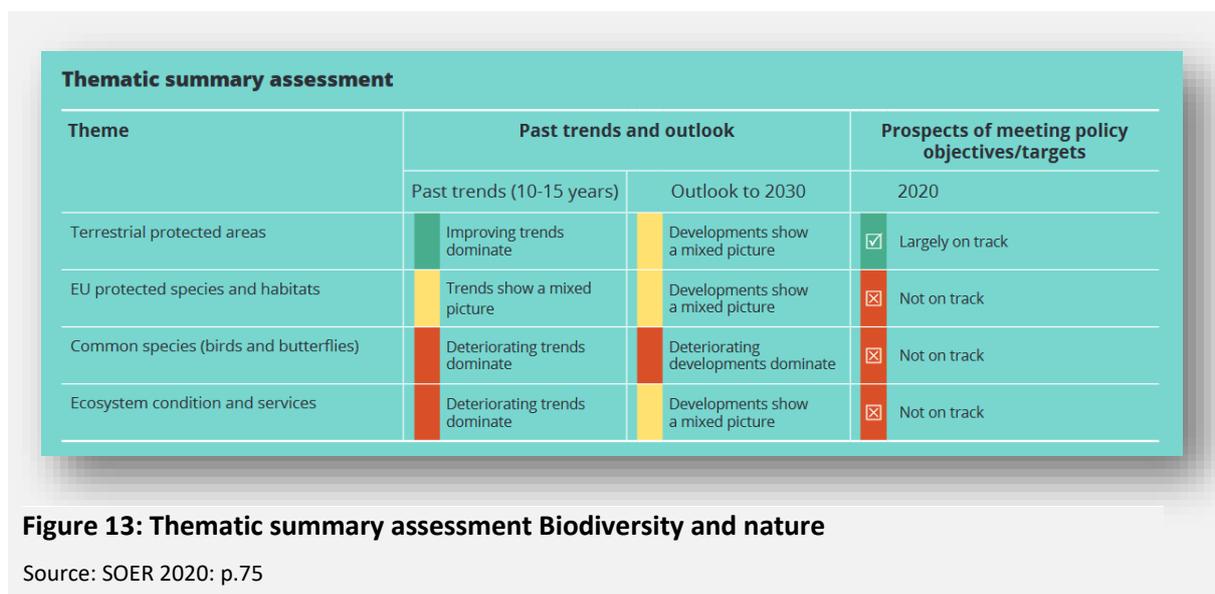
Europe continues to lose biodiversity at an alarming rate and many agreed policy targets will not be achieved (see Figure 13). Not only rare or threatened species are affected by biodiversity loss. A continuing downward trend show the populations of common birds and butterflies, with the most pronounced declines in farmland birds (32 %) and grassland butterflies (39 %).

Progress can be found in the designation of protected areas: the EU Natura 2000 network now covers 18 % of the EU’s land area and almost 9 % of marine waters, making it the world’s largest network of protected areas. (SOER 2020 p.74)

However, as Figure 11 shows, of the Interreg NWE member states, only Luxembourg meets or exceeds the required 18% terrestrial protected area, while the other member states are all below this level.

Figure 12 clearly shows how the common farmland bird index also declines in Interreg NWE member states, with the exception of Ireland, where the index increases since 2000.

The outlook is bleak, without decisive action the loss of species and habitats in Europe will not be stopped (see Figure 13 below) and important targets of EU policies will not be met. (SOER 2020 p. 75)



3.2.1 Marine Environment

The marine environment is under pressure from human activities at sea and on land. Pollution, seabed damage, overexploitation, biodiversity loss, ocean warming and acidification are the results. In 2008, the EU adopted the Marine Strategy Framework Directive (MSFD) to maintain marine ecosystems in a healthy, productive and resilient condition while securing a more sustainable use of marine resources. The MSFD requires Member States to develop national marine strategies in order to achieve, or maintain where it exists, 'good environmental status'. Such status should have been achieved by 2020. The marine strategies comprise regular assessments of the marine environment, setting objectives and targets, establishing monitoring programmes and putting in place measures to improve the state of marine waters in close coordination with neighbouring countries at regional sea level.³³

The new EU Biodiversity Strategy for 2030 (adopted in May 2020) aims to strengthen the protection of marine ecosystems and to restore them to achieve “good environmental status” and the expansion of protected areas and the establishment of strictly protected areas for habitats and fish stocks

³³ European Commission (2021): Combined Evaluation roadmap/Inception impact assessment file:///C:/Users/User/Downloads/090166e5db960f4b.pdf

recovery. It stresses the need for an ecosystem-based approach to the management of human activities at sea. This means

- addressing the overexploitation of fishing stocks to or under, Maximum Sustainable Yield levels (i.e. a level that will allow a healthy future for the fish stock’s biomass);
- eliminating bycatch, or at least reducing it to non-dangerous levels, in order to protect sea mammals, turtles and birds, especially those that are threatened with extinction or in bad status;
- tackling practices that damage the seabed.³⁴

In the last years European countries have managed to reduce selected pressures, and positive effects are starting to become visible. These cover the recovery of some marine species, including commercially exploited fish and shellfish stocks; where an increasing number of these stocks are now being fished at maximum sustainable yield. The target for designation of marine protected areas has been met. the target of achieving good environmental status of European marine waters by 2020 has not been achieved (SOER 2020 p. 134, see also Figur14 below). While EU rules regulating chemicals have led to a reduction in contaminants, we see an increased accumulation of plastics and plastic chemical residues in most of the marine species.³⁵

Theme	Past trends and outlook		Prospects of meeting policy objectives/targets
	Past trends (10-15 years)	Outlook to 2030	2020
State of marine ecosystems and biodiversity	Trends show a mixed picture	Deteriorating developments dominate	<input checked="" type="checkbox"/> Largely not on track
Pressures and impacts on marine ecosystems	Trends show a mixed picture	Deteriorating developments dominate	<input checked="" type="checkbox"/> Largely not on track
Sustainable use of the seas	Trends show a mixed picture	Developments show a mixed picture	<input type="checkbox"/> Partly on track
Marine protected areas	Improving trends dominate	Developments show a mixed picture	<input checked="" type="checkbox"/> Largely on track

Figure 14: Thematic summary assessment – Marine Environment

Source: SOER 2020 p. 134

³⁴ EU website may 2021: Our Oceans, Seas and Coasts - The Marine Strategy Framework Directive ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

³⁵ EU website may 2021: Our Oceans, Seas and Coasts - The Marine Strategy Framework Directive ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm

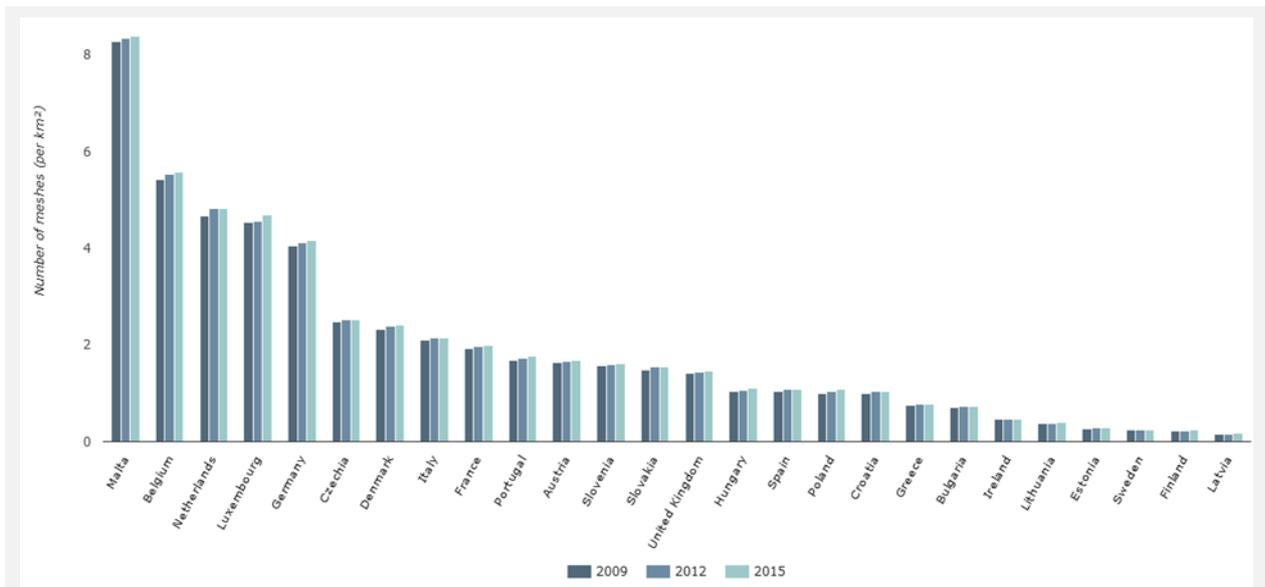


Figure 15: Average number of meshes per km² - Landscape fragmentation status and trends, 2009-2015: country comparison

Source: EEA Indicator Assessment - Landscape fragmentation pressure and trends in Europe
www.eea.europa.eu/data-and-maps/indicators/mobility-and-urbanisation-pressure-on-ecosystems-2/assessment

3.3 Landscape and Soil

Landscape is a central environmental medium that represents the habitat of humans as well as of animals and plants. Intensive agricultural and forestry use, urban sprawl, land fragmentation and soil sealing negatively affect all other environmental media as well.

Soil provides numerous services for people and the environment: Humans as well as animals and plants live on and from soils, soils filters water and store carbon, to name just a few of their services to ecosystems and humans. Healthy soils are also essential to meet climate and biodiversity goals under the European Green Deal.

Policies and targets

As prevention and restoration of land and soil degradation are addresses broadly in the European policy framework, binding targets are lacking at European level. (SOER 2020 p. 115)

The *7th EAP* as well as the *EU Roadmap to a resource efficient Europe* request no net land take in the EU by 2050, to reduce soil erosion, increase organic matter, promote remedial work on contaminated sites. The *Thematic strategy on the protection of soil* aims to prevent further degradation of soil, preserve its functions and restore degraded soils by integrating these themes in relevant EU strategies. The *proposal for an 8th EAP* aims under its six thematic priority objectives “a zero-pollution ambition for a toxic free-environment, including for air, water and soil”.

Part of the *EU Biodiversity strategy for 2030*, the new EU soil strategy *Healthy Soils* is planned to come in force in Q2 2021. Goals of the strategy are: protect soil fertility, reduce erosion and sealing, increase organic matter, identify contaminated sites, restore degraded soils, define what constitutes ‘good ecological status’ for soils.³⁶

³⁶ EU website may 2021: Healthy soils - new EU soil strategy ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12634-Healthy-soils-new-EU-soil-strategy

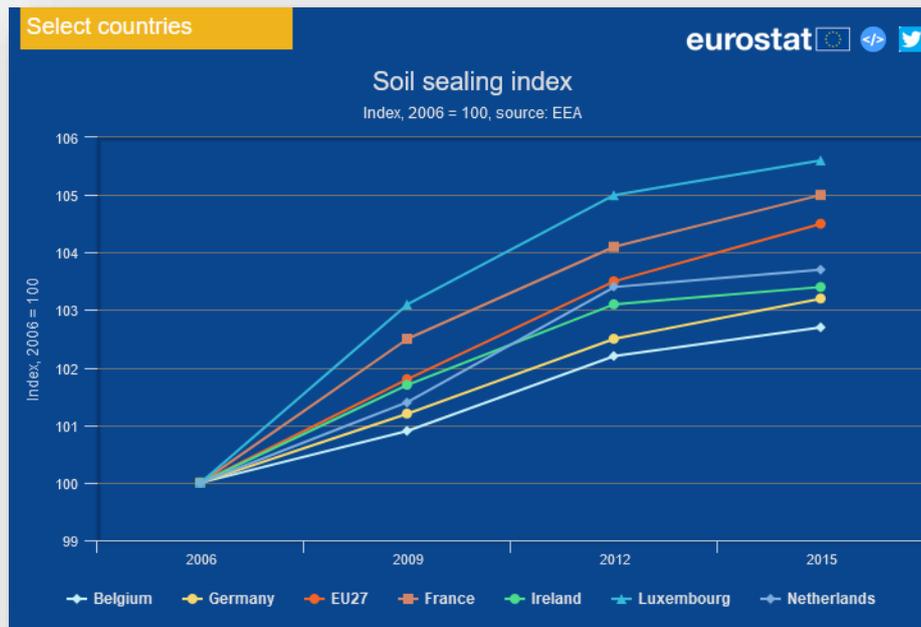


Figure 16: NWE Member States - Soil sealing Index

source: Eurostat website may 2021 ec.europa.eu/eurostat/web/sdi/life-on-land

Soils play a central role in achieving the goals of the European Green Deal, as sustainable soil management is seen as a cross-cutting issue relevant to several policy areas addressed by the European Green Deal, such as climate change, biodiversity, agriculture, food safety.

Luca Montanarella and Panos Panagos (2021) summarize in their publication “The relevance of sustainable soil management within the European Green Deal” the targets of the Green Deal concerning soil and land use as follows: “The European Commission presented an ambitious package of measures within the Biodiversity Strategy 2030, the Farm to Fork and the European Climate Law including actions to protect our soils. The Farm to Fork strategy addresses soil pollution with 50 % reduction in use of chemical pesticides by 2030 and aims 20 % reduction in fertilizer use plus a decrease of nutrient losses by at least 50 %. The Biodiversity Strategy has the ambition to set a minimum of 30 % of the EU’s land area as protected areas, limit urban sprawl, reduce the pesticides risk, bring back at least 10 % of agricultural area under high-diversity landscape features, put forward the 25 % of the EU’s agricultural land as organically farmed, progress in the remediation of contaminated sites, reduce land degradation and plant more than three billion new trees. The maintenance of wetlands and the enhancement of soil organic carbon are also addressed in the European Climate Law.”³⁷

State and outlook

Arable lands and permanent croplands (around 42.6 %) and pastures and farmland mosaics (around 40.2 %) were most affected by strong fragmentation pressure in 2015 in the EU. Between 2009 and 2015, however, the largest increase in the area of strongly fragmented landscape was in grasslands/pastures and in farmland mosaics. In NWE Belgium, The Netherlands, Luxembourg and Ger-

³⁷ Montanarella, Panagos (2021): The relevance of sustainable soil management within the European Green Deal www.sciencedirect.com/science/article/pii/S0264837720304257?via%253Dihub

many had the largest proportions of strongly fragmented landscape in 2015, Ireland is the least fragmented country (see Figure 15). In all NWE member states the Soil Sealing Index is still increasing (see Figure 16).

