

Informal document No. 1
Provisional agenda item on
Information sharing by Parties on the implementation of the Convention:
Good practices to strengthen the implementation
of air pollution-related policies, strategies and measures

**Background information and template
for the submission of**

Examples/Good practices of air pollution related policies, strategies and measures

- Prepared by the CLRTAP secretariat, in cooperation with the Chair of WGSR -

I. Background

1. The Executive Body, at its thirty-second session, adopted **decision 2013/2** on Reporting on strategies, policies, and other measures to implement obligations under the Convention and its Protocols. This decision stipulates that *“the Working Group on Strategies and Review shall continue to devote time each year for policy discussions related to the design and implementation of different regulatory, voluntary, economic or other measures relating to air pollution”*. It *“shall, annually in advance of a session, invite Parties to report at the session on strategies, policies, and measures employed to implement obligations under any of the Protocols to the Convention”*.

2. In line with that decision, in total, 31 Parties shared experiences over the course of the fifty-first, fifty-second and fifty-third sessions of the Working Group on Strategies and Review,¹ including at a special session on transport and air pollution organized during the Working Group’s fifty-second session. Two non-Parties, Tajikistan and Uzbekistan, also shared experiences in the period under review. Experiences were shared either through a presentation at a Working Group session or through the submission of a template prepared and circulated by the secretariat ahead of the Working Group’s fifty-second and fifty-third sessions.

3. The present document provides background information on the obligations to report on strategies, policies and measures for the respective Protocols. The enclosed template has been developed to facilitate the submission by Parties of examples/good practices of different regulatory, voluntary, economic and other measures relating to air pollution in advance of WGSR’s fifty-fourth session to be held in Geneva from 13 to 14 December 2016.

4. Heads of Delegations and other participants in the fifty-third session of the Working Group on Strategies and Review are invited to submit to the secretariat case studies/examples which could be of interest to other countries and thus to the policy discussion at the WGSR session. **In order to facilitate the preparation of the policy discussion on the basis of the examples submitted, please send your examples to air_meetings@unece.org by 18 November 2016.**

5. At its fifty-second session, the Working Group on Strategies and Review invited all Parties to participate actively in future sessions on exchanges of experience, **and in particular those Parties that had not yet shared such information at the previous sessions of the Working Group.** The

¹ The Parties having shared experiences and good practices are: Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Croatia, Czechia, Denmark, European Union, France, Georgia, Germany, Hungary, Ireland, Italy, Kazakhstan, Kyrgyzstan, Lithuania, Montenegro, Norway, Poland, Republic of Moldova, Serbia, Slovakia, Spain, Switzerland, the former Yugoslav Republic of Macedonia, United Kingdom of Great Britain and Northern Ireland, Ukraine and United States of America.

importance of the timely submission of templates and presentations to the secretariat was also underscored.

6. **Examples could comprise, amongst others, economic measures such as financial incentives or disincentives (such as taxes, subsidies, set prices or caps/ceilings, payments, rebates), voluntary measures (such as voluntary agreements, programmes or contracts), regulatory or legislative measures or other measures (such as educational or informational measures).** They can include policies, strategies and measures emanating from different sectors with positive effects on air pollution abatement (such as acts/laws on sustainable transport, sustainable agriculture/farming, energy, green building, biodiversity conservation and enhancement). A more detailed description of the implementation of your chosen policy, strategy or measure and related challenges and problems as well as solutions would be more useful than the presentation of many different examples. Furthermore, your examples could also be useful to other Parties even if they have not been successful by indicating why this was the case. You are thus also invited to submit experiences that cover such items as:

- a) A measure that was less effective than you anticipated and why;
- b) A measure that was actually more effective than you predicted;
- c) A measure that had particular implementation challenges – what were they and how did you address them;
- d) A measure that was either less expensive or more expensive than you had estimated. What caused the increased or decreased costs?
- e) Goals that were set and were met by innovative strategies.

II. Obligations under the Protocols to the CLRTAP Convention to report on strategies, policies and measures

II.1 Reporting on strategies, policies and measures under the 1994 Sulphur, Heavy Metals, POPs and Gothenburg Protocols

7. In accordance with **Decision 2013/2** adopted by the Executive Body at its thirty-second session, *“the sessions of the Working Group on Strategies and Review shall be considered the format for reporting on strategies, policies, and measures referenced in Article 5.1 of the 1994 Sulphur Protocol, Article 7.2 of the Heavy Metals Protocol, Article 7.2 of the POPs Protocol, and Article 7.2 of the Gothenburg Protocol”*.

