29/03/2019

National Air Pollution Control Programme, 2019, Finland

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Information required for reporting on the national air pollution control programme (Finland) pursuant to Article 6 of Directive (EU) 2016/2284

COMMISSION IMPLEMENTING DECISION (EU) 2018/1522 of 11 October 2018 laying down a common format for national air pollution control programmes under Directive (EU) 2016/2284 of the European Parliament and of the Council on the reduction of national emissions of certain atmospheric pollutants – Annex

All fields in this common format that are marked (M) are mandatory and those marked (O) are optional.

2.1 Title of the programme, contact information and websites

2.1.1 Title of the programme, contact information and websites (M)

Title of the programme	Kansallinen ilmansuojeluohjelma 2030 (National Air Pollution Control Programme 2030)
Date	21 March 2019
Member State	Finland
Name of competent authority responsible for drawing up the programme	Ministry of the Environment
Telephone number of responsible service	+358 295 250300
Email address of responsible service	kirjaamo@ym.fi sirpa.salo-asikainen@ym.fi, kimmo.silvo@ymparisto.fi
Link to website where the programme is published	http://urn.fi/URN:ISBN:978-952-361-008-8 The English version of the NAPCP will be published by May 2019. http://www.ym.fi/fi-FI/Ymparisto/Ilmasto_ja_ilma/Kansallisella_ilmansuojeluohjelmalla_vuo(49594)
Link(s) to website(s) on the consultation(s) on the programme	https://www.ym.fi/fi-FI/Ajankohtaista/Tapahtumat/Kuulemistilaisuus_kansallisen_ilmansuoje(47839)

2.2 Executive summary (O)

Executive summary (pp. 9–14) in Kansallinen ilmansuojeluohjelma 2030. Ympäristöministeriön julkaisuja 2019:7. http://urn.fi/URN:ISBN:978-952-361-008-8

2.3 The national air quality and pollution policy framework

2.3.1 Policy priorities and their relationship to priorities set in other relevant policy areas

The national emission reduction commitments compared with base year 2005 (in %) (M)	SO_2	NO_x	NMVOC	NH_3	PM2.5
2020-2029 (M)	30	35	35	20	30
From 2030 (M)	34	47	48	20	34
The air quality priorities: national policy priorities related to EU or national air quality objectives (incl. limit values and target values, and exposure concentration obligations) (M) *Reference can also be made to air quality objectives recommended by the WHO.*	Implementation of the European Union's air quality legislation (Government Decree on air quality 79/2017 (*Valtioneuvoston asetus ilmanlaadusta*), Government Decree on arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air 113/2017 (*Valtioneuvoston asetus ilmassa olevasta arseenista, kadmiumista, elohopeasta, nikkelistä ja polysyklisistä aromaattisista hiilivedyistä*), Government Decree on Limiting Emissions from Large Combustion Plants 936/2014, Government Decree on Environmental Protection Requirements for Medium-sized Energy Production Units 1065/2017, Government Decree on Limiting Certain Emissions from Agriculture and Horticulture 1250/2014). According to the Environmental Protection Act (527/2014), the aim for all activities shall be to achieve a level of air quality in which the quantity of hazardous or harmful substances or compounds in ambient air or atmospheric deposition is not present at a level that would cause harm to health, be detrimental to nature and how it functions, or cause a loss of general amenity of the environment. Finland aims to achieve the air quality objectives recommended by the WHO.				
Relevant climate change and energy policy priorities (M)	The Climate Change Act (609/2015)[1] provides a framework for the planning of Finland's climate change policy and the monitoring of its implementation, while concrete policy measures are defined in the National Energy and Climate Strategy for 2030[2] and the Medium-term Climate Change Policy Plan for 2030 (KAISU)[3] adopted by the Government.				
Relevant policy priorities in relevant policy areas, incl. agriculture, industry and transport (M)	Government report on the National Energy and Climate Strategy for 2030. Publications of the Ministry of Economic Affairs and Employment 12/2017. http://urn.fi/URN:ISBN:978-952-327-199-9 Government Report on Medium-term Climate Change Policy Plan for 2030 – Towards Climate-Smart Day-to-Day Living. Reports of the Ministry of the Environment 21en/2017. http://urn.fi/URN:ISBN:978-952-11-4752-4 Kävelyn ja pyöräilyn edistämisohjelma (Programme for the promotion of walking and cycling). Liikenne- ja viestintäministeriön julkaisuja 5/2018. http://urn.fi/URN:ISBN:978-952-243-549-1 Liikenteen ilmastopolitiikan työryhmän väliraportti: Hiiletön liikenne 2045 – polkuja päästöttömään tulevaisuuteen (Carbon-free transport by 2045 – Paths to an emission-free future – Interim report by the Transport Climate Policy working group). Liikenne- ja viestintäministeriön julkaisuja 9/2018. http://urn.fi/URN:ISBN:978-952-243-555-2 Action plan to reduce ammonia emissions from agriculture in Finland. Publications of the Ministry of Agriculture and Forestry 1b/2018. http://urn.fi/URN:ISBN:978-952-453-974-6				

