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## Economic Commission for Europe

Executive Body for the Convention on Long-range  
Transboundary Air Pollution

**Steering Body to the Cooperative Programme for  
Monitoring and Evaluation of the Long-range  
Transmission of Air Pollutants in Europe (EMEP)**

### **Thirty-fifth session**

Geneva, 5–7 September 2011

Item 6 (b) of the provisional agenda

**Progress in activities in 2011 and future work:  
integrated assessment modelling**

### **Working Group on Strategies and Review**

### **Forty-ninth session**

Geneva, 12–16 September 2011

Item 3 (a) of the provisional agenda

**Options for revising the annexes to the Gothenburg Protocol  
to Abate Acidification, Eutrophication and Ground-level  
Ozone: annex II**

## **Integrated assessment modelling**

### **Report by the co-Chairs of the Task Force on Integrated Assessment Modelling**

#### **I. Introductory remarks**

1. This report describes progress in the activities of the Task Force on Integrated Assessment Modelling, including the results of its thirty-ninth and fortieth meetings held on 23–25 February 2011 in Stockholm and on 18–20 May 2011 in Oslo, respectively. The main conclusions of the workshop on uncertainty treatment held on 3 and 4 November 2010 in Laxenburg, Austria, are presented in annex I. The main conclusions of the meeting

of the Network of Experts on Benefits and Economic Instruments held on 18 May 2011 in Oslo are presented in annex II.<sup>1</sup>

## **A. Attendance**

2. Around 70 experts participated in the two meetings of the Task Force. A number of experts participated via a Skype connection. The availability of Russian translation during the Task Force meetings ensured a more effective participation from experts from the Russian Federation, Ukraine, Belarus and the Republic of Moldova.

## **B. Organization of work**

3. Ms. A. Engleryd (Sweden) and Mr. R. Maas (Netherlands) chaired the Task Force meetings.

4. The Task Force stressed the need to avoid duplication of the work on integrated assessment activities undertaken by the Task Force on Hemispheric Air Pollution, and offered to cooperate to that end.

5. The Task Force expressed its concern about a potential additional reduction in translation and interpretation capacity. It suggested that Parties explore possibilities for funding the translation of documents into Russian.

## **II. Objectives**

6. At the forty-seventh session of the Working Group on Strategies and Review various options for target setting were presented. The Working Group requested the Task Force on Integrated Assessment Modelling to explore the costs and impacts of various ambition levels following a hybrid combination of European-wide health-related gap-closure targets and equal ecosystem improvements across countries. Furthermore, at its forty-eighth session the Working Group requested the Task Force to explore the attainability of PRIMES<sup>2</sup>-based optimized ambition levels when using national data. It also requested it to assess the costs and impacts of a limited set of key technical measures.

7. The Task Force discussed progress on the ex post analysis of impacts with the Working Group on Effects, the methodology of benefit estimation, modelling of short-lived climate forcers, uncertainty management and flexibility in compliance. National experiences in integrated assessment modelling were also exchanged.

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<sup>1</sup> Presentations made during the meetings and extended chair's reports are available at: <http://gains.iiasa.ac.at/index.php/tfiam/past-tfiam-meetings>.

<sup>2</sup> As a partial equilibrium model for the European Union energy markets, PRIMES is used for forecasting, scenario construction and policy impact analysis up to the year 2030. For more information, see <http://ec.europa.eu/environment/air/pollutants/models/primes.htm>.

### III. Progress in the work of the Task Force

#### A. Options for targets in a revised Gothenburg Protocol

8. At the thirty-ninth meeting of the Task Force the head of the Centre for Integrated Assessment Modelling (CIAM) presented the technological scope for additional environmental improvement and a number of variants for achievable environmental targets between current legislation and maximum technically feasible reductions. In total, around 4,000 variants and sensitivity runs had been analysed (see CIAM-report 1/2011, available at <http://gains.iiasa.ac.at/images/stories/meetings/TFIAM39/CIAM2011-1-v3.pdf>). The report described a selection of options. New information on measures had been supplied for ammonia, with new cost data and their applicability. Measures for small farms had been excluded. Overall costs now would be lower, with the same potential for emission reduction.

