

Provisional agenda item 8  
Action Plan for the Implementation of the Long-term Strategy for  
the Convention

**Review of the CLRTAP organization and operational structure: subsidiary bodies, task forces and other groups**

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**I. Introduction**

1. The long-term strategy (LTS) for the Convention notes the need for the Parties to "examine critically" the Conventions work, "to formulate priorities and to confront potential difficult decisions on its future work programme and organizational structure" (para 4). The LTS indicates the strategy will base its vision on "the unique strengths of the Convention - the close links between science and policy and the ability to deal with multiple effects and pollutants" (Para 6(b)).
2. In identifying strategic priorities for the Convention, the LTS recognizes the need to regularly review priorities which may require a change in the balance of activities of the Convention; it may be necessary to scale down or even stop work where it can no longer add value, while opening up opportunities for newly relevant issues (Para 16(d)). The strategic priorities also make note of science policy links and the need for science in the evaluation and assessment of the effectiveness of policies and Protocols; science too may influence policy and the scientific programmes need to involve countries of Eastern Europe, the Caucasus and Central Asia with a view to developing, inter alia, emissions data, monitoring and modelling in that region; science is also an important element for developing outreach (para 16(h)).
3. In particular, the LTS indicates the Convention "will critically assess the current structure of its subsidiary bodies, groups and task forces, and the number and frequency of meetings, with a view to realigning the use of time and resources"; "the Parties to the Convention will seek possible ways and means to streamline and rationalize operations and to make them more transparent" (para 16(l)).
4. The Convention has existed for more than 30 years and throughout its life many activities have started and various bodies have been created or dissolved. However, science and the science-policy links have been a major success of the Convention and have frequently been cited in social science literature as a major advantage that the Convention has over a number of other environmental agreements. The last major review of the Convention's structure took place in 1999, at the time of the adoption of the Gothenburg Protocol, when major changes were made to the structure of the main subsidiary bodies. The current structure of the Convention and a brief glossary of terms are set out in annex I to this document.
5. It is now timely to reassess the organization critically to ensure it has the structure and method of working that serves present and future challenges - to identify possibilities to use resources more efficiently whilst maintaining the momentum of work in existing areas of priority. Below we consider each Convention body and explore possibilities for reorganization and redundancy at the Executive Body, working group and task force/expert group levels. We also analyse the current method of working, with regard to frequency of meetings and levels of documentation, to identify possibilities for change.
6. Recommendations are made (in italics) and options are presented where there are alternative ways forward. Timescales for change are also considered since changes may be implemented immediately or phased over time. The latter may be important when changes are significant and there is a need to ensure financial support and maintain an effective work programme.

## II. Main principles

7. This review is based on the principle that the main task under the Convention is to develop and implement protocols or other legislation, or to document, assess and improve the air pollution situation in the UNECE region by developing air pollution abatement strategies (in line with the goals of articles 2 and 3 of the Convention). The current structure of the Convention broadly reflects the various elements needed for this: a decision-making body (the Executive Body); a body to review Parties meeting their obligations under treaties (the Implementation Committee); a policy review and negotiating body (the Working Group on Strategies and Review); and scientific bodies (EMEP and the Working Group on Effects) to form the necessary basis for policy development.

8. It is further agreed that future development, assessment and revisions of protocols will continue to be science-based (the LTS notes one of the strengths of the Convention is its science base and the unique way in which science informs policy development (para. 8)); for this, it is assumed that the main current areas of science - in particular monitoring and assessment of transboundary pollution, exposure and effects and the development of related science - will continue to be core. In addition, integrated assessment (IA) should be applied for developing emission reduction strategies/commitments as well as assessing their effectiveness.

9. Thus, a basic requirement for the organization of the Convention's scientific and technical bodies, which provide the necessary information for negotiations and follow up of decisions, is the continued operation of activities that directly or indirectly provide input to IA and environmental assessment. These may be seen as three over-arching needs for support to policy development:

(a) Integrated assessments and other information in support of future strategies. The assessment of cost-effective and effects-based emission abatement strategies has, for a long time, been most important for the Convention. A large part of the research and development under the Convention has formed the basis for the work (critical loads, source-receptor modelling, gap closure principles etc.);

(b) Assessments of the outcome of protocols and control measures and identification of needs for further measures. This area is of crucial importance as a basis for future strategies. It should also encompass the identification of new effects linked to air pollution and recommendations for policy responses. The goal is to assess the effectiveness of specific protocols or a particular topic on a periodic basis (e.g. every 5 years). This is important in order to make sure that the outcome of measures is in line with what is expected from signed agreements, to report on what we achieve, and to inform policy about scientific advances and their consequences;

(c) Support to the Implementation Committee to aid assessment of Parties meeting their obligations under Protocols, e.g. detailed evaluation of emission data.

10. It is key that all Convention bodies encourage and support the more active involvement of EECCA and SEE countries, in particular to help build capacity for the ratification of protocols and the implementation of measures to meet obligations.

11. In addition, all Convention bodies should provide input to other strategic priorities identified in the LTS, in particular:

(a) Co-benefits in combating air pollution and climate change (including short-lived climate pollutant or SLCPs);

(b) Intercontinental transport of air pollution;

(c) Tackling both biodiversity loss as well as studying nitrogen pollution in general;

(d) Enhanced outreach to extend the work of the Convention beyond the region.

12. An important aspect of the Convention is its effective relationship with its Parties. The Convention and its subsidiary bodies can contribute substantially to Parties' increased understanding of air pollution problems and the need for emission controls and implementation of agreed control measures. In addition, the contributions made by Parties are necessary for the success of the Convention. For example, lead countries for task forces provide financial, technical and organizational leadership of the scientific and technical work, but all Parties need to honour their obligations to submit required data and share information if the Convention's scientific and technical work is to be a success.

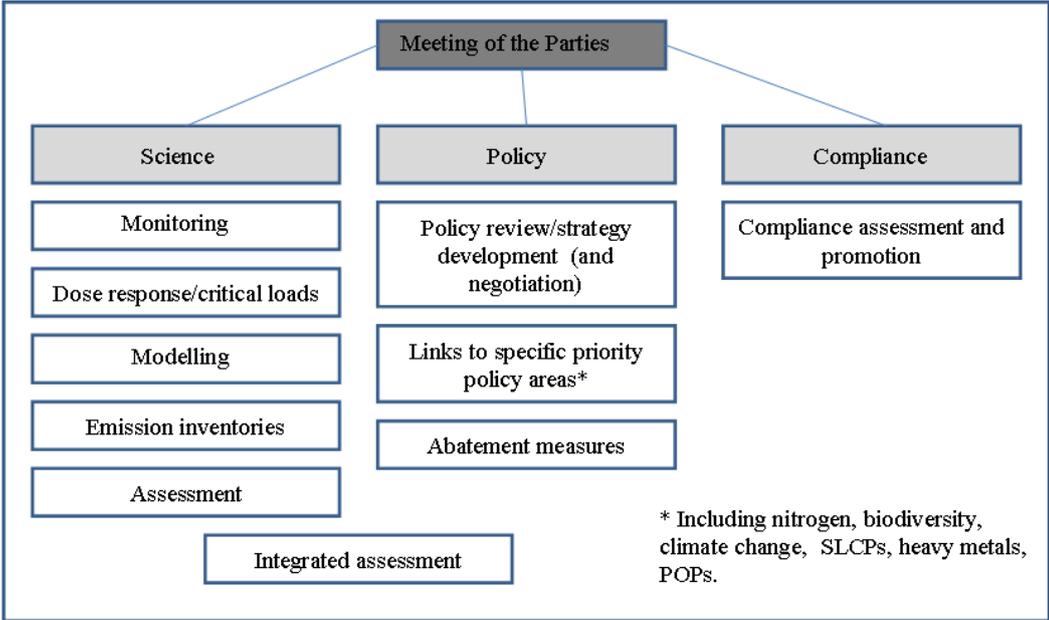
*It is assumed, therefore, that the national efforts of the Parties will be increasingly important to ensure shared responsibility for the Convention's future success (see annex II, figure 2). It will be important to recognize and further develop Parties' efforts, including national reports that EMEP and some ICPs have produced in recent years, annual submissions of monitoring and emission data, as well as responses to data calls according to the Protocols' reporting requirements. It is recommended that the Executive Body encourages further development of national reports which could involve inviting the scientific bodies to plan future collations of national assessment reports in parallel with the bodies' own assessment reporting.*