1 Climate Change Act (609/2015)
2 National Energy and Climate Strategy for 2030
3 KAISU

2.3.2 Responsibilities attributed to national, regional and local authorities

List the relevant authorities(M)	Describe the type of authority (M)	Describe the attributed responsibilities in the areas of air quality and air pollution (M)	Source sectors under the responsibility of the authority (O)
National authorities (M)	Ministry of the Environment	Policy making Implementation Reporting Coordination	Prepares national air pollution control objectives, participates in international cooperation, and develops and prepares legislation on air pollution control and other environmental protection. National contact point for the Convention on Long-Range Transboundary Air Pollution. National coordination of the Medium-term Climate Change Policy Plan (KAISU). Property-specific energy production and use, and implementation of the Ecodesign Directive.
	Ministry of Economic Affairs and Employment	Policy making	Responsibilities within the ministry's own sector, such as the National Energy and Climate Strategy, as well as industry and energy policy measures.
	Ministry of Social Affairs and Health	Policy making	Responsibilities within the ministry's own sector, such as reducing the adverse effects of air pollutants on human health.
	Ministry of Transport and Communications	Policy making	Responsibilities within the ministry's own sector, such as transport emission reduction and transport policy measures.
	Ministry of Agriculture and Forestry	Policy making	Responsibilities within the ministry's own sector, such as reduction of ammonia emissions from agriculture.
	Ministry of Finance	Policy making	Responsibilities within the ministry's own sector, such as economic instruments relating to emission reduction, including fuel taxes and transport taxes.
	Finnish Safety and Chemicals Agency (Tukes)	Enforcement	Market surveillance of paints and varnishes that contain VOCs.
	Finnish Transport and Communications Agency (Traficom)	Enforcement	Market surveillance of combustion engines installed in mobile

			machinery.
Regional authorities (M)	Regional State Administrative Agencies (AVI)	Implementation	Grant environmental permits to plants (all the large and some of the medium-sized) falling under their competence (Environmental Protection Act 527/2014).
Regional authorities (M)	Centres for Economic Development, Transport and the Environment (ELY Centres)	Implementation Enforcement	Guide and promote air pollution control in their respective areas. Supervise environmental permits granted by the state supervisory authority (AVI). Work related to air pollution control is carried out in the context of the supervision of energy production units and industrial plants, in particular.
Local authorities (M)	Municipalities	Implementation Enforcement	Monitor air quality in agglomerations; safeguard and promote local air quality; grant environmental permits to plants (all the small and some of the medium-sized) falling under their competence; supervise the environmental permits of plants that they have granted, as well as activities subject to registration (e.g. energy production); decide on town and country planning and make decisions on transport and energy production that have a significant impact on emissions, air quality and exposure; issue environmental protection regulations to prevent environmental pollution applied to activities other than those subject to a permit or registration.

2.4 Progress made by current policies and measures (PaMs) in reducing emissions and improving air quality, and the degree of compliance with national and Union obligations, compared to 2005

2.4.1 Progress made by current PaMs in reducing emissions, and the degree of compliance with national and Union emission reduction obligations

