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MATTERS RELATED TO THE KYOTO PROTOCOL

MATTERS RELATED TO DECISION 1/CP.3, PARAGRAPH 5

IMPACTS OF SINGLE PROJECTS ON EMISSIONS IN THE COMMITMENT PERIOD

Submissions by Parties

Note by the secretariat

1. A submission has been received from a Party in connection with item 5 (a) (v) of the agenda of the Conference of the Parties.

2. In accordance with the procedure for miscellaneous documents, the submission received is attached and reproduced in the language in which it was received and without formal editing.

* Including the ninth sessions of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation.

SUBMISSION BY ICELAND

RESPONSE OF ICELAND TO:

ISSUES RAISED BY THE EU IN THE CONTEXT OF THE SUBMISSION BY ICELAND ON A DRAFT DECISION --/CP.4 METHODOLOGICAL ISSUES RELATED TO THE KYOTO PROTOCOL

In addition to the following answers, reference is made to documents FCCC/SB/1998/MISC.1/Add.2 and FCCC/SB/1998/MISC.1/Add.4 which were presented by Iceland for the 8th session of SBSTA in Bonn, 2-12 June 1998.

1. What other options have been considered and why have they been rejected?

Iceland is fully committed to the development of the flexibility mechanisms under the Protocol. The scale of the problem faced by Iceland is however such that it can not be solved through the use of the flexibility mechanisms. These mechanisms have an important role to play in effective implementation of the Protocol, but they can not be used to correct major deficiencies in the Protocol.

The feasibility of exporting electricity generated by renewable sources to Europe has been studied. Such a project could be in the form of JI and contribute to an increased share of renewables in the total energy supply of Europe. Owing however to the long distance to the UK and the Continent, such a project would not be economically feasible and could be technically risky. Moreover, such a project requires more time for preparation and construction than would fit within the stipulated first commitment period.

As concerns CDM, Iceland has experience of working with developing countries. Iceland hosts the UN Geothermal Training Programme where graduate students from developing countries with some experience in this field receive practical training in exploiting and using geothermal technology. Moreover Icelandic scientists and engineers have participated in a number of bilateral projects involving technology transfer and assistance in harnessing geothermal energy. Iceland will certainly seek to intensify this work.

From a realistic perspective, however, it must be borne in mind that an economy with a population of 270 thousand with GDP of $ 7 500 million and annual Government budget of $ 2 500 million can not engage in such large-scale JI or CDM activities as to offset domestic emissions.

As concerns emissions trading, again the uncertainty with respect to the timing and form of the arrangement entails a too high short-term risk and economic uncertainty to an open and small economy as the one of Iceland to wait for conclusion of that matter. Moreover, the relatively high cost it would involve would outweigh the economic benefits.

Finally, an internationally recognized expert has assessed a solution within the framework of compliance. Also the option of not becoming a Party to the Kyoto Protocol has been

considered. Both these options have been deemed unattractive in the light of the commitment of the Government of Iceland to participate in the global endeavor to combat climate change.

2. Do you intend that single projects could include

a. Enlargement of already existing plants?

In 1990, there were only two power intensive industrial plants in Iceland, an aluminum smelter and a ferrosilicon plant. As indicated in document FCCC/SB/1998/MISC.1/Add.4 the single projects include enlargement of these plants.

b. Replacement of existing plants by new ones?

No.

3. Regarding global benefits

a. What procedures are proposed to assess the global benefits of a single project?

Parties with projects which meet the requirements of the decision are requested to report this in a timely manner to the Secretariat in their national communications. The Secretariat will report to the COP/MOP on the process emissions from any projects meeting the requirements as well as an estimate of the emission savings resulting from the use of renewable energy in these projects.

b. What are the criteria to assess the global benefits of a single project?

The global benefit derives from the fact that there will be no energy-related emissions from these projects. The emission savings resulting from this can be estimated by comparing the sum of energy related emissions and industrial process emissions per unit of production from a project falling under the decision to the same sum for a comparable project which receives its energy from power plants driven by coal, oil or natural gas. The sophistication of this comparison could be improved by using average numbers for sectors or for all new installations after 1990. The approach to the determination of the emission savings will benefit from methodological work called for by various provisions of the Protocol such as Article 12.

c. How should it be decided that a single project fulfils the criteria?

