

# **News from the Air Convention, other bodies, and objectives of the meeting**

TFIAM co-chairs – 6 April 2022

# Main activities under the Air Convention

1. 2009 amendment of the POP protocol entered into force on the 20th of Jan. 2022 (not Annex I and II)
2. 2012 amendment of the HM protocol entered into force on the 8th of Feb. 2022
3. Review of the Gothenburg Protocol
  - Review group (GPG) led by Kimber Scavo (US)
    - includes EMEP, WGE and Task Force co-chairs
  - Draft conclusions to be discussed at WGSR60 (10-14 April 2022)
  - Final GPG report + annexes: 9 Sept 2022
  - Input based on TFIAM/CIAM knowledge:
    - Scenarios .... With disclaimer for covid and war
    - Costs and benefits
    - Condensables → expert group
    - Methane → why and how to include in air pollution policy
4. EMEP research strategy 2022-2029 including economics
  - Behavioural and structural measures, innovation, learning, economies of scale, policy instruments
5. Outreach, launch of the Task Force on International Cooperation on Air pollution (TFICAP)

# Input to GPG based on a.o. TFIAM/CIAM knowledge

1. Answers to GPG questions, including GAINS-scenario results (2022)
  - Will critical loads and WHO-AQG levels be met with current obligations or MTR?
2. Inclusion of condensables in PM-exposure (2022-...)
3. Ammonia Assessment Report (adopted 2021)
4. Guidance document on PM/BC synergy measures (adopted 2021)
5. Cost of Inaction report (2022)
6. Guidance document on non-technical & structural measures  
(discussion note (2021 → formal guidance document 2023))
7. Document on (air-climate-nitrogen) synergies → options for methane reduction (with TFTEI and TFHTAP)

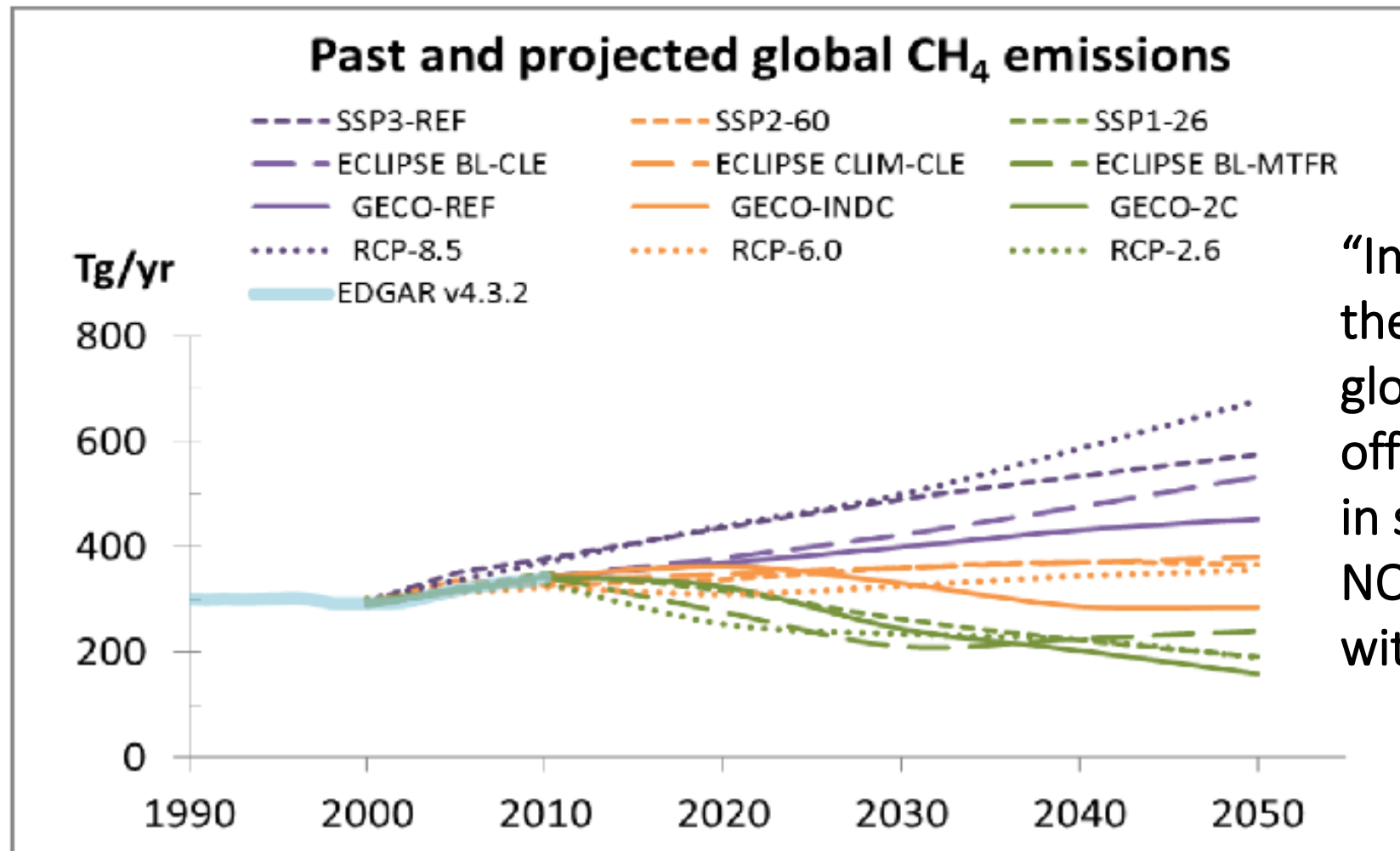
# GPG questions on scenarios (3.1)