In the EU land take and soil sealing continue, intensive land management leads to negative impacts on soils, on soil biodiversity; land for agricultural use has decreased. Trend, outlook and prospects for the indicators “Urbanisation and land use by agriculture and forestry” as well as “Soil condition” are negative (see Figure 17).

Thematic summary assessment				
Theme	Past trends and outlook		Prospects of meeting policy objectives/targets	
	Past trends (10-15 years)	Outlook to 2030	2020	2050
Urbanisation and land use by agriculture and forestry	Deteriorating trends dominate	Deteriorating developments dominate		Not on track
Soil condition	Deteriorating trends dominate	Deteriorating developments dominate	Not on track	

Figure 17: Thematic summary Assessment - Soil and Landscape

Source: SOER 2020 p. 114

3.4 Water

Water is essential for human health, nature, agriculture, energy production and transport. Rivers, lakes and wetlands are habitat for plants and animals, important for our climate and furthermore recreation areas for humans.

The SOER 2020 (p. 95) report points out, that Europe’s waters are affected by pressures from pollution, over-abstraction and physical changes. In addition, there are burdens due to climate change such as drought and flooding.

Policies and targets

The EU Water Framework Directive 2000/60/EC is the most considerate policy concerning water, with the legally binding commitment to ensure a 'good status' for all water bodies. Also, an integrated ecosystem-based approach to managing water was introduced.

Furthermore, there are some specific directives like the Drinking Water, Groundwater, Bathing Water and Floods Directives (EU, 1998, 2006, 2006, 2007), which also comprise legally binding commitments.

The EU Biodiversity Strategy for 2030 sets the target to restore the good environmental status of freshwater and marine ecosystems. The Roadmap to a resource efficient Europe (EC, 2011b) aims that “water abstraction should stay below 20 % of available renewable water resources”.

The 8th Environment Action Programme formulates under its thematic priority objectives:

- pursuing a zero-pollution ambition for a toxic free-environment, including for air, water and soil, and protecting the health and well-being of citizens from environment-related risks and impacts;
- protecting, preserving and restoring biodiversity and enhancing natural capital, notably air, water, soil, and forest, freshwater, wetland and marine ecosystems;

Theme	Past trends and outlook		Prospects of meeting policy objectives/targets	
	Past trends (10-15 years)	Outlook to 2030	2020	
Water ecosystems and wetlands	Trends show a mixed picture	Developments show a mixed picture	☒	Not on track
Hydromorphological pressures	Deteriorating trends dominate	Developments show a mixed picture	☒	Not on track
Pollution pressures on water and links to human health	Trends show a mixed picture	Developments show a mixed picture	☒	Not on track
Water abstraction and its pressures on surface and groundwater	Improving trends dominate	Developments show a mixed picture	☒	Not on track

Figure 18: Thematic summary Assessment - Soil and Landscape

Source: SOER 2020 p.94

State and outlook

Currently only 40 % of Europe’s surface water bodies achieve good ecological status and wetlands are widely degraded, as are 80-90 % of floodplains. As in Europe point source pollution, nitrogen surpluses and water abstraction have been reduced, freshwaters continue to be affected by diffuse pollution, hydromorphological changes and water abstraction. Diffuse pollution and water abstraction pressures are expected to continue in response to intensive agricultural practices and energy production (SOER 2020 p. 94).

Climate change will increase floods, droughts and water shortages in many regions of Europe.

As figure 18 shows, Europe is not at the track to meet its targets to 2020 and the prospects to 2030 are mixed.

The report “Territorial Analysis of the NWE Cooperation area³⁸” analyses the water efficiency focuses on the topics of ecological status, quantitative status, chemical status and urban water waste treatment detailed (p. 72-82). The results, highly abbreviated:

- The large majority of NWE water bodies are not in good ecological status or potential. The main causes of water abstraction pressures are agriculture (49 %, i.e. France, Luxembourg, the Netherlands), public water supply (35 %, i.e. France, Ireland, Luxembourg), hydropower (26 %) and industry (25 %, i.e. Belgium, France). (p. 72-73)
- North West Europe is relatively rich in annual renewable freshwater resources. Though, most of NWE area has a good quantitative status. In a few River Basin Districts (RBD) located mainly in Belgium, France and the Netherlands, water abstraction pressure is important (between 20 % and 40 %), and the use of freshwater resources is at the limit of sustainability. (P. 74-75)
- In Luxembourg, Germany and Belgium a good chemical status of surface water is not achieved. (p. 75)
- The status of groundwater across NWE is generally better than that of surface waters, more than half of NWE groundwater bodies are not affected by significant pressures. The main pressures on the quality of NWE groundwater bodies are located in parts of Belgium, and to a lesser extent in few parts of France, Germany and Luxembourg. (p. 77-79)

³⁸ Spatial Foresight GmbH (2020): Territorial Analysis of the NWE area DRAFT REPORT –THEMATIC ANALYSIS

- In the Netherlands and in Germany almost the whole population is connected to sewage collection systems applying stringent treatment, followed by Belgium, Luxembourg, the Netherlands, In Ireland less than 20 % of the population is connected to tertiary treatment systems. (p. 81-82).

Figure 19 shows that among the Interreg NWE countries Nitrate in groundwater as well as Phosphate in rivers is very high in in Belgium and very low in Ireland.

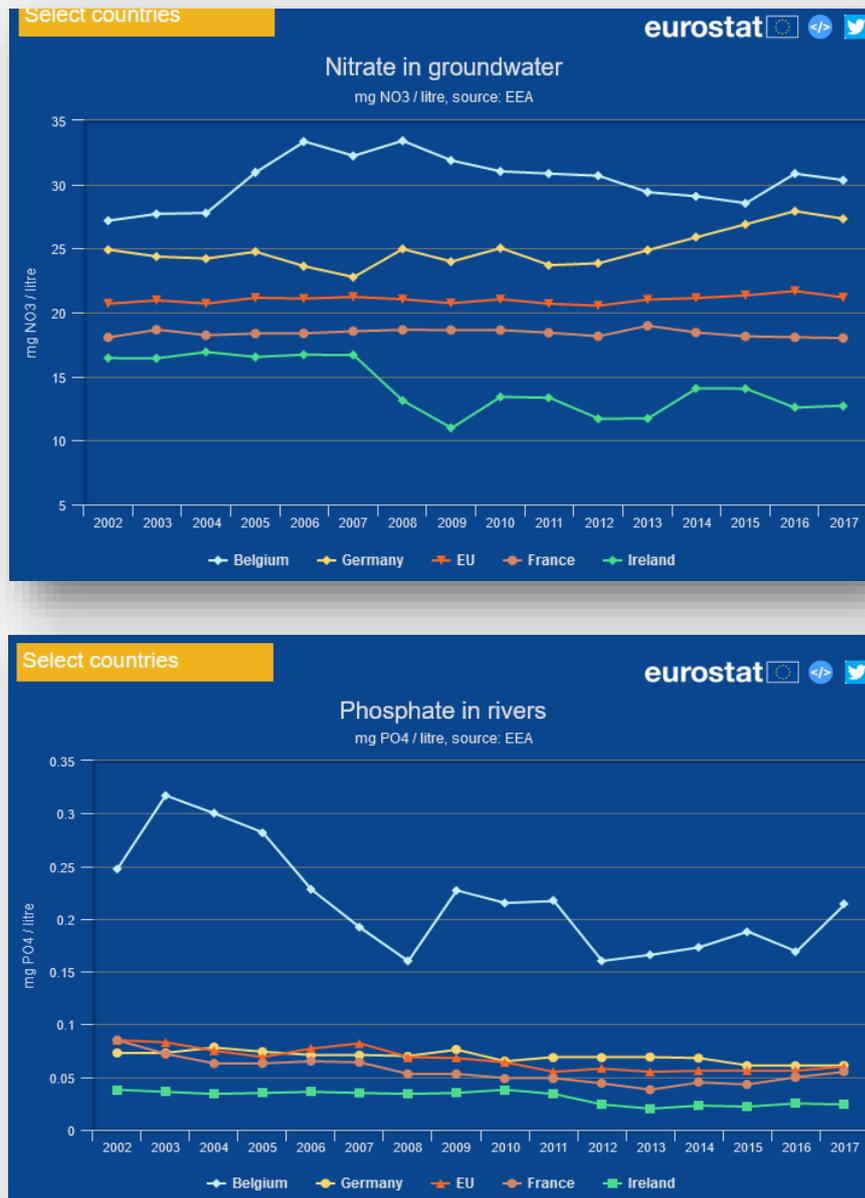


Figure 19: NWE Member States- Nitrate in Groundwater, Phosphate in Rivers

Source: Eurostat Sustainable development indicator <https://ec.europa.eu/eurostat/web/sdi/clean-water-and-sanitation>

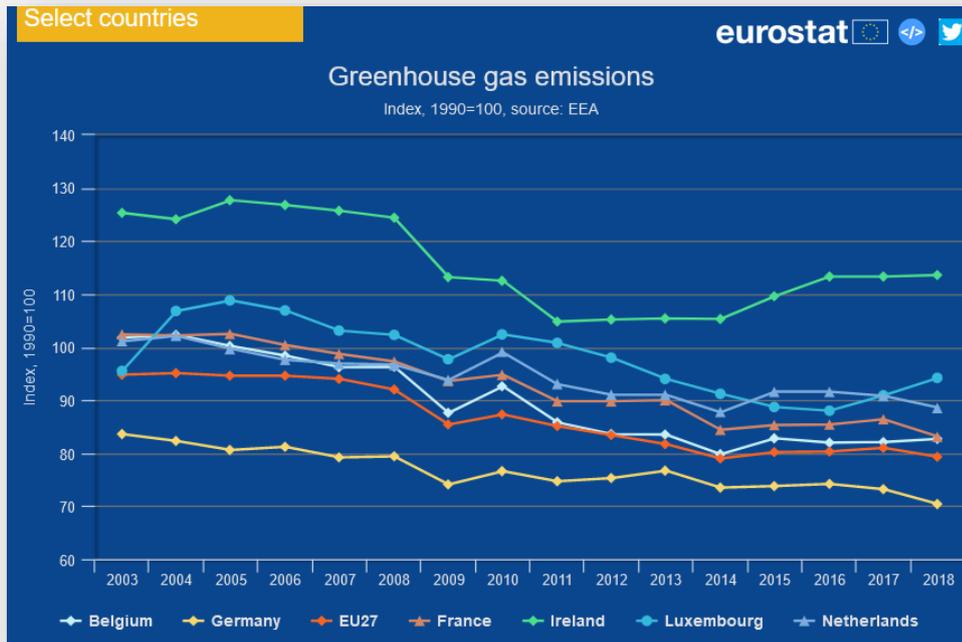
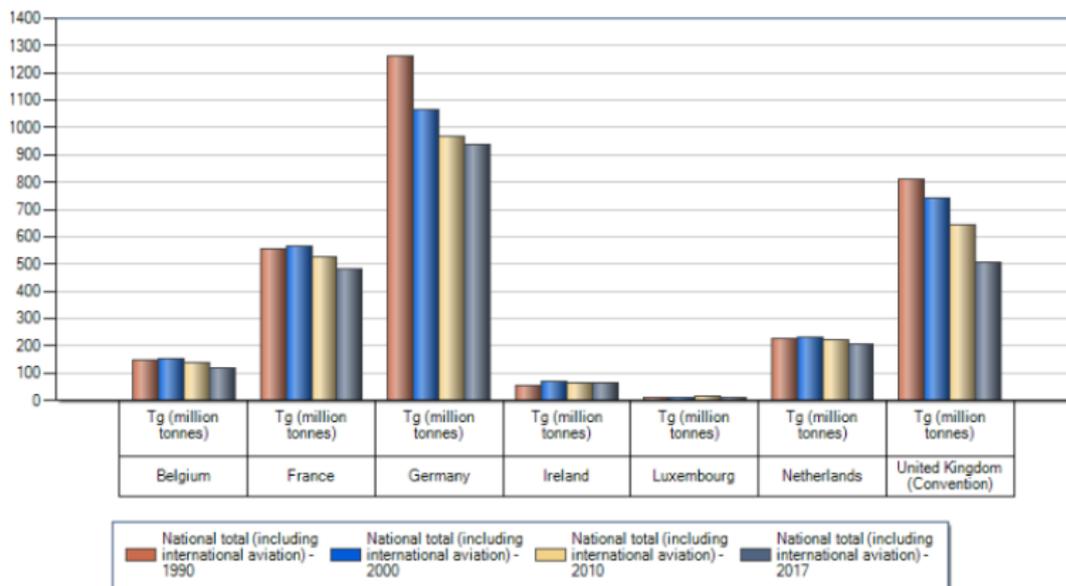


Figure 20: NWE Member States – Greenhouse gas emissions

Source: Eurostat Sustainable development indicator <https://ec.europa.eu/eurostat/web/sdi/climate-action>

Figure 2-2 Evolution of greenhouse gas emissions by NWE country (1990, 2000, 2010, 2017)



Data source: National emissions sent to UNFCCC and to the EU Greenhouse Gas Monitoring Mechanism, <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>.

Source: EEA, 2020.

Figure 21: Evolution of greenhouse gas emissions by NWE member states

Source: Territorial Analysis of the NWE area, DRAFT REPORT –THEMATIC ANALYSIS (2020 p. 60)

3.5 Global Climate

3.5.1 Greenhouse gases

Mitigating climate change and the associated risks is one of the most challenging problems facing society. To achieve the international target to limit global warming to 1.5°C, climate gas emissions must be significantly reduced worldwide.

