

## **Informal Meeting of the International Law Commission: Dialogue with Atmospheric Scientists (Second Session), 4 May 2016, Palais des Nations, Room XXI, Geneva**

### **Summary of the Informal Dialogue**

#### **Introduction**

1. “Informal Meeting of the International Law Commission: Dialogue with Atmospheric Scientists (Second Session)” [*hereinafter* Informal Dialogue] was held under the chairmanship of **Mr. Shinya Murase**, Special Rapporteur on the topic Protection of the Atmosphere, in order to facilitate a discussion in the International Law Commission [*hereinafter* Commission] on the topic. The Commission decided to include the topic Protection of the Atmosphere in its programme of work at its sixty-fifth session (2013), and provisionally adopted draft guidelines 1, 2 and 5 and four preambular paragraphs as well as the commentaries thereto at its sixty-seventh session (2015).<sup>1</sup> The First Session of the Informal Dialogue was held during the sixty-seventh session (2015) of the Commission, and contributed to deepening the understanding of Commission Members on the scientific background of the topic.<sup>2</sup>
2. During the present session, five presentations were given by prominent scientists and experts from various fields, followed by a discussion with Commission Members.

#### **Main points of the presentations**

3. The first presentation was given by **Mr. Øystein Hov**, President of the Commission of Atmospheric Sciences, World Meteorological Organization (WMO), under the title of “**Geoengineering – a way forward?**”
4. Mr. Hov first points out that humans are altering the climate and other environmental conditions inadvertently, as illustrated by, for example, a rise in surface temperature, acidification of freshwater lakes, streams and oceans, stratospheric ozone depletion, and a rise in temperature in the Arctic. He also demonstrates how policy actions, including international conventions, have contributed to mitigating the inadvertent negative impact on the environment.

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<sup>1</sup> Report of the International Law Commission: Sixty-seventh session (4 May-5 June and 6 July-7 August 2015), A/70/10, paras. 45, 51-52 (2015).

<sup>2</sup> UN ILC’s Dialogue with Scientists on the Protection of the Atmosphere (Charles Wharton), <http://www.unep.org/delc/Portals/119/documents/montevideo/ilc-dialogue-wharton.pdf>.

5. Mr. Hov then turns to geoengineering, an advertent alteration of the climate by managing solar radiation (SRM) or removing greenhouse gas (CDR). He points out that there is complexity and uncertainty on climate science, technical, ethical, legal, policy, and economic issues involving geoengineering, and that geoengineering could have unforeseen consequences if conducted on a large scale. He concludes his presentation by emphasizing that geoengineering should be governed by internationally accepted guidelines such as the Oxford Principles, which consist of 1) Geoengineering to be regulated as a public good; 2) Public participation in geoengineering decision-making; 3) Disclosure of geoengineering research and open publication of results; 4) Independent assessment of impacts; and 5) Governance before deployment.<sup>3</sup>
6. The second presentation, entitled “**Linkages between transboundary air pollution and climate change,**” was made by **Mr. Peringe Grennfelt**, Chair of the Working Group on Effects, The Convention on Long-range Transboundary Air Pollution (CLRTAP), United Nations Economic Commission for Europe (UNECE).
7. Mr. Grennfelt begins by showing that air pollution still causes health and ecosystems, and remains an international problem that requires international cooperation at several regions in the world and even on a global scale. According to him, a key reason for the international collaboration on air pollution has been transboundary transport, which involves acid deposition; eutrophication and threats to biodiversity; health effects from particles; ground level ozone; heavy metals; and Persistent Organic Pollutants (POPs). He presents an example of NO<sub>x</sub> deposition in Norway to show that air pollution in a particular country may be dominated by emissions in other countries.
8. Mr. Grennfelt took up tropospheric ozone and its relation to methane emissions as an example. In his view, the existing regional institutions are fragmented and not sufficiently effective in dealing with transboundary air pollution, which is not merely a local problem but indeed is becoming a global issue. He adds that mercury and POPs as well have regional and global dimensions. He also calls attention to a report entitled “Towards cleaner air, scientific assessment report 2016: summary for policy makers,” which has been prepared under the CLRTAP, and will be published shortly.
9. Mr. Grennfelt concludes by stating that there is a linkage between air pollution and climate change, and that there are large synergies between air pollution and

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<sup>3</sup> Oxford Geoengineering Programme, Oxford Principles, <http://www.geoengineering.ox.ac.uk/oxford-principles/principles>.

climate change policies. For example, he points out that the Paris Agreement is expected to contribute not only to reduced emissions of greenhouse gases but also to cleaner air.