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?

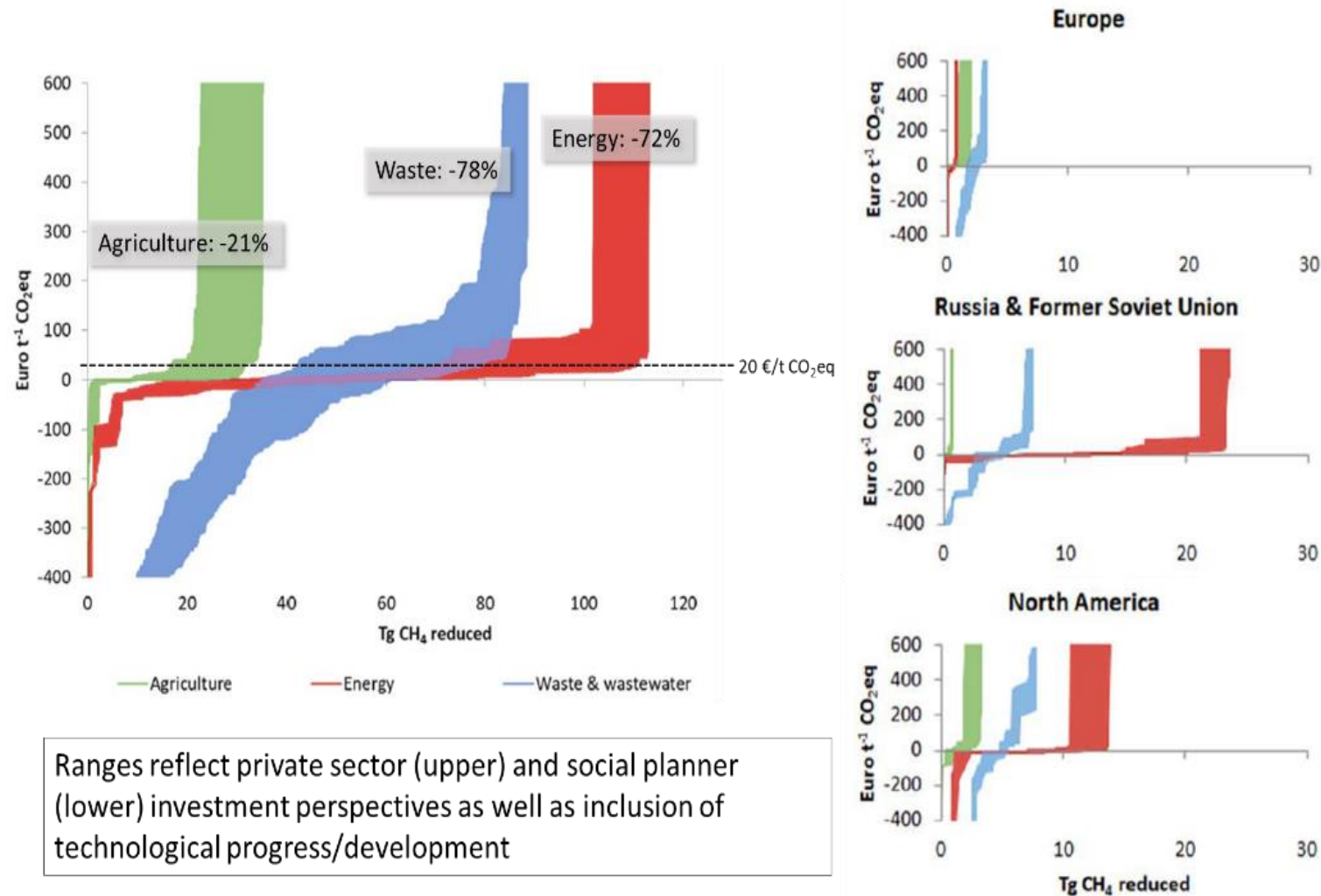
# Methane is a greenhouse gas and a precursor of surface ozone



