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Where we are and where we are going in Climate Policy

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Dear Participants to the Conference,

It is my pleasure to be with you here in Engelberg. This informal conference will give me the opportunity to review together climate policy : where we are and where we are going to.

My presentation will focus on the three following topics :

- I. Where we are : Climate facts and the current situation both in the international negotiating fora and at the national implementation level
- II. What we need : A worldwide participation to the efforts to reduce greenhouse gas emissions
- III. Where we are going to : Possible ways that have to be considered for the future of the climate regime.

1. Where we are: Climate facts and the current situation both in the international negotiating fora and at the national implementation level

There is no need to recall in detail the origins, in the 1970's and 80's, of the international process on climate change. You all know this.

I just would like to point out that among the main elements that contributed to action by policy-makers, we had :

- the role of the scientific community in providing an increasing scientific evidence of human interference with the climate system and its dangerous consequences for us humans
- and
- the role played by the civil society with the development of a growing public concern over global environmental issues.

These circumstances have pushed climate change onto the political agenda in the mid-1980s and now it is well established as one of the most prominent item of the international environmental agenda and generally regarded as one of the major challenges we are facing.



Let me recall some of the more disturbing facts pushed on the international stage by the IPCC which was established by the World Meteorological Organization (WMO) and the UN Environment Programme (UNEP).

So far, the IPCC has published 3 Assessment Reports, 5 Special Reports, and a number of Technical Papers, as well as methodologies for greenhouse gas inventories.

Of the findings of the IPCC, let us mention that :

- Since the pre-industrial era, atmospheric concentrations of greenhouse gases have increase substantially : plus 30 per cent for CO₂ since 1750, reaching 370 parts per million nowadays, plus 150 per cent for methane and plus 17 per cent for nitrous oxide. These increases are of anthropogenic origin and result from the burning of fossil fuels and deforestation
- The global mean surface temperature has increased by 0.6°C over the 20th century
- There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.

In terms of the what could happen in the next century, the IPCC has considered a number of possible scenarios and the projections are that :

- For the illustrative IPCC emissions scenarios and if no mitigation measures are implemented, the projected concentration of CO₂ in the year 2100 ranges from 540 to 970 ppm, compared to about 280 ppm in the pre-industrial era and about 368 ppm in the year 2000
- Projections using the emissions scenarios in a range of climate models result in an increase in globally averaged surface temperature of 1.4 to 5.8°C over the period 1990 to 2100. This is about two to ten times larger than the central value of observed warming over the 20th century and the projected rate of warming is very likely to be without precedent during at least the last 10,000 years, based on paleoclimate data

and

- Global mean sea level is projected to rise by 0.09 to 0.88 m between the years 1990 and 2100, for the full range of IPCC scenarios, but with significant regional variations. This rise is due primarily to thermal expansion of the oceans and melting of glaciers and ice caps.



If nothing is done to prevent these changes, they could have major consequences for the ecosystems and the human activities. The IPCC has identified the “reasons for concern” as increasing risks with increasing temperatures :

- to unique and threatened systems
- from extreme climate events

and

- from future large scale discontinuities.

Increased temperatures also widen the distribution and aggregation of impacts of climate change.

So, climate change over the next century is projected to affect, directly and indirectly, all aspects of ecosystem service provision and human activities. Therefore, climate change is currently recognised by policymakers and by the international community as one of the most important political, technical and societal challenges for the next century.

The international community has promptly reacted to this situation with some institutional responses. On the scientific side, we have already mentioned the creation in 1988 of the IPCC. For the political process, in the same year, following a proposal by Malta, the United Nations General Assembly considered the issue of climate change for the first time and adopted resolution 43/53 on the “Protection of global climate for present and future generations”. In 1990, the IPCC issued its First Assessment Report, confirming human-induced climate change and calling for a global treaty to address the problem. This call was echoed by the Ministerial Declaration of the Second World Climate Conference, held in Geneva in 1990. In December 1990, the UN General Assembly launched negotiations on a framework convention on climate change by its resolution 45/212. The United Nations Convention on Climate Change, the UNFCCC, was adopted in 1992 in Rio de Janeiro with occasion of the Earth Summit. It entered into force in 1994. The UNFCCC is one of the most universally accepted treaties with 189 ratifications.