9. The mid-ambition scenario aimed at a 50% gap closure (between baseline and maximum technically feasible reductions) for the years of life lost due to exposure to particulate matter, using the European-wide optimization as described in option 4 of CIAM report 1/2010, which had been presented at the thirty-eighth meeting of the Task Force. That mid-ambition scenario had been combined with a 50% gap closure of the accumulated exceedance of critical loads for acidification for all ecosystems, a 60% gap closure for eutrophication and a 40% gap closure for the sum of eight-hour mean ozone concentration levels exceeding 35 ppb. For those end-points a country-specific gap closure approach had been applied, as described in option 3 of CIAM report 1/2010.

10. Costs were most sensitive for the gap closure ambition for ozone. Around the mid-ambition case a number of scenarios with higher and lower ambitions had been developed. All scenarios implied higher per capita costs beyond the baseline for non-European Union countries than for European Union (EU) countries, but no country would experience cost increases exceeding 0.6 % of gross domestic product (GDP). Calculations were based on a coherent scenario that included climate and energy policies and the effects of the economic crisis (PRIMES-2009). Sensitivity analysis showed for some specific countries and pollutants a disagreement between the PRIMES scenario and the national scenarios on the scope for emission reductions.

Table 1  
Gap closure ambition levels, costs and impacts for various scenarios, 2020, Europe<sup>3</sup>

	2000	2020 BL	LOW	Low*	Mid	High*	HIGH	MTFR
<b>Ambition: gap closure % from BL 2020</b>								
<i>Impacts</i>								
Health — PM		0	25	25	50	75	75	100
Acidification		0	25	25	50	75	75	100
Eutrophication		0	25	50	60	75	75	100
Ozone		0	25	25	40	50	75	100
<b>Additional cost above BL 2020</b>								
<i>Costs</i>								
Million €/year		0	610	905	2 262	5 380	10 752	69 155
% of GDP		0	0.00	0.01	0.01	0.03	0.07	0.45

<sup>3</sup> Total costs of implementing the baseline measures are estimated to be around €100,000 million.

	2000	2020 BL	LOW	Low*	Mid	High*	HIGH	MTFR
<b>Resulting changes from 2000</b>								
<i>Emission reduction %</i>								
Sulphur dioxide (SO <sub>2</sub> )		60	63	62	68	79	77	83
Nitrogen oxides (NO <sub>x</sub> )		48	51	51	54	56	60	62
Fine particulate matter ( PM <sub>2.5</sub> )		22	39	35	50	58	57	71
Ammonia (NH <sub>3</sub> )		6	15	25	27	33	30	40
Volatile organic compounds (VOCs)		41	46	45	47	48	52	60
<i>Reduced impacts %</i>								
Loss in life expectancy		43	51	51	57	63	63	69
Acidification		69	74	76	80	85	84	89
Eutrophication		29	36	42	45	50	50	57
Premature deaths ozone		32	34	34	35	36	39	42

Note: BL = Baseline; MTFR = Maximum technically feasible emission reductions; PM = particulate matter.

Table 2  
Gap closure ambition levels, costs and impacts for various scenarios, 2020, EU-27<sup>4,5</sup>

	2000	2020 BL	LOW	Low*	Mid	High*	HIGH	MTFR	TSAP
<b>Additional costs above BL 2020</b>									
<i>Costs</i>									
Million €/year		0	245	319	864	2 288	3 807	49 117	1 501
% of GDP		0	0.00	0.00	0.01	0.02	0.05	0.65	0.01
<b>Resulting changes from 2000</b>									
<i>Emission reduction %</i>									
SO <sub>2</sub>		74	75	74	76	80	79	83	76
NO <sub>x</sub>		55	57	58	59	60	62	64	58
PM <sub>2.5</sub>		39	46	45	48	52	52	67	46
NH <sub>3</sub>		9	18	27	30	35	32	41	25
VOCs		46	49	49	50	51	55	63	46
<i>Reduced impacts %</i>									
Loss in life expectancy		52	56	56	59	63	63	69	56
Acidification		70	74	76	80	84	84	88	77
Eutrophication		21	28	34	37	42	42	50	31
Premature deaths ozone		34	37	37	38	39	41	44	35

Note: BL = Baseline; MTFR = Maximum technically feasible emission reductions; TSAP = Thematic Strategy on Air Pollution.