### **III. The "needs" of the Convention and its Parties**

13. Taking note of the LTS and the above principles, it is possible to seek an answer to the question "What does the Convention need from its subsidiary bodies to achieve its objectives under the LTS." For this, *the Convention's "needs" can be summarized in a structure under the Executive Body that reflects the necessary activities of the subsidiary bodies (Figure 1).* There are some issues such as outreach and communications that are activities of all subsidiary bodies. Such a structure highlights the three main elements of work: science - currently led by the EMEP Steering Body and the Working Group on Effects; and policy and compliance - led by the Working Group on Strategies and Review and the Implementation Committee, respectively.

14. Most of the existing Convention activities and Convention bodies fall mostly under one of the three main headings. However, many activities are linked to both science and policy (e.g. critical loads), some are broad issues with science and policy elements (e.g. reactive nitrogen), and some are major drivers of science and policy (e.g. integrated assessment).

Figure 1. The needs of the Convention and its Parties



15. Another way of illustrating the structure and work of the Convention, other than the structural chart in figure 1, is to relate the work to the hierarchical structure of the Convention's subsidiary bodies as shown in the chart shown in annex I. While each of the "needs" elements might represent the work of several Convention subsidiary bodies (e.g. complete environmental monitoring requires the expertise of atmospheric, vegetation, soils and freshwaters groups), it is the activities and needs that are the driving forces and essential parts of the Convention's work. Furthermore, the needs structure is much less likely to change with time, even if the Executive Body should decide upon a change of emphasis of work with concomitant changes in the Convention bodies. However, while Figure 1 shows the relevant information flows in the Convention's work, it should be noted that not every box in Figure 1 need necessarily correspond to a body in the organisational structure.

**IV. The Executive Body**

16. The role of the Executive Body is clearly outlined in the text of the Convention. However, the breadth of its work has inevitably increased over the years as focus has shifted to a large number of air pollutants and their effects. In addition, the increased geographic

scale of air pollution concerns and the inter-relationship with other environmental issues have resulted in a more complex set of issues to be considered by the Executive Body. This has led to the need for more synthesis and assessment of effort, resources and time spent on Executive Body business.

17. With the completion of the latest revisions of protocols, the Executive Body needs to take stock of its work and agree on an effective way of working for the future. While some work can be effectively delegated to subsidiary bodies, there are important elements that could provide better focus and efficiency for the future.

18. The Convention text indicates that it "shall meet at least annually". While some Parties believe that less frequent meetings could still be effective, others feel that annual meetings help maintain the momentum of the Convention's work. An amendment to the Convention text might therefore be problematic.

19. In the past, the Executive Body has adjusted the length (and timing) of its meetings to meet the immediate needs to accomplish its work. The Executive Body Bureau, in consultation with the secretariat, has made the final decision on the agenda for the meeting including the number of days for the session.

20. *The Executive Body should plan its meetings, including the duration of its meetings, based on a well-defined policy cycle in which an overall assessment and review report based on the latest scientific knowledge has a central role. The plan should therefore cover four or five years and ensure that priorities identified in the LTS are covered in sufficient depth at appropriate intervals. The plan should be updated annually (a rolling plan), which would provide Parties the flexibility and opportunity to streamline and shorten sessions if appropriate.*

21. *Following negotiations of amendments to protocols the Executive Body's short term work priorities should give special attention to:*

- (a) Focussing cooperation efforts, especially with EECCA and SEE countries, to enable the political commitment for ratifying and implementing protocols;*
- (b) Implementation of the LTS in general and its action plan;*
- (c) Reports and work plans of the main subsidiary bodies, to ensure that reports are focused and that work plans are targeted to the Convention's priorities;*
- (d) Outreach, to continue collaboration with other regional networks and agreements on air pollution; and*
- (e) Scientific and technical cooperation with international bodies and processes on climate change (e.g. IPCC) and biodiversity; subjects on which this cooperation could take place might include SLCPs and nitrogen.*

22. *The Executive Body might decide that some of these issues should be dealt with by one or more of its subsidiary bodies, but should recognize that high-level cooperation and decision making for the Convention is the remit of the Executive Body.*

## **V. The Implementation Committee**

23. Compliance assessment and advice to the Executive Body on action to address non-compliance is the role of the Implementation Committee.

24. Since it was established in 1997 the Committee has established a sound reputation for assessing the compliance of individual States with respect to their obligations under Protocols to which they are party. Advice given to the Executive Body has enabled decisions that have, in most instances, led to responsive action by those in non-compliance. The Committee has also carried out in-depth reviews in the past with the purpose of assessing the general “state of health” of the Protocols.

25. By adhering to the mandate given to it by the Executive Body, the Committee has been well focused on its work plan. The work of the Committee is given a very high priority in the adopted long-term strategy and the Committee has been assigned to review its method of work and to consider ways to improve the compliance mechanism. *It is recommended that the Executive Body encourages the Committee to continue updating its current mandate and its present method of working.*

26. The work for the Committee is at times very demanding; election to the Committee should not be taken lightly. Secretariat support is vital to the smooth-functioning of the Committee. However, there have been differing views about the level of support the Secretariat should provide the Committee and in particular what tasks should be performed by the Secretariat versus Committee members or perhaps consultants. At times in the past, Parties have provided resources to enable some aspects of the secretariat's work for the Committee to be done by members of the Committee or by consultants. This may be appropriate for certain tasks but not for others. *It is recommended that the secretariat continues to make providing support to the Implementation Committee a high priority so that the Committee can maintain its high standards and output.*

## **VI. The current scientific and policy bodies under the Convention**

27. A characteristic feature of the present organization under the Convention (see annex I) is 17 task forces/expert groups<sup>1</sup> under the three main subsidiary bodies (4 under the EMEP Steering Body, 7 under the Working Group on Effects and 5 under the Working Group on Strategies and Review). Several of these have been in operation since the middle of the 1980s, and have thus become “standing bodies”. This structure of the Convention inevitably leads to many meetings and has provided a great deal of documentation, some of which may be too long and some of which may be of limited utility. The structure has encouraged broad and active participation of experts from the Parties, and the Executive Body has established bodies when it deemed necessary. Even so, one may still question whether the current way of working is in all cases the most effective solution or whether in some cases it might be more effective to use fewer groups, or time limited ad hoc expert groups, which could be re-installed if new needs arise, or different mechanisms for reporting that target better the Executive Body's requirements.