The information reported by Parties on the industrial process emissions from projects and the estimated emission savings will be reviewed by the expert review teams called for in Article 8 of the Kyoto Protocol. When COP/MOP1 decides on the guidelines for these teams, the implication of the decision on the single project issue could be taken into account.

The decision can also have implications for the development of the compliance regime to be developed under Article 18 of the Protocol.

4. Do you intend to limit the proposal to the first commitment period?

As specified in the draft decision, it applies exclusively to the first commitment period.

5. Do you intend an upper limit of emissions from all single projects and if so, what limit would you propose?

Iceland has not suggested that an upper limit be set on the emissions from the projects falling under the draft decision. If the setting of such an upper limit provides Parties to the Convention with added assurance that this decision does not represent a loophole, Iceland would support such an amendment.

In this context it should be borne in mind that there is in small economies a natural upper limit on the possible use of renewable energy sources for energy intensive industry. Nature conservation considerations set limits to exploitation of hydro and geothermal sources as well as the availability of land for large industrial plants. Moreover, small economies can sustain only few such large scale projects.

6. Have you assessed the impact of this proposal on international industrial competitiveness and if so, what are the results?

Careful consideration has been given to this aspect. The proposed decision arises from the very fact that the Kyoto Protocol is biased against small economies in this respect. The draft decision seeks to establish a level-playing field as opposed to market distortion.

The Kyoto Protocol is based on the approach of setting quantified emission limitations for individual Parties in Annex B taking into account, to a certain degree, their specific national circumstances. Although this approach may work well in many cases, special difficulties can arise for small economies where the relative impact of single projects on total emissions can be too large for the Party in question to absorb through reductions in other sectors or through available flexibility mechanisms.

For most of Annex I countries, sources of emissions are numerous and no single source contributes a significant proportion of the total emissions. This makes it possible for these Parties to formulate general or sector-based climate change strategies in their effort to reduce emissions. When we look to the smaller economies, however, the proportional weight of individual projects increases as the size of the economy decreases. In the extreme case of the smallest economies in Annex I such as Iceland, individual projects do have major impact on emissions.

The difficulties posed by large single projects are especially relevant for Parties where renewable energy is already used extensively. For instance in the case of Iceland, CO2 emissions from electricity and heat generation amounted in 1996 to about 1 ton CO2 per

GWh compared with the average of 446 tons CO2 per GWh in Annex II countries (IEA Statistics 1998). Such a party can not make room for new projects through reductions in other sectors, notably non-stationary sectors such as transport, with current technology. Therefore, problems associated with significant proportional impact of single projects make it exceedingly difficult for small economies to absorb increases in emission through reductions in other sectors.

7. Have you assessed the legal position of this proposal with respect to WTO regulations and if so, what are the results?

Consideration has been given to possible implication of the proposal with respect to trade rules established by WTO. We are not aware of any such rule with which the proposed decision would be incompatible.

8. Has the impact of the proposal on global GHG emissions been assessed including the impact if countries with emissions lower than the limit become Annex I Parties, and if so, what has been the result?

The adoption of the draft decision would lead to a reduction of global GHG emissions. At this point it is difficult to assess the magnitude of this reduction but it would be very small due to the fact that this draft decision only applies to three small Annex I Parties. The share of the economies in question in the total global emissions of GHG is negligible. Only the industrial process emissions fall under the draft decision. Possible increase in emissions from energy production will not fall thereunder regardless of the size of the economy.

One of the key measures, which can be taken to meet the objectives of the Convention, is to increase the share of renewable energy in the global energy supply. Any potential projects falling under this draft decision will by definition use non-emitting renewable energy and therefore produce products with minimum emissions per unit of production.