Source: JRC elaboration of emission data

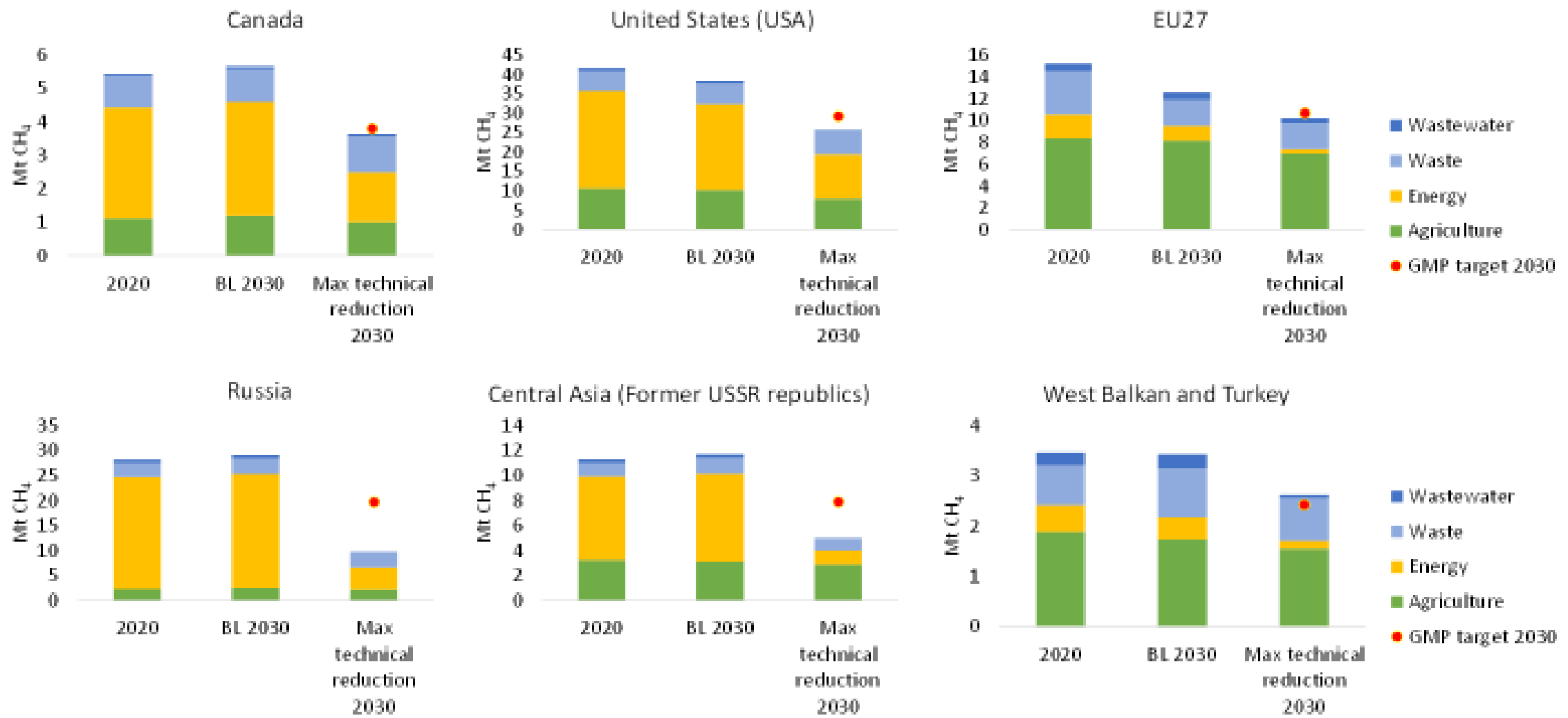
“In Europe and North America, the expected increase in global methane concentrations offsets the decreases in surface ozone due to NO<sub>x</sub> and NMVOC controls within those regions.”