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<sup>1</sup> CLRTAP has traditionally considered task forces to be longer lived bodies and expert groups as having a shorter existence, this terminology differs in other organizations

28. One important element that could be used more effectively for the direction and organization of the Convention's work, is the annual work plans of the subsidiary bodies. *It is recommended that the Executive Body and its Bureau give more attention to developing and scrutinizing work plans to provide better focus for targeting the Convention's priorities and ensuring appropriate outputs. It is also recommended that the Executive Body encourage the subsidiary bodies to, where appropriate, shorten their official documents.*

29. A feature of most minor subsidiary bodies of the Convention is that they consist of a task force (or expert group) often with one or more associated centres (sometimes under the umbrella of an international cooperative programme (ICP)). This structure enables the Convention to keep Parties actively involved through task force meetings and ensures the necessary work is completed through the centres. Both task forces/expert groups and centres operate under a "lead country" (Party), which offers (to the Executive Body) resources and leadership (through a chair or head of centre) to ensure that work plan activities are accomplished. The Executive Body decides on the lead country or countries, and that Party (or Parties) has responsibility for reporting (though in practice it discharges this task to the task force chair or head of centre).

30. A consequence of the large number of scientific/technical bodies each with their associated lead country is that, overall, lead country resources are shared across the many small groups (most Parties lead just one body). Parties also tend to lead on issues that are of particular interest to their governments, so support is more readily assured. In addition, from a scientific and technical perspective, well-focused groups provide good forums for in-depth discussion on specific technical issues, since the participating experts are knowledgeable and "speak the same language". However, now that the Convention has adopted a Long Term Strategy with associated priorities, it is time to undertake a critical appraisal of the structure, organization and operation of these bodies.

## **VII. The Working Group on Strategies and Review and its subsidiary bodies**

31. The Working Group on Strategies and Review (WGSR) has an important role in negotiating and reviewing protocols, and developing air pollution abatement strategies. While negotiations on new or revised protocols are unlikely in the immediate future, *the working group should focus on review and strategy development issues that may have been neglected in recent years. It is recommended that the Executive Body reviews the workplan of the Working Group to identify its priorities, especially with respect to updating the technical annexes of the Gothenburg Protocol, in particular annexes IX and X, and implementing the LTS with a strong focus on improved implementation of current protocols.*

32. The subsidiary bodies of the Working Group are considered, each in turn, below with recommendations for action on their future.

33. The Expert Group on Techno-economic Issues (EGTEI) has provided important inputs to integrated assessment modelling and to technical annexes and guidelines associated with recent protocols. It is anticipated that this work will continue though, after the current round of protocol revisions, the emphasis of work might shift, at least in the short to medium term.

There will be a continued need for updates for technical annexes and/or guidelines, perhaps with a broader mandate, to include, for example, mobile sources and emissions of POPs and heavy metals. *The Group should place emphasis on advice and guidance to EECCA and SEE countries, perhaps through seminars and workshops that have proved so popular in the past. The work should be linked strongly to that of the Task Force on Integrated Assessment Modelling. In view of the longer term work required by the Convention, it is recommended that the Expert Group on Techno-economic Issues continues, with an updated mandate, as a Task Force (a longer standing body under the Convention) to address pollutants covered by the Protocols under the Convention and emission abatement techniques for stationary and mobile sources.*

34. The Network of Experts on the Benefits of Economic Instruments (NEBEI) has worked in an ad hoc fashion throughout its lifetime. In view of the relatively few meetings held in recent years, *it is recommended that the Network be discontinued. Work in this area could be continued, if the Executive Body wished, through existing bodies, e.g. the Task Force on Integrated Assessment Modelling (TFIAM), or through targeted workshops.*

35. The Task Force on Reactive Nitrogen (TFRN) has reported on: (i) ammonia controls for guidelines and technical annexes associated with protocols, and (ii) broader nitrogen interests developed from global concerns raised by, for example, the International Nitrogen Initiative. Together with ozone (itself linked to nitrogen oxide emissions), reactive nitrogen will be a major focus for the future as it is a global issue (and linked to outreach) as well as contributing to radiative forcing (and climate change co-benefits). While other international bodies and efforts may be concerned with nitrogen, the TFRN should focus on nitrogen and its effects in the UNECE region, and on outreach and communication efforts to help ensure that the results of this work inform such broader efforts. Specifically, ammonia is one of the few pollutants projected to increase in the future unless further measures are taken. *It is therefore recommended that the strategically important work of the Task Force continues. It is appropriate that the Task Force reports to the WGSR but the Executive Body should ensure that its scientific work is linked appropriately to other scientific work under the Convention to ensure best use of competence and data, and avoid overlap and duplication of effort.*

36. The Task Force on Heavy Metals and the Task Force on Persistent Organic Pollutants (POPs) have provided the Working Group (and the Executive Body) with the basis for revision of the Protocols on Heavy Metals and POPs. As that work concludes, the need for standing task forces is likely to decline. The LTS recommends shifting focus to: (a) increasing the number of ratifications to the HM and POP Protocols; (b) continue science and implementation work, e.g. on unintentionally released POPs; and (c) areas and substances where the implementation of stricter measures in the UNECE region is still recommended. *It is recommended that the Task Force on POPs be discontinued, and the Task Force on Heavy Metals be discontinued after finalization of amendments to the HM Protocol. Any further work should be organized under ad hoc groups when needs arise. The WGSR should keep a dialogue with the scientific bodies under the Convention with respect to new scientific findings and setting priorities. Emission abatement measures are best dealt with under the proposed new Task Force on Techno-economic Issues (see above). Any need to add new*

*substances to Protocols, e.g. if proposals to the Stockholm Convention fail, should be taken up by the WGSR.*

## **VIII. The scientific bodies**

37. The complexity and large numbers of bodies, already noted above in section VI, are particular features of the scientific bodies - the EMEP Steering Body and the Working Group on Effects. Task forces and expert groups have been set up over the years to deal with the different aspects of the scientific work, but only rarely has there been any formal assessment of the work to identify possibilities for streamlining and change. In the current exercise, bearing in mind the need to ensure relevance of outputs for the Convention's priorities identified in the LTS, three aspects for possible streamlining and change should be considered:

- (a) The organization of the body (resources requirements and funding, relevance of work and outputs, place in the structure of the Convention, relations to Parties);
- (b) Meetings (focus, relevance, efficiency, periodicity and timing);
- (c) Reporting (relevance to needs of the Convention).

