EUROPEAN
COMMISSION

Brussels, 12.5.2021
COM(2021) 400 final

ANNEXES 1 to 2

ANNEXES

to the

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Pathway to a Healthy Planet for All
EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil'

{SWD(2021) 140 final} - {SWD(2021) 141 final}

ANNEX 1 - LIST OF ACTIONS

N°	ACTIONS	Timetable
IMPROVING OUR HEALTH AND WELL-BEING		
Flagship 1	**Reducing health inequalities through zero pollution** Regularly feed pollution monitoring and outlook data into the Cancer Inequalities Registry and the Atlas of Demographys.	as from 2022
Flagship 2	**Supporting urban zero pollution action** As part of the future Year of Greener Cities, in synergy with the proposed Horizon Europe Mission for Climate Neutral and Smart Cities, the revision of the Urban Mobility Package, the Covenant of Mayors, and the New European Bauhaus initiative, identify key urban greening and innovation needs to prevent pollution, including indoors.	as from 2022
1	Revise the **Ambient Air Quality Directives**	2022
2	Introduce more stringent **emission limits for motor vehicles** (**Euro 7**)	2021
3	Reduce **air and noise emissions from transport** at source by updating, where relevant, EU or international regulatory frameworks	as from 2021
4	Implementation Report on the **Environmental Noise Directive**	2022
5	Follow up of the evaluation of the **Outdoor Noise Directive**	2022/2023
6	Assess pathways and policy options to **improve indoor air quality, and propose legislative measure as relevant**	2023
7	Review and, if necessary, revise the **Bathing Water Directive**	2021-2023
8	Support the implementation of the **new Drinking Water Directive** and adopt relevant implementing and delegated acts	as from 2022
9	Review and, if necessary, revise the **Energy Efficiency Directive**, the **Renewable Energy Directive** and the **eco-design and energy labelling requirements for heating appliances**	as from 2021
LIVING WITHIN OUR PLANETARY BOUNDARIES		
Flagship 3	**Promoting zero pollution across regions** In cooperation with the Committee of the Regions, present a Scoreboard of EU regions' green performance to measure, in particular, efforts to achieve pollution-relevant targets.	2024
10	Revise the **Environmental Quality Standards Directive** and the **Groundwater Directive**	2022
11	Review and, if necessary, revise the **Marine Strategy Framework Directive**	2021-2023
12	Reduce **underwater noise** and **marine litter** through EU threshold values to be set under the **Marine Strategy Framework Directive**	2022
13	Revise **the Urban Waste Water Treatment Directive** in synergy with the review of the Industrial Emissions Directive and the evaluation of the Sewage Sludge Directive	2022
14	Support the implementation of the **Strategic Guidelines for a more sustainable and competitive EU aquaculture** - Environmental performance aspects	2022-2023
15	**Identify and remedy contaminated sites** by:	2022

	• establishing an **EU priority watch list for soil contaminants** and introducing a zero soil pollution module in the future LUCAS survey; • investigating best practices and providing guidance for a **passport for the safe, sustainable and circular use of excavated soil**; • facilitating and promoting awareness of public and private funding for **identification, investigation, assessment and remediation of contaminated soils and groundwater**.	2024 2024
TOWARDS ZERO POLLUTION FROM PRODUCTION AND CONSUMPTION		
Flagship 4	**Facilitating zero pollution choices** Encourage public and private sector operators to make 'zero pollution pledges' to promote best available, 'near-zerowaste' and least polluting options.	as from 2022
16	Revision of the **Industrial Emissions Directive** and the **E-PRTR Regulation**	2021/2022
17	**Recommendations** on the basis of a fitness check on the **implementation of the polluter pays principle**	2024
18	Revision of the **Mercury Regulation**	2022
19	Support **international work on best available techniques (BAT), including new and emerging technologies, to reduce industrial emissions** and on the revision of the Kiyv Protocol to improve public access to information on those emissions	as from 2021
ENSURING STRICTER IMPLEMENTATION AND ENFORCEMENT		
Flagship 5	**Enforcing zero pollution together** Bring together environmental and other enforcement authorities to kick off the exchange of best practices and encourage Member States to devise cross-sectorial compliance actions towards zero tolerance for pollution at national level and transboundary level.	as from 2022
20	Revise the **Environmental Crime Directive**	2021
21	Fitness check of the **Environmental Liability Directive**	2023
BOOSTING CHANGE ACROSS SOCIETY FOR ZERO POLLUTION		
Flagship 6	**Showcasing zero pollution solutions for buildings** Showcase from the renovation wave strategy and New European Bauhaus initiative how building projects and the use of Local Digital Twins can contribute to zero pollution objectives.	as from 2022
Flagship 7	**Living Labs for green digital solutions and smart zero pollution** Launch Living Labs for green digital solutions and smart zero pollution to help develop local actions for green and digital transformation.	2021
22	Build capacity and improve knowledge on less polluting practices with **national advisory services for farmers**	as from 2023
23	Compile and make accessible in a digital format all main **obligations on nutrient management** stemming from EU law to limit the environmental footprint of farming activities	2023
24	Create a **zero pollution contribution** to the **European Green**	2023