# Abatement cost curves for global methane emissions (left) and for selected UNECE regions (right) for different sectors



(Höglund-Isaksson et al, 2020)

# Feasibility to meet the Global Methane Pledge in 2030 much depends on sector composition of emissions



Source: Adapted from Höglund-Isaksson et al. 2020, for *forthcoming* paper










## Synergies and trade-offs: benefits of a comprehensive approach

- A comprehensive policy approach including energy & climate, agricultural & food policies could offer more health and ecosystem benefits than with traditional air pollution measures alone
- It could also increase the cost-effectiveness and consistency of public policy
- Parties are recommended to take synergies and trade-offs into account in developing national policies

A new TFIAM 2022-2023 work plan has been adopted





# Progress of 2022-2023 WP items



 = item finished     = item under progress     = item not started     = finance/action needed for initiation

WP item	Status	Progress indicator
<u>Monitoring and modelling results</u>		
1.1.1.27	Evidence on health outcomes of exposure to air pollution	
<u>Integrated assessment tools</u>		
1.1.3.1	Scenario assessment for the AGP* review and pot. revision	
1.1.3.2	Scenario development for the pot. revision of the AGP	
1.1.3.3	Assessing observed trends in air pollution at the various scales	
1.1.3.5	Evaluation of methane mitigation measures on regional ozone	





\*Amended Gothenburg Protocol








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WP item	Status	Progress indicator
<u>Linking the scales</u>		
1.1.4.1	EPCAC activities	
1.1.4.2	Global emission scenarios (regional and sectoral)	
<u>Cooperation with other projects and bodies</u>		
1.3.1	Cooperation Helcom & OSPAR	