Policies and targets

The Paris Agreement, in force since 2016, is a legally binding international treaty on climate change. Its objective is to keep the global temperature increase to well below 2°C and pursue efforts to keep it to 1.5°C. To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century.³⁹

In order to support this goal, the EU has launched several current policies. Superior policy is the European Green Deal, with the European Green Deal its main target to become climate neutral in Europe by the year of 2050. To achieve this target the European Commission proposed to cut greenhouse gas emissions by at least 55% by 2030.

With the *2030 Climate Target Plan* the European Commission proposes to transmit these climate targets. It comprises a proposal for the first *European Climate Law* that aims to write into law the goal set out in the European Green Deal. Furthermore, the Commission proposes to review, and where necessary propose to revise, by June 2021, all relevant policy instruments to achieve the additional emission reductions.

The 2030 climate and energy framework formulate following key targets for 2030:

- At least 40 % cuts in greenhouse gas emissions (from 1990 levels)
- At least 32 % share for renewable energy
- At least 32,5 % improvement in energy efficiency.⁴⁰

The long-term strategy of the EU aims to be climate-neutral by 2050 - an economy with net-zero greenhouse gas emissions. This objective is at the heart of the European Green Deal and in line with the EU's commitment to global climate action under the Paris Agreement.⁴¹

Despite measures to mitigate the effects of climate change, it is already having serious consequences in Europe and worldwide. Thus, in addition to mitigation, adaptation to climate change is the second pillar of European climate policy. The first *EU Strategy on adaptation to climate change* was adopted in 2013 to deal with the unavoidable climate impacts and their economic, environmental and social costs.⁴² As part of its Green Deal, the Commission adopted in 2021 a new *EU Strategy on Adaptation to Climate Change*, which focuses on:

- encouraging investment in eco-friendly solutions
- climate-proofing the economy
- making key infrastructure more resilient
- adding climate factors to risk management practice
- stepping up prevention & preparedness.⁴³

³⁹ UNFCCC (2015): The Paris Agreement unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

⁴⁰ EU website may 2021 - 2030 climate & energy framework ec.europa.eu/clima/policies/strategies/2030_en

⁴¹ EU website may 2021 - climate action - 2050 long-term strategy ec.europa.eu/clima/policies/strategies/2050_en

⁴² EU website may 2021 - The EU Strategy on adaptation to climate change ec.europa.eu/clima/sites/clima/files/docs/eu_strategy_en.pdf

⁴³ EU website may 2021 - Adapting to climate change – EU strategy

ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12381-Adapting-to-climate-change-EU-strategy_en

State and outlook

Climate change is happening: “Several climate variables, including global and European temperatures and sea level, have repeatedly broken long-term records in recent years. Climate change has substantially increased the occurrence of climate and weather extremes, including heat waves, heavy precipitation, floods and droughts, in many regions of Europe”. (SOER 2020 p. 154)

To limit the adverse effects of climate change, strong mitigation and adaptation measures are needed.

As Fig shows, greenhouse gas emissions are decreasing in all countries of NWE. The development of the absolute values can be found in table ...

In the report *Territorial Analysis of the NWE area* the Greenhouse gas emission targets for 2030 and their success in implementation are described in detail for each of NWE's countries, as well as the risks of climate change impacts such as heat stress, flooding and forest fire.⁴⁴

Figure 22 shows, that largely is not on the track to meet the targets set in 2014. Achieving the new goals of the European Green Deal will require significant efforts and changes at all levels.

Theme	Past trends and outlook		Prospects of meeting policy objectives/targets		
	Past trends (10-15 years)	Outlook to 2030	2020	2030	2050
Greenhouse gas emissions and mitigation efforts	Improving trends dominate	Developments show a mixed picture	<input checked="" type="checkbox"/> Largely on track	<input checked="" type="checkbox"/> Largely not on track	<input checked="" type="checkbox"/> Largely not on track
Energy efficiency	Improving trends dominate	Developments show a mixed picture	<input type="checkbox"/> Partly on track	<input checked="" type="checkbox"/> Largely not on track	<input checked="" type="checkbox"/> Largely not on track
Renewable energy sources	Improving trends dominate	Developments show a mixed picture	<input checked="" type="checkbox"/> Largely on track	<input checked="" type="checkbox"/> Largely not on track	<input checked="" type="checkbox"/> Largely not on track
Climate change and impacts on ecosystems	Deteriorating trends dominate	Deteriorating developments dominate	<input checked="" type="checkbox"/> Largely not on track		
Climate change risks to society	Deteriorating trends dominate	Deteriorating developments dominate	<input type="checkbox"/> Partly on track		
Climate change adaptation strategies and plans	Improving trends dominate	Improving developments dominate	<input type="checkbox"/> Partly on track		

Figure 22: Thematic summary Assessment – Climate Change

Source: SOER 2020 p.154

⁴⁴ Spatial Foresight GmbH (2020): Territorial Analysis of the NWE area DRAFT REPORT –THEMATIC ANALYSIS p. 60

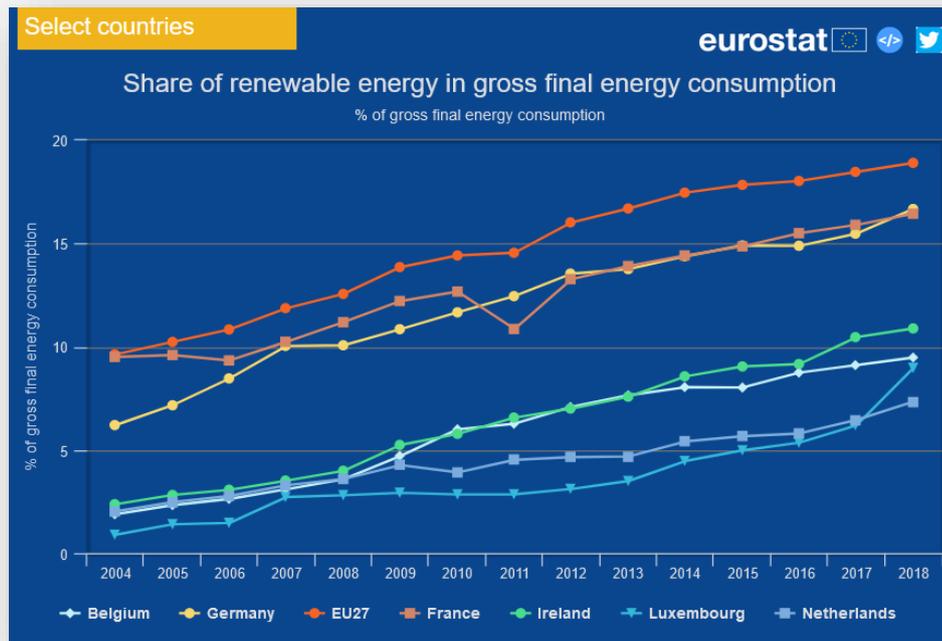


Figure 23: NWE member states – Share of renewable energy gross final energy consumption

Source: Eurostat Sustainable development indicator <https://ec.europa.eu/eurostat/web/sdi/climate-action>

3.5.2 Renewable Energy, Energy Efficiency

Policies and targets

The Energy Efficiency Directive (2012/27/EU) was originally agreed in 2012 to deliver the EU goal of minimum 20 % energy efficiency improvements by 2020 (compared to 2005 levels). The EED was revised in 2018 to deliver the new EU goal of at least 32.5 % energy efficiency improvements by 2030 (compared to 2005 levels). As part of the European Green Deal, the European Commission plans a potential revision of the EU energy efficiency directive (EED) to help deliver on the EU's increased climate ambition for 2030 and 2050 with the target to reduce the EU's greenhouse gas emissions by at least 55 % in 2030 (compared to 1990). This would require a series of coordinated actions at EU level, including the revision of existing energy and climate legislation.⁴⁵

The **Clean energy for all Europeans package** was a significant step towards the implementation of the energy union strategy, published in 2015. This package completed in 2019 a comprehensive update of EU's energy policy framework to facilitate the transition away from fossil fuels towards cleaner energy and to deliver on the EU's Paris Agreement commitments for reducing greenhouse gas emissions. The package includes a governance system for the energy union, under which each Member State is required to establish integrated 10-year National Energy and Climate Plans (NECPs) for 2021 to 2030 outlining how to achieve the targets.⁴⁶

⁴⁵ EU website may 2021 – Revision of the EU energy efficiency directive (EED), <https://www.europarl.europa.eu/legislative-train/theme-a-european-green-deal/file-revision-of-the-energy-efficiency-directive>

⁴⁶ EU website may 2021 - New Renewables, Energy Efficiency and Governance legislation comes into force on 24 December 2018 ec.europa.eu/info/news/new-renewables-energy-efficiency-and-governance-legislation-comes-force-24-december-2018-2018-dec-21_en

Within the framework of the European Green Deal several policies to promote Clean Energy were adopted:

- **EU Strategy on Offshore Renewable Energy COM(2020)741.**
This Strategy proposes to increase Europe's offshore wind capacity from its current level of 12 GW to at least 60 GW by 2030 and to 300 GW by 2050. The Commission aims to complement this with 40 GW of ocean energy and other emerging technologies such as floating wind and solar by 2050.⁴⁷
- **Powering a climate-neutral economy: An EU Strategy for Energy System Integration COM(2020) 299 final**
To become climate-neutral by 2050, Europe needs to transform its energy system, which accounts for 75% of the EU's greenhouse gas emissions. The EU strategies for energy system integration and hydrogen, adopted today, will pave the way towards a more efficient and interconnected energy sector, driven by the twin goals of a cleaner planet and a stronger economy.⁴⁸
- **A hydrogen strategy for a climate-neutral Europe COM(2020) 301 final**
In an integrated energy system, hydrogen can support the decarbonisation of industry, transport, power generation and buildings across Europe. This strategy addresses how to transform this potential into reality, through investments, regulation, market creation and research and innovation.⁴⁹

State and outlook

The share of renewable energy in gross final energy consumption of all Interreg NWE countries is rising, but below the average values for the EU as a whole (see Figure 23). A detailed and extensive analysis of NWE's member states on energy can be found in the report "Territorial Analysis of the NWE area"⁵⁰

The past trend in Europe shows, that the EU has been successful in reducing energy consumption and decoupling energy consumption from economic growth. The EU has steadily increased the share of energy consumed from renewable sources. The SOER 2020 report states: "The carbon and energy intensity of the EU economy is lower now than it was in 1990 because of improvements in energy efficiency and the use of less carbon-intensive fuels, especially renewable energy sources. Transport remains one of the biggest challenges ahead to decarbonising the economy." (p. 154) However, the annual increase has slowed down in recent years, especially due to increases in total final energy consumption. (SOER 2020 p.168)

3.6 Resource-efficiency, Circular and Low-Carbon economy

Policies and targets

Resource efficiency, waste prevention and using waste as a source are at the core of the circular economy⁵¹. Therefore, the Commission underlines in its European Green Deal: "Achieving a climate

⁴⁷ EU (2020): An EU Strategy to harness the potential of offshore renewable energy for a climate neutral future COM(2020) 741 final ec.europa.eu/energy/sites/ener/files/offshore_renewable_energy_strategy.pdf

⁴⁸ EU website may 2021 - Powering a climate-neutral economy: Commission sets out plans for the energy system of the future and clean hydrogen ec.europa.eu/commission/presscorner/detail/en/ip_20_1259

⁴⁹ EU website may - Communication COM/2020/301: A hydrogen strategy for a climate-neutral Europe 2021 knowledge4policy.ec.europa.eu/publication/communication-com2020301-hydrogen-strategy-climate-neutral-europe_en

⁵⁰ Spatial Foresight GmbH (2020): Territorial Analysis of the NWE area DRAFT REPORT –THEMATIC ANALYSIS17

⁵¹ SOER 2020 p. 213

neutral and circular economy requires the full mobilisation of industry. It takes 25 years - a generation - to transform an industrial sector and all the value chains. To be ready in 2050, decisions and actions need to be taken in the next five years⁵².

A New Industrial Strategy for Europe COM(2020) 102 final and an *SME Strategy for a sustainable and digital Europe COM(2020) 103 final*, promote the transition to low-emission technologies, sustainable products and services and address the twin challenge of the green and the digital transformation.

Parallel the *New Circular Economy Action Plan (COM(2020) 98 final)* is one of the main blocks of the European Green Deal. It introduces legislative and non-legislative measures targeting initiatives along the entire life cycle of products, for example their design, promoting circular economy processes, fostering sustainable consumption, and aims to ensure that the resources used are kept in the EU economy for as long as possible. The circular economy action plan will also include measures to encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products. It will analyse the need for a 'right to repair', and curb the built-in obsolescence of devices, in particular for electronics. Consumer policy will help to empower consumers to make informed choices and play an active role in the ecological transition. New business models based on renting and sharing goods and services will play a role as long as they are truly sustainable and affordable⁵³



Specific binding targets to 2008-2035 according waste management were set in the Waste Framework Directive (EU, 2008, 2018b), Packaging Waste Directive (EU, 1994, 2018c), WEEE Directive, ELV Directive (EU, 2000), Batteries Directive (EU, 2006); Single-use Plastics Directive (EU, 2019b)). Legally

⁵² European Commission (2019): The European New Deal p.6

⁵³EU website may 2021 - First circular economy action plan ec.europa.eu/environment/circular-economy/

binding is also the Landfill Directive (EU, 1999, 2018a) with the target to reduce landfill to a maximum of 10 % of municipal waste generated until 2035.⁵⁴

The Waste Framework Directive (EU, 2008, 2018b) sets the basic concepts and definitions related to waste management in Europe. Overarching principle of the EU’s policies is the waste hierarchy in which prevention has the highest priority, followed by preparing for reuse, recycling and other recovery and finally disposal as the least desirable option. In line with the waste hierarchy, EU waste legislation includes more than 30 binding targets for the management of waste for the period 2015-2035 but none for waste prevention (SOER 2020 p. 21). Also, the 7th and 8th Environment Action Programmes aimed to ensure that economic growth did not lead to more waste.⁵⁵

State and outlook

As the SOER 2020 report states, Europe is still far away from the goal of becoming a circular economy. The resource use in the economy of the 28 EU Member States declined over the last decade, while resource productivity improved. The progress according to waste recycling is slow and several countries are at risk of not meeting agreed targets. Still were large amounts of resources used and waste generated and rather low of recycled materials contribute to the material demands of the economy. (SOER 2020 p. 212)

As Figure 25 shows, Europe is largely or partly on the track to meet the goals and targets for 2020 or 2030, set before the green deal.