	Deal Dataspace to improve data availability	
25	Create **Destination Earth** to develop a very high precision digital model of the Earth with Copernicus data as key building block to monitor the state of air, freshwaters, seas and soil	as from 2024
26	Improved **training and educational support on environmental risks** including pharmaceuticals through • **tailored EU training modules for healthcare and other social care sector workers** • Guidelines for **healthcare** professionals on the **prudent use** of pharmaceuticals and support to include environmental aspects in **training** and **professional development programmes** • Training and educational support for **climate, environment, and health conscious professionals and economic operators**.	as from 2021
PROMOTING WORLDWIDE CHANGE FOR ZERO POLLUTION		
Flagship 8	**Minimising the EU's external pollution footprint** Promote global zero pollution in all relevant international fora and work with the EU Member States and stakeholders.	as from 2021
27	Advance **international cooperation on black carbon policies** to reduce climate change impacts and improve air quality	as from 2021
28	Support **global action on the export of end-of-life and used vehicles**	as from 2021/2022
29	Support initiatives to **better monitor and manage international trade for waste electrical and electronic equipment** (WEEE) and **waste batteries**	as from 2021
30	Support a **global initiative to end informal recycling of used lead acid batteries**	as from 2021/2022
TRACKING PROGRESS, ANTICIPATING TRENDS AND MAINSTREAMING ZERO POLLUTION		
Flagship 9	**Consolidating EU's Knowledge Centres for Zero Pollution** Consolidate the roles of the European Environment Agency (EEA) and the Joint Research Centre (JRC) as the EU's Knowledge Centres of Excellence for Zero Pollution.	as from 2021
31	**Zero Pollution Monitoring and Outlook Reports**	2022 & 2024
32	Develop a '**European Environment and Health Atlas**'	2023/2024
33	Launch the **Zero Pollution Stakeholder Platform** (including thematic hubs, e.g. on digital solutions, clean air tech, soil pollution)	as from 2021

In addition to these actions, many 'zero pollution' actions already planned under the European Green Deal and other initiatives will be essential for achieving the zero pollution ambiton[1].

[1] See in particular the lists of actions in the annexes to the following initiatives (non-exhaustive list): COM(2020) 98, COM(2020) 102, COM(2020) 299, COM(2020) 301, COM(2020) 380, COM(2020) 381, COM(2020) 562, COM(2020) 662, COM(2020) 663, COM(2020) 667, COM(2020) 696, COM(2020) 741, COM(2020) 761, COM(2020) 788, COM(2020)789, COM(2021) 44, COM(2021) 66, COM(2021) 82 and JOIN(2021) 3.

ANNEX 2

EXPLANATIONS FOR THE TARGETS SET OUT IN THE ZERO POLLUTION ACTION PLAN

Target 1: By 2030 the EU should reduce by more than 55% the health impacts (premature deaths) of air pollution

Basis: National Emission reduction Commitments Directive (EU) 2016/2284

Description: The reduction is projected to be achieved through fine particulate matter ($PM_{2.5}$) emissions reduction, if all Member States implement all measures announced in their first National Air Pollution Control Programmes (Article 6 of Directive (EU) 2016/2284) to reach the objectives of the Directive, and based on the full implementation of other relevant legislation (including, in particular, energy and climate policies). Reduction of emissions of air pollutants other than $PM_{2.5}$ (which are also covered by the NEC Directive) will deliver additional positive health effects.