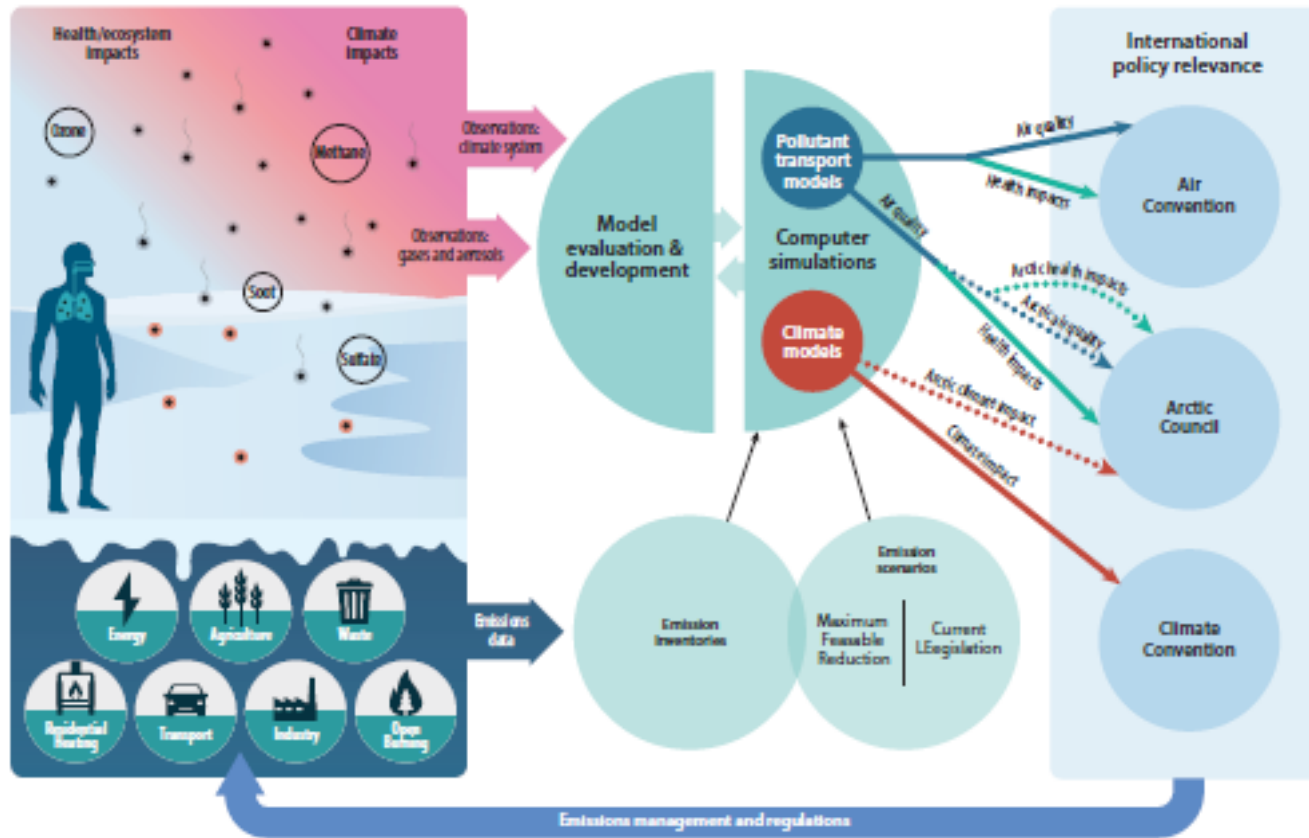
# Progress of 2022-2023 WP items

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WP item	Status	Progress indicator
<u>Exchange of information, review of protocols and strategies and policies</u>		
2.1.2	Review sufficiency and effectiveness of the AGP	
2.1.5	Demonstrate the costs of inaction on air pollution	
2.1.6	Promotion of multiscale modelling for effective measures	 
2.1.7	Discuss implications of global and regional emissions scenarios	
<u>Cooperation with other projects and bodies</u>		
2.2.3	Guidance document on non-technical and structural measures	
2.2.4	Promotion of guidance documents	