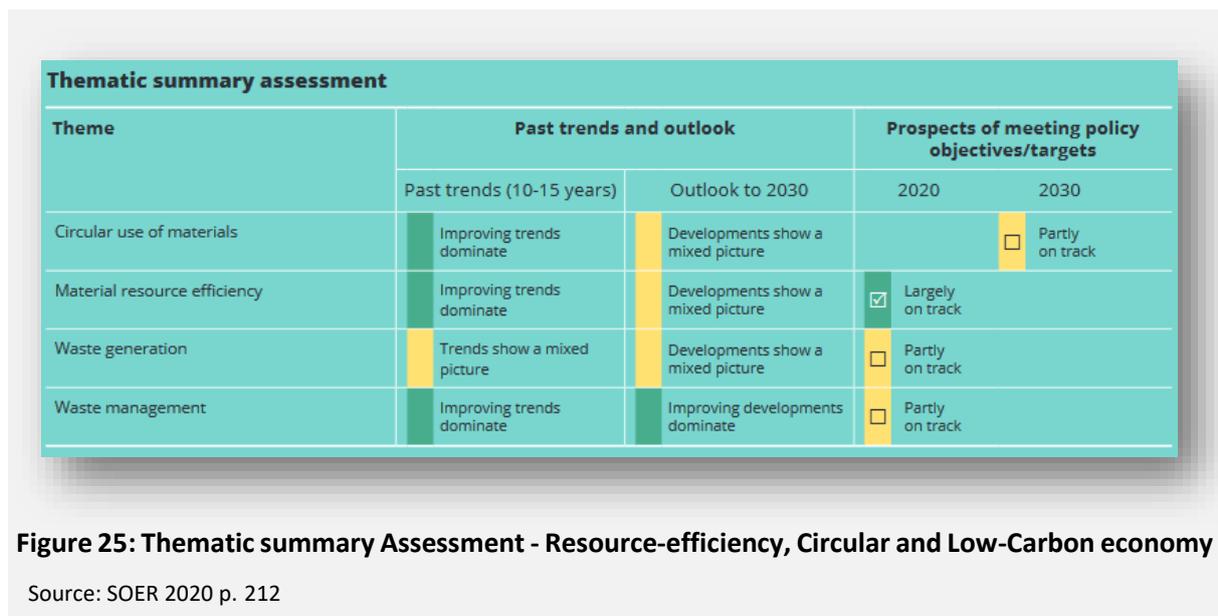


Figure 25: Thematic summary Assessment - Resource-efficiency, Circular and Low-Carbon economy

Source: SOER 2020 p. 212

⁵⁴ For further information see SOER 2020 p. 215: TABLE 9.1 Overview of selected policy objectives and targets

⁵⁵ See also: EU website may 2021 - Waste law ec.europa.eu/environment/waste/target_review.htm

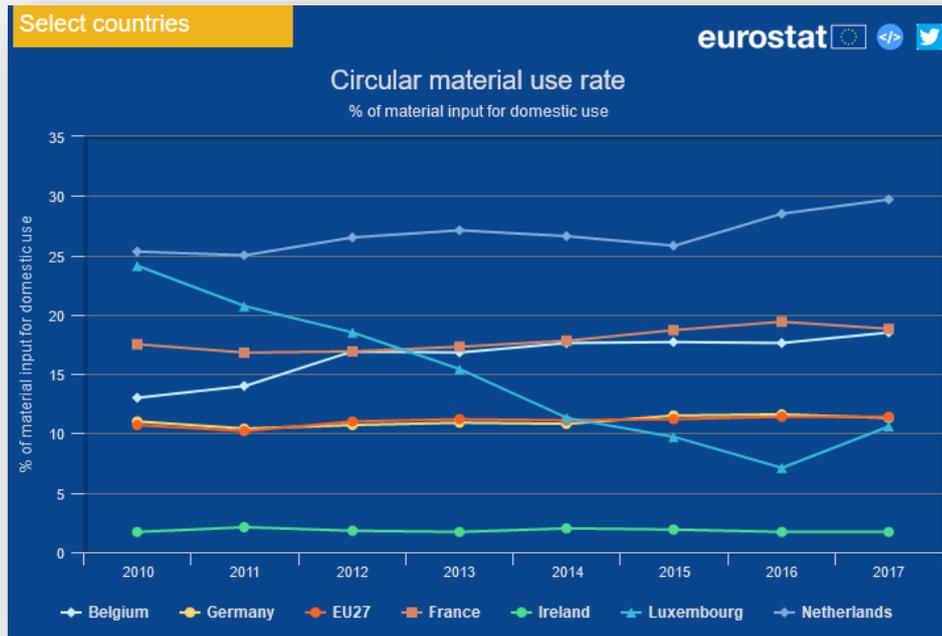


Figure 26: NWE member states - Circular material use rate

..Source: Eurostat Sustainable development indicator ec.europa.eu/eurostat/web/sdi/responsible-consumption-and-production

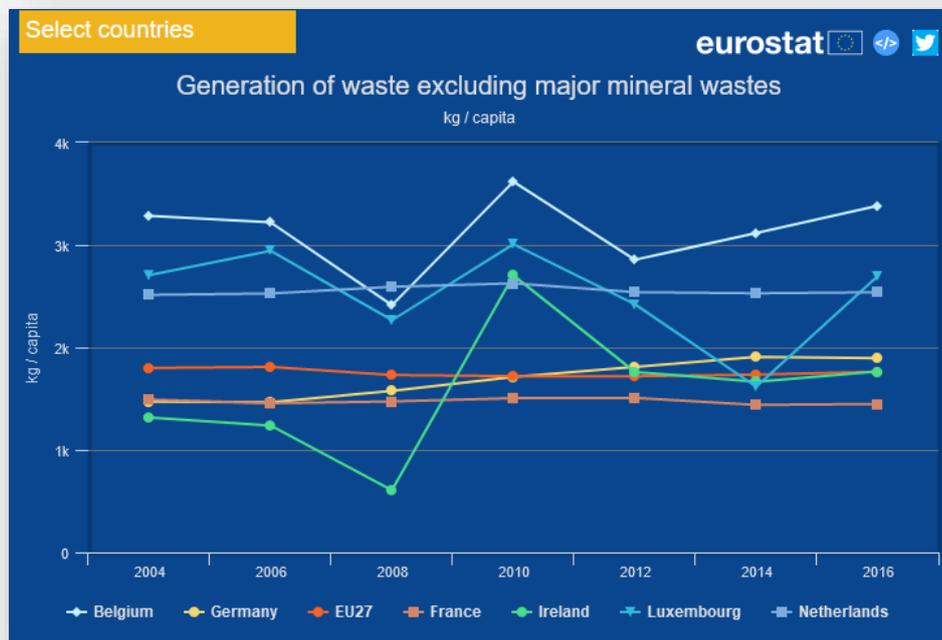


Figure 27: NWE Member States - Generation of waste excluding major mineral waste, Circular material use rate

Source: Eurostat Sustainable development indicator <https://ec.europa.eu/eurostat/web/sdi/responsible-consumption-and-production>

The circular material use rate is particularly high in Netherlands and particularly low in Ireland. (see Figure 26) The generation of waste is particularly high in Belgium and the Netherlands and lowest in France. However, the values of the remaining states are not far from those of France. (see Figure 27)

A detailed analyse of the state of circular economy in the countries NWE area can be found in the report "Territorial Analysis of the NWE Cooperation Area"⁵⁶. (p. 82-94)

According to this the NWE average ratio of the waste generated per domestic material consumption (excluding major mineral wastes) is 16.8 % which is well above the EU average.

The NWE average recycling rate of waste (excluding major mineral wastes) is 60 %, which is above the EU average (p. 88). The analysis of the recycling rate of waste (excluding major mineral wastes), indicates that all NWE countries, except for Ireland, have met the EU target of 50 % recycling of municipal waste by 2020. Belgium leads with 78 %, followed by the Netherlands (72 %), Luxembourg (64 %) that are all above the EU (56 %) average, next comes France (54 %) and Germany (53 %, data from 2014) slightly below and Ireland lying much further at 41 %. (p. 86)

3.7 Cultural Heritage

While policy in this area is primarily the responsibility of Member States, regional and local authorities, the EU is committed to safeguarding and enhancing Europe's cultural heritage through a number of policies and programmes.

The Treaty on European Union (TEU) refers to "drawing inspiration from the cultural, religious and humanist inheritance of Europe". It also specifies that one of the aims of the European Union is to "respect its rich cultural and linguistic diversity, and ensure that Europe's cultural heritage is safeguarded and enhanced". Furthermore, Article 6 of the Treaty on the Functioning of the European Union (TFEU) recognises that the EU's competences in the field of culture are to "carry out actions to support, coordinate or supplement the actions of the Member States".⁵⁷

The New European Agenda for Culture (COM(2018) 267 final) has three strategic objectives:

- To foster the cultural capability of all Europeans by making available a wide range of cultural activities and providing opportunities to participate actively
- To encourage the mobility of professionals in the cultural and creative sectors and remove obstacles to their mobility
- To protect and promote Europe's cultural heritage as a shared resource, to raise awareness of our common history and values and reinforce a sense of common European identity.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.

The Convention for the Protection of the Architectural Heritage of October 3, 1985, also known as the Granada Convention, is considered one of the most important agreements of the Council of Europe in the field of preservation of cultural property. It outlines legislative measures and protections to safeguard the cultural heritage of the European states as well as conservation policies to protect the architectural heritage.

European Heritage Strategy for the 21st Century is the result of the meeting of the ministers of the States Parties to the European Cultural Convention in April 2015 to promote a shared and unifying approach to cultural heritage management.

⁵⁶ Spatial Foresight GmbH (2020): Territorial Analysis of the NWE area DRAFT REPORT -THEMATIC ANALYSIS

⁵⁷ EU website may 2021 - EU competences in the field of culture ec.europa.eu/culture/policies/eu-competences-field-culture

4 Expected significant effects on the environment

4.1 Considered alternatives

According to the character and the presented structure of the programme, it is not possible to define alternatives except the zero scenario, meaning the non-implementation of the programme.

At this level of programming, possible shifts in the allocation of funds to the individual Priorities and Specific Objectives might be considered as alternatives in principle. Due to the fact that total amount and allocation of funds to the individual Priorities and Specific Objectives are not known presently, no assessment can be considered in this respect and no alternatives can be identified.

The scope of the programme with three out of five Priorities and five out of nine selected Specific Objectives under the Policy Objective 2 (“A greener, low carbon Europe”) already puts a clear orientation on the environmental policies and targets and also on the European Green Deal. The defined priorities under Policy Objective 2 tackle important components of EU environmental policies and contributes to sustainability and environmental and climate protection are intrinsic:

- Priority 1: Smart climate and environmental resilience for NWE territories
- Priority 2: Smart and just energy transition
- Priority 3: Transition towards a place-based circular economy

Alternatives for the programme in this area are not relevant.

Though the remaining two priorities

- Priority 4: Improving territorial resilience in NWE through innovative and smart transformation (previously: Innovation for resilient and liveable territories)⁵⁸ and
- Priority 5: Transition towards a socially inclusive and resilient society (previously: Just and inclusive NWE)⁵⁹

are not directly linked to sustainability and environmental and climate protection, both show considerable potential. To actively use this potential, it is inevitable to link projects consequently with EU environmental policies and targets and thus with sustainability and environmental and climate protection. Reasonable alternatives to the defined Priorities and the selected Specific Objectives are not seen.

Decisions for more or for less active contribution to EU environmental policies and targets particular by Priorities 4 and 5 can be made at the implementation level (project level) when applications and achievements can be capitalized in favour of more or less mainstreaming sustainability and environmental and climate protection. However, relevant adjustment of implementation mechanisms are no alternatives. Recommendations to use implementation mechanisms for active contributions of funded projects to EU environmental policies and targets are made in chapter 5.

⁵⁸ Please see explanation in the introduction, p.1

⁵⁹ Please see explanation in the introduction, p.1

4.2 Effects on the environment by the INTERREG NWE 2021-2027 Programme

Prior to the description of the findings of the assessment it has to be stressed again, that a detailed assessment of the programme and the identification and appraisal of potential effects on environmental and cross-cutting issues caused by the achievement of the expected results are not possible due to lacking spatial, technical and financial specifications of the funded projects. The nature of the programme determines that projections of effects can-not be provided by quantitative analyses but by very general qualitative statements only. A regionalised differentiation of possible effects on the environment cannot not be done. Based on the establishment of actions in the course of the implementation of the programme with regards to type, spatial orientation, content and financial volume of the respective actions, additional assessments of significant environmental effects might be necessary to conduct at project level (tiering).

The statements below have to be understood in strict consideration of this condition!

4.2.1 Assessment of the general approach

General approach

As its overall aim, Interreg NWE 2021-2027 intends “to contribute to a balanced development across the NWE programme, regardless the type of territory (urban, rural, coastal, border etc.)”⁶⁰. This should be achieved by increasing resilience of the regions that they are able to respond better to any existing and future challenge; Interreg 2021-2027 shall contribute to the good quality of life and well-being of all citizens in the programme area.