Reference year: 2005

Evidence base: Second Clean Air Outlook[2] and underpinning study[3]

Monitoring: Update of the Clean Air Outlook through the Zero Pollution Monitoring and Outlook Framework[4]

Target 2: By 2030 the EU should reduce by 30% the share of people chronically disturbed by transport noise

Basis: Environmental Noise Directive 2002/49/EC

Description: The target is based on a 2021 Commission study analysing the official Member State data on noise exposure (Article 7 of the Environmental Noise Directive), national noise action plans covering the 2018-2024 period (Article 8 of the Environmental Noise Directive) and the 2020 EEA outlook on environmental noise in Europe[5]. The study quantified the reduction in noise-related health issues which can derive from implementing cost-effective measures, including solutions already available on the market. Some of those stem from specific noise limits mandatory under EU law (e.g.: on tyres[6], on road vehicles[7], on quiet wagons[8]), whilst others (e.g.: on quieter road surfaces, on smooth and quieter rails, on flight timeframes and procedures) require measures to be taken at national/local level under the Environmental Noise Directive in interplay with other relevant EU law[9]: the overall coordination and ambition level of the latter are left to the discretion of the relevant national/local authorities. Overall, the assessment of different scenarios integrating measures on roads, railways and airports showed that, compared to 2017, the expected reduction in noise-related health issues by 2030 ranged from 15% to 45%, with the most modest reduction stemming from the implementation of a few measures linked to the specific noise limits mandatory under EU law, and the highest reduction from a combination of the first scenario

---

[2] COM(2021) 3
[3] https://ec.europa.eu/environment/air/pdf/CAO2-MAIN-final-21Dec20.pdf
[4] SWD(2021) 141
[5] https://www.eea.europa.eu/publications/environmental-noise-in-europe
[6] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009R0661
[7] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0540
[8] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0774
[9] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0598

together with stronger measures at local level. Thus, a reduction of 30% by 2030 is proposed as a realistic ambition, mainly achievable through a better implementation of relevant EU law and sound support to urban and regional zero-pollution actions on noise.

Reference year: 2017

Evidence base: EU study (2021) 'Assessment of potential health benefits of noise abatement measures in the EU'[10]

Monitoring: Update of the regular EEA assessment (latest EEA Report No 22/2019[11]) to be included in the Zero Pollution Monitoring and Outlook Framework[12]

Target 3: By 2030 the EU should reduce by 25% the EU ecosystems where air pollution threatens biodiversity

Basis: National Emission reduction Commitments Directive (EU) 2016/2284

Description: The Second Clean Air Outlook and its underpinning study calculated that, based on the full implementation of all measures announced by Member States in their first National Air Pollution Control Programmes (Article 6 of Directive (EU) 2016/2284), a reduction of 20% of the ecosystem areas measured as areas above 'critical loads' of nitrogen deposition can be achieved by 2030 compared to 2005.

These estimates do not take into account the additional measures needed to achieve the 50% reduction of nutrient losses as set out in both the Farm to Fork and the Biodiversity Strategies and the nature restoration targets set out in the 2030 Biodiversity Strategy. Thus, a reduction of 25% compared to 2005 is proposed as a realistic ambition, achievable through the implementation of the measures already announced by the Member States in their first National Air Pollution Control Programmes in combination with the implementation of the additional measures needed to achieve the targets set in the Farm to Fork and Biodiversity Strategies.

Reference year: 2005

Evidence base: Second Clean Air Outlook[13] and underpinning study (in particular Table 3.12)[14]

Monitoring: Update of the Clean Air Outlook through the Zero Pollution Monitoring and Outlook Framework[15]

Target 4: By 2030 the EU should reduce by 50% nutrient losses, the use and risk of chemical pesticides and the use of the more hazardous ones, and the sale of antimicrobials for farmed animals and in aquaculture

Basis: The Biodiversity[16] and Farm to Fork[17] Strategies set out the following targets:

- "50% reduction of nutrient losses by 2030. The target shall ensure that there is no deterioration in soil fertility and will lead to 20% reduction of the use of fertilisers."

[10] ISBN 978-92-76-30696-2, DOI: 10.2779/24566
[11] https://www.eea.europa.eu/publications/environmental-noise-in-europe
[12] SWD(2021) 141
[13] COM(2021) 3
[14] https://ec.europa.eu/environment/air/pdf/CAO2-MAIN-final-21Dec20.pdf
[15] SWD(2021) 141
[16] COM(2020) 380
[17] COM(2020) 381

- "By 2030, 50% reduction of the overall use and risk of chemical pesticides and 50% reduction of the use of more hazardous pesticides."
- "50% reduction of overall EU sales of antimicrobials for farmed animals and in aquaculture by 2030."

Description:

Nutrients: This target will be achieved by implementing and enforcing the relevant environmental and climate legislation in full, identifying with Member States the nutrient load reductions needed to achieve these goals, applying balanced fertilisation and sustainable nutrient management, stimulating the markets for recovered nutrients and by managing nitrogen and phosphorus better throughout their lifecycle.

Pesticides: This target will be achieved in a number of steps, in particular, the revision of the Sustainable Use of Pesticides Directive, proposals for stricter provisions on integrated pest management (IPM) and promotion of a greater use of safe alternative ways of protecting harvests from pests and diseases. The target includes 50% reduction of three aspects, the use of chemical pesticides, the use of the most hazardous pesticides and the risk that the use causes.