10. The third speaker, **Mr. Christian Blondin**, Director of Cabinet and External Relations Department, WMO, analyzed “**Scientific aspects of the 2015 Paris Agreement.**”
11. Mr. Blondin first gives an overview of the Paris Agreement. He states that the Paris Agreement is a new legal agreement for the post-2020 climate regime under the United Nations Framework Convention on Climate Change (UNFCCC), its goal is to limit warming to well below 2°C above pre-industrial levels while pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, addresses mitigation, adaptation and loss and damage as well as the means of implementation such as finance, technology transfer and capacity building. He also mentions funding mobilization efforts under the Paris Agreement using the Green Climate Fund (GCF) and the Global Environment Fund (GEF). In particular, from a scientific viewpoint, he points out that loss and damage recognition involves a difficult question concerning attribution of extreme weather phenomena to climate change.
12. Mr. Blondin also states that the key commitment under the Paris Agreement will be the Nationally Determined Contributions (NDCs) to be revised regularly, as the Intended Nationally Determined Contributions (INDCs) which were presented in Paris place the global warming on a more than 3°C track. In this connection, he emphasizes the importance of monitoring and assessment the Green House Gas (GHG) concentrations in the atmosphere and the role of the WMO in this regard.
13. Recalling that IPCC has been tasked with the production of a specific report on possible 1.5°C scenarios, Mr. Blondin then presents different emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) for its fifth Assessment Report (AR5). He points out that, for the purpose of the AR5, only carbon dioxide removal (CDR) has been used in several mitigation scenarios to try to limit global warming to 2°C or less, a geoengineering technique that plays nevertheless a major role to achieve this goal, while still operational at the required scale. At the same time, he suggests that geoengineering should be used by careful consideration of its global and long-term implications.
14. The fourth speaker, **Mr. Valentin Foltescu**, Head of Thematic Assessments Unit in the Division of Early Warning and Assessments, UNEP presented “**An overview of the latest findings and estimates of the effects of air pollution.**”

15. Mr. Foltescu first states that there is new evidence that air pollution is a major risk to health. More specifically, he quotes statistics to show that one-fifth of premature deaths caused by non-communicable diseases, some 7 million people each year in the whole world, are attributed to air pollution. He also refers to WHO air quality guidelines as well as a resolution passed by the 68th World Health Assembly, which recognizes household and ambient air pollution as one of the major causes of deaths, and calls for states to develop air quality monitoring systems and health registries to improve surveillance for all illnesses related to air pollution.<sup>4</sup>
16. After discussing two types of air pollution, *i.e.*, indoor air pollution and ambient air pollution, Mr. Foltescu presents the WHO's estimates of burden of disease caused by outdoor air pollution exposure to show the uneven geographical distribution of exposure to air pollution. In focusing on urban population exposure in Europe, he points out that air quality standards in Europe are generally less stringent than the WHO air quality guidelines.
17. Mr. Foltescu concludes by highlighting the relevance of Sustainable Development Goals (SDG), particularly Goals 3, 7, and 11, to tackling air pollution.
18. The fifth and last speaker was **Mr. Masa Nagai**, Deputy Director, Division of Environmental Law and Conventions, UNEP, who discussed "**Linking science with law.**"
19. Mr. Nagai begins by reminding that planetary ecosystems are affected by human activities, while human health and well-being are affected by the ecosystems. He also introduces the concept of "planetary boundaries," which define safe operating space for the earth and humans. He then discusses pollution of global significance such as global transboundary air pollution, global transport of hazardous chemicals, ocean acidification, marine debris and micro-plastic, pointing out that they are interconnected with each other.
20. Mr. Nagai then underlines the fact that, while many international treaties and other instruments have been adopted to address particular pollution problems, no overarching framework convention exists on global environmental concerns. By stressing horizontal linkages between various environmental problems as well as vertical linkages between global, regional, and national levels, he indicates the need to design the "future shape of international law."
21. Next, Mr. Nagai explores factors to consider when designing the "future shape of international law." He points out that a system of international law consisting of

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<sup>4</sup> WHA68.8 Health and the environment: addressing the health impact of air pollution, WHA68/2015/REC/1 (2015)

international treaties, international non-legally binding instruments and relevant international processes should be addressed in a holistic manner to tackle pollution of global significance. For example, he emphasizes that not only States but also non-State actors such as business, industry, citizens, and organizations need to be engaged in the efforts to solve the pollution problem. In addition, he suggests that substantive norms such as guiding principles and standards of conduct should be adopted along with procedures. Mr. Nagai stated that future international law would be defined by establishing the linkage between science and international law. Finally, he invited Commission Members to consider the future shape of international law to address pollution of global significance affecting the Earth's ecosystems.