This overall aim shows a more indirect reference to sustainability and environmental and climate protection by increasing resilience against challenges and quality of life, consequently this aim in its formulation can also be seen in a prioritized socio-economic respect. However, additional descriptions in the submitted template stress the intention to link the balanced development across the NWE programme area with a clear commitment towards strengthened sustainability and environmental and climate protection:

Interreg NWE wants to “promote a green, smart and just transition for all NWE territories with the aim to support a balanced development and make all regions more resilient” and that the implementation of the programme shall “contribute to the ‘green’ transition of all NWE territories to a climate-neutral, resource-efficient and sustainable society” and “contribute to preserving natural resources, enhancing nature-based solutions to climate change while supporting solutions for energy, circular and environmental transition”.⁶¹

Accordingly, the general approach of Interreg NWE 2021-2027 can be described as a comprehensive strategic contribution to the EU environmental policies and targets. To which extent this strategic contribution will be transferred into operational contributions depends on clearly targeted and effective project application and selection criteria.

⁶⁰ Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021, chapter 1.2

⁶¹ Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021, chapter 1.2

Defined Priorities

The programme puts a focus on sustainability and environmental and climate protection. According to number of Priorities and Specific Objectives, the biggest share of the programme is dedicated to these aims. Three out of five defined Priorities and five out of nine selected Specific Objectives are under the Policy Objective 2 (“A greener, low carbon Europe”):

- Priority 1. Smart climate and environmental resilience for NWE territories
 - Specific Objective 2.4: Promoting climate change adaptation and disaster risk prevention, resilience taking into account eco-system based approaches
 - Specific Objective 2.7 Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution
- Priority 2: Smart and just energy transition
 - Specific Objective 2.1: Promoting energy efficiency and reducing greenhouse gas emissions
 - Specific Objective 2.2: Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001[1], including the sustainability criteria set out therein
- Priority 3: Transition towards a place-based circular economy
 - Specific Objective 2.6: Promoting the transition to a circular and resource efficient economy

Due to the lack of information on allocated funds for those three Priorities it is not possible to conclude the financial emphasize on direct contributions to sustainability and environmental and climate protection by the programme.

The remaining smaller thematic part of the programme focussing on Policy Objective 1 (“A more competitive and smarter Europe”) and Policy Objective 4 (“A more social and inclusive Europe”) are not directly linked to sustainability and environmental and climate protection. Nevertheless, a considerable potential for contributions to these aims can be seen by application of targeted and effective selection criteria for actions:

- Priority 4: Improving territorial resilience in NWE through innovative and smart transformation (previously: Innovation for resilient and liveable territories)⁶²
 - Specific Objective 1.1: Developing and enhancing research and innovation capacities and the uptake of advanced technologies
- Priority 5: Transition towards a socially inclusive and resilient society (previously: Just and inclusive NWE)⁶³
 - Specific Objective 4.1: Enhancing the effectiveness and inclusiveness of labour markets and access to quality employment through developing social infra-structure and promoting social economy
 - Specific Objective 4.5 (previously 4.4)⁶⁴: Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family- and community-based care
 - Specific Objective 4.6 (previously 4.5)⁶⁵: Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation

⁶² Please see explanation in the introduction, p. 1

⁶³ Please see explanation in the introduction, p. 1

⁶⁴ Please see explanation in the introduction, p. 1

⁶⁵ Please see explanation in the introduction, p. 1

On the whole it can be stated that Interreg NWE 2021-2027 shows a distinct orientation towards sustainability and environmental and climate protection. This is caused first of all by the defined Priorities 1, 2 and 3. In case of targeted and effective project selection criteria, the defined Priorities 4 and 5 also can contribute to that considerably.

Internal interrelations

Between defined Priorities 1, 2 and 3 on the one hand and the priorities 4 and 5 on the other hand, supportive interrelations can be seen. Mutual consideration of approaches and results in climate and environmental resilience, energy transition, place-based circular economy, innovative capacities and socially and resilient society helps to increase the positive contributions to sustainability and environmental and climate protection. For example, the enhancement of research and innovative capacities can be oriented towards mitigation of air pollution, regional climate change adaption, energy efficiency or renewable energy or promotion of circular economy. Otherwise, environmentally oriented research solutions can be wide-scaled by pilot actions funded under Policy Objectives 1, but also under Policy Objective 4 particularly Specific Objective 4.6 (previously: 4.5)⁶⁶.

Those internal interrelations are not mentioned in the programme, neither as a general possibility to apply synergies nor as an inherent approach of the programme. Although internal interrelations can be seen as an implicit potential, the realization of such internal mutual effects will depend on incidental situations due to the lack of strategic determination in the programme. The potential of strengthening positive contributions to sustainability and environmental and climate protection by making use and promoting of those internal interrelations is not sufficiently exploited by the programme.

Horizontal principle “Sustainable development”

The consideration of the horizontal principle “Sustainable development” is not explicitly mentioned in the programme as an inherent goal of the programme, as a principle selection criteria for projects or as an important element of the strategic approach.

For the consideration of horizontal principles in implementation tools, please refer to chapter 4.5.

4.2.2 Assessment of indicators

The defined output and result indicators describe for each Specific Objective the same logic, namely to refer to number of strategies, plans, projects and solutions and their uptake by organisations. An additional result indicator for each Specific Objective refers to increased institutional capacities of organisations.

At the **output level**, the following indicators are defined for each Specific Objective:

- 1) Strategies and actions plans jointly developed
- 2) Pilot Actions developed jointly and implemented in projects
- 3) Jointly developed solutions

The achievement of the individual output indicators does not influence directly sustainability and environmental and climate protection. They do not set own aims for improved sustainability and environmental and climate protection and ensuring positive and avoiding negative contributions to EU environmental policies and targets. Positive effects can be actively realized by achievement of indicators:

- a) under Priorities 1, 2 or 3 as of their direct orientation to environmental important topics or

⁶⁶ Please see explanation in the introduction, p. 1

- b) by application of targeted and effective project selection criteria - this counts exclusively for projects under Priorities 4 and 5 which are not aiming on environmental topics per se.

The approved jointly developed strategies and action plans, the jointly developed and implemented pilot actions and the jointly developed solutions need to be oriented strictly on consideration of EU environmental policies and targets. By this, the indicators indirectly reflect the contribution of the programme to the EU environmental objective and policies and the achievement of the output indicators can contribute to improved sustainability and environmental and climate protection.

At the **result level**, the following indicators are defined for each Specific Objective:

- 1) Joint strategies and action plans taken up by organisations
- 2) Solutions taken up or up-scaled by organisations
- 3) Organisations with increased institutional capacity due to their participation in cooperation activities across borders

Same as for output indicators, the achievement of the defined result indicators do not show direct influence on sustainability and environmental and climate protection. The more the projects contributing to the output indicators are oriented towards sustainability and environmental and climate protection the more positive effects can be initiated by the achievement of the result indicators.

It counts again that projects under Priorities 1, 2 and 3 will cause positive effects by the take-up of their developed products due to their given direction, whereas positive contributions by the take-up of developed products by projects under Priorities 4 and 5 depend on project selection criteria. In combination with targeted and effective selection criteria, the defined output and result indicators can not only force the development of environmentally friendly strategies, action plans and solutions but also cause dissemination of positive contributions.

In the same light, the increased institutional capacities can be seen. Targeted and effective project selection criteria can support capacity building aiming on consistent consideration of sustainability and environmental and climate protection.

4.2.3 Assessment of the individual Specific Objectives

For the scoping phase, Interreg NWE presented a list of possible types of actions which were used for the scoping note and the consultation with relevant authorities. Following the changed structure and content for the individual Specific Objectives in the submitted Template for Interreg NWE 2021-2027, the intended preliminary assessment (of the possible types of actions) became obsolete and the methodological approach was changed compared to the one proposed in the scoping note.

Instead of using assessment categories and describing expected potential positive or negative effects on the individual environmental and crosscutting issues by possible types of actions of each Specific Objective, principle considerations regarding potential environmental effects are described in this chapter for stated expected results for the individual Specific Objectives.

For the assessment of potential effects of the expected results, the following structure of environmental and cross-cutting issues is taken:

Table 1: Overview about relevant environmental and crosscutting issues

Environmental issues / crosscutting issues										
Human health and Well-being			Flora, Fauna, Biodiversity	Soil, Landscape	Water	Global Climate			Resource efficiency	Cultural heritage
Air pollution	Noise	Hazardous chemicals				Greenhouse gases	Regen. energy / Energy efficiency	Adaptation		

4.2.3.1 Policy Objective 2: A greener, low-carbon Europe

Priority 1: Smart climate and environmental resilience for NWE territories

Specific Objective 2.4: Promoting climate change adaptation and disaster risk prevention, resilience taking into account eco-system based approaches

Focus 1 Heat stress and air pollution

Expected results:

The programme expects to contribute to making the NWE communities more resilient and able to adapt to and mitigate the effect of climate change in the long term, aiming in particular to reduce the incidence of heat stress and of human activities on air quality, to reduce air pollution, to improve the preparedness to adverse weather phenomena (such as flooding and heavy rain events, draught in rural areas) and to reduce their negative effects.

To achieve these desired changes, the following results are expected:

- key aspects of climate resilience, adaptation and mitigation better embedded into territorial strategies and local initiatives with specific attention to heat stress and air pollution and the reduction or prevention of the severe negative effects of weather phenomena;
- climate and environmental resilience, adaptation and mitigation ensured through integrated place-based solutions and enhanced spatial planning processes;
- increased knowledge and capacity of stakeholders to translate climate change resilience, adaptation and mitigation into policies and actions (e.g. by systematically including climate variability as a key issue to consider during policy design and in the development of decision-making processes, as well as in the planning and adaptation of new and existing infrastructure);
- innovative technologies, solutions, products and services that benefit regional climate change adaptation are taken up aiming to prevent or reduce heat stress and air pollution as well as the severe negative effects of weather phenomena, ensuring coherence between the proposed approaches and local/regional needs;
- citizens have better knowledge and capacity leading to their increased involvement and active role in climate and natural risks resilience.

Assessment:

The overall direction of expected results of focus 1 of Specific Objective 2.4 (“heat stress and air pollution”) provides the base for positive effects for all environmental issues related to global climate and, indirectly by improvement in those issue, for air pollution as an important aspect for improved human health and well-being.

Due to the lack of information on particular type of actions, potential negative effects by the achievement of the expected results for this Specific Objective cannot be assessed.

- Environmental and crosscutting issues with potential positive effects:
 - Related of Global Climate:
 - Reduction of greenhouse gases
 - Improvement of adaptation
 - Related to human health and well-being:
 - Reduction of air pollution
- Environmental and crosscutting issues with potential negative effects:
 - Based on existing information no assessment possible.

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

Focus 2 Water management

Expected results:

The programme wants to contribute to making the NWE area communities more resilient and able to adapt to and mitigate the effect of climate change in the long term, aiming in particular to improve the water management approach in the NWE area and to address water quality and availability related issues for the NWE surface and groundwater bodies.

In particular, the programme aims to improve water quality and availability in the NWE territories, as well as shift to a water management that is in line with climate change resilience, adaptation and mitigation and prevents natural risks. The adoption of integrated measures can lead to significant improvements in the participating regions.

To achieve these desired changes, the following results are expected:

- key aspects of climate resilience and adaptation better embedded into territorial strategies and local initiatives, with specific attention to improving water management in relation to quality and availability;
- increased knowledge and capacity of stakeholders to adopt innovative solutions concerning water management;
- stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to water management among cities, rural, coastal or intermediate areas dealing with similar issues (water quality and/or availability);
- establishment of long-lasting place-based collaborations between decision makers, businesses, citizens and researchers to exploit the existing scientific and technological know-how and to disseminate innovative solutions and collect more reliable data for monitoring, managing, preventing and responding to natural and climate-related risks.

Assessment:

The overall direction of expected results of focus 2 of Specific Objective 2.4 (“water management”) provides the base for an improved capacity for water management aiming on availability and quality of water as well as on better linking water management with consequences of global climate changes. Positive effects on the environmental issue ‘water’ can be seen and to adaptation as part of global climate issue. To which extent improved water management will cause positive effects on other environmental issues cannot be assessed on base of the existing information.

Due to the lack of information on particular type of actions, potential negative effects by the achievement of the expected results for this Specific Objective cannot be assessed.

- Environmental and crosscutting issues with potential positive effects:
 - Water
 - Related of Global Climate:
Improvement of adaptation
- Environmental and crosscutting issues with potential negative effects:
Based on existing information no assessment possible.

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

Specific Objective 2.7: Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution

Expected results:

The programme wants to increase the capacity of communities to maintain and enhance green/blue infrastructure and ecosystem services in the NWE regions. The programme expects to contribute to embedding blue and green corridors, biodiversity and natural capital concepts in strategic ecosystem-based approaches and solutions. The programme intends to show the benefits of sound green/blue infrastructure not only to preserve biodiversity but also to combat climate change effects, e.g. with eco-system based services.

To achieve these desired changes, the following results are expected:

- key aspects of biodiversity preservation and green/blue infrastructure better embedded into territorial strategies and local initiatives;
- increased knowledge and capacity of stakeholders about green/blue infrastructure and biodiversity-enhancing / nature-friendly practices (through dissemination);
- increased capacity of stakeholders to manage and maintain green/blue infrastructure and biodiversity through integrated territorial policies;
- increased knowledge and skills on data management and new technologies in the field of biodiversity preservation and green/blue infrastructure;
- innovative solutions that benefit biodiversity and the maintenance and enhancement of green/blue infrastructure taken up ensuring coherence between the proposed approaches and local/regional needs;
- stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to biodiversity and green/blue infrastructure among urban, rural, coastal and intermediate areas dealing with similar issues;
- establishment of long-lasting collaborations between policy makers, businesses, researchers and citizens contributing to the demonstration and testing of innovative solutions for protecting and enhancing natural heritage.

Assessment:

The overall direction of expected results under Specific Objective 2.7 provides the base for improved and strengthened biodiversity in a non-specified range. Which aspects of biodiversity will be particularly considered is not defined and thus the programme allows for the consideration of all possible elements. An important direction of this Specific Objective in the scope of Interreg NWE is the promotion of blue and green infrastructure.

Due to the lack of information on particular type of actions, potential negative effects by the achievement of the expected results for this Specific Objective cannot be assessed. The enhancement of blue and green infrastructure might cause negative effects on the environmental issues 'soil, landscape' and 'water'. However, it is not possible to issue serious assessment statements based on existing information.