II.1.1 Reporting on strategies, policies and measures under the 1994 Sulphur and the Gothenburg Protocol

8. Article 4 of the 1994 Sulphur Protocol requires that *“[each] Party shall, in order to implement its obligations under article 2: (a) adopt national strategies, policies and programmes, no later than six months after the present Protocol enters into force for it; and (b) take and apply national measures to control and reduce its sulphur emissions”*. Article 5 of the 1994 Sulphur Protocol on “Reporting” stipulates that *“each Party shall report, through the Executive Secretary of the Commission, to the Executive Body, on a periodic basis as determined by the Executive Body, information on: (a) the implementation of national strategies, policies, programmes and measures referred to in article 4, paragraph 1; [...] (c) the implementation of other obligations that it has entered into under the present Protocol, in conformity with a decision regarding format and content to be adopted by the Parties at a session of the Executive Body. The terms of this decision shall be reviewed as necessary to identify any additional elements regarding the format and/or content of the information that are to be included in the reports”*.

9. The 1994 Sulphur Protocol sets emission ceilings for 2005 and 2010 for some Parties. With the exception of Austria, Canada, Greece, Ireland, Italy, Liechtenstein and Monaco, all Parties to the 1994 Sulphur Protocol have also ratified or acceded to the 1999 Gothenburg Protocol which sets ceilings for 2010.

10. Article 6 of the Gothenburg Protocol stipulates that *“each Party shall, as necessary and on the basis of sound scientific and economic criteria, in order to facilitate the implementation of its obligations under article 3: (a) adopt supporting strategies, policies and programmes without undue delay after the present Protocol enters into force for it;[...]*” Paragraph 1 of Article 7 on “Reporting” stipulates that *“subject to its laws and regulations and in accordance with its obligations under the present Protocol: (a) each Party shall report, through the Executive Secretary of the Commission, to the Executive Body, on a periodic basis as determined by the Parties at a session of the Executive Body, information on the measures that it has taken to implement the present Protocol”*. Paragraph 2 stipulates that *“the information to be reported in accordance with paragraph 1 (a) shall be in conformity with a decision regarding format and content to be adopted by the Parties at a session of the Executive Body. The terms of this decision shall be reviewed as necessary to identify any additional elements regarding the format or the content of the information that is to be included in the reports.”*

11. In 2012, amendments to the Gothenburg Protocol and its annexes were adopted by decisions 2012/1, 2012/2 and 2012/3. In addition, Parties adopted decision 2012/4 on the Provisional application of the amendments to the Protocol, which enables Parties to make use of the adjustment procedure under decision 2012/3 immediately.

12. Sulphur as a pollutant is covered by both the Gothenburg Protocol and the 1994 Sulphur Protocol. Moreover, the following pollutions are covered by the Gothenburg Protocol: nitrogen oxides (NO_x), ammonia (NH₃) and volatile organic compounds (VOC).

13. In accordance with Decision 2013/2, Parties to the 1994 Sulphur and Gothenburg Protocol are thus invited to report on the design and implementation of strategies, policies and measures to implement obligations under the 1994 Sulphur Protocol and the Gothenburg Protocol, notably to abate pollution of sulphur, nitrogen oxides, ammonia and volatile organic compounds.

II.1.1 Reporting on strategies, policies and measures under the Protocol on Persistent Organic Pollutants (Protocol on POPs)

14. Article 7 of the Protocol on POPs requires that each Party shall, no later than six months after the date on which this Protocol enters into force for it, develop strategies, policies and programmes in order to discharge its obligations under the present Protocol. Article 9, paragraph 1 of the Protocol on POPs on “Reporting” stipulates that *“subject to its laws governing the confidentiality of commercial information: (a) each Party shall report, through the Executive Secretary of the Commission, to the Executive Body, on a periodic basis as determined by the Parties meeting within the Executive Body, information on the measures that it has taken to implement the present Protocol”*. Furthermore, paragraph 2 of article 9 stipulates that *“the information to be reported in accordance with paragraph 1 (a) above shall be in conformity with a decision regarding format and content to be adopted by the Parties at a session of the Executive Body. The*

terms of this decision shall be reviewed as necessary to identify any additional elements regarding the format or the content of the information that is to be included in the reports.”

15. In 2009, amendments to the Protocol on POPs were adopted through decisions 2009/1, 2009/2 and 2009.

16. The pollutants covered by the Protocol on POPs are the following: polycyclic aromatic hydrocarbons (PAH), hexachlorobenzene (HCB), and dioxins/furans.