Describe progress made by current PaMs in reducing emissions, and the degree of compliance with national and Union emission reduction legislation (M)	During the period 1980-2016, Finland's emissions into the air (NO_x, NMVOC, SO_x, NH_3, $PM_{2.5}$, PM_{10}, CH_4 and black carbon) fell significantly, mainly thanks to technological development. This reduction in emissions has been contributed to by international agreements, the implementation of EU legislation, and specific national legislation. Sulphur dioxide emission have been reduced mainly by measures in industry (desulphurisation systems, fuel quality); nitrogen oxide emissions by measures in transport (passenger car engine technology and catalytic converters), as well as in energy production and industry (combustion and deNO_x technologies); volatile organic compounds by measures in transport and industry; and particulate emissions by measures in energy production, industry (electrostatic precipitators) and transport. The development of ammonia emissions results from changes in the number of livestock and measures related to manure management.
Provide complete references (chapter and page) to publically available supporting datasets (e.g. historic emission inventory reporting) (M)	https://www.ymparisto.fi/fi-FI/Kartat_ja_tilastot/Ilman_epapuhtauksien_paastot https://www.ymparisto.fi/en-US/Maps_and_statistics/Air_pollutant_emissions
Include graphics illustrating the emission reductions per pollutant and/or per main sectors (O)	Kansallinen ilmansuojeluohjelma 2030. Ympäristöministeriön julkaisuja 2019:7. Section 3.1 http://urn.fi/URN:ISBN:978-952-361-008-8

2.4.2 Progress made by current PaMs in improving air quality, and the degree of compliance with national and Union air quality obligations

Describe progress made by current PaMs in improving air quality, and the degree of compliance with national and Union air quality obligations by, as a minimum, specifying the number of air quality zones, out of the total air quality zones, that are (non)compliant with EU air quality objectives for NO_2, PM_{10}, $PM_{2.5}$ and O_3, and any other pollutant(s) for which there are exceedances (M)	According to measurements, all air quality zones in Finland are compliant with the binding EU air quality requirements (limit values), but measures are still needed in the Helsinki metropolitan monitoring area to ensure that the air quality situation remains under control and improves. As a general rule, the ozone target values set for 2010 are not exceeded in Finland, but the long-term objectives are exceeded at rural background stations, in particular. In order to avoid adverse effects on human health, the maximum daily eight-hour mean for ozone should not exceed 120 µg/m^3. However, the daily mean is permitted to exceed this level 25 times per year. Such exceedances are recorded at rural background stations every year. However, the number of exceedances has been less than 25, and thus the target value is not exceeded.
Provide complete references (chapter and page) to publically available supporting datasets (e.g. air quality plans, source apportionment) (M)	Kansallinen ilmansuojeluohjelma 2030. Ympäristöministeriön julkaisuja 2019:7, Sections 3.2, 3.3 and 3.4 (p. 41–53) and 4.2. (p. 55–58) http://urn.fi/URN:ISBN:978-952-361-008-8 Helsingin kaupungin ilmansuojelusuunnitelma 2017–2024 (Air Quality Plan of the City of Helsinki 2017–2024). Helsingin kaupungin ympäristökeskuksen julkaisuja 11/2016. https://www.hel.fi/static/ymk/julkaisut/julkaisu-11-16.pdf
Maps or histograms illustrating the current ambient air concentrations (for at least NO_2, PM_{10}, $PM_{2.5}$ and O_3, and any other pollutant(s) that present(s) a problem) and which show, for instance, the number of zones, out of the total air quality zones, that are (non)compliant in the base year and in the reporting year (O)	
Where problems are identified in (an) air quality zone(s), describe how progress was made in reducing the maximum concentrations reported (O)	

2.4.3 Current transboundary impact of national emission sources

Where relevant, describe the current transboundary impact of domestic emission sources (M)	No significant adverse current transboundary impact of domestic emission sources has been identified.
In case quantitative data is used to describe the results of the assessment, specify data and methodologies used to conduct the above assessment (O)	

2.5 Projected further evolution assuming no change to already adopted policies and measures

2.5.1 Projected emissions and emission reductions (WM scenario)

Pollutants (M)	Total emissions (kt), consistent with inventories for year x-2 or x-3 (year to be specified) (M)				Projected % emission reduction achieved compared with 2005 (M)			National emission reduction commitment for 2020-2029 (%) (M)	National emission reduction commitment from 2030 (%) (M)
	05	**20**	**25**	**30**	**20**	**25**	**30**		
SO_2	**69.6**	**29.9**	**25.0**	**24.4**	57	64	65	30	34
NO_x	**195**	**107**	**84.2**	**76.6**	45	57	61	35	47
NMVOC	**122**	**59.7**	**57.0**	**55.7**	51	53	54	35	48
NH_3	**36.6**	**28.4**	**27.4**	**26.9**	22	25	27	20	20
$PM_{2.5}$	**27.8**	**17.7**	**16.3**	**15.7**	36	41	44	30	34
Outline the associated uncertainties for the WM projections to meet the emission reduction commitments for 2020, 2025 and 2030 onwards (O)					Only those emission sectors are included that are covered by the emission reduction commitments set in the National Emission Ceilings Directive. Some of the figures for 2005-2015 were projected when the preliminary estimates for updates in the inventory were prepared, and thus they deviate somewhat from the values reported in 2019. The use of the most recent figures would not change the conclusion that the emission reduction commitments are met under the WM scenario.				
Date of emission projections (M)					18/12/2018				

