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Norwegian Positions



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Norwegian Climate Policy: Goals and National Implementation

Norwegian climate policy is based on the goal of limiting the average rise in global temperature to no more than 2°C above the pre-industrial level.

During the first commitment period under the Kyoto Protocol (2008–2012), the Government will:

- strengthen Norway's Kyoto commitment by 10 percentage points, corresponding to nine per cent below the 1990 level.
- ensure that a substantial proportion of Norway's emissions reductions are achieved through domestic action.

Furthermore, the Government is designing Norway's climate policy to achieve the following long term targets:

- reduce global greenhouse gas emissions by the equivalent of 30 % of our 1990 emissions by 2020.
- carbon neutrality by 2050. In case of an ambitious global international climate agreement we will aim to achieve this by 2030.

The Government considers that a realistic target is to reduce emissions in Norway by 15–17 million tonnes CO₂ equivalents, when CO₂ uptake by forests is included. This means that about two thirds of the cuts in total emissions by 2020 would be made in Norway.

Presently, about 70 % of Norwegian emissions are either covered by the emissions trading scheme or subject to a CO₂ tax. Norway has also included the emissions of N₂O from the production of nitric acid in to the emissions trading system. Certain sources of emissions cannot be incorporated into the emissions trading scheme or made subject to a CO₂ tax. In such cases, the Government will use other policies and measures.

Examples of such other policies and measures are Government support for new renewable energy developments and energy efficiency projects, new stricter building regulations and promotion of public transportation. Action plans have also been drawn up for the following sectors: petroleum and energy, transport, the manufacturing industries, primary industries, waste management, and the public sector.

Norway also has strong efforts on developing and deploying carbon capture and storage (CCS) as a global climate mitigation measure. We have already gained valuable experience from CO₂ storage at the Sleipner field in the North Sea and at the Snøhvit field in the Barents Sea. The Government also cooperates with the industry on realizing CCS at the gas fired power plants at Mongstad and Kårstø, and contributes financially to these projects.

Towards a climate agreement in Copenhagen: Norwegian positions

A climate first strategy

Our first priority should be to establish a long term goal for reducing greenhouse gas emissions, based on scientific advice. It is Norway's view that the increase in global mean temperature has to be limited to a maximum of 2 degrees Celsius compared to pre-industrial level in order to achieve the ultimate objective of the UN Convention on Climate Change of preventing dangerous climate change. Global emissions will have to be reduced by 50-85 % by 2050, most likely as much as 85%.

The developed countries must take the lead by cutting their emissions in the range of 25-40% in 2020 compared to 1990 level. Norway believes that all OECD countries should take on quantified reduction commitments in a post-2012 climate regime, differentiated according to specific criteria. In developing countries, collective emissions will have to deviate substantially from projected baseline emissions within the next decades. Emerging economies should take on emission reduction commitments in a new Copenhagen Agreement. Norway is flexible regarding the type of commitments for these countries, given that the emission reductions are measurable, reportable and verifiable. For other developing countries, in particular least developed countries, technological and financial support to enable a low carbon development path is imperative.

All sectors must be included - REDD and international maritime transport

To stabilize global warming at two degrees, all major emission sources must be included in a new climate regime. CO₂-emissions from deforestation and forest degradation in developing countries contribute to about 17 per cent of the annual global greenhouse gases emissions. A REDD mechanism should be included in the 2012 regime, to achieve measurable and verifiable reductions in emissions from deforestation and forest

degradation. Norway will increase its support for efforts to prevent deforestation/forest degradation in developing countries with about three billion NOK (more than 500 million dollars) a year. Norway has also proposed to include emissions from international shipping in a new Copenhagen agreement, by setting an emission target for this sector and invite the IMO to develop a cap-and-trade regime to meet such a target.

CCS

Moving towards a low carbon economy requires accelerated development and deployment of emission reduction technologies. Technologies related to renewable energy and energy efficiency measures must be implemented in all relevant sectors. Norway also considers Carbon Capture and Storage (CCS) a key mitigation technology, with the potential of reducing emissions up to 20-28% of required emission reductions up to 2050. Efforts to stimulate the earliest possible introduction of commercially viable CCS technologies should therefore be looked at under the UNFCCC framework.