The Convention is a “framework Convention”, that is : it does not attribute quantified greenhouse gas reduction objective to the countries. But it contains provisions for further development of commitments of Parties. The ultimate objective of the Convention is established in its Article 2. It states that :

- “The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt natu-



rally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”

Among other obligations, Parties have to report on their GHG emissions and on their national policies relevant to climate change. The Convention divides countries into two main groups :

- the 41 industrialised countries listed in its Annex I
- and
- those that are not listed in its Annex I, known as non-Annex I Parties and which are developing countries.

Furthermore, there is a subgroup of Annex I which is called Annex II and consists of OECD countries with the exception of Mexico, Turkey and Korea. Annex II countries have the obligation to provide financial and technical assistance to non-Annex I Parties to help them to implement the Convention.

The negotiating process under the UNFCCC takes place within the the Conference of the Parties being the supreme body of the UNFCCC. The COP has a session every year. It adopts the decisions for the implementation of the UNFCCC. So far, 9 COPs have taken place. The next COP, COP 10 will be held in Buenos Aires.

The first achievement of the Convention was the negotiation and adoption in 1997 of the Kyoto Protocol. This Protocol shares the Convention's objective, principles and institutions, but significantly strengthens the Convention by committing Annex I Parties to individual, legally-binding targets to limit or reduce their greenhouse gas emissions. Only Parties to the UNFCCC that are also Parties to the Protocol will be bound by the Protocol's commitments, once it enters into force. These commitments add up to a total cut of 5,2 % from 1990 levels in the commitment period 2008-2012, the so-called “first commitment period”. I recall here the quantified GHG emission reduction objective for some industrialised countries : Switzerland -8%, EU -8 %, Canada and Japan -6%, USA -7%, Russian Federation 0 and Australia +8%.

The Kyoto Protocol allows countries to reduce their so called CO₂-equivalent emissions by converting in tonnes of CO₂, thanks to the use of the Global Warming Potential, emissions and reductions of the six gases of the so called “Basket of GHG of the Kyoto Protocol”, namely : CO₂, CH₄, N₂O, HFC, PFC, SF₆. Furthermore the Kyoto Protocol allows Parties to use market mechanisms to fulfil their commitments. These mechanisms consist of two project-based mechanisms, namely Joint Implementation and the Clean Development Mechanism, and Emissions Trading. An additional flexibility is contained in the Protocol. This is the use of biological



carbon sinks such as forests and management of land, agriculture in particular, to reach the GHG reduction objective.

The rules for entry into force of the Kyoto Protocol require 55 Parties to the Convention to ratify the Protocol, including Annex I Parties accounting for 55% of that group's carbon dioxide emissions in 1990. The status of ratification as of September 2004 is encouraging : have ratified the Protocol 124 Parties, among which 32 Annex I. This represent 44.2 % of the CO₂ emissions from Annex I in 1990. This is why without the ratification of the USA, which emitted 36,1 % of the CO₂ emissions from Annex I in 1990, and/or the Russian Federation, which represents 17,4 % of the CO₂ emissions from Annex I in 1990, the Protocol can not enter into force.

But although the Kyoto Protocol is not yet in force, it is already being implemented worldwide. In fact, the countries that have ratified the Protocol have started to implement it. To mention only industrialised countries :

- in Switzerland we have in force since May 2000 the CO₂ law that provides for a CO₂ emission reduction of 10 % in the energy sector in 2010 compared to 1990 levels
- in the EU, a number of directives have being adopted that make the Kyoto Protocol law and
- Japan and Canada have national plans for the implementation of the Kyoto Protocol.