17. In accordance with Decision 2013/2, Parties to the Protocol on POPs are thus invited to report at the WGSR session on the design and implementation of strategies, policies, and measures employed to implement obligations under the Protocol on POPs, notably to reduce emissions of PAH, HCB and dioxins/furans.

II.1.1 Reporting on strategies, policies and measures under the Protocol on Heavy Metals

18. Article 5 of the Protocol on Heavy Metals stipulates “*each Party shall develop, without undue delay, strategies, policies and programmes to discharge its obligations under the present Protocol.*” Paragraph 1 of Article 7 on “Reporting” requires that “*subject to its laws governing the confidentiality of commercial information: (a) each Party shall report, through the Executive Secretary of the Commission, to the Executive Body, on a periodic basis as determined by the Parties meeting within the Executive Body, information on the measures that it has taken to implement the present Protocol*”. Paragraph 2 stipulates that “*the information to be reported in accordance with paragraph 1 (a) above shall be in conformity with a decision regarding format and content to be adopted by the Parties at a session of the Executive Body. The terms of this decision shall be reviewed as necessary to identify any additional elements regarding the format or the content of the information that is to be included in the reports.*”

19. In 2012, amendments to the Protocol and its annexes were adopted by decisions 2012/5 and 2012/6.

20. The pollutants covered by the Protocol on Heavy Metals are cadmium, lead and mercury.

21. In accordance with Decision 2013/2, Parties to the Protocol on Heavy Metals are invited to report at the WGSR session on the design and implementation of strategies, policies, and measures employed to implement obligations under the Protocol on Heavy Metals, notably to reduce emission of mercury, lead and cadmium.

II.2 Reporting on strategies, policies and measures by Parties to the Protocol concerning the control of Nitrogen Oxides or their transboundary fluxes (Protocol on NOx) and the Protocol concerning the control of emissions of Volatile Organic Compounds and their transboundary fluxes (Protocol on VOC)

22. In accordance with Decision 2013/2, “*Parties to the Protocol on NOx and the Protocol on VOC may utilize the time set aside during the annual session of the Working Group on Strategies and Review to report on changes or revisions to their policies, strategies, and measures to implement obligations under the respective Protocols in*

satisfaction of their obligations under Article 8.1 of the Protocol on NOx and Article 8.2 of the Protocol on VOC”.

23. Article 7 of the 1988 Protocol on NOx stipulates that “*Parties shall develop without undue delay national programmes, policies and strategies to implement the obligations under the present Protocol that shall serve as a means of controlling and reducing emissions of nitrogen oxides or their transboundary fluxes.*” Article 8 requires that “*Parties shall exchange information by notifying the Executive Body of the national programmes, policies and strategies that they develop in accordance with article 7 and by reporting to it annually on progress achieved under, and any changes to, those programmes, policies and strategies, [...]*” Paragraph 2 of article 8 stipulates that “*such information shall, as far as possible, be submitted in accordance with a uniform reporting framework.*”

24. Article 7 of the 1991 Protocol on VOC stipulates that “*Parties shall develop without undue delay national programmes, policies and strategies to implement the obligations under the present Protocol that shall serve as a means of controlling and reducing emissions of VOCs or their transboundary fluxes.*” Article 8 on “Information exchange and annual reporting” provides that “*Parties shall exchange information by notifying the Executive Body of the national programmes, policies and strategies that they develop in accordance with article 7, and by reporting to it progress achieved under, and any changes to, those programmes, policies and strategies [...]*” Paragraph 4 of article 8 stipulates that “*such information shall, as far as possible, be submitted in accordance with a uniform reporting framework*”.

25. The majority of the Parties to the NOx and VOC Protocols are also Parties to the Gothenburg Protocol which covers the pollutants covered by the NOx and VOC Protocols. Parties to the NOx Protocol not Parties to the Gothenburg Protocol are the following: Albania, Austria, Belarus, Estonia, Greece, Ireland, Italy, Liechtenstein, Russian Federation, Ukraine. Parties to the VOC Protocol not Parties to the Gothenburg Protocol are the following: Austria, Estonia, Italy, Monaco, Liechtenstein. In accordance with Decision 2013/2, the Parties listed above may wish to consider reporting on changes or revisions to their policies, strategies, and measures to implement obligations under the respective NOx or VOC Protocols.