A new financial mechanism

Significant and predictable financial resources must be mobilised to support necessary mitigation and adaptation action. Norway proposes that an amount of the emission allowances issued under the Copenhagen Agreement is auctioned internationally, to generate new additional funds. International auctioning of allowances will generate funds independent of national annual budgetary decisions. If two percent of the allowances are auctioned, the annual income is estimated to be 20-30 billion USD. This is based on assumption that all developed countries take on quantified economy-wide commitments corresponding to the lowest emission scenarios of the IPCC, including a 2° C scenario.

Norwegian Climate Policy: Carbon Capture and Storage (CCS)

It is Norway's view that the increase in global mean temperature has to be limited to a maximum of 2 degrees Celsius compared to pre-industrial level in order to achieve the ultimate objective of the UN Convention on Climate Change of preventing dangerous anthropogenic interference with the climate system.

This means that global greenhouse gas emissions will have to be reduced by 50-85 % by 2050, most likely as much as 85%. According to the Intergovernmental Panel on Climate Change, carbon capture and storage (CCS) has, after energy efficiency, the second largest potential for global emission reductions. This view is supported by the International Energy Agency which stresses that CCS is a key technology in reaching the two-degree goal. Around 20 per cent of necessary emissions reductions could come from CCS activities.

To tackle the important task at hand, we need a broad and comprehensive portfolio of mitigation options and tools. In light of its vast potential of reducing greenhouse gas emissions, Norway sees CCS as an imperative part of this portfolio.

It is crucial that the future climate regime creates a framework that welcomes, promotes and provides incentives for research, innovation and implementation of all technologies that contribute to reducing emissions. This requires increased efforts on renewable energy and energy efficiency. But we must also meet the challenge of securing a sustainable future energy supply by reducing emissions from the continued production and use of fossil fuels. CCS is one of the most promising technologies to achieve this. This technology will complement other climate change mitigation actions by reducing emissions from use of fossil fuels, including

coal, during the transition to a low-carbon economy.

Since 1996, Norway has gained extensive experience in storing CO₂ in geological structures. Monitoring data show the precise subsurface location of the CO₂ plume and confirms that the CO₂ is confined securely within the storage reservoir.

Norway is strongly committed to further develop and contribute to a widespread dissemination of CCS technologies. The Government cooperates with industry on realizing CCS at two gas-fired power plants and will contribute financially to these projects. In addition, the European CO₂ Technology Centre Mongstad will test, verify and demonstrate different concepts and technologies capable of reducing costs and risks related to CCS.

There are still challenges in making CCS technologies commercially viable on a global scale. At the same time, there are emissions that easily can be captured and stored if financial and other conditions are in place. We need to develop mechanisms to meet these challenges. To mobilize the financial resources needed to enable and disseminate such climate friendly technologies, we must create a framework that incentives investments in both developed countries and developing countries.

The international efforts to develop incentives that could help facilitating implementation of the CCS technology need to be further intensified. Financing CCS should be seen in the context of the broader discussion on financing mitigation technologies.

Climate change in the Polar Regions

Both Antarctica and the Arctic have a decisive impact on the Earth's climate development. Because of their role in the global climate system, a close watch needs to be kept on the Polar Regions to be able to give an adequate response to the challenge of climate change at a global level.

For climate change, the Arctic can be seen as the “canary in the coalmine”. Over the past few decades the annual average arctic temperature has increased at almost twice the rate of the rest of the world. Without changes in global emission patterns climate change is expected to accelerate in the Arctic in this century, contributing to major physical, ecological, social and economic changes, many of which have already begun. Over the last decades we have seen an extensive retreat in sea ice cover, multi-year sea ice has been significantly reduced and the ice has become thinner. The observed minimum sea ice cover in the Arctic in the last few years corresponds to a warming that was not expected to occur until 20-30 years into the future.

Climate change is also observed in the Antarctica. In the last 50 years, the air temperatures of the Antarctic Peninsula have increased by 2.5 degrees Celsius. The temperature of the ocean has increased by 1-2 degrees Celsius. Some of the ice shelves surrounding the Peninsula have disappeared and the ice masses onshore are increasing their speed on the way to the ocean.

Feedback processes in the Arctic can accelerate climate change

The melting of sea ice is one of the key feedback processes that threaten to accelerate climate change. The reduction in ice and snow cover will increase the absorption of incoming radiation because a reflective white surface – snow and ice – is replaced by a dark surface; open sea and a bare earth surface.