In this context it is a cause of great concern that most of the new capacity in the energy intensive industry appears to be powered with fossil fuel. To take aluminum as an example, the world production has increased by 1.5 million tons per year, or 7.7%, from 1990. As can be seen in the table below, 88% of this increase is powered by thermal power plants using fossil fuel. In 1990 about 35% of the aluminum production was powered by such power stations. This means that there are more GHG emissions behind each produced ton of aluminum today than in 1990. This demonstrates the need to ensure that the Protocol does not limit the use of renewable energy.

Changes in Power Consumption at Aluminum, Silicon and Ferrosilicon Smelters, 1990-1997 (GWh)

Metal	Total change	Nuclear	Hydro	Fossil fuel	Other
Aluminium(1)	14,894	-1,355	1,935	14,253	61
Silicon	2,089	59	677	1,352	1
Ferrosilicon	-1,097	-210	-505	-383	1
Total	15,886	-1,506	2,107	15,222	63

Note: (1) Chinese plants are included for the period 1993 to 1997.
Data: CRU International Ltd.

As concerns the implications of the decision should countries with emissions lower than the limit become Annex I Parties, it should be borne in mind that the decision concerns the first commitment period only.

9. Have you assessed the influence of the proposal on the improvement of the industrial processes and if so, what has been the result?

In developing the draft decision, Iceland added the specific requirement that for projects to fall under the decision they will have to use best environmental practice. This is in addition to the requirement of using renewable energy. This includes techniques for the minimization of PFC emission from the aluminum industry through the use of improved control technology. Multilateral environmental agreements such as the Convention on the Protection of the North East Atlantic (the OSPAR Convention) have developed guidelines for this (Best Available Technique – BAT).

Assessing the influence of this on the improvement of industrial processes internationally is difficult, however. Such an assessment has not been made, since it has little relevance for the proposal. Small economies are usually receivers, when it comes to technology. They have the means to require industries to apply the Best Available Technique, but rarely can they support such industries or participate with them in technological innovation and development on such a large scale.

This is not to say that Iceland does not recognize the importance of the issue. Indeed for significant technological advances to take place, pressure has often to be applied on industry. Such pressure, however, has to be exerted on the whole sector through multilateral environmental agreements to further refine guidelines for instance for Best Available Technique and benchmarks for the industry. With such multilateral instrument in place, the Icelandic proposal would be fully consistent with international endeavors to improve industrial processes.

10. Have you assessed the impact of your proposal on the long-term environmental impact of global emissions of PFCs and if so, what are the results?

Under the assumption that the decision will not lead to an increase in the world production of aluminum it should not have any impact on the long-term environmental impact of global emissions of PFCs. If on the other hand the proposal would lead to closure of smelters using old techniques, it would lead to reduction in global emissions of PFCs.

Emission of PFCs in aluminum production is due to the so-called anode effects. In a well run smelter using Best Available Technique, including central heating and computerized production control, the emission of PFCs can be as low as 0.03 kg per ton aluminum. This equals to 0.21 tons of CO2 per ton aluminum produced. The electrolysis (reduction of alumina to aluminum), using carbon anodes, emits about 1.54 tones of CO2 per ton aluminum. In total, the process emissions of GHG in a modern smelter are about 1.75 tons of CO2 per ton aluminum produced. Thus the PFCs account for about 12% of the emissions of GHG from the industrial process.

11. What kinds of projects are conceivable to be single projects under your proposal?

The projects will have to fulfill the following criteria:

- The project commences operation after 1990
- The project adds in the first commitment period more than five per cent to the total greenhouse gas emissions of the Party in 1990
- The project is powered with renewable energy
- The use of renewable energy results in a reduction in greenhouse gas emissions per unit of production
- Best environmental practice is used to minimize industrial process emissions

In the particular case of Iceland there are three ongoing projects that meet the above mentioned criteria: extension of two plants and an aluminum smelter that commenced operation in 1998. For further information see documents FCCC/SB/1998/MISC.1/Add.2 and FCCC/SB/1998/MISC.1/Add.4.

It should be pointed out that in the case of Iceland, there are no other existing sources of industrial process emission that can be expected to expand to such an extent that they would fall under the decision.