- Environmental and crosscutting issues with potential positive effects:
 - Flora, fauna, biodiversity
 - Soil, landscape
 - Water
- Environmental and crosscutting issues with potential negative effects:
Based on existing information no assessment possible.

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

Priority 2: Smart and just energy transition

Specific Objective 2.1: Promoting energy efficiency and reducing greenhouse gas emissions

Expected results:

The programme intends to contribute to increasing the capacity of communities to exploit potential for improving energy efficiency and to reduce energy consumption and GHG emissions by identifying opportunities that increase the energy performance of e.g. dwellings and public buildings, transport/mobility, of district heating and cooling network lines.

To achieve the desired changes, the following results are expected:

- key principles guiding energy transition better embedded into territorial strategies and local initiatives, with a specific attention to energy efficiency improvements in different settings, promotion of smart energy systems (storage and distribution), prevention of exclusion and energy poverty;
- increased knowledge and capacity of stakeholders to translate energy efficiency principles into policies, services, products and actions (e.g. by systematically including energy efficiency as a key issue to be considered in decision-making processes, as well as in the planning and adaptation of new and existing infrastructure, by increasing competences of workers in the building sector and others - transports, industries, etc.);
- innovative technologies, solutions, products and services that improve energy efficiency in different settings and avoid exclusion and energy poverty are taken up ensuring coherence between the proposed approaches and local/regional needs;
- citizens, consumers and local communities more interested and better empowered and engaged in more efficient energy consumption.

Assessment:

The overall direction of expected results under Specific Objective 2.1 provides the base for improved efficiency in energy consumption. The programme allows for the consideration of all main areas of energy consumption as transportation, buildings, heating and cooling. Positive effects can be expected for the global climate as particularly by reduction of greenhouse gases and for human health by reduction of air pollution.

Significant negative effects by the achievement of the expected results are not seen.

- Environmental and crosscutting issues with potential positive effects:
 - Related of Global Climate:
Reduction of greenhouse gases
Energy efficiency
 - Related to human health and well-being:
Reduction of air pollution
- Environmental and crosscutting issues with potential negative effects:

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

Specific Objective 2.2: Promoting renewable energy in accordance with Renewable Energy Directive (EU) 2018/2001[1], including the sustainability criteria set out therein

Expected results:

The programme wants to contribute to increasing the capacity of communities to exploit potential to improve the renewable energy production and consumption mix. To achieve the desired changes, the following results are expected:

- key principles guiding energy transition better embedded into territorial strategies and local initiatives with specific attention to promoting the production and use of energy from renewable sources in different settings (e.g. by supporting SMEs as technology developers, by supporting decentralised RES production, by introducing new financing and procurement schemes);
- innovative technologies, solutions, products and services to increase use and production of renewable energies are taken up ensuring coherence between the proposed approaches and local/regional needs;
- citizens, consumers and local communities and businesses are more interested, better empowered and engaged in the green energy transition.

Assessment:

The overall direction of expected results under Specific Objective 2.2 provides the base for improved production of energy using renewable sources. Positive effects can be expected for the global climate as particularly by reduction of greenhouse gases and for human health by reduction of air pollution.

Due to the lack of information on particular type of actions, potential negative effects by the achievement of the expected results for this Specific Objective cannot be assessed. The installation of systems for the production of energy using renewable sources as wind power plants or hydro power plants might cause negative effects on the environmental issues 'flora, fauna, biodiversity', 'soil, landscape' and 'water' by installation of required infrastructure. However, it is not possible to issue serious assessment statements based on existing information. Avoidance needs to be ensured by application of targeted and effective project selection criteria.

- Environmental and crosscutting issues with potential positive effects:
 - Related of Global Climate:
Reduction of greenhouse gases
Increase of regenerative energy

- Related to human health and well-being:
Reduction of air pollution
- Environmental and crosscutting issues with potential negative effects:
Based on existing information no assessment possible.

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria. This is particularly important for possible conflicts between regenerative energy production and natural protection! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

Priority 3: Transition towards a place-based circular economy

Specific Objective 2.6: Promoting the transition to a circular and resource efficient economy

Expected results:

The programme wants to promote a more effective and balanced transition towards a circular economy by increasing the capacity of communities to develop circular approaches and benefit from the transition to a circular economy and identifying opportunities that reduce waste, use resources more efficiently, limit the use of raw materials (e.g. recycle critical raw materials from co-products, biomass, fluids, composites, etc.), replace fossil-based resources, increase the capacity for waste collection and recycling, stimulate service, processes and product innovation, while at the same time contribute positively to the inclusive and sustainable development of all territories.

To achieve these desired changes, the following results are expected:

- key principles of circular economy better embedded into territorial strategies, community-led initiatives, manufacturing processes or business models, with specific attention to waste reduction, a limited use of raw materials and an increased capacity for waste collection and recycling;
- citizens are more engaged in supporting the transition to a circular economy;
- stakeholders (both public and private) are more capable to adopt innovative solutions for supporting the transition to a circular economy (e.g. re-thinking planning production / service delivery processes in key sectors such as building, manufacturing or agri-food to achieve circularity);
- innovative solutions for supporting the transition to a circular economy, contributing in particular to waste reduction, a more limited use of raw materials and an increased capacity for waste collection and recycling, tailored to the needs of territories to ensure that the approaches proposed correspond to local or regional needs;
- innovative technologies, solutions, products and services that enable a more circular economy are taken up by different sectors;
- eco-design approaches are better supported and promoted in different economic sectors or across sectors through territorial approaches to eco-design.

Assessment:

The overall direction of expected results under Specific Objective 2.6 aims on increased resource efficiency and enhancement of circular economy in a wide scope. Although details of funded types of action are not known, significant positive effects can be expected for the crosscutting issue 'resource efficiency'. Depending on the particular projects, positive effects can also be expected related to reduction of greenhouse gases, reduction of air pollution and consumption of water. Increased recycling of waste can also show positive effects on the environmental issues 'soil, landscape' and 'flora, fauna, biodiversity'.

Significant negative effects by the achievement of the expected results are not seen.

- Environmental and crosscutting issues with potential positive effects:
 - Resource efficiency
 - Related of Global Climate:
Reduction of greenhouse gases
Energy efficiency
 - Related to human health and well-being:
Reduction of air pollution
 - Soil, landscape
 - Flora, fauna, biodiversity
 - Water
- Environmental and crosscutting issues with potential negative effects:

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

4.2.3.2 Policy Objective 1: A more competitive and smarter Europe

Priority 4: Improving territorial resilience in NWE through innovative and smart transformation
(previously: Innovation for resilient and liveable territories)⁶⁷

Specific Objective 1.1: Developing and enhancing research and innovation capacities and the uptake of advanced technologies

Expected results:

The Programme wants projects to build on the potential of advanced technologies, innovative solutions and digitalization. Innovation shall be an enabler for balanced territorial development and territorial resilience. Types of innovations can refer, for example, to territorial uptake of new techniques, new approaches or new uses of technology in specific territorial settings, innovative use of technology and data to inform and influence decision-making and planning, innovation of processes through social innovation, empowerment and co-creation, service delivery innovations, financial innovations, territorial governance innovations and organizational innovations. Projects should be developed with an implicit motive to benefit citizens and territories.

To achieve these desired changes, the following results are expected:

- Strengthened territorial, social and economic resilience through creative governance approaches, behavioural shifts and mobilising creativity.
- Newly developed integrated approaches to ensure liveability and accessibility of territories.
- Solutions to increase citizen engagement in territorial development processes.
- More solutions to promote sustainable consumption and production schemes and strengthen local markets.
- More solutions to assist territorial innovation systems to recover from previous shocks and crises.

⁶⁷ Please see explanation in the introduction, p. 1

- More capacities to better exploit Smart Specialization and Digital Innovation in NWE as a means to contribute to territorial innovation and resilience.
- New solutions and approaches for territories to benefit from digital transformation.

Assessment:

The expected results formulated for Specific Objective 1.1 do not particularly aim on sustainability and environmental and climate protection, except the one mentioning “*to promote sustainable consumption and production*”.

For this exceptional one, positive effects can be expected for the cross-cutting issues ‘resource efficiency’ and following potential influences to other environmental issues (see also assessment above of priority 3, Special Objective 2.6). The other stated expected results do not show pronounced reference to sustainability and environmental and climate protection. Given the overall strategic intention of Interreg NWE to “*promote a green, smart and just transition for all NWE territories with the aim to support a balanced development and make all regions more resilient*”⁶⁸, it can be only assumed that there should be an orientation towards sustainability and environmental and climate protection. However, due to the lack of information on particular type of actions, potential positive effects by the achievement of the expected results for this Specific Objective cannot be assessed.

Same holds for potential negative effects by the achievement of the expected results for this Specific Objective. The lack of information on particular type of actions prevents an assessment. In principle, it should be considered that an extension of digitalization and increased application of digital services cause significant increase of electricity consumption. Measures for improved energy efficiency and usage of renewable energy need to be linked to promotion of digital innovation and digital transformation.

- Environmental and crosscutting issues with potential positive effects:
Based on existing information no assessment possible.
- Environmental and crosscutting issues with potential negative effects:
Based on existing information no assessment possible.

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

4.2.3.3 Policy Objective 4: A more social and inclusive Europe

Priority 5: Transition towards a socially inclusive and resilient society (previously: Just and inclusive NWE)⁶⁹

Specific Objective 4.1: Enhancing the effectiveness and inclusiveness of labour markets and access to quality employment through developing social infrastructure and promoting social economy

⁶⁸ Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021, chapter 1.2

⁶⁹ Please see explanation in the introduction, p. 1

Expected results:

The programme expects to increase the capacities of NWE communities to include “vulnerable” groups by enhancing the effectiveness and inclusiveness of labour markets as well as the access to quality employment.

To achieve these desired changes, the following results are expected:

- More and better strategies to develop conditions for place-based, relevant and quality employment and skills;
- Offer of online and physical training and digital skills, tools and facilities is expanded and improved to address local needs and economic sectors under pressure, including principles of social economy, entre-preneurship, business takeover and transfer, etc.,
- Employability is increased and leads to more social/ societal integration of labour as well as balanced territories.
- Business models and business support programmes, including entrepreneurship, business takeover / transfer and principles of the social economy, are transferred, adapted or newly developed to become more inclusive and place-based (e.g. by focusing on NEETs, disabled persons, marginalised persons).
- Skilled workers are attracted and retained in the NWE.
- Increased knowledge and skills on data management and new technologies in the field of quality employment and its pertaining public services.
- Stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to quality employment and its pertaining public services among cities, rural, coastal or intermediate areas dealing with similar issues.

Assessment:

The expected results formulated for Specific Objective 4.1 do not aim particularly on sustainability and environmental and climate protection. No significant positive or negative effects on environmental or cross-cutting issues can be expected.

- Environmental and crosscutting issues with potential positive effects:

- Environmental and crosscutting issues with potential negative effects:

Specific Objective 4.5 (previously: 4.4)⁷⁰: Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family- and community-based careExpected results

The programme expects to increase the capacities of NWE communities to include “vulnerable” groups (e.g., elderly people, chronically ill people, disabled persons or single-parent families...) by reducing imbalances in the field of health and care access.

To achieve these desired changes, the following results are expected:

- Key aspects of health, care, prevention and well-being in general better embedded into territorial strategies and local initiative.
- Better access to health and care services, especially in “disadvantaged” territories of NWE (i.e. rural and peripheral areas, deprived urban neighbourhoods, rural, underequipped areas, ...).

⁷⁰ Please see explanation in the introduction, p. 1

- Uptake of innovative solutions benefiting local communities and promoting the maintenance or enhancement of innovative place-based health and care practices, tools and solutions.
- Better assistance to vulnerable population groups in improving their situation of health and well-being.
- Increased knowledge and capacity of stakeholders (incl. professionals and carers) to adopt innovative solutions concerning health and care and provide better assistance and access.
- Stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to health and care among cities, rural, coastal or intermediate areas dealing with similar issues.
- Better preparedness of the NWE with respect to health challenges associated with population growth/depopulation (e.g., further ageing of urban and rural population) as well as with unexpected large-scale events seriously affecting the population's health.

Assessment:

The expected results formulated for Specific Objective 4.5 aim on the improvement of access to health care services and health care institutions and better preparedness of the health care sector to structural (demographic) changes and crises.

Positive effects can be seen on human health and well-being of the residents. Particular emphasis is put on improvement for vulnerable groups.

No significant negative effects on environmental or cross-cutting issues can be expected.

- Environmental and crosscutting issues with potential positive effects:
 - Human health and well-being
- Environmental and crosscutting issues with potential negative effects:

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

Specific Objective 4.6 (previously: 4.5)⁷¹: Enhancing the role of culture and sustainable tourism in economic development, social inclusion and social innovation

Expected results

The programme expects to contribute to a sustainable, inclusive and balanced development by enhancing the capacities of NWE communities to multiply the potential of culture and tourism.

To achieve these desired changes, the following results are expected:

- More sustainable and territorially balanced tourism in NWE, reconciling the interests of touristic and cultural organisations, of inhabitants and of visitors, and encouraging joint local engagement.
- Key aspects of tourism and culture better embedded into territorial strategies and local initiatives.
- Higher transnational visibility of local specificities existing in the NWE territories (i.e. natural and cultural heritage assets, incl. gastronomy).
- A better access of “vulnerable” person groups (old, disabled, unemployed, young people, single parents, NEETs, people living in a rural, intermediate or urban area....) to tourism and culture as well as their stronger direct involvement in local development initiatives.

⁷¹ Please see explanation in the introduction, p. 1

- A stronger empowerment of local authorities, academics, businesses and inhabitants allowing them to better valorise local hidden or unknown assets, also involving enhanced territory-related skills and networking in tourism and cultural development.
- Renovated or better preserved and more accessible natural and cultural heritage potentials, also including eco-friendlier access, tools and approaches to valuable natural landscapes and built assets.
- More inclusive and place-based business models and business support programmes, including entrepreneurship, and principles of sustainable tourism.
- Stronger stakeholder cooperation networks enabling the transfer of innovative approaches and/or the establishment of functional linkages in relation to tourism and culture among cities, rural, coastal or intermediate areas dealing with similar issues

Assessment:

The expected results formulated for Specific Objective 4.6 hold the potential for positive and negative effects.