This will absorb more heat, which will lead to increased warming. Increased terrestrial temperatures may lead to thawing of permafrost and subsequent releases of large quantities of methane to the atmosphere. This is another crucial feedback mechanism that may lead to increased warming and make efforts to combat climate change all the more difficult.

Effects on sea level rise

The Polar Regions store large freshwater reservoirs in the form of ice. The ice cap at the South Pole continent makes up 90% of the fresh water ice of the world. An accelerated melting process is observed for the Greenland Ice Sheet and several Arctic glaciers. There are also signs of increased warming in the Antarctic. Melting of these ice caps will result in major rises in sea level. Melting of the Greenland Ice Sheet, if only a long-term threat, would increase the sea level by about 6-7 meters. If only 1 percent of the Antarctica melts, it will increase the sea level by 65 cm. The Greenland ice sheet is already diminishing. Melting of ice in the Antarctica is the most unpredictable variable in the prognoses of future sea levels, according to the IPCC. Sea level rise will have devastating consequences for livelihoods in coastal areas.

Understanding more

Polar climate research is a priority issue for the Norwegian government. We must understand the polar processes better to get more precise climate predictions, and thus a better foundation for understanding the consequences of climate change. A better understanding of these climate processes will also help us identify the emission cuts necessary to avoid triggering irreversible physical processes that may threaten our ability to control the future climate development.

Norwegian Climate Policy: Reduced emissions from deforestation and forest degradation (REDD) in developing countries

It is Norway's view that the increase in global mean temperature has to be limited to a maximum of 2 degrees Celsius compared to pre-industrial level in order to achieve the ultimate objective of the UN Convention on Climate Change of preventing dangerous climate change.

Today emissions from deforestation and forest degradation in developing countries amount to about 17 % of the global greenhouse gas emissions. Achieving a 2 degree goal requires significant and long term reductions in emissions from deforestation and forest degradation (REDD) in these countries. Efforts to reduce these emissions must be additional to and not replace efforts by developed countries to reduce their emissions.

In order to promote early action on REDD, Norway has launched a comprehensive Forest and Climate Initiative. In addition to achieving reduced emissions, the initiative will generate useful experiences to the negotiation process. The initiative was launched by Prime Minister Stoltenberg at the Bali summit in 2007, and has an annual budget of about 3 billion (more than 500 million USD).

In addition to emission reductions, a global REDD mechanism should promote sustainable forest management, contribute to the protection of biodiversity and secure the rights, involvement and livelihood of local communities and indigenous peoples. Besides reduced greenhouse gas emissions, REDD should also promote sustainable development and poverty reduction.

The main focus needs to be on deforestation and forest degradation due to the high rate of emissions from these activities. However,

Norway supports a future REDD regime that also promotes incentives for conservation, stock enhancement and sustainable management of existing forests. Such a broad scope will reduce the risk of carbon leakage within countries.

A REDD regime should result in measurable, reportable and verifiable emission reductions from deforestation and forest degradation in developing countries.

There are large differences between countries with regard to capacity for monitoring and reporting, institutional arrangements and governance. A differentiated use of incentives and policy approaches between countries would therefore be necessary. A ***combination of market and fund based mechanisms*** will be the best way to respond to such differences.

Crediting of reduced emissions should only take place after reliable national systems for monitoring, reporting and verification have been established. To ensure credibility an ***independent verification system*** for reported emission reductions and defined reference levels should be established.

Reference levels for emissions should in principle be based on historical emission data. Other approaches could be considered where historical data does not fairly reflect the threat of increased emissions from forests.

The focus should be on ***national approaches*** in order to reduce the risk of carbon leakage within the country. ***International leakage*** will only be fully addressed through global participation.

Norwegian Climate Policy: Greenhouse gas emissions from international shipping

Greenhouse gas emissions from international shipping and aviation are currently not regulated. Emissions from these sectors have reached a level of approximately 1,35 billion tonnes CO₂, showing an increase of around 50% since 1997. Projections show continued high growth in these emissions if further measures are not introduced. In an effective global response to climate change, all sectors and sources of greenhouse gas emissions must be addressed. Norway therefore believes that emissions from international shipping and aviation must be included in a future global climate agreement. For international shipping, we believe that a global target for the sector should be set under the Climate Change Convention and that the International Maritime Organization (IMO) should establish the regulatory framework.

