

# Long term strategy and the potential review of Gothenburg protocol

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# Long term strategy - LTS

- Approved by the Executive body in December 2018  
<[https://www.unece.org/fileadmin/DAM/env/documents/2018/Air/EB/correct\\_numbering\\_Decision\\_2018\\_5.pdf](https://www.unece.org/fileadmin/DAM/env/documents/2018/Air/EB/correct_numbering_Decision_2018_5.pdf)>
- Sets out a vision for the Convention for the period 2020–2030.
- An important document as it in ways dictate the priorities set by parties the next 10 years.
- It presents the history of the convention, its successes and what has to be addressed in the future.
- Closely linked to the potential revision of the GP protocol



## Remaining challenges (relevant for us)

34. Reductions in the emission of acidifying pollutants, particularly sulfur, have significantly reduced the threat of acidification for sensitive terrestrial and aquatic ecosystems. However, biological recovery shows a substantial delay compared with recovery of critical chemical parameters. The input of nitrogen compounds, especially ammonia/ammonium, increasingly dominates the remaining acidification. Sulfur and nitrogen compounds still contribute significantly to corrosion of and damage to the cultural heritage with acceptable levels exceeded in some areas.

36. ... critical loads of lead and mercury are widely exceeded and the levels of unintentionally released persistent organic pollutants (uPOPs) such as polycyclic aromatic hydrocarbons (PAHs) and hexachlorobenzene are still a concern ... Air Convention will continue to play an important role pursuant to the Executive Body decision 2013/22, particularly with regard to the determination and assessment of emissions; atmospheric transport and the effects of heavy metals and persistent organic pollutants, including on health; and the technologies for abatement of heavy metal and uPOP emissions.



## Cont.

39. Air quality and effects monitoring is essential in order to verify models, detect recovery from past impacts or identify new ones, and assess the efficiency and sufficiency of further abatement. Among other things, models and assessment methods facilitate the analysis and use of monitoring results by policymakers. The Convention's monitoring, modelling and assessment system is unique worldwide and the Parties need to ensure the provision of resources for its effective long-term operation.

40. The links and feedbacks between air pollution, ecosystem biogeochemistry and biodiversity, land-use management and climate change are complex. ... In light of these interactions and given that air pollution is the central link, this is an important science-policy issue for outreach under the Convention. Further work on these interactions by the Convention's scientific bodies is a high priority.



## Strategic priorities for the convention

56. Improving the scientific and technical basis of the Convention by better assessing progress in improving air quality and reducing human health impacts and materials and ecosystem effects will help to ensure that policymaking remains evidence-based and effective. Air quality monitoring and modelling activities should be closely coordinated with health and ecosystem impact assessments with a view to a clearer understanding of the progress made and the remaining issues to be addressed.

57. The Parties should maintain or extend their monitoring networks, including ecosystem and material monitoring... every opportunity should be taken to make monitoring networks serve multiple clients (national and international) and help them to address other problems, such as climate, biodiversity and land-use management. Priority should be given to expanding effects-based monitoring to include additional types of ecosystems, including grasslands, heathlands, bogs and dunes. Cooperation with other networks such as the Long-Term Ecosystem Research Network and LifeWatch will also be important....



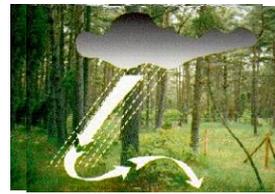
## Overarching conclusions

- Continuing to use the best available science and to further develop the multi-pollutant, multi-effect approach;
- Striving for an integrated approach to environmental policymaking that includes ground-level ozone-nitrogen-climate-biodiversity interaction; integrated nitrogen management, including its impact on health; the climate change co-benefits of air pollution policies and measures; and the impact of climate policies on air pollution.



# Potential review of the Gothenburg protocol (highlights from WGSR)

Initiate the review of the amended Gothenburg Protocol with an initial focus including but not limited to the requirements pursuant to article 10, paragraphs 3 and 4, of the Protocol, having due consideration of the list as contained in annex I, and provided that the Gothenburg Protocol as amended in 2012, has entered into force prior to that session;



# Potential review of the Gothenburg protocol (highlights from WGSR)

## Elements meant to address gaps:

- Appropriate steps towards reducing emission of black carbon, ozone precursors not yet addressed, such as methane, and emissions from shipping (with due consideration for IMO policies and measures);
- An integrated approach to addressing air pollution through a multi-pollutant, multi-effect approach, that includes the potential interaction with climate change, the nitrogen cycle and biodiversity, that can achieve multiple goals and benefits, and avoid potential unintended consequences of proposed actions for other environmental problems.



# Cont.

## Scientific and technical inputs

- Quality and consistency of inventories, and in particular black carbon emissions inventories, and condensables in PM, including emissions factors;
- Definition for black carbon;
- Additional types of non-forested terrestrial ecosystems for monitoring and modelling the effects of air pollution;
- Update of the critical loads for the analysis of the efficiency of policies;
- Effects of air pollution on biodiversity as a basis for critical levels/loads calculations;
- Metrics for assessing ozone damages on crops and ecosystems and the interactions with other pollutants and climate change;



# Cont.

## Scientific and technical inputs

- Accounting for linkages with climate change and land use in effects indicators;
- Analysis of costs and benefits, including costs of inaction;
- Further input from TFHTAP, on ozone and ozone precursors and particulate matter, including in response to questions proposed by the Working Group on Strategies and Review and recommended control strategies for further TFHTAP modeling;
- Definition of human health impact metrics;
- Trend analysis in emissions/concentrations/depositions/impacts at the multi-scale dimension, and consideration of impact of international policies on trends;
- Ways to address barriers to implementation, including for existing sources.



## Main conclusions

- The importance of the LTS is clear, and I believe we are in a good place for the future work under the convention
- We have an important role in the review of the GP protocol with our long term monitoring and expertise on ecosystem effects
- We have to give recommendations to the WGSR and EB on what they should focus on with regards to ecosystem effects
- Also, be adaptable to the requests from WGSR and EB on what they need for the future review.
- For our future WP, take into account GP protocol in our planning