TFIAM Stock-taking during day 2

# News from other bodies – 2021 AMAP Assessment report



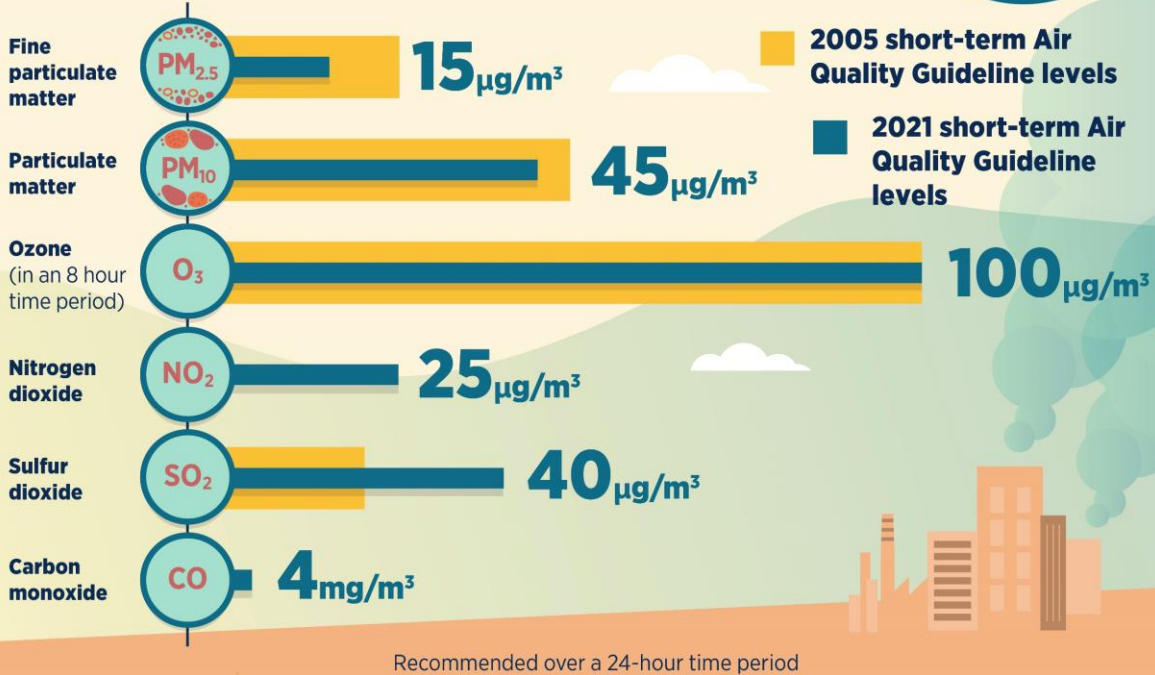
*Simplified illustration of how the key finding and recommendations in the AMAP 2021 SLCF assessment are based on a combination of data from emissions and observations; scenarios of future emissions; and model simulations to estimate impacts on air quality and the climate, and how this information can feed into policy development.*

## IMPACTS OF SHORT-LIVED CLIMATE FORCERS ON ARCTIC CLIMATE, AIR QUALITY, AND HUMAN HEALTH

SUMMARY FOR POLICY-MAKERS  
ARCTIC MONITORING & ASSESSMENT PROGRAMME

# News from other bodies – 2021 WHO guidelines

## NEW WHO AIR QUALITY GUIDELINES SET CLEAR GOALS TO HELP IMPROVE AIR QUALITY FOR ALL



WHO Air Quality Guidelines set goals to protect millions of lives from air pollution.