Potential positive effects can be seen in different directions. Cultural heritage shall be better preserved and renovated; the promotion of cultural tourism contributes to better perception of the issue 'cultural heritage' by both target groups, tourists and local population. Same counts for the preservation of natural heritage as an important element of tourism promotion. This can aim on positive effects on the environmental issue 'flora, fauna, biodiversity'. Promotion and expansion of touristic activities generates employment and income which presents an element of human well-being of the population; however, it is in the grey zone of an SEA to see this as a significant positive environmental effect.

On the other side, the realization of the expected results under Specific Objective 4.6 can cause also potentially negative effects on several environmental issues. First of all intensified tourism can lead to more stress on 'flora, fauna, biodiversity' and 'soil, landscape' by increased number of tourists and the construction of touristic or tourism related infrastructure. Also water bodies can be affected negatively by sports offers or touristic infrastructure. Intensified tourism can also cause increased traffic with negative effects on 'air pollution', 'greenhouse gases' or 'noise'. It needs to include targeted and effective measures in projects to avoid or at least to minimize negative effects in the promotion of tourism; this challenge needs to be mastered by selection and monitoring criteria.

- Environmental and crosscutting issues with potential positive effects:
 - Cultural heritage
 - Flora, fauna, biodiversity (depending on kind of promotion of sustainable tourism to preserve natural heritage)
- Environmental and crosscutting issues with potential negative effects:
 - Flora, fauna, biodiversity (depending on kind of promotion of sustainable tourism and construction of touristic infrastructure)
 - Water (depending on kind of promotion of sustainable tourism and construction of touristic infrastructure)
 - Soil, landscape (depending on kind of promotion of sustainable tourism and construction of touristic infrastructure)
 - Related of Global Climate:
 - Reduction of greenhouse gases
 - Related to human health and well-being:
 - Reduction of air pollution
 - Noise

Kind, extent and directness of potential positive and negative effects eventually depend on the type of actions, on the technical, financial and spatial details of the individual funded projects and on the targeting and effectiveness of project selection and monitoring criteria! The detailed assessment of effects on environmental issues needs to be shifted to the next lower level and needs to be done in the course of project applications (→ tiering).

4.3 Cumulative and synergetic effects of environmental contributions

The high aggregation level of the programme makes a detailed, quantitative and spatially differentiated assessment of the potential effects infeasible. The assessment thus has been based on the verification how far the strategic approach but also the implementation conditions contribute to EU environmental objectives and environmental policies. The assessment of possible cumulative and synergetic effects follows this approach and restriction.

Due to the wide range of potential contributions to EU environmental policies and targets, **cumulative effects** can be realized by the programme in case the implementation of projects is directed to an active contribution to sustainability and environmental and climate protection. Most of the individual defined Priorities, selected Specific Objectives and of the defined expected results show potential to contribute to one or several of the EU environmental policies and targets. A consistent and strict demand in the applications can generate cumulative effects in principle. The extent depends also on the spatial location of the projects contributing to the various Priorities and expected results.

The implementation of projects under Priorities 1, 2 and 3 will generate indirect **synergetic effects**. Aiming on different environmental issues, the effects generated by those projects can cause a higher positive effect than just the sum of their individual effects. Environmental protection combined with better energy efficiency and renewable energy production and also improved circular economy can create a comprehensive contribution to “the ‘green’ transition of all NWE territories to a climate-neutral, resource-efficient and sustainable society”⁷². The extent of positive synergetic effects depends, as for cumulative effects as well, on the spatial location of the projects. In principle, the entire programme area of Interreg NWE can benefit from those synergetic effects.

It must be highlighted that projects under Priority 4 (“Improving territorial resilience in NWE through innovative and smart transformation (previously: Innovation for resilient and liveable territories)”⁷³) and Priority 5 (“Transition towards a socially inclusive and resilient society (previously: Just and inclusive NWE)”⁷⁴) need particular consideration. Contrary to projects under Priority 1, 2 and 3, projects under Priorities 4 and 5 have no environmental focus by definition. The more projects under Priorities 4 and 5 aim to positively contribute to European environmental policies and targets the larger the extent of potential cumulative and synergetic effects. It is important that application and selection criteria for projects under priorities 4 and 5 ensure a strict consideration of intended positive contributions to sustainability and environmental and climate protection.

Cumulative and synergetic effects are not per se only positive. Even environmentally oriented projects might cause negative effects as for example energy generation using renewable sources can show negative effects on other environmental issues if not properly planned. Possible negative effects can also cumulate and synergize but more important is that negative environmental effects might reduce the extent of potential cumulative and synergetic effects. Again, the use of targeted and effective application and selection criteria for projects receive a key role.

⁷² Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021, chapter 1.2

⁷³ Please see explanation in the introduction, p. 1

⁷⁴ Please see explanation in the introduction, p. 1

4.4 Effects on the environment by the Programme as a whole

Taking all assessed elements into account, the Interreg NWE 2021-2027 programme shows potential for significant positive effects on environmental and cross-cutting issues in various respects.

The base for this positive orientation is laid by the definition of three Priorities under the Policy Objective 2 (“A greener, low-carbon Europe”) which Specific Objectives have an exclusive focus on sustainability and environmental and climate protection. Additionally, the selected Specific Objective 4.5 (previously: 4.4)⁷⁵ (“Ensuring equal access to health care and fostering resilience of health systems, including primary care, and promoting the transition from institutional to family- and community-based care”) has a focus on improvement of human health and well-being.

Consequently, the expected results for those Priorities and Specific Objectives reflect also the exclusive focus on sustainability and environmental and climate protection.

For those remaining Priorities and related Specific Objectives under Policy Objectives 1 (“A more competitive and smarter Europe”) and Policy Objective 4 (“A more social and inclusive Europe”), which do not show an exclusive focus on sustainability and environmental and climate protection, no criteria or arguments are stated in the programme to ensure orientation towards sustainability and environmental and climate protection. In this respect, the programme could be stricter and should explicitly link expected results with contributions to EU environmental policies and targets and the EU Green Deal⁷⁶.

The SEA Directive requests also the assessment of certain characteristics of the potential significant effects. Two aspects are the reversibility of the effects and the type of appearance (short-, middle- and long-run). Both characteristics cannot be assessed for the Interreg NWE 2021-2027 programme because kind, extent and characteristics of types of actions and thus of potential effects are not known. Also, due to the support of development of strategies, action plans and pilot actions potential effects will be realised indirectly and at a later stage to an overwhelming extent. Whether those potential effects and contributions will be finally realised depends on decisions and influences outside the programme’s control. The Programme foundations and creates opportunities to realise positive environmental effects and contributions to EU environmental policies and targets.

Another crucial aspect in the assessment of the programme as a whole is the fact that the achievement of positive effects and the avoidance and mitigation of negative effects need to be assessed at other levels:

- A detailed consideration of environmental effects can only be done at the level of funded actions in the course of the implementation of the programme when type, content, financial and spatial details of the actions are known (→ tiering to project level).
- The programme intends to promote the take-up of developed strategies, action plans and pilot actions which means that those strategies, action plans and actions further developed on base of results of actions funded by the Interreg NWE but outside the programme’s control (→ tiering to subsequent programmes).

⁷⁵ Please see explanation in the introduction, p. 1

⁷⁶ See also European Commission (2021): Supporting Sustainability Transitions under the European Green Deal with Cohesion Policy - Toolkit for national and regional decision-makers; Luxembourg: Publications Office of the European Union, 21 p.

4.5 Consideration of sustainability and environmental and climate protection in implementation tools

As stated already, by the character of Interreg NWE as an highly aggregated programme and the lack of spatial, technical and financial details of projects financed by the programme the focus for consideration of sustainability and environmental and climate protection is directed to the implementation of the programme and to the project level.

The implementation of the programme is based on various tools which provide information to target groups/beneficiaries, application forms, reporting forms, etc. Those tools form an adequate leverage to anchor the consideration of sustainability and environmental and climate protection in the programme implementation and to strengthen positive contributions of Interreg NWE to European Green Deal and EU environmental policies and targets.

In the present implementation tools, reference to sustainability and environmental and climate protection is made by requests of consideration of the EU horizontal principles. Examples of consideration of sustainability and environmental and climate protection in implementation tools:

- **Programme manual, version June 2019**

4.2.3 Project description⁷⁷

Horizontal principles

Sustainable development, equal opportunities and non-discrimination, as well as equality between men and women, and inclusion, are the three major horizontal principles that constitute an integral part of EU policies and the NWE Programme. Please carefully check the related eligibility criterion to make sure the application complies with the programme's requirements.

In practical terms this means that projects must not violate these principles in their activities, outputs and results, or at the very minimum should be neutral in their effect on them. The project assessment will consider the promotion of these horizontal principles as a positive factor. Projects should therefore mention if they are planning any specific measures to follow these principles. Further details of the horizontal principles can be found in the *Cooperation Programme*.

4.3.2 "Step 2 ELIGIBILITY CRITERIA"⁷⁸

- | | |
|---|---|
| <p>15 The project confirms that it makes a positive or neutral contribution to the programme's horizontal principles: equal opportunities and non-discrimination, equality between men and women, sustainable development.</p> | <p><i>In submitting the application form the project confirms that it makes positive or neutral contribution to the programme's horizontal principles: equal opportunities & non-discrimination, equality between men and women, sustainable development.</i></p> |
|---|---|

⁷⁷ Programme manual, version June 2019, p. 50

⁷⁸ Programme manual, version June 2019, p. 60

Term Definition⁷⁹

Horizontal principles *Horizontal principles, as mentioned in Articles 7 and 8 of Regulation (EU) No 1303/2013, are core principles of importance that cut across and have relevance to all areas of the work of EU funded projects. Projects need to refer to them in their application form. There are 3 horizontal principles: sustainable development, equal opportunities and non-discrimination, and equality between men and women.*

• **Project progress report**

Horizontal Principles⁸⁰

Horizontal principles	Contribution in this reporting period	Description of the contribution
Equality between men and women		
Equal opportunity and non-discrimination		
Sustainable development (environment)		
Inclusion		

• **Application Form 2nd call Capitalization**

A. Eligibility⁸¹

Just to select YES or NO to confirm that horizontal principles remain applicable

B. Initial project results⁸²

No reference made to horizontal principles

C. Capitalization Initiative description⁸³

No reference to horizontal principles requested

In the existing implementation tools, the consideration of sustainability and environmental and climate protection is requested, however to a rather weak extent. The normative demand that the horizontal principles needs to be considered in all programmes and projects financed by the EU, is formally met. However, active contributions to environmental policies and targets and thus positive contributions to sustainability and environmental and climate protection are not consequent and obligatory requested from the project implementers. The tenor of the stated requests is on positive or neutral contributions, meaning the focus is set on avoidance of negative effects which should be a matter of course. In respect of the European Green Deal this matter of course is not sufficient to respond to the current

⁷⁹ Programme manual, version June 2019, p. 149

⁸⁰ Project progress report, p. 4

⁸¹ Application Form 2nd call Capitalization, p. 3

⁸² Application Form 2nd call Capitalization, p. 3

⁸³ Application Form 2nd call Capitalization, p. 4

challenges of environmental and climate protection. The European Green Deal implies the strengthening of sustainability and environmental and climate protection and an improvement of the current status. To avoid negative effects and to allow neutral contributions do not reflect current and future requirements.

Interreg NWE as other EU-funded programmes is an appropriate mechanism to actively support the intention of the European Green Deal and should play a prominent role in the promotion of sustainability and environmental and climate protection.

5 Recommendations

To a large extent, caused by the defined Priorities 1, 2 and 3, the NWE-programme contributes by its strategic orientation to the EU environmental policies and targets and to strengthen sustainability and environmental and climate protection.

The lever for optimization of the programme's contribution, i.e. optimum enhancement of positive effects and active contributions and optimum mitigation of negative effects, lies with the implementation of the programme and its implementation mechanisms.

Recommendations can be provided for both levels, i.e. the programme as such and the implementation of the programme; the recommendations stated below result from the assessment of the Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021:

Programme

1. The overall objective of the programme⁸⁴ should refer explicitly to sustainability and environmental and climate protection by naming the orientation on EU environmental policies and targets incl. Green Deal.
2. Orientation on and positive contribution to EU environmental policies and targets in the approach of the Priorities 4 and 5 should be clearly and unequivocal.
3. The strict consideration of the horizontal principle "sustainable development" added by the request of positive contribution to sustainability and environmental and climate protection as a crucial project selection criteria should be included in the programme already to underline the important role in the approach of Interreg NWE.
4. It should also be stated explicitly in the programme that EU and national environmental legislations must be applied and EU and national environmental standards must be met by all supported projects.
5. In the selection process for projects in the frame of Priority 2, Specific Objective 2.2 aiming on the promotion of renewable energy, the possible effects on biodiversity, landscape, soil and water by installation of required infrastructure as for example wind power plants or hydro power plants have to be taken into account seriously. This needs to be clearly stated in the description of the expected results.

