

Main messages from TFIAM 51

- 1) GAINS projections 2030-2040-2050 available (see ppt CIAM). Country data still to follow. Optimised emission control scenarios will become available for EU27.
- 2) EECCA and West-Balkan projections show high pollution levels (especially in cities), but also large mitigation potentials.
- 3) Further reduction of exceedances of WHO-AQG & critical loads requires more efforts, both at international, national and local level.
- 4) Emission reduction measures are still available at international, national, and local levels. There is a large emission reduction potential for shipping (at sea and in ports).
- 5) The low-emission scenario for 2050 includes changes in the energy system and in agriculture (NH₃). This seems to be sufficient to meet >90% of the deposition targets and WHO 2021 AQG (in EU+ and West Balkan) and ~50% for EECCA and Turkey.
- 6) A preliminary consistent database for condensable PM emissions has been developed. Using this database will likely increase PM-exposure in some regions compared to exposures based on reported emissions. Further analysis of implications in relation to emission reduction obligations will have to follow.
- 7) Global methane reduction (in addition to NO_x/VOC control in UNECE) is needed to reduce groundlevel ozone in UNECE
- 8) WHO can't exclude impacts below AQGs, nor different toxicity of PM_{2.5}-subspecies, but these are still too uncertain to quantify sensitivity analyses is needed!
- 9) Several experts expressed interest to assist in the inventory of good practices on measures to stimulate behavioural change
- 10) Several experts expressed interest in further co-operation with TFHTAP and TFICAP.
- 11) Uncertainty/robustness analysis of policy advice should be addressed if a revision of the Gothenburg protocol is initiated.
- 12) TFIAM concludes that several GPG questions could be answered (though in some cases preliminary). → see following slides

GPG questions on scenarios (3.1)

1. What are the latest **emission projections**, compared with the latest GAINS-scenarios (including recent climate, energy and agricultural policies and new source legislations)? **Are emission reduction obligations adequate for meeting long term environmental and health protection targets?** What will be the outcomes for health risks from ozone and particulate matter and for nitrogen deposition in 2030 and 2050.
2. Will implementation of **MTFR** be adequate for meeting long term environmental and health protection targets of the protocol beyond 2020?
3. What would be the **optimized emission reduction obligations**, given the updated emission inventories and projections for 2030 in comparison to the emission reduction commitments in the amended Gothenburg Protocol for 2030
4. What would be the impact on emissions reductions of **climate and energy measures** in the long term (2030-2050)? What would be the impact of new policies and measures on **nitrogen** management, biodiversity, bioeconomy, etc.

GPG questions on black carbon, condensables and methane (4-6)

1. What are best available techniques to reduce **black carbon emissions**?
2. What is the contribution of **condensables** to the population exposure and total health impacts?
3. What will be the impact of the inclusion of condensables in particulate matter emissions for residential heating, national emission trends and effectivity of abatement measures?
4. What is the difference between optimized emission reduction allocations with and without particles from condensables?
5. What is the projected future trend in **methane emissions** and subsequent improvements in ozone exposure and human health and ecosystems impacts?
6. What is the contribution of existing and new climate policy on methane emissions? What are the (best) available emission abatement techniques?