

# Guidance document on health and environmental improvements

## Presented at WGSR50

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**Working Group on Strategies and Review,  
Fiftieth session, 10-14 September 2012**

**Informal document No. 4**

**Provisional Agenda Item 5**

**Draft guidance documents  
to the revised 1999 Protocol to  
Abate Acidification, Eutrophication and Ground-level Ozone**

*Summary*

The Working Group may wish to consider the latest version of this guidance document to the revised 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone adopted by the Executive Body at its thirtieth session and recommend it to the Executive Body for adoption. This document, prepared by the Working Group on Effects, had previously been submitted to the Working Group on Strategies and Review at its forty-eighth session in April 2011 and to the Executive Body at its 30th meeting in April/May 2012. It is available in English, French and Russian.



Table I.3. Relative environmental and health improvements in 2020 (Table I.2) compared to the year 2000 (Table I.1)<sup>2</sup>

Party	Mortality PM (%)	Mortality Ozone (%)	Morbidity PM and Ozone (%)	Acidification <sup>1</sup> (%)	AAE Acidification <sup>1</sup> (%)	Eutrophication (%)	AAE Eutrophication (%)	Biodiversity <sup>1</sup> (%)	Wheat yield reduction Ozone (%)	Materials Corrosion (%)	Material Soiling (%)
Austria	51	35	48	100	100	27	71	91	44	95	
Belgium	48	13	45	53	83	15	62	37	24	20	
Bulgaria	51	23	46	n/a	n/a	37	75	n/a	28	94	
Cyprus	18	13	17	n/a	n/a	0	-1	n/a	13		
Czech Republic	49	33	47	44	77	0	41	83	46	57	
Denmark	46	13	42	87	97	0	50	29	37	99	
Estonia	37	10	34	n/a	100	59	76	n/a	37	100	
Finland	30	0	27	67	85	48	72	n/a	34	0	
France	53	30	49	77	86	11	56	90	36	87	
Germany	49	30	47	69	87	28	59	47	39	56	
Greece	50	16	41	100	99	2	36	n/a	26	89	
Hungary	49	31	47	88	97	1	48	100	40	89	
Ireland	47	-25	39	77	92	13	47	85	28	96	
Italy	50	29	45	n/a	n/a	30	59	47	31	70	
Latvia	25	14	24	85	93	8	49	n/a	39	100	
Lithuania	34	21	32	12	66	0	28	100	39	100	
Luxembourg	51	26	49	20	79	1	43	19	33	47	
Malta	27	17	25						25	0	
Netherlands	48	19	46	11	57	9	43	36	20	0	
Poland	44	28	42	55	82	2	38	93	42	21	
Portugal	57	9	49	73	92	32	71	n/a	21	58	
Romania	51	23	46	53	83	37	75	n/a	28	94	
Slovakia	49	33	47	44	77	0	41	83	46	57	
Slovenia	46	13	42	87	97	0	50	29	37	99	
Spain	37	10	34	n/a	100	59	76	n/a	37	100	
Sweden	30	0	27	67	85	48	72	n/a	34	0	
Switzerland	53	30	49	77	86	11	56	90	36	87	
Turkey	49	30	47	69	87	28	59	47	39	56	
Ukraine	50	16	41	100	99	2	36	n/a	26	89	
United Kingdom	49	31	47	88	97	1	48	100	40	89	
Yugoslavia	47	-25	39	77	92	13	47	85	28	96	

## Current indicators (WGSR agreed)

- Mortality PM (average months lost per person) (EMEP-WGE/TFH)
- Mortality Ozone (cases. yr-1 per million people) (EMEP-WGE/TFH)
- Morbidity PM and Ozone (cases.yr-1 per million people (EMEP-WGE/TFH)
- Acidification (% area at risk) (EMEP-WGE/ICP-M&M)
- AAE Acidification (mol H+.ha-1.yr-1) (EMEP-WGE/ICP-M&M)
- Eutrophication (% area at risk) (EMEP-WGE/ICP-M&M)
- AAE Eutrophication (mol N.ha-1.yr-1) (EMEP-WGE/ICP/M&M)
- Biodiversity (%) (EMEP-WGE/ICP/M&M)
- Wheat yield reduction Ozone (%) (EMEP-WGE/ICP/V)
- Materials Corrosion (% area of country at significant risk)  
(EMEP-WGE/ICP/M)
- Materials Soiling (% area of country at significant risk )  
(EMEP-WGE/ICP/M)

## WGSR requests revised Tables, requiring inclusion of this task in EMEP and WGE workplans !

- Base year: 2005
- Target year: GP2020
- Env. Improvements GP2020 vrs 2005
- Deadline preferably EB2012, but the WGSR proposes 2013 workplan as alternative.

# Final remarks

- The ‘old’ EMEP model should be used to generate deposition and concentrations for 2005 and GP2020, to ensure consistency with results of earlier scenarios,
- The circulation of IIASA emissions for 2005 and GP2020 to CCE and EMEP-MSC/W, for ICP-M&M, ICP-M and ICP-V simulations of guidance document indicators, can follow the logistics used to compile indicators of the WGE “impact report” and “guidance document” in 2011. However, this involves a number of steps and varying computation requirements as well as resources,
- Considering the above, it may not be realistic to expect a final result before December 2012 (EB meeting), although an effort should be made to that effect.