A global challenge requires a truly global solution. Shipping is a uniquely global industry which needs global solutions suitable for the characteristics of that industry. Emission reduction strategies for shipping should not risk the distortion of international markets for no environmental benefit.

Potential for emission reductions

There is considerable potential for reducing greenhouse gas emissions from international shipping. The IMO is currently developing technical and operational standards for international shipping. These standards will contribute to more energy efficient and less emission-intensive shipping, but will not be sufficient to ensure the necessary emission reductions. Market-based instruments should be developed. A global emissions

trading system for shipping is the appropriate mechanism to achieve ambitious emission reductions, as it sets an emission cap while ensuring cost-efficiency.

A global cap- and-trade system

The following strategy will be environmentally effective and cost-efficient, give room for support measures, make the best use of international organisations and ensure a level playing field for the shipping industry:

- A global target for emissions from international shipping should be established by COP 15 in Copenhagen.
- The ambition for emission reductions from international shipping should be in line with the ambitions for an overall climate agreement in Copenhagen.
- The international maritime organisation, IMO, should be invited to develop the mechanisms that ensure that the global target is met.
- In the proposed emission trading system, emission allowances should be auctioned to increase cost efficiency.
- Revenues generated by auctioning allowances could be used to finance climate change mitigation, adaptation and related technical assistance in the maritime sector for developing countries.

Using already established practices and institutions for implementing regulations for international shipping, such as the system for flag state enforcement and port state control of vessels, will keep administrative burdens at a minimum. The emission trading system for international shipping should also be linked to other international emission trading systems, to increase global cost efficiency.

Norwegian Climate Policy: Proposal on international auctioning to raise substantial, additional and predictable funds for climate change actions under the Copenhagen Agreement

In an emission trading system auctioning of emission allowances is a possible source of revenue. Norway has proposed that a certain amount of these allowances issued under the Copenhagen Agreement should be auctioned at the international level to generate new additional funds for climate change actions.

The value of allowances is determined by the amount of allowances (allowed overall emission cap) times the price of each allowance (equal to the marginal abatement cost). How many allowances that will be issued, depends on emission targets agreed in the new global agreement.

International (as apart from domestic) auctioning of allowances is a financial mechanism that generates funds independent of national annual budgetary decisions. Hence, a coordinated system for collection of funds raised domestically will be redundant. This means a higher degree of predictability of raising funds than offered by traditional ODA contributions.

If two percent is used to determine the amount to be auctioned, the annual income is estimated to be 20-30 billion USD. This figure is based on assumptions that all developed countries take on quantified economywide commitments corresponding to the lowest emission scenarios of the Intergovernmental Panel on Climate Change (IPCC), including a 2°C scenario.

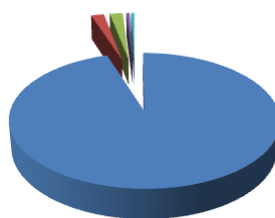
Holding back a share of allowances from distribution, implies a cost for countries with emissions covered by international emission trading. Indirectly countries with large emissions will contribute more than countries with more limited emissions. Our proposal thus differentiates between developed countries in accordance with the polluter pays principle.

The Norwegian proposal could be a source of revenue for different kinds of financial needs under the Convention. The proposal is in particular designed to meet special needs for raising substantial resources for financing adaptation and capacity building.

In a context where a price on carbon is inadequate, the Norwegian proposal could also be a possible source of funding for meeting mitigation costs. Technology development and reducing emissions from deforestation and degradation in developing countries (REDD) are areas that could potentially receive support from funds raised by international auctioning.

Improved access for developing countries to adequate, predictable and sustainable financial resources should be a cornerstone in a new deal on climate change. Our proposal has the potential of meeting these requirements under the premise that existing financial contributions from Parties are not reduced proportionally. To fully serve as an innovative financing mechanism, the funds mobilized through international auctioning must be additional to existing levels of ODA.

International auctioning of allowances prior to free of charge allocation to Parties for the purpose of raising funds for meeting costs of adaptation, REDD, capacity building and/or technology development and transfer



■ Free of charge ■ Adaptation ■ REDD ■ Capacity building ■ Technology