<sup>4</sup> Total costs of implementing the baseline measures are estimated to be around €100,000 million.

<sup>5</sup> EU-27 stands for the 27 member States of the European Union.

## B. Further analysis of ambition targets

11. At the fortieth meeting of the Task Force, the head of CIAM presented the identification of key technical measures with respect to emission reductions and environmental impacts. That information could be used to simplify the technical annexes to a revised protocol.

12. When identifying key measures, CIAM ranked emission abatement technologies from the cost-optimized mid scenario with respect to the total emission reduction for each technology. A subset was then created by identifying which of those technologies would be needed to reach the Low\*-ambition level. That analysis resulted in a list of 15 key measures (see table 3). However, increased simplicity would imply reduced cost effectiveness. Implementation of the 15 key measures in all countries would, however, increase the costs of the Low\*-scenario by ~ 80%, but also offer ~ 5% additional health protection.

Table 3

**Smallest set of measures and target areas to achieve the emission reductions of the Low\* scenario in the EMEP<sup>6</sup> region<sup>7</sup>**

SO <sub>2</sub>	Desulphurization of new hard coal power plants
NO <sub>x</sub>	Retrofitting low-NO <sub>x</sub> burners at existing gas power plants Low-NO <sub>x</sub> burners for gas in industry Low-NO <sub>x</sub> burners for refineries Cement and lime production
PM <sub>2.5</sub>	Ban of open burning of agricultural waste Steel production, basic oxygen
NH <sub>3</sub>	Urea substitution Pigs — liquid and solid slurry systems Dairy cows — liquid and solid slurry systems Other cattle — liquid slurry systems Laying hens and other poultry
VOC	Industrial solvents use Other industrial VOC sources Industrial use of adhesives

13. Enforcement of these key measures does not automatically define the national emission ceilings, but only the part of the national emission ceilings that is supported by European-wide measures. Additional national measures would be needed in, e.g., densely populated countries.

<sup>6</sup> Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP).

<sup>7</sup> All these measures were calculated in addition to the current legislation in each country.

14. The Task Force requested CIAM to forward the above information to the Working Group on Strategies and Review, and also to supply additional information on the costs and impacts for individual countries. CIAM agreed to make that information available on its website and would welcome comments and additional national data before 30 June 2011. CIAM would finalize a new report (3/2011) before the end of July 2011.

15. A substantial part of the fortieth meeting was devoted to the assessment of the attainability of emission-reduction ambition levels when based on national data (see table 4). The analysis was limited to the technical attainability, not considering political preferences or positions or other non-technical barriers to the implementation of measures. Some countries also reported on the differences in cost estimates compared with the Greenhouse Gas and Air pollution Interactions and Synergies (GAINS) model results. General elements in the discussion were:

(a) For several countries differences remained with the PRIMES baseline when examined at a disaggregated level. Although PRIMES offered consistent scenarios for all parties, ultimately compliance would be based on national inventories and such inventories would in most cases be closer to the national estimations and forecasts than the PRIMES ones;

(b) With regard to the agricultural sector, some countries questioned the national applicability of available abatement measures, although they were considered to be cost-effective; and

(c) Uncertainties in PM<sub>2.5</sub> and VOC emission inventories made a judgement on the attainability of national ceilings difficult for many countries. The use in the transport sector of higher national emission factors than the COPERT<sup>8</sup> data used in GAINS was in some countries leading to higher national baseline emission projections for NO<sub>x</sub>. Moreover, new sources such as NO<sub>x</sub> emissions from agricultural soils and VOC emissions from crops were not included in GAINS, but it was expected that an increasing number of Parties to the Convention on Long-range Transboundary Air Pollution (Air Convention) would report such emissions in their national emission inventories in the future. These points emphasized the need for mechanisms to address uncertainties in the process and for introducing flexibility in compliance checking.

16. The Task Force concluded that even though the scenarios reported in CIAM report 1/2011 differed from national scenarios and estimates, the fact that those scenarios were coherent, consistent and available for in-depth analysis by all Parties made them suitable as a starting point for discussions on burden sharing. The Working Group was recommended to take the remaining differences between GAINS and national perspectives into account in its deliberations, as further efforts in improving the data would probably not change the political willingness to take action.

