

Draft Chair's Summary - Item 4 a)

Information sharing by Parties on the implementation of the Convention

a) Good practices to strengthen the implementation of air pollution related policies, strategies and measures

with comments included as received by Ireland, the US, Switzerland, the Netherlands and Belgium

Annex to the WGSR-51 report

- Advance, unedited version -

A. Policies, strategies and measures to abate air pollution

1. There are different motivations for policy makers to implement policies, strategies and measures with the objective of abating air pollution including:
 - Protecting and improving public health
 - The US revised and strengthened one of its National Ambient Air Quality Standards for PM_{2.5} and is implementing regulations and programs to achieve reductions in PM_{2.5} and black carbon.
 - Protecting the environment
 - Implementation of nutrient balance restrictions through incentive programmes as part of the Swiss agricultural policy
 - Denmark introduced regulatory measures in response to fish mortality aiming also at public perception.
 - Belgium introduced voluntary measures to reduce NO_x and SO₂ emissions in order to abate acidification.
 - Mitigating climate change
 - By reducing PM and black carbon emissions through the regulation of emissions from construction machinery with a primary health benefit, climate change mitigation through the reduction of short-lived climate forcers is a co-benefit.
 - Market and industrial competitiveness
 - To create a level-playing field on the market, the EU regulates fuel quality used by many different sectors and industries.
 - In Belgium, cost-effectiveness was an important driver for choosing voluntary measures to reduce SO₂ and NO_x
 - Compliance with emission ceilings of the Gothenburg Protocol
 - The compliance with emission reduction ceilings such as the ones set out in the Gothenburg Protocol was a main driver to implement the NO_x tax scheme in Norway, in addition to environmental health.
2. While policies, strategies and measures can have direct or indirect positive effects for air pollution abatement, unintended negative effects could arise in cases when policy objectives are different or even compete with each other. An example for competing policy objectives is the promotion of renewable energy through ambitious targets and strategies by ECE member States which can lead to an increase in particulate matter emissions from biomass and biogas combustion. Consequently, cross-sectoral exchange of information and the involvement of air pollution experts in policy and instrument design are critical to avoid unintended outcomes with regard to air pollution abatement, to mitigate them, and to achieve greater policy coherence.
 - The use of wood for domestic heating is promoted as part of the Climate Policy in the EU, including in Germany, while it has led to negative implications for air quality. Germany has

revised its ordinance for small combustion installations such as pellet stoves to introduce more stringent dust emission standards.

3. The implementation of measures conducive to air pollution abatement can reduce pollutants while maintaining and increasing levels of economic productivity.
 - In Denmark and Switzerland, production levels in agriculture have been maintained (or even increased) while nutrient reduction policies were implemented leading to a decreasing use of fertilizers.
 - In the Flemish part of Belgium, all emission reduction targets for SO₂ and NO_x were achieved while electricity production increased.

B. Different types of instruments to promote air pollution abatement incl. economic, voluntary and educational measures

4. Different types of regulatory measures have been implemented to reduce air emissions :
 - In Germany, a 2010 amendment to the ordinance on small combustion installations introduced new emission limit values for dust emissions for new installations (boilers, pellet ovens) and with a 5-15 year transition period for existing installations.
 - The United States has a number of national regulations designed to reduce PM_{2.5}. These programs include rules for mobile sources, regional haze, mercury and air toxics and emissions standards that address categories such as reciprocating internal combustion engines. Denmark introduced a cap on the price of ammonia abatement measures set to 15 EUR/kg of nitrogen.
 - Belgium sets mandatory ELVs for new installations.
 - Switzerland sets particle number emission limit values which require the use of construction equipment with high efficiency diesel particle filters.
5. In addition to legislative and regulative approaches, measures beneficial to air pollution abatement can include economic, voluntary and educational measures. Such measures can have additional benefits including awareness raising, increased cooperation and information exchange.
 - In Belgium, voluntary programmes encourage the exchange of information and cooperation between a certain sector (electricity, chemical, glass industry) and the government.
 - Direct payments linked to ecological criteria in Switzerland have increased farmers' awareness of manure management.
6. Economic instruments include incentives and disincentives like direct payments or taxes.
 - The Norwegian NO_x tax scheme has led to reductions in NO_x emissions based on an agreement with the government and 14 business organizations to reduce emissions to agreed levels. If the reduction cannot be achieved, a tax has to be paid by all businesses.
 - Direct payments linked to ecological criteria in agriculture in Switzerland have led to a reduction of the use of fertilizers and increased nutrient efficiency.
 - The EPA's residential wood smoke initiative includes cash rebates for homeowners to change out their woodstoves in certain communities. Some of these are financed by industry through settlement agreements. Industry can opt for this option rather than paying a fine for not complying with certain regulations.
 - Switzerland applies a disincentive by charging a tax for VOCs for solvents and solvent containing products.
7. Voluntary programmes can provide flexibility in finding the right approach to encourage national or regional compliance with new emission reduction targets in a cost-effective way while making use of synergies with other sectors and objectives. They can be designed in many different ways and connected to long-term objectives of achieving emission reductions thereby offering a stable

regulation framework. Measures can be adjusted over time to adapt them to changing circumstances and lessons learned.