2. The need of a worldwide participation to the efforts to reduce greenhouse gas emissions

Now, let us turn attention on how to address the ultimate objective of the UNFCCC contained in its Article 2.

According to the IPCC Special Report on Emissions Scenarios :

- Stabilizing atmospheric concentrations of GHGs is a very long-term issue that will take decades to centuries
- and
- Stabilization means that global emissions must peak in the decades ahead and then decline indefinitely thereafter. For example, for stabilising atmospheric concentrations of GHG at 550 ppm GHG emissions have to peak in 2040 and then decline steadily.

But the IPCC also tells us that around 2020, developing countries will be responsible of 50% of the global emissions. Therefore, emission reductions from the sole industrialised countries will



not be enough to slow down climate change. Therefore, an effort has to be done by developing countries in order to control and reduce their GHG emissions. It remains to be decided how this effort has to be done and how much by whom.

The discussions on these matters have not yet formally started under the Convention, although many Parties have already called for GHG emissions reductions in the long-term. This was the case, for example, at the COP 8 in New Delhi in 2002. The discussions were highly controversial and so far, there is no agreement on the way objectives may be established for both industrialised and developing countries in the period post-2012. Furthermore, many industrialised and developing countries are reluctant to accept targets that may put in question their economic and social development.

3. Where we are going to : Possible ways that have to be considered for the future of the climate regime.

Among the prerequisites for starting the negotiations on the long-term or post-2012 GHG emission reduction, we can point out the following ones :

- an international political agreement at high level
- the demonstration that Annex I Parties have fulfilled their commitments, that is : that they have reduced their GHG emissions and provided financial and technical assistance to non-Annex I Parties
- and
- the assurance that all, and in particular developing countries, will receive a “fair” emission reduction commitment.

The guiding principles that countries will have in mind when negotiating the future commitments will probably be :

- the stabilisation at a given level of the atmospheric GHG concentrations, e. g. 450 ppm or 550 ppm
- and / or
- a maximum global temperature increase, e. g. 2 °C
- and / or
- that all countries, including developing countries or at least the biggest ones and from an equitable perspective, have to reduce and/or control their GHG emissions in the future, after 2012, but most probably around 2020.



But in negotiating the next commitments to stabilize the atmospheric concentrations of GHG and/or temperatures increase, negotiators must take into account additional issues such as :

- Vulnerability and adaptation to climate change
- Equity
- Technology availability

and

- Costs of GHG emission reduction.

Once a practical approach has been agreed upon on how to take into account all these issues, negotiators will have to find practical ways to share the burden of GHG emission reduction. Here we benefit from the prolix work of many scholars, but also from our own experience in implementing measures to reduce GHG emissions in view to fulfil the Kyoto commitments. Let me give you some indication of what is currently being discussed :

- Continuing with the Kyoto Protocol approach and extending the commitments for a second commitment period. Two cases could then be envisaged. In the first one, only Annex I countries would receive limitation and reduction commitments as in the first commitment period. In the second case, on the contrary, most advanced and most emitting developing countries would also have a control / reduction objective
- A multistage approach would consist in attributing limitation and reduction objectives to both developed and developing countries in order that the burden be shared according to the emitting responsibility and the limitation and reduction capability of each country
- Under the so-called contraction and convergence approach, all countries would agree on a global target, e. g. an atmospheric concentration of GHG and / or an increase of the global temperature; then they would share the burden and would have to reach the same level of per capita emissions in a specified year, e. g. 2050
- Under the multisector convergence, the per capita emissions from some sectors would have to converge
- The Brazilian proposal consists in attributing to the countries a reduction objective which is proportional to their responsibility of the temperature increase determined through their historical and near future GHG emissions
- The Triptych approach consists in distributing reduction targets to countries, developed or developing, addressing considering their emissions in three broad emission sectors, namely: the power sector, the energy-intensive industries sector and the residential and transport sector
- An other approach is the so-called commitment to human development with low emissions. In this approach, a distinction would be made between basic and luxury emissions and a target would be attributed only to countries having the latter.