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<sup>8</sup> COPERT is a software tool used world-wide to calculate air pollutant and greenhouse gas emissions from road transport. The development of COPERT is coordinated by the [European Environment Agency \(EEA\)](#),

Table 4  
Technical attainability of ambition levels, based on national data

Country	SO <sub>2</sub>	NO <sub>x</sub>	PM <sub>2.5</sub>	NH <sub>3</sub>	VOC
Belarus	LOW-Mid	LOW-Mid	?	LOW-Mid	LOW-Mid
Belgium <sup>a</sup>	HIGH	HIGH	HIGH	HIGH	HIGH
Croatia	None	None	?	None	BL
Czech Republic	Low*	Low*	None	Low*	None
Denmark	BL	BL	HIGH	HIGH	HIGH
Finland	None	HIGH	HIGH	BL	HIGH
France <sup>a</sup>	Mid	None	LOW	LOW	Mid
Germany <sup>a</sup>	HIGH	HIGH	HIGH	LOW	FLEX
Hungary	Mid	Low*	BL	LOW	Mid
Ireland	HIGH	?	FLEX	None	FLEX
Italy <sup>a</sup>	?	?	?	?	Mid
The former Yugoslav Republic of Macedonia	None	BL	?	HIGH	None
Republic of Moldova	?	?	?	?	?
Netherlands <sup>a</sup>	Mid	Mid	Mid	Mid	BL
Norway	Mid-HIGH	Mid/FLEX	Mid	?	?
Poland	LOW	LOW	LOW	LOW-Mid	Mid-High*
Portugal	Mid	FLEX	FLEX	Mid	Mid
Russian Federation	LOW-Mid	High*	Mid	?	High*
Spain	?	?	?	?	?
Sweden	HIGH	HIGH	FLEX	Mid-HIGH	FLEX
Switzerland	Mid-High*	Mid-high*	Mid-High*	Mid	Mid-High*
United Kingdom of Great Britain and Northern Ireland	LOW	?	FLEX	?	?
<b>“Average”</b>	Mid	LOW-Mid	FLEX	LOW	FLEX

Notes: ? = no assessment; FLEX = uncertainties require flexibility in compliance; none = not even the baseline is attainable.

<sup>a</sup> Depending on the implementation of climate and energy policies.

### **C. Modelling activities in Eastern European and South-Eastern European countries**

17. Analyses from Belarus showed that attaining ambition levels for PM<sub>2.5</sub> was the most uncertain. The list of key measures was considered to be useful, but its applicability and effectiveness in real life could vary from pollutant to pollutant. There were differences between the national estimates and the GAINS estimates for projected emission levels and abatement costs. Preliminary indications showed that with full implementation of key measures and current legislation, ambition levels between LOW and Mid scenarios would be feasible for SO<sub>2</sub>, NO<sub>x</sub>, VOC and NH<sub>3</sub>, but further analysis of the attainability of ambition levels would be made after an update of national emission scenarios.

18. In the Republic of Moldova, modelling work was in progress. National emission estimates from construction of coal-fired power plants appeared to be significantly higher than the data used in GAINS.

19. The expert from the Russian Federation reported on reforms in the State environmental management system and presented results from the Swedish-Finnish-Russian and Nordic Council of Ministers cooperation projects. The reform would include a gradual introduction of best available technologies (BAT) in industrial enterprises. After 2020, all enterprises subject to BAT would have to implement the advanced technical standards. Based on national scenarios, it was judged that with additional measures the LOW-Mid scenario would be attainable for SO<sub>2</sub>, the Mid scenario for PM<sub>2.5</sub> and the High\* scenario for NO<sub>x</sub> and VOC. For NH<sub>3</sub> the attainability was difficult to judge.

20. In the former Yugoslav Republic of Macedonia, emission inventories were in place for air pollutants and greenhouse gases, based on the *EMEP/EEA<sup>9</sup> Air Pollutant Emission Inventory Guidebook*. Emission projections for air pollutants were not available yet. The former Yugoslav Republic of Macedonia was currently preparing a new emission-reduction plan.

21. Ukraine had collected data for GAINS and presented some of the results. GAINS had been used to explore possibilities for cost reductions and to analyse the effect of ammonia emission reductions in agriculture. The need for further work was recognized, especially to compare the national data with GAINS assessments.