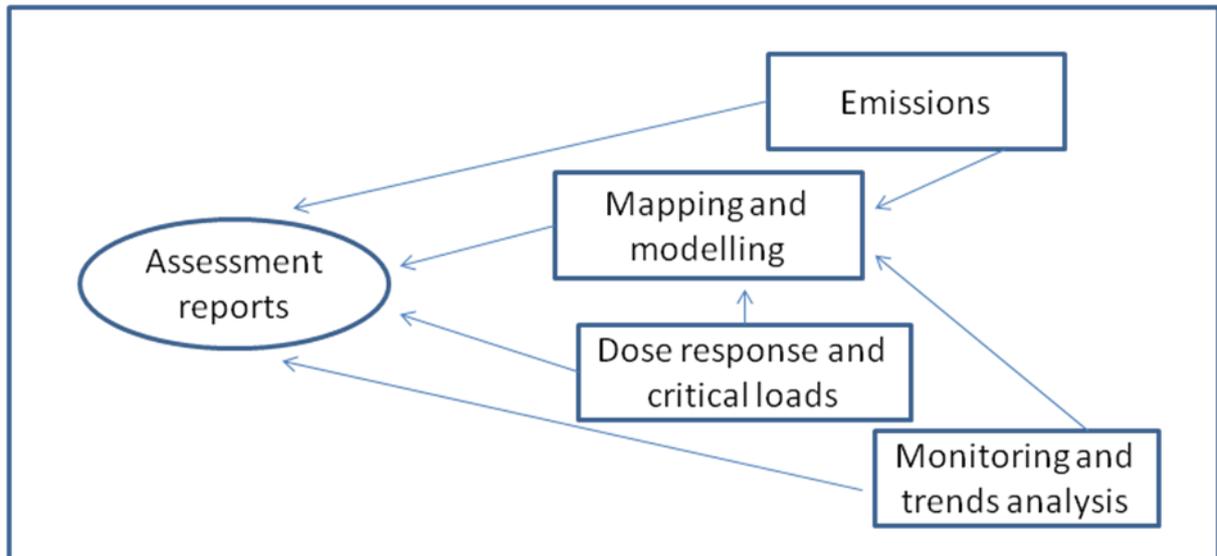
Now is a particularly useful time to make such an assessment and thereby ensure that the Convention's science delivers the results that the Convention needs to implement its LTS.

38. A second important issue to be addressed is ensuring the effective collaboration between scientific and technical bodies. With the development of effects-based approaches and integrated assessment modelling in the 1990's, it became evident that there was a need for exchange of data and information, and coordination of the approaches of different groups in order to achieve harmonized results. Some efforts have already been made over the past 15 years<sup>2</sup>, but much more is needed; one way would be to develop an information technology strategy/plan to enable greater interoperability and sharing of data across the subsidiary bodies (this could be an element of a revised communication strategy for the Convention). How subsidiary bodies cooperate to meet the three over-arching needs for support to policy development (para. 9 above) are further elaborated in annex II, figure 1. Once again, there is much complexity, this time in the many interactions between the many different bodies. However, the picture can be greatly simplified by ignoring the individual bodies (as was done in figure 1 above) and focusing on the Convention's "needs" as described in section III above. The result is shown in figure 2 below, which provides far better insight into what is being exchanged and what is achieved. A similar diagram could be constructed for integrated assessment modelling.

Figure 2. Development of assessment reports

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<sup>2</sup> The EMEP Steering Body and the Working Group on Effects both initiated "Extended Bureau meetings" in the 1990's; these include bureau members, TF/EG chairs and representatives of programme centres. In addition, the two bodies have held annual "Joint Extended Bureau meetings" annually to improve coordination between scientific work. In 2011 and 2012 the EMEP Steering Body and WGE meetings have been held back to back to further aid co-participation.



39. The simple "needs" boxes of figure 2 each encompass a number of activities that are essential for the Convention's work. *Monitoring and trends analysis* covers both atmospheric and also effects (ecological, human health and materials) monitoring, and these should primarily provide the status and trends of the environment in time and across the region. They underpin our knowledge of the environment and how it is responding to environmental pollution. Environmental monitoring should also provide evidence to validate critical loads/levels and dose-response functions and input to modelling and mapping. Calculating *dose-response functions and critical loads/levels* provide the formulae and numerical values that give a measure of damage or potential damage from air pollution. They provide input to modelling and mapping. Temporal and spatial *modelling and mapping* enable extrapolation of damage over time and across the region. They also provide predictive capacity to enable the development of policy. This work provides direct input to integrated assessment modelling. Estimating *emissions* and their projections provides the status and trends of Parties air pollution emissions. It provides direct input to integrated assessment modelling as well as input to the compliance work of the Implementation Committee.

40. Given the needs of the Convention, as described above, in section III, and in figure 1, it is pertinent to consider EMEP and the Working Group on Effects and plan a useful and effective way forward for their future organization. This is done in the following paragraphs. The individual scientific bodies under the two main subsidiary bodies are considered in more depth in the subsequent sub-sections.

41. The need for EMEP, its Steering Body, and the development of much of the work under EMEP is set out in various parts of the text of the Convention; article 9 indicates it is a key organisation for the further development of activities such as emission inventories, atmospheric measurements and modelling. The establishment of "a similar monitoring programme to record effects on health and environment" was an element for the further development of EMEP (article 9 h).

42. WGE was set up as a parallel body to EMEP by EB in 1980 with the aim of covering the effects-oriented areas mentioned in the Convention text: studying effects (on human health,

forestry, materials, aquatic and other natural ecosystems) with a view to establish a scientific basis for dose/response relationships (article 7); national reporting of physico-chemical and biological data relating to effects and damage (article 8); and monitoring chemical components in other media such as water, soil and vegetation (article 9). These point towards a need for a comprehensive effects programme under the Convention.

43. Both EMEP and WGE have been instrumental in identifying the need for control measures and the development of the effect-based, cost-effective strategies for these. Such strategies have been very important in the EMEP region for individual countries and international organizations that have used the same approaches (and data) to develop their own emission control strategies. As noted above, interaction and coordination between EMEP and the effects work has intensified but it needs to be taken further. Various options for achieving this have been discussed, however, a major decision is whether it would be more effective to merge EMEP and the Working Group on Effects or whether it would be better for them to continue as separate entities with enhanced linkages. The strategic issues that can be argued for each are spelled out in annex III to this document.

*The group, in considering the needs of the Convention (figure 1), agreed that current scientific work was important and should be continued to meet the requirements of the long-term strategy. However, in considering possibilities for future streamlining, the Executive Body is invited to decide on whether the main scientific subsidiary bodies (WGE and EMEP) should be merged into one unified science body (option 1) or remain two separate bodies (option 2).*

*The group has identified a number of advantages both for merging and for keeping the present structure which are listed in a Table in Annex III. The Parties, especially lead countries, may have additional views.*

44. *Whichever option is chosen, the Executive Body should decide on further measures to address the issues of simplified meetings and reporting to ensure effective communications to Parties (and to the Executive Body), between scientific bodies within the Convention, to national focal centres, and to the public at large.* There has been significant discussion within EMEP and WGE Bureaux about the need to create more integrated, policy-relevant, and accessible reports. Some bodies have indicated that they would like to rethink the reports that they generate but that their hands are tied because some time consuming reports are required on an annual basis by the protocols (e.g. Gothenburg Protocol, Article 5, para 3 requires annual reports on S concentrations and budgets). One example of improved reporting formats is the "Guidelines for reporting on the monitoring and modelling of air pollution effects" adopted by the EB in 2008, which have facilitated common reporting (e.g. the "Impacts Report" to the 30<sup>th</sup> session of the EB; draft Guidance Document to the Gothenburg Protocol on health and environmental improvements) complementing IAM results with effects indicators not used in GAINS.