26. As it is not possible to cover all of the above issues in one meeting, **Parties are invited to inform the secretariat of the information they may wish to provide on a particular measure or two at the WSGR session, by submitting the enclosed template by 18 November 2016 by writing to air_meetings@unece.org. The priority for presentations would be given to Parties that have not yet shared their experience during previous WSGR sessions and to Parties that would submit their inputs by the indicated deadline.**

III. Template to facilitate the submission of examples/good practices of strategies, policies and measures employed to implement obligations under any of the Protocols to the Convention

Country: Sweden	Sector: Combustion for energy production exceeding 25 GWh/year.
Type of strategy, policy or measure: Charge on nitrogen oxides with refund based on useful energy output.	Level: National
<p>What is the main objective of the strategy, policy or measure? When has it been implemented/or will be implemented? Reduce emissions of nitrogen oxides (NO_x).</p> <p>The charge was introduced in January 1992. In the start it was only for boilers exceeding useful energy output of 50 GWh/year. In 1996 the limit was lowered to 40 GWh/year and finally in 1997 it was set to 25 GWh/year.</p> <p>The objectives of the NO_x charge are to decrease emissions and to make energy production more effective. One way to demonstrate this is to use the specific emission of kg NO_x/MWh. This number was on average 0,41 kg NO_x/MWh in 1992 when the charge was introduced. In 2015 it had decreased to 0,171 kg NO_x/MWh. This is a decrease with 58 %.</p>	
<p>Background and driving forces: Emissions of nitrogen oxides (NO_x) contribute to several environmental problems. Together with sulphur dioxide (SO₂), emissions of nitrogen oxides are the main causes of acidification, which results in widespread damage to vegetation in forests and lakes. In addition, nitrogen oxides contribute to the formation of ground-level ozone, which has adverse effects on vegetation and human health, and they are a main cause of eutrophication in forest soils and sea beds.</p> <p>In the 1980s acid rain and eutrophication were hot topics in Sweden. Sulphur and nitrogen oxides were anticipated to cause big problems for the Swedish forests. There were examples of dying forests in other parts of Europe, and some signs were starting to show up in Sweden as well. In 1985, the Swedish Parliament decided that airborne emissions of nitrogen oxides should be reduced by 30 per cent by 1995, compared to 1980 levels. The intention with the charge on NO_x was to achieve a more rapid reduction of emissions than was considered possible by relying on the administrative guidelines in place at that time. There was also a will to provide an incentive for cost-effective emission reductions in excess of these administrative guidelines.</p> <p>The charge with refund was chosen so a high charge could be set without giving industries in the NO_x-system a disadvantage compared to the industries not submitted to the charge. This is why the NO_x charge was more accepted than a regular tax.</p>	
<p>Description of the strategy, policy or measure: All boilers and gas turbines that produce more than 25 GWh/year have to measure their emissions of NO_x and their useful energy output.</p> <p>For every kg NO_x they pay a charge of 50 SEK ≈ € 5,5. The total amount of charge money is then divided by the total amount of useful energy output from all plants to calculate a refund. The refund varies from year to year, and decreases when the NO_x emissions decrease.</p> <p>The system is very easy to predict in the long term for the companies submitted to the charge. Every kg NO_x they can reduce is worth 50 SEK. This makes it much easier to predict the economic outcome from an investment than in an emission trading system.</p> <p>There are about 270 plants that are subjected to the NO_x charge. Five people work full time with reviewing emission reports and making site visits.</p>	

Costs, Funding and Revenue allocation:

The monitoring cost for the Swedish EPA is around 5 000 000 SEK /year \approx € 550 000. This is funded by the emission charge.

The cost for emission measurements carried out by the plants varies a lot, but it is a much larger cost than the administrative cost for monitoring by the Swedish EPA.

Effect and impacts on air pollution abatement:

The specific emission of kg NO_x/MWh from plants submitted to the NO_x charge was on average 0.41 kg NO_x/MWh in 1992 when the charge was introduced. In 2015 it had decreased to 0.171 kg NO_x/MWh. This is a decrease with 58 %.

Emissions from plants submitted to the NO_x charge are only a small part of the total Swedish emissions of nitrogen oxides. Total emission from plants subjected to the NO_x charge where 11 600 tonnes in 2014, and the total Swedish emissions of NO_x to air where 135 000 tonnes.

The effect of the NO_x charge has not been fully investigated.

References/Further information:

<http://www.naturvardsverket.se/Om-Naturvardsverket/Publikationer/ISBN/8200/91-620-8245-0/>
(from 2006, some figures are outdated but description of how it works is correct)

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Additional comments: *Please include any additional information you may wish to provide here.*