- In Belgium, voluntary agreements based on a contract between the Government and associations for the electricity sector (on SO₂ and NO_x) and the chemical and glass industry (on NO_x) have been quite successful; the voluntary agreements with the electricity sector, applied since 1993, have led to significant reductions of SO₂ and NO_x emissions of Flemish power stations. In the first phase, these ran for 10 years; in the current phase for 5 years and can be terminated at any time.
 - In Switzerland, farmers may commit for a period of 6 years as well as to the continuation of the new approach beyond the end of the resource efficiency programme to implement nutrient balance restrictions.
 - In the Netherlands, the industry encouraged the government to discontinue the voluntary programmes on NO_x and sulphur reduction and instead implement regulatory measures for those companies that did not want to take part in the voluntary programmes.
 - In Switzerland, a direct payment programme to reduce the environmental impact of agriculture was first introduced in 2004 for the cantons. As of 2014 it will be complemented by Federal Resource Efficiency Incentives.
 - The US EPA's residential wood smoke initiative has voluntary and regulatory components. Voluntary components include the EPA Hydronic Heater and Fireplace Partnership Programs which includes a labeling scheme (hang tag) for EPA-certified appliances.
8. Along with regulatory measures, voluntary agreements can be used as tools to achieve the obligations set out in the Gothenburg Protocol and as an alternative approach to applying ELV's at installation level, in line with the alternative to applying ELVs at installation level (annexes IV, V and X), and the flexibility options of article 3.2/3.3 (alternative reduction strategy achieving equivalent overall emission levels).
9. Voluntary programmes also offer the possibility of achieving emissions reductions for sources that are not addressed by regulation.
- Currently, in the US, there is no national regulation that addresses fireplaces. The US EPA has a voluntary partnership programme.
10. Educational measures such as information campaigns can also be important tools of the overall policy and instrument mix. Examples are:
- The "Burn Wise" education campaign to reduce residential wood smoke in the US includes information on the website, videos and information materials.
 - Personal consultations are carried out for every operator of small combustion installations (boilers, pellet stoves, etc.) by the chimney sweeper in Germany. Chimney sweepers additionally check wood and fuel quality as per a list of requirements.
 - In Denmark, the farmers' association advises farmers on how to comply with the regulations.
11. A variety of different educational tools including web resources exist. Examples of web platforms are:
- www.policymeasures.com
 - www.economicinstruments.com

The principal challenges for such sites are good design, quality content and a sufficient level of initial content. These three components are necessary to generate a level of user interest and added value that will sustain engagement with the resource.

C. Designing and implementing targeted measures to abate air pollution

12. The right choice of a measure might require a comparison of the cost of implementation of several measures, their objectives and benefits.
 - In Belgium, for instance, voluntary agreements have been described as cost-effective tools for existing installations, while the continuous strengthening of mandatory ELVs was found to be the better approach for new installations.
13. Choosing and designing appropriate measures needs to be based on national, regional and local circumstances.
 - In the USA, regulation is applied to more wide-spread emission sources e.g. mobile sources while voluntary measures are used to address certain more local issues. For example, 50 communities implemented the wood-stove change-out programme.
 - In Switzerland, the programme incentivizing more efficient nitrogen use in agriculture has been implemented by 24 of the 26 cantons. Each canton can choose the strategies and measures which it wants to include.
14. Adequate monitoring and assessment of implemented measures is crucial in order to be able to judge their implementation and effectiveness. Expenses for monitoring and assessment should be foreseen in the design of and budgeting for the implementation of the policy or measure.
 - In Denmark, the inspection/monitoring of regulatory measures for livestock takes place every three years by local authorities; water quality measurements are used as an indicator.
 - In Germany, the inspection of small combustion installations is mandatory and costs have to be borne by the operators.
15. When considering the costs of introducing a new or more stringent measure, it is imperative to also take the avoided costs into account.
 - For example, the average public health benefits of reducing directly emitted PM_{2.5} in the US are estimated to range from \$290,000 to \$1.2 million per ton PM_{2.5} in 2030.
 - The EU estimated that the implementation of its new fuel quality regulations will cost 0.6 EUR – 3.7 billion annually until 2020, while the benefits for human health would be seven fold higher with 8-16 billion EUR annually until 2020.
16. Measures can be implemented in planning for the accession to and implementation of the recently amended Protocols (Gothenburg Protocol, Protocol on Heavy Metals and POPs).
 - Switzerland has already introduced a regulation to limit the emission of PM from construction machinery. It stipulates that further regulation for all diesel powered non-road mobile machinery and vehicles should include a particle number limit value.
 - The US has regulatory and voluntary measures which address PM_{2.5} and black carbon.
17. A step-wise approach to the implementation of new targets can support their gradual introduction.
 - In the US, the EPA plans to propose an updated new source performance standard for woodstoves.
 - In Germany, different limit values for boilers and pellet stoves are gradually being introduced and transition periods are given for existing installations.
 - In the EU the staged approach of the introduction of fuel quality regulation allows to manage costs in industry, energy production and households.
 - In Norway, the first agreement on the NO_x scheme was developed for a period of 3 years, and following its successful implementation, a second agreement was set up for further 6 years.

D. Exchanging information on strategies, policies and measures to support implementation of the Convention

18. Exchanging information and experience on air pollution related policies, strategies and can help identify “good practices”, discuss their applicability to different national circumstances and thus assist Parties in the implementation the Convention as per its Article 8 to “[...] exchange information on national, sub-regional and regional policies and strategies for [...] the control of major air pollutants [...].”
19. Exchanging pertinent information can assist Parties in preparing for the implementation of the Convention’s Protocols, in particular the 3 most recently amended ones including the Gothenburg Protocol, as amended in 2012, which encourages in its Article 6 the implementation of management programmes to reduce emissions, including voluntary programmes, and the use of economic instruments.
20. Exchanging experiences on the implementation of the Convention in the framework of WGSR can also allow the sharing of selected examples of the work carried out in the framework of its Task Forces e.g. with regard to measures to reduce nitrogen and ammonia, techno-economic measures and other.