45. *The Executive Body should consider, inter alia, the following actions to improve effectiveness and streamlining of reporting:*

(a) *Developing a list of regularly required reports, as needed by Protocols or for other Convention purposes, and deciding upon measures that might simplify, or change the need for, such regular reporting;*

(b) *Requesting the scientific bodies to produce documents on scientific activities, that provide the Executive Body with scientific information relevant to the needs and strategic goals of the Convention and better insight into the work of scientific bodies. Common reporting will facilitate synthesizing the data. An example is Decision 2008/1: “Reporting of Monitoring and Modelling of Air Pollution Effects”. The Executive Body should take more time to consider such reports and provide feedback to the scientific bodies;*

(c) *Encouraging the scientific bodies to generate documentation material that is understandable by non-experts and which encompasses broader areas of the scientific work under the Convention (joint reports for the public);*

(d) *Linked to the development of publicly accessible material, the Executive Body, supported by the Secretariat, should consider developing a readily accessible “interface” which enables easily understandable information on the technical work of the Convention to be found;*

(e) *Initiating the first joint assessment report for the atmospheric and effects science that includes reports from national focal centres.*

46. At a much broader level, several of the scientific bodies have found value in their longer term mandates that provide additional guidance and direction for the development of annual work plans. *It is recommended that the Executive Body decides upon a new mandate or mandates for the scientific body or bodies that provide better scope for addressing the needs of the LTS. Possible elements for such a mandate or mandates are provided in annex IV.*

#### A. Groups under the Steering Body of EMEP

47. Groups under the EMEP Steering Body are considered individually.

48. The Task Force on Integrated Assessment Modelling and its centre at IIASA have a central role in the development and review of policies under the Convention. Considering the fact that the output of IAM is for policy purposes, and that IAM can be seen as applied science, there is a good argument to place TFIAM back under the WGSR, as it was previously. However, there are also advantages in keeping TFIAM under EMEP where it is currently functioning effectively and has close contacts with the supporting scientific bodies within EMEP and WGE.. *It is recommended that the Task Force and Centre continue their work as at present, including the regular reporting to WGSR.*

49. The Task Force on Emission Inventories and Projections and its Centre in Austria play an important role in implementing protocols under the Convention and support the work of the Implementation Committee. In addition, they provide essential input to integrated assessment modelling. *It is recommended that the Task Force and Centre continue their current roles.*

50. The Task Force on Measurement and Modelling, supported by MSC-West, MSC-East and CCC, was set up for handling scientific issues related to atmospheric transport and

deposition and to enable increased national participation in the monitoring and modelling work of EMEP. It has been very successful in this *and it is recommended that it work continues.*

51. The Task Force on Hemispheric Transport of Air Pollution, supported by MSC-West, MSC-East, CCC, CIAM and CEIP (as well as some centres of WGE), provides important information on the global movement of air pollution that provides better context for the efforts made through the Convention's protocols, and possibilities for better future decision making. The Task Force also provides sound links with scientists outside the UNECE region and is an important tool for outreach. *It is recommended that the Task Force continues with its present scientific work as decided by the EB in 2010. However, it is noted that this work may have policy implications in the longer term so the Task Force should communicate with the Working Group on Strategies and Review appropriately.*

52. The three EMEP centres identified in the EMEP Protocol are funded through that Protocol: the Chemical Coordinating Centre is responsible for monitoring activities, the Meteorological Synthesizing Centre-West for modelling sulphur, nitrogen and ozone, the Meteorological Synthesizing Centre-East for heavy metals and POPs modelling. Their work has been vital for the Convention's policy development and will continue to be so in the future. *It is recommended that the Executive Body takes steps to readjust Centres' and Parties workloads following decisions on, for example, decreasing future work on heavy metals and POPs, increasing support for EECCA countries, or other new tasks such as inventory/ceilings adjustment procedures.*

#### B. Groups under the Working Group on Effects

53. Groups under the Working Group on Effects are first considered individually and then followed by more general comments and conclusions.

54. The Task Force on the Health Aspects of Air Pollution (led by WHO) is responsible for providing knowledge of health-related effects, and for maintaining essential links with WHO. The Task Force is a joint body under the Executive Body and WHO. It has provided important reports to the Executive Body on the health impacts of various pollutants and has worked with integrated assessment modellers to provide estimates of the impacts of PM on human health across Europe. *It is recommended that the fruitful collaboration with WHO continues as present through this body.*

55. ICP Waters<sup>3</sup> (led by Norway) is concerned with monitoring and identifying trends in freshwater chemistry and biology of lakes and streams. Nationally collected data from participating Parties are collated annually and analysed every few years by the programme centre. Emphasis is placed upon methodology and quality assurance. Analyses have demonstrated the environmental time lags that can persist even after action on emissions has been taken, and shown rates of recovery in different regions of Europe.

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<sup>3</sup> International Cooperative Programme on Assessment and Monitoring of Effects of Air Pollution on Rivers and Lakes

56. ICP Forests<sup>4</sup> (led by Germany) monitors air pollution impacts on forests. National monitoring is carried out at three levels: annual level I monitoring focuses on forest condition; level II monitoring on deposition, soil chemistry and forest effects; and level III monitoring on detailed investigations on soil processes and biology. Collation and analysis of results is made by the programme centre. Results have shown the variation of air pollution damage from year to year and demonstrated the complex interactions of air pollution, climate, pests and disease that can affect the health and growth of forests.

57. ICP Integrated Monitoring<sup>5</sup> (led by Sweden with its programme centre in Finland) is concerned with in-depth monitoring of catchments and forest plots. Nationally collected data area analysed to determine trends and processes and to develop predictive models for effects. (Note. There are intensive modelling studies under an ad hoc joint expert group on dynamic modelling that brings together experts from several ICPs). In-depth studies help develop models that can be applied at a national or international scale. Dynamic modelling has played an increasingly important role in understanding the recovery processes and the links between emission controls and environmental recovery.

58. ICP Vegetation<sup>6</sup> (led by the UK) has two main areas of work. One, on ozone effects and ozone critical levels, where the Task Force deliberates on both experimental and monitoring work to look at dose-response and trends, as well as the mapping of ozone critical levels. This has provided essential input to the effects-related integrated assessment modelling work on ozone. The other, on moss survey and analysis of heavy metals, continues work started in Scandinavia to provide indicators of long-term trends in metal emissions. The future of the moss survey work is currently being evaluated by the Programme and it is expected that plans for any continued activity will soon be available to the Executive Body.

59. ICP Materials<sup>7</sup> (led jointly by Sweden and Italy) has developed increasingly better defined dose-response relationships for a wide range of materials including various stone materials, metals and glass. With stock at risk estimates it has enabled assessment of economic damage in relation to emission controls and demonstrated the high costs of pollution damage and benefits of emissions controls. Recent work, led by Italy, has focused upon cultural heritage, an important aspect of pollution damage for some countries.

60. ICP Modelling and Mapping<sup>8</sup> (led by France with the Coordination Centre for Effects (CCE) led by the Netherlands) is responsible for developing critical loads and mapping them for the purposes of assessment reporting (exceedance maps) and integrated assessment modelling. National focal centres are responsible for submitting national data and maps to the CCE. The ICP was key to providing maps for use with integrated assessment models and continues to provide updated information to ensure protocols can be properly reviewed.