Antimicrobials: The new Regulations on veterinary medicinal products and medicated feed provide for a wide range of measures to help achieve this objective and promote 'one health'.

Reference year: Compared to 2012-2015 (nutrients), 2011-2017 (pesticides) and 2018 (antimicrobials)

Evidence base: Biodiversity and Farm to Fork Strategies, annex I to the Recommendations to the Member States as regards their Strategic Plans for the Common Agricultural Policy[18]

Monitoring: Indicators for the quantified Green Deal targets[19] to be included in the Zero Pollution Monitoring and Outlook Framework[20]

Target 5: By 2030 the EU should reduce by 50% plastic litter at sea and by 30% micro-plastics released into the environment

Basis: Directive on the reduction of the impact of certain plastic products on the environment (EU) 2019/904 ('Single Use Plastics Directive') and Marine Strategy Framework Directive 2008/56/EC, Chemicals' legislation (REACH)

Description:

Plastic litter at sea: Reaching the target of 50% reduction by 2030 would include consumption changes triggered by the sound implementation of existing (mainly the Waste Framework Directive) and new (mainly the Single Use Plastic Directive) EU law. Monitoring beach litter quantities, as required by the Marine Strategy Framework Directive, will be used as a proxy to track progress. Hence, this target will be achieved through the combination of the measures foreseen to reduce plastics use and waste and to foster a cleaner and more circular economy.

Microplastics: According to a 2018 Commission study[21], a 30% reduction by 2035 of micro-plastic emissions onto surface waters is feasible, provided that a combination of measures to

[18] COM(2020) 846, Annex 1
[19] COM(2020) 846, Annex 1
[20] SWD(2021) 141

tackle them from pellets, tyres and textiles is implemented. Moreover, the European Chemicals Agency (ECHA) analysed that, if appropriate prevention measures under the REACH Regulation are applied to the use of micro-plastics intentionally put in products (e.g. cosmetics, detergents), a 60% reduction in micro-plastic emissions over the next 20 years is feasible too. Thus, a 30% reduction by 2030 is proposed as a realistic ambition, mainly achievable through a sound implementation of the 2020 Circular Economy Action Plan.

Reference year: 2016

Evidence base: Impact Assessment[22] for the Proposal of (now) Directive (EU) 2019/904 (plastic litter) and reports from the European Chemicals Agency (microplastics)[23] as well as underpinning studies[24] for the impact assessment for the Single Use Plastics Directive

Monitoring: The Marine Strategy Framework Directive (MSFD) requires regular monitoring of beach litter quantities by the Member States. On this basis the "EU Marine Beach Litter Baselines"[25] was produced. MSFD monitoring (supported by EMODNET[26]) will be included in the Zero Pollution Monitoring and Outlook Framework[27].

Target 6: By 2030 the EU should reduce significantly total waste generation and by 50% residual municipal waste

Basis: Circular Economy Action Plan[28] and Waste Framework Directive 2008/98/EC

Description: Aspirational target on the generation of total waste and residual municipal waste per capita within the EU which have been steadily increasing since 2014. The Commission intends to reinforce the waste hierarchy set out in Article 4 of Directive 2008/98/EC, which mandates the prioritization of waste prevention, by proposing waste reduction targets and other waste prevention measures in the context of the review of Directive 2008/98/EC, planned for 2023.

Reference year: To be defined

Evidence base: Eurostat database on waste[29], EEA reports on the Waste Prevention Programmes[30] and data on re-use provided by Member States in accordance with Article 37(3) of the Waste Framework Directive

Monitoring: Indicators under and Eurostat database on waste[31] and the Circular Economy Monitoring Framework[32] to be included in the Zero Pollution Monitoring and Outlook Framework[33]

---

[21] https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/microplastics_final_report_v5_full.pdf
[22] SWD/2018/254
[23] https://echa.europa.eu/hot-topics/microplastics
[24] https://ec.europa.eu/environment/pdf/waste/Study_sups.pdf; https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/microplastics_final_report_v5_full.pdf
[25] https://mcc.jrc.ec.europa.eu/main/dev.py?N=41&O=452
[26] The European Marine Observation and Data Network, for more details, see SWD(2021) 141
[27] SWD(2021) 141
[28] COM(2020) 98
[29] https://ec.europa.eu/eurostat/web/waste/data/database
[30] https://www.eea.europa.eu/themes/waste/waste-prevention
[31] https://ec.europa.eu/eurostat/web/waste/data/database
[32] SWD(2018) 29
[33] SWD(2021) 141