### **Discussion with Commission Members**

22. Following the presentations, Commission Members asked the following questions.
23. **Mr. Michael Wood** asks Mr. Nagai whether one should be looking for the “future shape of international law” as opposed to continuing what we have done hitherto. In this regard, he notes the fact that a mosaic of existing conventions specifically tailored for particular problems has been implemented pretty well. He then asks Mr. Foltescu why the EU standards are lower than the WHO standards. He also asks whether geoengineering is a good thing or a bad thing.
24. One of the questions from **Mr. Marcelo Vázquez-Bermudez** is related to States' duty to cooperate, which is included in the Draft Guidelines on the Protection of the Atmosphere provisionally adopted by the Commission in 2015. He asks for the scientists' views on what is the most important kind of cooperation. In addition, he asks whether it is possible with current technology to carry out specific measurements to signal that a certain country is a source of particular pollution in another country. He adds that this question is relevant to the mitigation issue.
25. **Mr. Kriangsak Kittichaisaree** asks about a threshold of harm that is actionable. In his view, the Special Rapporteur's third Report suggests that higher burden of proof is required for atmospheric pollution. He states that he assumes that higher burden of proof is required because the world is already polluted.
26. **Mr. Ki Gab Park** asks whether the definitions of “atmospheric pollution” and “atmospheric degradation” included in the Draft Guidelines are valid for scientists, particularly whether the two terms can be clearly distinguished from a scientific viewpoint.
27. **Mr. Chris M. Peter** asks Mr. Foltescu whether the assertion that “emissions have

been reduced” is based on authentic data.

28. **Mr. Sean D. Murphy** asks two questions concerning geoengineering. First, he asks whether there is a commonly accepted scientific definition of geoengineering, particularly whether it is necessarily climate change oriented. His second question is whether it is possible that geoengineering will be banned sometime in the future because of its risks. His last question is concerned with the Paris Agreement. He asks whether there is scientific reason to differentiate between Annex I countries and others.
29. **Mr. Bernd H. Niehaus** first notes that some people still claim that atmospheric pollution is not necessarily linked to global warming. He then asks whether it is irrefutably clear that atmospheric pollution is in fact linked to global warming.
30. **Mr. Donald M. McRae** asks Mr. Blondin to elaborate the difficulty of attribution he mentioned during his presentation.
31. The scientists answered some of the questions.
32. **Mr. Foltescu** suggests that the EU air quality standards are so far not as stringent as WHO standards so as to encourage implementation of the EU Member States in a phased approach. With respect to cooperation, he stresses the importance of exchange of information. He also points out that a wide range of information needs to be submitted for the assessment of compliance with air quality standards. Turning to the origin of pollution, he states that there is a system in Europe to quantify contribution of each country to pollution in other countries.
33. **Mr. Blondin** responds to questions concerning geoengineering. He states that the question to be asked is not whether geoengineering is good or bad but who should be allowed to do what. He also mentions that a difference between atmospheric pollution and atmospheric degradation makes sense, especially with respect to the introduction in the atmosphere of molecules/particles of anthropogenic origin. With respect to the Paris Agreement, he points out that the distinction between Annex I countries and non-Annex I countries is no more relevant in view of the fact that some non-Annex I countries have become major emitters. He adds that global warming is not a cyclical phenomenon. He clarifies that the attribution he refers to is one of a natural phenomenon to climate change, and the attribution could be made by assessing differences in probabilities of frequency, intensity and duration of a particular natural phenomenon. Finally, he suggests that international law should take into account the fact that the nature of GHG increase in the atmosphere is different from the conventional “pollution” due to anthropogenic short-lived pollutants, often causing health problem, as CO<sub>2</sub> and CH<sub>4</sub> which are

natural atmospheric components, are long-lived species accumulating in the atmosphere, but with no health effect at the current and foreseeable concentrations.

34. **Mr. Grennfelt** first responds to the question of threshold. He indicates that the issue of threshold has dimensions of science and psychology. He also stresses the importance of cooperation especially in the development world.
35. **Mr. Hov** considers that a “mosaic” of environmental conventions reflects the reality that an environmental convention on a particular issue is not adopted until its negative consequences become clear to stakeholders. He then anticipates that a global holistic legal instrument may be adopted in the future to deal environmental issues that are inextricably interconnected, but that the mosaic-approach will be the most realistic one for quite a while.
36. **Mr. Nagai** answers Mr. Wood’s question, by suggesting that there should be progressive approach to considering the future shape of international law to address pollution of global significance, and building upon the existing structure of international treaties and other instruments, an overarching legal framework – as a system of international law – could fill the gaps in the existing environmental conventions and help them produce more synergies.

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