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<sup>4</sup> International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests

<sup>5</sup> International Cooperative Programme on Integrated Monitoring of Air Pollution Effects on Ecosystems

<sup>6</sup> International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops

<sup>7</sup> International Cooperative Programme on Effects of Air Pollution on Materials, including Historic and Cultural Monuments

<sup>8</sup> International Cooperative Programme on Modelling and Mapping of Critical Loads and Levels and Air Pollution Effects, Risks and Trends

61. Some work on streamlining and coordination of activities has already been done by the ICPs/WGE. For instance, common workplan items have been defined that address the Executive Body's priority concerns, and Reporting Guidelines are being used to generate reports of direct use in policy development (see paragraph 44.). In addition, the Executive Body decided in 2000 to mandate the WGE to elaborate a draft short- and mid-term strategy, based on conclusions of an external review in 1998-99. Later a long-term strategy for effects-oriented activities was established and this was adopted by Executive Body in 2009.

62. However, it is evident that several programmes (and some EMEP activities) have some commonality with respect to the Convention's "needs" referred to above, e.g. monitoring, modelling. While there may be good reasons not to streamline by merger, e.g. disparity of data types, it is important that activities produce harmonized results that provide an holistic picture for the Executive Body. Such a holistic picture is likely to need a range of inputs from the various environmental sectors and the importance of those currently studied needs to be assessed.

63. The ad hoc Expert Group has given the matter some consideration and has noted, for example, some overlapping interests between ICP Waters and ICP Integrated Monitoring, and similarly between ICP Forests and ICP Integrated Monitoring – though not between ICP Waters and ICP Forests. Therefore, it might be considered that ICP Waters broadens its work to take on the aquatic interests of ICP Integrated Monitoring, whilst evaluating the need for the continued monitoring of the broad spectrum of parameters currently sampled under the Integrated Monitoring Programme. Similarly, on the terrestrial side, the work of ICP Integrated Monitoring and ICP Forests could be brought together, perhaps with other associated terrestrial work linked to activities of other bodies (e.g. ICP Vegetation, TFRN). Some members of the Expert Group/Bureau have questioned the continued relevance of ICP Materials; they have asked if further work on dose response and/or stock at risk is still needed and what might be delivered of policy relevance in the future..

*64. The ICPs play an essential role in identifying air pollution problems and developing the effects-based approach to emissions controls. Besides developing UNECE-wide methodological standards, they provide monitoring network sand data as well as models to support development of effects science. Despite past efforts in streamlining, the range of issues being studied is complex and further possibilities for simplification and streamlining should be considered. However, the scientific and policy merits of organizational change cannot be quickly and easily evaluated through this report. Furthermore, most areas of the effects-related work are identified as priorities in the Convention's LTS, as already in the LTS for the effects-oriented activities adopted by the EB in 2009. It is therefore recommended that the Executive Body initiates a review of the ICPs. The review should take into account the needs of the LTS, the needs of the Convention as defined in this document (including issues such as outreach), the needs of Parties (in particular those in EECCA and SEE regions), the scientific relevance and the possibilities for achieving what is needed from the current ICPs. The review should be objective but take account of work being done under the other main subsidiary bodies to provide a forward looking plan for the effects-related work.*

### C. Timing (and status) of meetings

65. In the past, scientific meetings have been planned around annual monitoring and/or submission of data and the annual meetings of the main subsidiary bodies and the Executive Body. It has been suggested that the main scientific working groups (EMEP and WGE) could operate differently, for example, meeting less frequently, e.g. every two years. There have also been suggestions to hold sessions in English only. Both steps could save resources but the knock on effects should be evaluated carefully.

66. While *the frequency of meetings<sup>9</sup> could be seen as more flexible for the main scientific bodies*, there are some practical issues to overcome, e.g. *budgets and workplans would need to be for two years*. In addition, there are concerns about: *the possible loss of momentum to the scientific work; the lack of accountability of lead countries should scientific outputs not be met; and the lack of transparency of the scientific work to the Executive Body if annual reports are not available*. In addition, *annual reports are currently used as part of the mechanism operated by the Secretariat for payment via the Trust Fund to programme centres*.

67. Task forces and expert groups are likely to continue annual meetings since, for most groups, an annual cycle of data collection, QA/QC and planning has proved effective for the work both under EMEP and the Working Group on Effects. While the Executive Body might decide some meetings should be "unofficial" so there are fewer "official" meetings (and reports), this may have implications for participating experts (e.g. if they rely on funding by Lead Countries or national authorities), as well as for the transparency of work to Parties and the Executive Body.

68. *It is recommended that, in the short term, to address the immediate needs for planning and implementing the LTS, the main subsidiary scientific bodies continue to meet annually, although these meetings need not all to be formal. Furthermore, the EB is invited to explore, through its Bureau, options for scheduling meetings of the subsidiary bodies and the EB to avoid the time pressures that currently occur between September and December.*

69. While it is true that a majority of Convention scientists can communicate effectively in English, the decision on stopping interpretation and document translation at the main scientific subsidiary body meetings should not be taken lightly. Absence of interpretation and of translation of official documents gives a bad signal to Russian speaking countries. The LTS, in para. 14(h), indicates that "scientific activities will need to involve the countries of EECCA more strongly than hitherto", and the action plan suggests that more, rather than less, documentation in Russian is needed. *To encourage participation, both at policy and scientific levels, it is recommended that interpretation at sessions of the main subsidiary bodies continues. Further, in view of proposals to develop more concise, understandable and needs-*

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<sup>9</sup> Work through conference calls and emails and even video conferencing should be explored for some of the sub-groups/centres under the main subsidiary bodies.

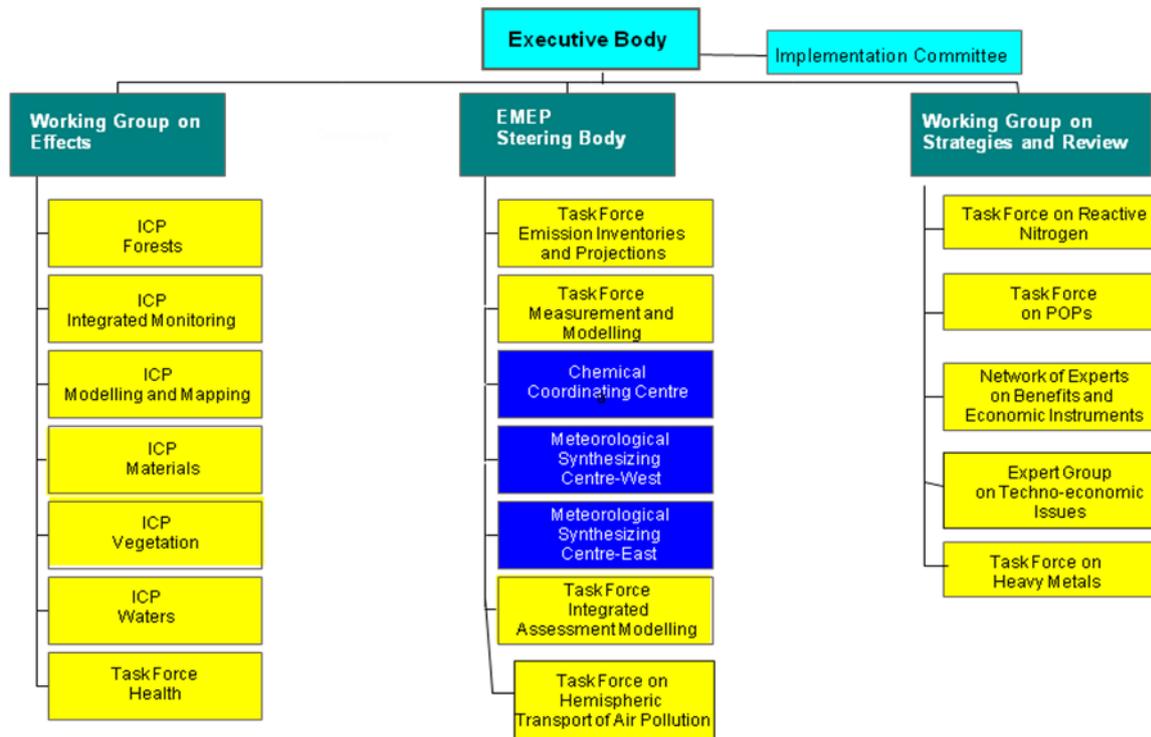
*focused documentation, it is recommended that “official” Convention documents continue to be translated to ensure they are read by a wide audience of Parties. It is also recommended that Russian speaking countries be invited to give their views on this approach.*