22. A special GAINS-modelling workshop for countries in Eastern Europe, the Caucasus and Central Asia and South-Eastern Europe would be held in Laxenburg, Austria, on 20 and 21 June 2011. It would be aimed at supporting the negotiations at the Working Group session in September 2011. The purpose was to have a common understanding of the data used in the baseline and to assess the impact of the key measures that had been identified by CIAM.

### **D. Joint scientific background report to the revised Gothenburg Protocol by the Working Group on Effects and the Task Force**

23. The Task Force discussed the outline of a scientific background report to the revised Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol) to be produced jointly with the Working Group on Effects. The plan was to deliver a report that presented scenarios and environmental impact analysis, as well as an assessment of the costs and benefits of the scenarios. The purpose of the report was to

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<sup>9</sup> European Environment Agency (EEA).

have a reference document that could be used in future reviews and implementation discussions. The following content was suggested:

- (a) Activity trends;
- (b) Key measures;
- (c) Emissions;
- (d) Air quality and deposition;
- (e) Impacts;
- (f) Costs and benefits;
- (g) Long-term prospect.

24. Emission- and impact-scenarios described in the report would cover the final protocol emissions for 2020, as well as the original baseline, the MTRF scenario and the Mid-scenario as references.

25. The goal of the impact analysis by the Working Group on Effects was to provide a more complete rationale for the policy ambition by presenting effects in indicators complementing those in the GAINS model. Biodiversity, crop losses, carbon sequestration and additional information on health risks of particulate matter and ozone were mentioned as relevant elements of such an analysis.

26. Scenario analysis using the flux-approach showed that ozone concentrations in 2020 were projected to exceed critical levels in 80% of the EMEP area where wheat was grown. For the United Kingdom, the International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops had calculated economic losses for a variety of crops (wheat, potato, oilseed rape, maize, barley, sugar beet, pea and beans, salad leaf) to be around €10 million per year.

27. The Joint World Health Organization/Air Convention Task Force on Health Aspects of Air Pollution (Task Force on Health) had found that available research confirmed the association between health indicators and black carbon exposure. However, the non-black carbon part of PM<sub>2.5</sub> still caused the major part of the health effects attributed to particulate matter. The recent CIAM report 2/2011 applied a cause-of-death-specific approach to estimate the months of life loss. That approach showed higher impacts on mortality, especially in non-EU countries, than the original all-cause mortality approach.

28. The Coordination Centre for Effects (CCE) had assessed that every step in the sequence of ambition levels BL-LOW-Mid-HIGH-MTRF led to an additional non-exceeded area of 0.5% for acidification (or 20,000 km<sup>2</sup> of ecosystem area) and 3%–4% for eutrophication (or 120,000–160,000 km<sup>2</sup>). CCE had produced maps indicating the risks of changes in biodiversity. Work was ongoing to analyse the impact of abatement strategies on the carbon sequestration in European forests.

#### **IV. Benefits and economic instruments**

29. The Network of Experts on Benefits and Economic Instruments had finalized a guidance document on economic instruments and made a preliminary analysis of the costs and benefits for the revised Gothenburg Protocol. A stakeholder survey on the future of the Network showed that there was support for its continuation. The responses also indicated that the Network should continue to have a focus on air pollution and needed to ensure relevance for countries in Eastern Europe, the Caucasus and Central Asia (see annex II). Funding was currently being explored.

30. The preliminary cost-benefit analysis for the revised Gothenburg Protocol showed that in all countries the additional costs of the High\* scenario over the Mid scenario, were lower than the additional benefits. For the HIGH scenario additional costs would exceed additional benefits. The Network confirmed that the key0measures approach analysed by CIAM would imply a reduction in cost-effectiveness of the policy strategy.

## **V. Further work**

31. The Task Force was provisionally planning an autumn workshop at the International Institute for Applied Systems Analysis, focusing on topics raised during the forty-eighth session of the Working Group in April 2011. The workshop could also be used to continue the preparation of the scientific background document to the revised Gothenburg Protocol. The forty-first meeting of the Task Force would be held in May 2012 at a venue still to be decided.