## SOLUTIONS

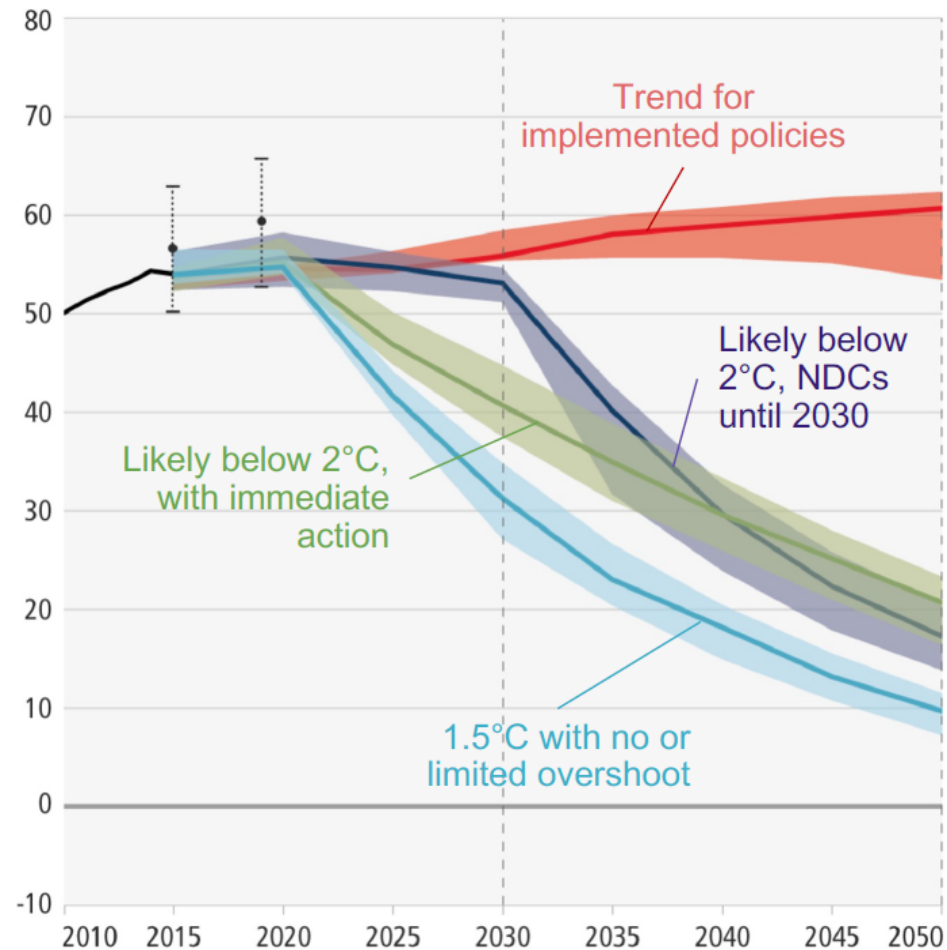


WHO Air Quality Guidelines set goals to protect millions of lives from air pollution.

# News from other bodies – IPCC assessments

## Sixth Assessment Report

WORKING GROUP III – MITIGATION OF CLIMATE CHANGE



## Limiting warming to 1.5 °C

- Global GHG emissions peak before 2025, reduced by 43% by 2030.
- Methane reduced by 34% by 2030

## Limiting warming to around 2°C

- Global GHG emissions peak before 2025, reduced by 27% by 2030.