#### **IX. Main conclusions and recommendations**

70. The main conclusions and recommendations have been highlighted throughout the text above in italics. They are also summarized in Chapter I of the ad hoc Expert Group’s Report on the implementation of the LTS Action Plan to the 31<sup>st</sup> Session of the EB (Doc. ECE/EB.AIR/2012/2).

## Annex I

### Current structure of the Convention



ICP International Cooperative Programme (led by a Party (or Parties) which is responsible for appointing Chair and running Programme Centre. Some Task Forces operate on a similar basis

## Annex II

### **The interrelations between subsidiary bodies for producing main policy support documents**

1. As pointed out above, there are, with respect to protocols, three main requests from the policy side on the scientific bodies to produce underlying material. How these needs are coordinated and met are described in this appendix with particular emphasis on the Gothenburg Protocol, but the structure will be similar for the protocols on POPs and HMs.

(a) Integrated assessments in support of future strategies. The most important support to the integrated assessment work comes from TFIAM and CIAM but additional information of crucial importance are coming from CEIP and TFEIP with respect to emission inventories, MSC-W and MSC-E with respect to source-receptor data, CCE and ICP M&M with respect to critical loads, ICP Vegetation with respect to critical levels for ozone, and finally to some extent from EGTEI and TFRN with respect to technologies and costs for control. Important bodies for the development of dose-effects estimates are the Task Force on Health Aspects of Air Pollution, ICPs (especially on Vegetation) and the Joint Expert Group on Dynamic Modelling.

(b) Integrated assessments of the outcome of protocols and control measures. Those bodies responsible for long term monitoring are most crucial for this task. These include CEIP/TFEIP, TFMM/CCC as well as MSC-E, MSC-W, and the ICPs. It is particularly important that those bodies that collect and deliver monitored data have a close collaboration.

(c) Support to the Implementation Committee. Most important is of course CEIP but also CCC and the ICPs may be of importance.

2. The other requirements with respect to the LTS (mentioned in para s 9-11 of this document) need support according to the following :

(a) Co-benefits in addressing air pollution and climate change (including consideration of SLCPs) are today mainly taken care of through the TFIAM and with respect to SLCP also by the TFHTAP, the TFRN and several ICPs;

(b) Intercontinental transport of air pollution. This issue has its own organization, TFHTAP supported by several centres, primarily MSC-E, MSC-W, CCC and TFIAM but is expected also to gain support from CEIP and some ICPs. Task Forces may also be involved in the work. The mandate today includes also preparatory work on control strategies and may therefore in the future include work within WGSR.

(c) Tackling nitrogen pollution and biodiversity loss. The policy work and large parts of the scientific and technical work on nitrogen is handled by the TFRN. The scientific support involves, as for TFIAM and TFHTAP, several of the centres and ICPs.

(d) Biodiversity loss. The scientific aspects of this work is being studied by some of the ICPs with support from the EMEP Centres;

(e) More active involvement of EECCA and SEE countries. Several initiatives have been taken over the last years including, translation of Guidebooks e.g. on Emission Inventories, support to the establishment of monitoring stations, involvement of countries in some ICPs and the IAM work;

(f) Enhanced outreach to extend the work of the Convention beyond the region. TF HTAP is playing a crucial role and the EMEP Centres and several of the ICPs have also been active in this work.

3. The support to countries is a task for all centres; if there is an increasing interest for further development of country reports, data and engagement from almost all Centres under WGE and EMEP will be needed.

4. The figure below illustrates how different subsidiary bodies are involved in the IAM and IA work in particular with respect to the Gothenburg Protocol. The work by the Task Force on Hemispheric Transport of Air Pollution is not included in the figure but it is of importance both for the future development of protocols, where the IAM work need to take into account intercontinental transport and scenarios for future emissions.