12. What criteria determine the timing requirements for the decision?

According to Decision 1/CP.3 (Adoption of the Kyoto Protocol to the United Nations Framework Convention on Climate Change), paragraph 5(d), COP4 is required to consider and, as appropriate, take action on "suitable methodologies to address the situation of Parties listed in Annex B to the Protocol for which single projects would have a significant proportional impact on emissions in the commitment period".

Another important timing requirement is the last day for signing the Protocol, March 15, 1999. At the end of the last meeting of the Committee of the Whole at COP3 in Kyoto, the Delegation of Iceland related the position of its Government that Iceland could not take on the commitments under the Protocol if the problem of single projects in small economies was not resolved. The Government of Iceland has announced that it will review its position towards the Protocol in light of the conclusions of COP4. An acceptable outcome at COP4 in Buenos Aires with respect to this matter would facilitate the signing of the Kyoto Protocol by Iceland.

It is important for the successful implementation of the Kyoto Protocol to clarify in a timely manner the implications of its provisions and of Decisions of COP3. It will significantly reduce the effectiveness of the Protocol in furthering the goals of the Convention if outstanding issues from Kyoto are left unresolved.

By adopting the draft decision at COP4, the issue of single projects would not be closed. The draft decision calls for further work with respect to criteria and assessment.

RESPONSE FROM ICELAND TO QUESTIONS FROM CANADA PRESENTED NOVEMBER 5TH, 1998

What are the options to encourage/reward use of renewable energy domestically when 1990 emission levels already reflect significant use of non-GHG emitting renewable energy?

There are several options available to encourage/reward the use of renewable energy. These options are reduced and become progressively more costly as the share of renewable energy in a country increases.

In the case of Iceland, heavy investment has been made in the exploitation of renewable energy. This can be illustrated by the fact that two thirds of the primary energy supply are renewable. More specifically 98% of the energy needs for space heating are met with renewable sources and they account for 99.9% of the electricity generation. However, this investment and the resulting reduction in GHG emissions took place before 1990.

Given this fact there are three options for further utilization of renewable energy sources. One option is the production of alternative fuels for transportation. This option however is premature given the state of the technology and the high production cost of such fuels. Another option is exportation of electricity. In the case of Iceland, such export is not feasible due to the long distance to the UK and the Continent. Lastly, there is the production of electricity for energy intensive industry, which at present is the most realistic option.

What are the options to encourage/reward the production of goods in areas of the globe where resulting emissions would be lower than if such production took place in another area?

It is difficult to identify particular areas of the globe where production could take place at lower emission than in other regions. The best measure to reduce emissions from energy intensive industry is to use non-emitting renewable energy for the production. While renewable energy sources are limited globally, there are several regions where these sources are underutilized. The further use of these renewable sources in the Annex I countries will be enhanced due to the pressure to reduce emission exerted by the Kyoto Protocol.

The expanded use of renewable energy in the developing countries can be enhanced through technology transfer and the Clean Development Mechanism.

In the long run, hopefully in the second commitment period, a more sophisticated approach to reduce global GHG emissions could be developed. During the discussions of adequacy of commitments prior to COP1 in Berlin, Iceland supported the idea of sectoral approach. Such an approach is more complicated but could reward enhanced use of renewable energy sources.

Every country has some unique circumstances. By addressing the particular circumstance of one country, through an exemption in the calculation of that country's allowed emissions, does this set a precedent for other Parties to seek other types of exemptions? What does the international jurisprudence indicate? What would be the implications for the implementation of the Kyoto Protocol?

With its Decision 1/CP.3 (Adoption of the Kyoto Protocol to the United Nations Framework Convention on Climate Change), paragraph 5(d), COP3 requested COP4 to consider and, as appropriate, take action on "suitable methodologies to address the situation of Parties listed in Annex B to the Protocol for which single projects would have a significant proportional impact on emissions in the commitment period". This was done in order to meet the special concerns expressed by Iceland at COP3.

We have proposed a decision by COP4 on this issue to the effect that, subject to stringent conditions, process emissions from a single project with a significant proportional impact on emissions shall be reported separately and not included in national totals.