Where the projected evolution demonstrates non-attainment of the emission reduction commitments under the WM scenario, section 2.6 shall outline the additional PaMs considered in order to achieve compliance.

As the projected evolution demonstrates that emission reduction commitments are met under the WM scenario, Finland will not present or report (PaMs tool) additional PaMs under sections 2.6, 2.7 and 2.8.

2.5.2 Projected impact on improving air quality (WM scenario), including the projected degree of compliance

2.5.2.1 Qualitative description of projected improvement in air quality (M)

Provide a qualitative description of the projected improvements in air quality and projected further evolution of degree of compliance (WM scenario) with EU air quality objectives for NO_2, PM_{10}, $PM_{2.5}$ and O_3 values, and any other pollutant(s) that present(s) a problem by 2020, 2025 and 2030 (M) Provide complete references (chapter and page) to publically available supporting datasets (e.g. air quality plans, source apportionment) describing the projected improvements and further evolution of degree of compliance (M)	The impact of the National Energy and Climate Strategy and the EU's air quality policy on the disease burden and premature deaths caused by fine particulate matter in Finland has been assessed. Taking into account demographic changes, the reduction in premature deaths between 2015 and 2030 would be 10%. With respect to domestic emission sources, the majority of health benefits would be achieved by reduced exhaust emissions from transport. The adverse effects on human health caused by small-scale woodburning and street dust are estimated to remain at approximately the current level. Small-scale woodburning would thus be the most important individual factor contributing to the disease burden caused by fine particulate matter, accounting for more than 50% of all $PM_{2.5}$ emissions from domestic sources and premature deaths in 2030. Street dust would account for less than 10% of all $PM_{2.5}$ emissions in 2030. (Kansallinen ilmansuojeluohjelma 2030. Ympäristöministeriön julkaisuja 2019:7, Section 3.3.3, p. 49–50) http://urn.fi/URN:ISBN:978-952-361-008-8 In Finland, the estimated surface area of ecosystems at risk of acidification is less than 1% of the total area of ecosystems and it will be almost 0% after 2020. Eutrophying atmospheric nitrogen deposition will exceed the critical level in Finland after 2020 in less than 1% of the total area of ecosystems (Southern and Western Finland). However, the nitrogen deposition can cause a threat to biodiversity in approximately 4% of the total area of ecosystems in 2020. (Kansallinen ilmansuojeluohjelma 2030. Ympäristöministeriön julkaisuja 2019:7, Section 3.4, p. 50–53) http://urn.fi/URN:ISBN:978-952-361-008-8 In Finland, the critical levels for ground-level ozone effects on vegetation are not exceeded. However, the long-term objective set for the protection of vegetation (6,000 $\mu g/m^3 \cdot h$) is often exceeded at background stations in Southern Finland. (Kansallinen ilmansuojeluohjelma 2030. Ympäristöministeriön julkaisuja 2019:7, Section 3.4, p. 50–53) http://urn.fi/URN:ISBN:978-952-361-008-8

2.5.2.2 Quantitative description of projected improvement of air quality (O)

AAQD values	Projected number of non-compliant air quality zones				Projected number of compliant air quality zones				Total number of air quality zones			
		20	25	30		20	25	30		20	25	30
$PM_{2.5}$ (1 yr)		0	0	0		14	14	14		14	14	14
NO_2 (1 yr)		1[1)]	0	0		14	14	14		14	14	14
PM_{10} (1 yr)		0	0	0		14	14	14		14	14	14
O_3 (max 8 hr mean)												
Other (please specify)												

1) According to modelling carried out for the Air Quality Plan of the City of Helsinki, achieving a level lower than the annual limit value set for nitrogen dioxide will be possible at the most challenging site in 2024. However, no exceedances have been recorded during air quality measurements carried out at fixed measurement stations since 2015. https://www.hel.fi/static/ymk/julkaisut/julkaisu-11-16.pdf