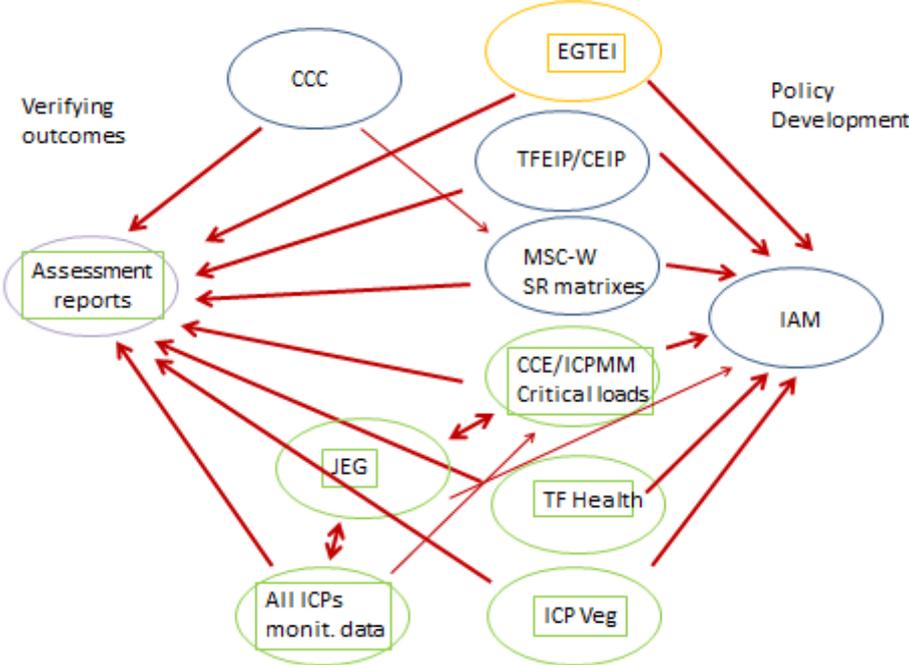
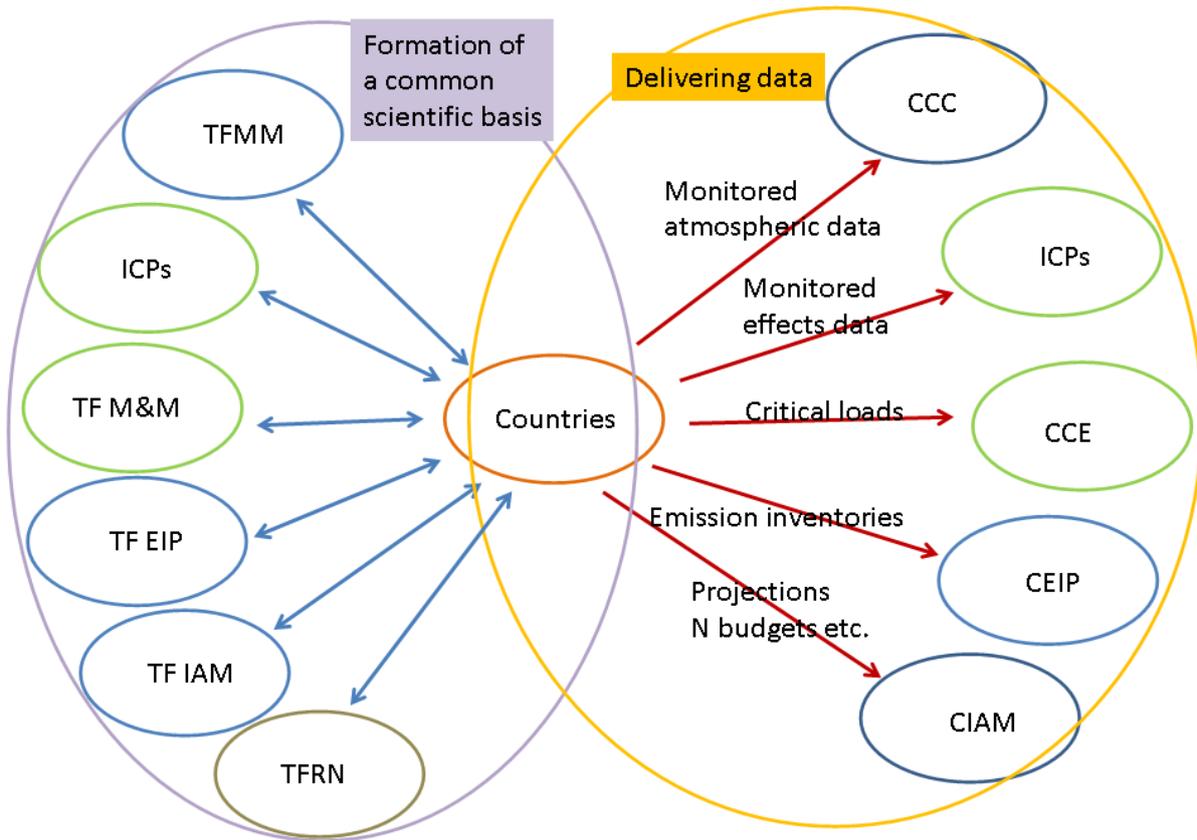


Figure 1

5. A further important aspect of the linkages is the role of the national focal centres of Parties. They are a key element in the successful operation of the Convention. The diagram below illustrates the position of national centres and experts in relation to data delivery and scientific development.



Not included: EGTEI, TF Health, TF HTAP.

Figure 2

### Annex III

#### **Strategic issues related to the merging or the retaining of some separation between the EMEP Steering Body and the Working Group on Effects**

Advantages of merging	Advantages of retaining separation
<p>1. Simplifications in the leadership (chairs/bureaux) of the science-based work under the Convention. Workplans would be developed and followed up by a single body and the need for coordination between groups would probably lessen.</p>	<p>1. Specialist leadership and more focused meetings can deal with complex scientific topics more effectively and efficiently. Back-to-back and over-lapping meetings would provide the necessary coordination between all groups and their workplans.</p>
<p>2. Parties and other subsidiary bodies have a more holistic overview of the scientific work; this may increase understanding and active participation in the work, and in turn lead to an increasing interest in participation from the policy side.</p>	<p>2. Two bodies could build an effective holistic view through continued improvements in communication, joint meetings, etc, whilst retaining the integrity and visibility of all aspects of the science needs of the Convention.</p>
<p>3. Reduced workload on the secretariat and on Parties due to fewer meetings (though this might depend upon changes in the underlying structure and needs of the Convention). (Increased burden on one Chair and more complex combined meetings are disadvantages.). Fewer meetings would encourage participation by EECCA/SEE countries.</p>	<p>3. More focused meetings would simplify agendas and reports and enable shorter meetings whilst retaining visibility of all necessary aspects of the Convention's needs. There would be less burden on two separate Chairs and Bureaux, who would have clearer visions of priorities of the more focused groups.</p>
<p>4. Increase the visibility and strength of the Convention's "scientific body", and give the scientific parts of the Convention possibilities to speak with one voice.</p>	<p>4. Retain individual strengths without weakening the visibility of some at the expense of others (probably effects at the expense of EMEP).</p>
<p>5. Delivery of assessment reports could be coordinated more effectively under a single body.</p>	<p>5. Assessment reports will be built up from the work of specialist groups that coordinate with one another when necessary. The reports would be planned and collated collectively.</p>

## Annex IV

### **Elements for new mandates for the scientific body/bodies**

1. In order to break from the current routine of reporting on progress and delivery of workplan elements it is proposed that scientific meetings be directed to more strategic discussions and decisions supporting the policy development of the Convention. This would better address the LTS and the priorities of the Executive Body. To this end, it is proposed that new mandates provide more focus for meetings and reports and enable relevant results to be reported to the Executive Body.

2. It is suggested that a new mandate/new mandates be based upon the following main elements:

(a) Ensure Parties undertake monitoring and collecting information as required by the Protocols and decisions of the Executive Body, and report this information to relevant bodies and centres;

(b) Ensure that work in subsidiary bodies is based on appropriate scientific methods and practices;

(c) Support any further strategies under the Convention with relevant scientific information;

(d) Organize the preparation of assessments and other (science-based) reports demanded by the Executive Body;

(e) Evaluate and communicate additional scientific issues of relevance for the Convention including linkages to climate change (including short lived climate pollutants), hemispheric and intercontinental transport of air pollution, biodiversity, nitrogen budgets and multiple effects;

(f) Inform the Executive Body and other relevant bodies under the Convention on new scientific findings of particular importance for the Convention and its policy work;

(g) Ensure that collected data are transparent and available for Parties, all bodies under the Convention and for scientific use and examination;

(h) Ensure that the results from the scientific bodies are publicly available, communicated to Parties, and as appropriate to countries outside the Convention and to relevant international organizations.

(i) Make sure that EECCA and SEE countries are supported appropriately in their fulfillment of obligations/requests on emission inventories, monitoring and collection of other information.

3. The bureau(x) of the scientific body/bodies should be included in any new mandate(s). It is suggested the following elements be included in its/their tasks:

(a) Oversee the work within the subsidiary groups under the main scientific body/bodies and make sure that activities are organized according to the mandate workplans;

- (b) Follow closely the work of the programme centres and from time to time initiate an evaluation of their work;
- (c) Make sure that the programme centres fulfill the obligations under the work plan;
- (d) Propose budgets for the allocation of funds collected under the EMEP Protocol and under decisions of the Executive Body;
- (e) Examine and audit the use of the funds allocated by the Executive Body for the scientific work.

4. Refocused scientific bodies will also mean that reporting and discussions at main subsidiary body sessions should not include lengthy reports on progress at the centres but rather present and approve reports on selected topics of relevance to the LTS and bring up topics of particular interest to the Convention for discussion and further consideration.