These approaches may combine special types of targets and instruments such as :

- Absolute binding emission reduction targets for industrialised and a most advanced and/or emitter developing countries
- Flexible emission targets among which : dynamic targets, non-binding targets, positively binding targets, dual targets, price caps
- Coordinated policies and measures, including technology standards and taxes
- Enhanced coordinated technology R&D efforts
- Extended CDM
- Sustainable Development First.

But all these considerations have to take into account the price of fossil fuels in the world market. It is therefore of the utmost importance that a strong international regime emerges to provide the necessary signals to the various actors in charge of technology and policy making in GHG emitting sectors. The legitimate development of all countries, in particular developing countries, has to be driven by environmentally sound technologies that reduce GHG emissions. The priority should be decoupling emissions from GDP in all countries, in particular developed countries.

This decoupling has already taken place, with different magnitudes, in a number of industrialised countries. So, we notice that in the USA, the CO₂ emissions from fossil fuels per unit of GDP have decrease 40 % since 1980, in the EU almost 50 %, and in Japan 25 %. This trend is noticed since a few years in some developing countries but big differences exist among them.

An interesting document of the UNFCCC Secretariat analysing the national communications from developing countries submitted pursuant to Article 12 of the Convention shows that developing countries have so far realised enormous GHG emission reductions and there is still an enormous potential to further reduce these emissions. Anecdotically, developing countries requested that this document be deleted from the list of official document from COP 9 in Milan. This gives an idea of the situation in which we are with respect to discussions on future commitments for developing countries.

Developing countries have just initiated the process of implementing the Convention and are also preparing for the use of the Clean Development Mechanism under the Kyoto Protocol. This is a slow process compared to the steps we – most of the developed countries - have already undertaken. Therefore they need probably more time to be ready to initiate the discussions on the development of their commitments. This is not to say that developing countries are not in a position to undertake actions aiming at controlling their GHG emissions. We consider that mainstreaming a number of climate relevant measures in sectoral national policies is a very efficient way to address climate change.



In this respect, the IPCC points out that there are many barriers preventing us from fully taking advantage of the emissions reduction potential in the various sectors and activities. One important task of climate policymaking has to therefore be to address and remove these barriers to the development and diffusion technologies.

The main limiting factor of mitigation is the cost of the measures. In its Third Assessment Report, the IPCC points out that there are wide differences in estimated mitigation costs between countries and sectors, depending on the :

- Modelling approach and assumptions adopted
- and
- Energy structures and no-regrets opportunities in the countries.

Estimates of regional costs of the implementation of the Kyoto Protocol in Annex B Parties, i. e. the industrialized countries with a limitation and reduction objective, indicate that :

- The GDP could be reduced annually between 0.1 and 0.2 %, depending on the use or not of emissions trading
- Costs can be even lowered by using carbon sinks, other GHGs, CDM and JI and/or no-regrets opportunities. In some cases, the implementation of mitigation measures result in net benefits but national cost estimates vary widely
- Economies in transition generally benefit from mitigation measures.

In conclusion, the main messages that have to be taken into account in designing the future of the climate policy are :

- Science has to continue providing scientific and technical information on trends and impacts of climate change, as well as technical solutions to address GHG emissions and socio-economic issues in relation with climate change
- To solve the problem of human-induced climate needs, we have to control emissions which implies to overcome the many political, economic, social and behavioral barriers to implement mitigation options
- As the problem will not go away on its own, early action to reduce emissions is necessary and should involve all countries, industrialized and developing countries. This is particularly true in case of low level stabilization

Technologies are presently available, in the short term, to stop the growth of global GHG emissions and, in the long term, to limit climate change impacts. Nevertheless, political action may contribute to major improvements of existing technologies as well as development and deployment of new technologies



Integrating mitigation and sustainable development policies improves the prospect of achieving stabilization and sustainable development goals

Thank you for your attention.