In our view the circumstances in Iceland, which are dealt with in the draft decision, are quite exceptional. Therefore, and since each case is decided on its own merits, we do not believe that the adoption of the draft decision by COP4 would have any prejudicial effect on other situations.

The proposed decision only applies to the first commitment period. We hope that for subsequent commitment periods a proper framework of differentiation will be used, taking into account special situations and rendering special considerations unnecessary.

As far as international jurisprudence is concerned, the special circumstances of Iceland, due to its small and relatively undiversified economy, have been recognized in other international conventions. One example applicable to a limited number of states, including Iceland, is the provision in Article 71 of the United Nations Convention on the Law of the Sea of 1982, according to which certain general principles of the Convention "do not apply in the case of a coastal state whose economy is overwhelmingly dependent on the exploitation of the living resources of its exclusive economic zone."

The decision proposed by Iceland does not by itself set a precedent for other decisions. If other cases come up in the future, where a decision by the COP could lead to a reduction in global GHG emissions, those cases should be evaluated on their merits. Any attempts to seek precedent with regard to this decision for Parties to increase their emission with no demonstrated global benefit should be rejected as being in direct contradiction with the aims and objectives of the UN Framework Convention on Climate Change and the Kyoto Protocol.

A BRIEF RESPONSE OF ICELAND
TO THE REMARKS PROVIDED BY THE MARSHALL ISLANDS ON BEHALF OF AOSIS REGARDING THE PROPOSED DECISION ON SINGLE PROJECTS

The Marshall Islands on single project issue:

- *uncomfortable with the possibility that even prior to entry into force we would establish special dispensations*
- *do not like the message we would send by allowing an already high growth rate allowance under the Kyoto Protocol to establish an excemption or dispensation to grow even further*
- *FCCC requires a downward trend*
- *precedent to other exemptions, for political difficulties, social disruption, or any other worthy consideration*
- *the mechanisms of the Kyoto Protocol should come into effect, and should be at least attempted to be used*
- *issues relating to what is an environmentally friendly technology versus simply renewable energy promotion*

Iceland takes note of the concerns of the Marshall Islands, on behalf of AOSIS, as expressed here above. In response to these concerns Iceland refers the Marshall Islands to its responses to specific questions posed by the European Union and Canada and which are included herewith. In addition, Iceland makes the following remarks.

The draft decision of Iceland on single projects is presented on the basis of Decision 1/CP.3 "Adoption of the Kyoto Protocol to the United Nations Framework Convention on Climate Change". In paragraph 5(d) of that Decision, COP4 is requested to consider and, as appropriate, take action on "suitable methodologies to address the situation of Parties listed in Annex B to the Protocol for which single projects would have a significant proportional impact on emissions in the commitment period". This was done in order to meet the special concerns expressed by Iceland at COP3.

One of the aims and objectives of the UN Framework Convention on Climate Change and of the Kyoto Protocol is to encourage the use of renewable energy sources to combat climate change. Iceland is one those countries that has an abundance of unharnessed renewable energy sources. Owing however to Iceland's low national GHG emissions, single projects represent significant proportion of the total emission inventory, even though the GHG emission from such projects are negligible compared to total Annex I emissions. This fact limits the possibilities of Iceland to further use its renewable energy sources in meeting its sustainable development objectives. The proposed decision seeks to correct this anomaly and allow Iceland to contribute to global action to combat climate change.

In preparing the draft decision account has been taken of concerns as those raised by the Marshall Islands on behalf of AOSIS. They have called for a narrow definition of any special considerations. This Iceland has attempted to achieve. The decision proposed will not by itself set precedent for other decisions. If other cases come up in the future, where a decision by the COP could lead to a reduction in global GHG emissions, those cases should be evaluated on their merits. Any attempts to seek precedent with regard to this decision for Parties to increase their emission with no demonstrated global benefit should be rejected as being in direct contradiction with the aims and the objectives of the UN Framework Convention on Climate Change and the Kyoto Protocol.

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