## Annex I

### Workshop on uncertainty treatment

1. The workshop on uncertainty treatment was held on 3 and 4 November 2011 in Laxenburg, Austria. It was organized jointly by the Task Force and the European Consortium for Modelling of Air Pollution and Climate Strategies (EC4MACS). Presentations made at the workshop are available at <http://gains.iiasa.ac.at/index.php/meetings/pastmeetings>
2. While the workshop offered a long list of uncertain elements, in general the database, the modelling framework and the methods to develop targets were considered fit for the purpose of providing robust information for air pollution abatement strategies. In particular, experts confirm their confidence about the harmful impacts of air pollution on health and ecosystems, and that there is scope for cost-effective improvements.
3. Scientific knowledge will develop further and will most likely provide new answers, but also create new questions and uncertainties. A regular review of data and knowledge was recommended. Uncertainty analysis by integrated assessment modellers could provide directions to future national and international research programmes to tackle salient sources of uncertainty.
4. Sensitivity analyses should not be done at the end of the policy process. Sufficient resources will be required to ensure that sensitivity runs accompany scenarios made during the whole process.
5. Priority should be given to analysing a broader range of baselines with time horizons extending beyond 2020, including cases with more ambitious climate policies as well as with policy failures. Furthermore, sensitivity analyses should address implications of alternative hypotheses about the toxicity of different species of particulate matter and of higher real-life emissions of vehicles.
6. Communication with decision makers will be essential for building trust in the scientific messages. This communication should include uncertainties and the possibilities for managing resulting policy risks.
7. The workshop concluded that the robustness of emission-ceilings based strategies could be enhanced by creating more flexibility in achieving the emission ceilings, including possible mechanisms to adjust for different economic developments, relative reduction targets for uncertain sources, procedures to deal with new sources and significantly revised estimates for emissions from known sources.

## Annex II

### Network of Experts on Benefits and Economic Instruments

1. The meeting of the Network of Experts on Benefits and Economic Instruments was held on 18 May 2011 in Oslo. It was attended by 41 experts from a range of countries and organizations throughout Europe.
2. Cost-benefit analysis of the revision of the Gothenburg Protocol financed by the European Commission showed that the health benefits of the LOW, Low\*, Mid and High\* scenarios presented earlier by CIAM are forecast to exceed abatement costs for a range of assumptions. The analysis did not take account of benefits for ecosystems at the present time. Supplementary assessment of health effects has been undertaken during the project, by the Institute of Occupational Medicine. This was discussed at the Task Force on Health in May 2011, and showed that the current methods are likely to underestimate the health benefits to people in the newer EU member States and the Eastern Europe, Caucasus and Central Asia subregion. This will be taken into account in the finalization of the cost-benefit report. Additional sensitivity analysis may also be carried out on the long-term effects of ozone on mortality.
3. Updates were provided on refinements to impact assessment methodologies in the areas of health and crop production, drawing on information supplied by the Task Forces on Health and International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops, respectively. A representative of the oil companies' European organization for environment, health and safety in refining and distribution (CONCAWE) presented research on an alternative approach to mortality valuation, introducing the metric of "maximal societal revenue".
4. On economic instruments, a presentation by the European Environment Agency on the revision of the Eurovignette Directive highlighted the use of estimates of external costs for setting charges for vehicles. Furthermore, a review of websites providing information on economic instruments from Ireland (see: [www.policymeasures.com](http://www.policymeasures.com)), the Organization for Economic Cooperation and Development and the European Environment Agency was presented.
5. A questionnaire was distributed to experts around Europe prior to the meeting relating to the future of the Network. There was broad agreement that the Network could perform a useful role, though clarification of its remit was necessary. Most respondents felt that it should retain strong links with the Task Force on Integrated Assessment Modelling and the Working Group on Effects. It was concluded that the meetings of the Network would be most successful if organized around these other meetings. A website should also be developed. There was little enthusiasm for extending the remit of the Network to cover other policy areas (e.g., chemicals) at this time, although this should be monitored where there was common interest. Most considered it important that the Network should extend its activities to the countries in Eastern Europe, the Caucasus and Central Asia. In line with its origins as an informal network, no formal membership was proposed, though contact points in each country and for certain organizations would be useful. Also stressed was the need to bring in stakeholder organizations such as non-governmental organizations and industry (representatives of both were present at the meeting). It was agreed to develop a workplan for the Network for the coming two years, taking account of suggestions made by those at the meeting and respondents to the questionnaire.