⁸⁴ Template for Interreg North West Europe 2021-2027, version submitted 24.05.2021, chapter 1.2

Implementation of the programme

6. In the implementation tools, the consideration of sustainability and environmental and climate protection in funded projects should be requested strictly. Presently, the normative demand that the horizontal principles needs to be considered in all programmes and projects financed by the EU, is not sufficient. The tenor should be on positive contributions to EU environmental policies and targets and strengthening of sustainability and environmental and climate protection.
7. The approved jointly developed strategies and action plans, the jointly developed and implemented pilot actions and the jointly developed solutions - as subjects of defined output and result indicators - need to be oriented strictly on consideration of EU environmental policies and targets.
8. Interreg NWE as other EU-funded programmes is an appropriate mechanism to actively support the intention of the European Green Deal and should play a prominent role in the promotion of sustainability and environmental and climate protection. By preparation and dissemination of a guidance how to incorporate elements and approaches of sustainability and environmental and climate protection in project ideas, a widespread awareness and understanding of EU environmental policies and targets will be supported.
9. Each project application should be complemented by a concise description of the environment-related aspects to be addressed and of expected positive environmental effects and how to avoid negative environmental effects. Depending whether the project has a clear territorial focus, a short description of the existing environmental conditions relevant to the subject of the project could be added.
10. At the level of the Member States respectively regions, arrangements should be established to enable applicants to receive information and advice for the consideration of environmental aspects in the design and execution of projects.
11. Relevant national or regional authorities responsible for environmental and nature protection should be involved in the assessment and selection of relevant project applications.
12. To exploit the potential to an optimum, the Joint Secretariat should support the exchange of information and knowledge between beneficiaries on the projects' outputs and lessons learned of the different types of actions related to sustainability and environmental and climate protection.
13. The brochure "Supporting Sustainability Transitions under the European Green Deal with Cohesion Policy - Toolkit for national and regional decision-makers" provides approaches and recommendations for the initiation and realization of positive contributions to the EU environmental policies and targets⁸⁵.

⁸⁵ European Commission (2021): Supporting Sustainability Transitions under the European Green Deal with Cohesion Policy - Toolkit for national and regional decision-makers; Luxembourg: Publications Office of the European Union, 21 p.

6 Notes on problems in the compilation of required data and information

In the course of the assessment, no problems occurred to find and use accurate data and information to describe environmental policies and targets, characteristics of the environment in the programme area and environmental trends in case of non-implementation of Interreg NWE.

In the course of the SEA process, a shift from possible types of actions presented in the first outline of the Priorities used for the conduction of the scoping phase to the presentation of expected results and of only exemplary actions to explain the character of categories of project activities was done by Interreg NWE. In the Template for Interreg NWE submitted 24.05.2021 as the actual base for the assessment, the possible types of actions are not mentioned anymore.

Consequently, this shift causes a change in the methodological approach of the assessment of potential effects on environmental and cross-cutting issues. The approach could not further follow the assessment of the individual possible types of actions more in detail according to weighting categories and present the findings in tabular and textual form. Instead, the expected results per Specific Objective were assessed as a block and the findings are presented in textual form.

7 Proposed monitoring measures

The SEA Directive requires that “Member States shall monitor the significant environmental effects of the implementation of the plans and programmes, in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action.”⁸⁶

The highly indirectness of potential environmental effects of the Interreg NWE 2021-2027 Programme does not allow the identification of measures to monitor concrete possible effects on sustainability and environmental and climate protection and the programme’s contributions to EU environmental policies and targets.

Thus, the monitoring must aim to ensure two aspects:

- To ensure that positive contributions to the EU environmental policies and targets will be realized to the optimum extent possible by the programme.
- Also to ensure that no adverse effects to the EU environmental policies and targets are initiated by projects which are supported by the programme, even if the direct effects will occur in the long run.

Monitoring measures should include:

1. Environmental criteria have to be safeguarded by including them into the programme manual of the NWE-Programme.
2. The consideration of potential environmental effects has to be proven in the application for a project. Projects which potentially show effects not compliant with EU environmental policies and targets and with the principles of sustainable development as described in the programme manual can be screened out or amendments can be demanded. The selection process must be

⁸⁶ Article 10 of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment (2001/42/EC) (hereinafter: SEA-Directive)

used to avoid contradictions to the effective EU environmental policies and targets and to the European Green Deal.

3. In the reports of the projects, the initiated direct and indirect effects should be described and assessed towards the expected effects stated in the applications.
4. As part of collecting and processing project monitoring reports, monitoring outputs, results and financial implementation by the Joint Secretariat, the expected effects and contributions and the actually initiated ones as stated in the project reports have to be compiled and assessed on regular base in order to avoid incompatibility of the overall implementation orientation of the NWE-Programme towards an effective contribution to the EU environmental policies and targets and the European Green Deal.
5. As part of the monitoring systems, adequate indicators should be defined to measure the contribution of the NWE-Programme to the EU environmental policies and targets and to sustainability, environmental and climate protection. Areas of monitoring should be the expected results of the defined Priorities.
6. Depending on the nature of the individual projects, relevant existing national, regional and/or local environmental monitoring systems should be used (for example to measure air pollution, noise, water pollution). Relevance and mode of utilisation could be clarified by involvement of the authorities responsible for the monitoring (linked to recommendations 10 and 11, see chapter 5).

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Annex 1: Relevant International and EU policies, strategies and directives

The table provides an overview of the international and EU policies, strategies and directives, which provide relevant environmental objectives and targets relevant for the SEA of Interreg NWE 2021-2027 Cooperation Programme.

Since the program is very general in terms of spatial and content aspects of implementation, overarching policies are predominantly relevant for the assessment. A complete documentation of all laws, programs, strategies, etc. introduced at the national and sub-national level of the Interreg NWE Member States is not appropriate in this context, nor is it desirable in terms of a concise presentation in the environmental report, as it would also not support the assessment of the draft programme in any way.

Table 2: Relevant International and EU Policies, Strategies and Directives

Relevant Environmental Issues	Relevant International and EU policies, strategies and directives
Overarching	United Nations: Transforming our world: the 2030 Agenda for Sustainable Development, 2015 EU: Roadmap to a Resource Efficient Europe COM(2011) 571 EU: The European Green Deal COM(2019) 640 final EU: 8 th EAP - proposal on a General Union Environment Action Programme to 2030, COM(2020) 652 final EU: 7th EAP - A General Union Environment Action Programme to 2020 'Living well, within the limits of our planet', DECISION No 1386/2013/EU EU: Green Infrastructure (GI) - Enhancing Europe's Natural Capital COM/2013/0249 final EU: Chemicals Strategy for Sustainability - Towards a Toxic-Free Environment COM(2020) 667 final EU: Farm to Fork Strategy - for a fair, healthy and environmentally-friendly food system COM(2020) 381 final EU: Territorial Agenda 2030 - A future for all places - informal meeting of Ministers responsible for Spatial Planning and Territorial Development and/or Territorial Cohesion 1 December 2020, Germany
Human Health	Air Pollution: WHO - Fact sheets on sustainable development goals: health targets - Air quality and health (2018) EU: Thematic Strategy on air pollution COM(2005) 446 final EU: Directive on ambient air quality and cleaner air for Europe, 2008/50/EC EU: Directive on heavy metals and polycyclic aromatic hydrocarbons in ambient air, 2004/107/EC EU: Directive 2016/2284 on the reduction of national emissions of certain atmospheric pollutants EU: Communication "A Europe that protects: Clean air for all" (COM(2018) 330 final) EU: Industrial emissions - EU rules update. Proposal for a directive, Adoption planned for fourth quarter 2021 EU: Action Plan Towards a Zero Pollution Ambition for air, water and soil, in preparation, planned for second quarter 2021 Noise: WHO (2028): Environmental Noise Guidelines for the European Region (2018) EU: 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. EU: 7th EAP - A General Union Environment Action Programme to 2020 'Living well, within the limits of our planet', DECISION No 1386/2013/EU

Relevant Environmental Issues	Relevant International and EU policies, strategies and directives
	<p>Hazardous chemicals:</p> <p>EU: REACH - Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, EC 1907/2006</p> <p>EU: (CLP) – Regulation on classification, labelling and packaging of substances and mixtures, EC No 1272/2008</p> <p>EU: Chemicals Strategy for Sustainability - Towards a Toxic-Free Environment COM(2020) 667 final</p> <p>EU: Farm to Fork Strategy - for a fair, healthy and environmentally-friendly food system COM(2020) 381 final</p>
Fauna, Flora, Biodiversity	<p>UNEP: The Convention on Biological Diversity 1993</p> <p>UNEP: Aichi Biodiversity Targets 2010</p> <p>UNESCO: Ramsar Convention 1971</p> <p>UNESCO: Convention Concerning the Protection of the World Cultural and Natural Heritage 1972</p> <p>EU: Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 1979</p> <p>EU: EU Biodiversity Strategy for 2030 COM(2020) 380 final</p> <p>EU: Directive on the conservation of natural habitats and of wild fauna and flora, Council Directive 92/43/EEC 1992</p> <p>EU: Directive on the conservation of wild birds, DIRECTIVE 2009/147/EC</p> <p>EU: Forests - new EU strategy adoption planned for First quarter 2021</p> <p>EU: Farm to Fork Strategy - for a fair, healthy and environmentally-friendly food system COM(2020) 381 final</p> <p>EU: 8th EAP - proposal on a General Union Environment Action Programme to 2030, COM(2020) 652 final</p> <p>EU: 7th EAP - A General Union Environment Action Programme to 2020 'Living well, within the limits of our planet', DECISION No 1386/2013/EU</p> <p>EU: Action Plan Towards a Zero Pollution Ambition for air, water and soil, in preparation, planned for second quarter 2021</p> <p>EU: Marine Strategy Framework Directive 2008/56/EC</p> <p>Ministerial Declaration of The Fourth International Conference On The Protection Of The North Sea (1995)</p>
Landscape, Soil	<p>Council of Europe: Council of Europe Landscape Convention European Treaty Series - No. 176</p> <p>EU: Roadmap to a Resource Efficient Europe COM(2011) 571</p> <p>EU: General Union Environment Action Programme to 2030, proposal (8th Environment Action Programme (EAP) (2020)</p> <p>EU: Thematic Strategy for Soil Protection [SEC(2006)620][SEC(2006)1165]</p> <p>EU: EU Biodiversity Strategy for 2030 COM(2020) 380 final</p> <p>EU: Farm to Fork Strategy - for a fair, healthy and environmentally-friendly food system COM(2020) 381 final</p> <p>EU: 8th EAP - proposal on a General Union Environment Action Programme to 2030, COM(2020) 652 final</p> <p>EU: 7th EAP - A General Union Environment Action Programme to 2020 'Living well, within the limits of our planet', DECISION No 1386/2013/EU</p> <p>EU: Action Plan Towards a Zero Pollution Ambition for air, water and soil, in preparation, planned for second quarter 2021</p>

Relevant Environmental Issues	Relevant International and EU policies, strategies and directives
Water	<p>EU: The EU Water Framework Directive 2000/60/EC EU: Drinking Water Directive (98/83/EC) EU: Bathing Water Directive (2006/7/EC) EU: Groundwater Directive (GWD) 2006/118/EC EU: 8th EAP - proposal on a General Union Environment Action Programme to 2030, COM(2020) 652 final EU: Action Plan Towards a Zero Pollution Ambition for air, water and soil, in preparation, planned for second quarter 2021 EU: Roadmap to a Resource Efficient Europe COM(2011) 571</p>
Global Climate	<p>United Nations Framework Convention on Climate Change (UNFCCC) and climate negotiations from Rio de Janeiro, 1992 UNFCCC: Paris Agreement 2016 EU: The European Green Deal COM(2019) 640 final EU: Clean Planet for all - A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy. COM(2018) 773 final EU: The 2030 Climate Target Plan, Stepping up Europe’s 2030 climate ambition - Investing in a climate-neutral future for the benefit of our people COM(2020) 562 final EU: Proposal - European Climate Law - establishing the framework for achieving climate neutrality COM(2020) 80 final EU: The 2030 climate and energy framework - communication on a policy framework for climate and energy from 2020 to 2030, COM(2014) 0015 EU: An EU Strategy on adaptation to climate change COM/2013/0216 final EU: Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change, COM(2021) 82 final</p>
Renewable Energy Energy Efficiency	<p>EU: Clean Energy for All Europeans. COM(2016) 860 final EU: The recast Renewable Energy Directive - on the promotion of the use of energy from renewable sources. Directive (EU) 2018/2001 EU: The revised Energy Efficiency Directive (EU) 2018/2002 EU: A hydrogen strategy for a climate-neutral Europe COM(2020) 301 final EU: Strategy on offshore renewable energy COM(2020)741 EU: Powering a climate-neutral economy: An EU Strategy for Energy System Integration COM(2020) 299 final EU: A Renovation Wave for Europe - greening our buildings, creating jobs, improving lives. COM(2020) 662 final EU: The Energy Performance of Buildings Directive ((EU) 2018/844) EU: A European Strategy for Low-Emission Mobility COM(2016) 501 final EU: Sustainable and Smart Mobility Strategy –putting European transport on track for the future. COM(2020) 789 final EU: Proposal for a decision on a European Year of Rail (2021) COM(2020) 78 final</p>
Resource-efficiency, Circular and Low-Carbon economy	<p>EU: Roadmap to a Resource Efficient Europe (COM(2011) 571) EU: A new Circular Economy Action Plan for a Cleaner and More Competitive Europe 2020 COM(2020) 98 final EU: Directive on the promotion of the use of energy from renewable sources, DIRECTIVE (EU) 2018/2001 EU: Waste Framework Directive (EU, 2008, 2018b) EU: Revised waste proposal (2008/98/EC) EU: Directive on the landfill of waste, (1999/31/EC, 2018a) New Industrial Strategy for Europe COM(2020) 102 final An SME Strategy for a sustainable and digital Europe COM(2020) 103 final</p>

Relevant Environmental Issues	Relevant International and EU policies, strategies and directives
	EU: 8th EAP - proposal on a General Union Environment Action Programme to 2030, COM(2020) 652 final EU: 7th EAP - A General Union Environment Action Programme to 2020 'Living well, within the limits of our planet', DECISION No 1386/2013/EU
Cultural Heritage	UNESCO: Convention concerning the Protection of the World's Cultural and Natural Heritage 1975 EU: Treaty on European Union (TEU) – 1993, consolidated 2012 EU: Treaty on the Functioning of the European Union (TFEU) – 1958 EU: A New European Agenda for Culture - COM(2018) 267 final EU: Convention for the Protection of the Architectural Heritage of Europe (Granada, 1985) EU: European Heritage Strategy for the 21st Century, Limassol 2017 EU: A New European Agenda for Culture - COM(2018) 267 final EU: 8th Environment Action Programme