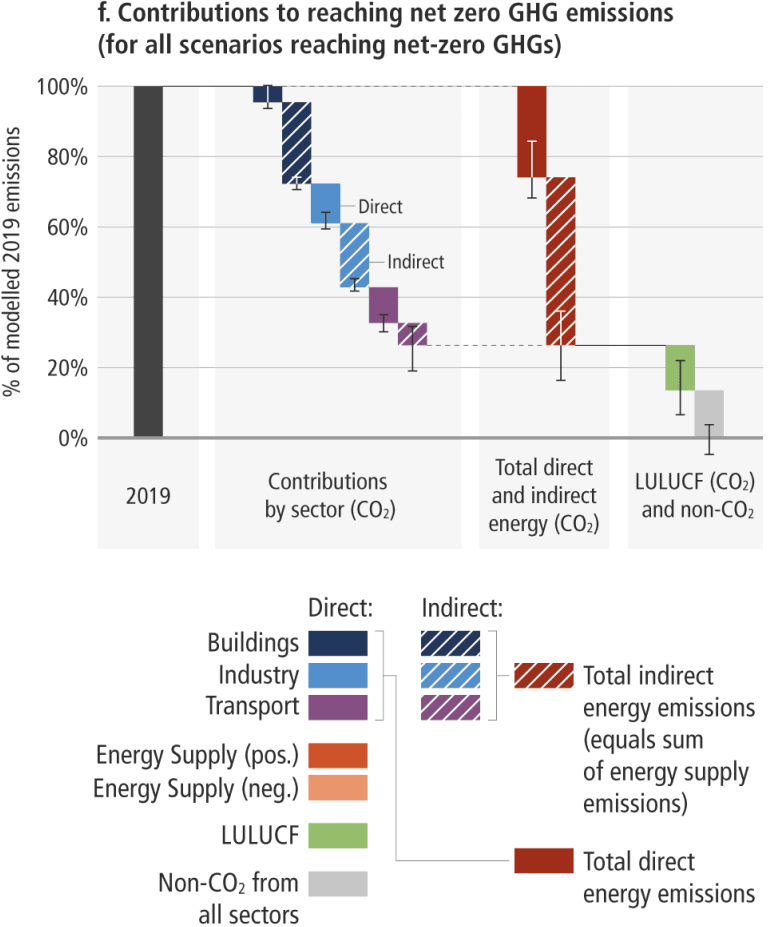
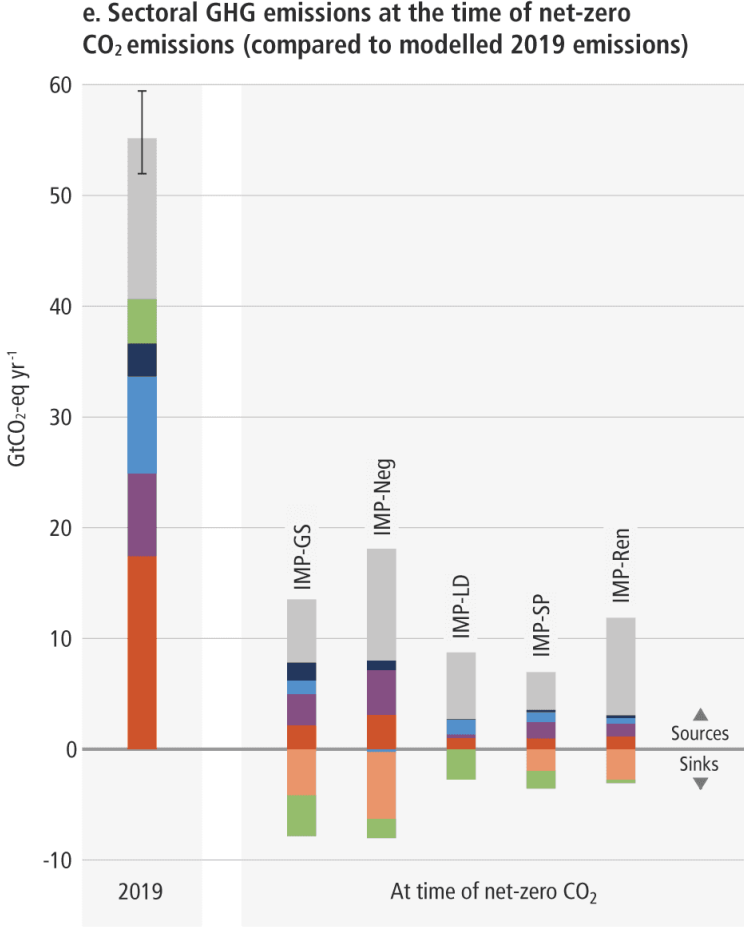
*(based on IPCC-assessed scenarios)*



# News from other bodies – IPCC assessments

Net zero CO<sub>2</sub> and net zero GHG emissions are possible through different modelled mitigation pathways.

Options are available!



# Objectives of the TFIAM 51 meeting

- 1) To assess GAINS scenarios
- 2) To assess other input to the Gothenburg Protocol review process
- 3) To exchange experiences on integrated assessment modelling
- 4) If appropriate: give additional advice to WGSR60 (next week)