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**Prerequisites for
joint implementation
projects under the
UN Framework
Convention on
Climate Change**

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by

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Introduction

An opening for Joint Implementation (JI) is found in Art. 4.2 of the UN Framework Convention on Climate Change (FCCC). The JI mechanism will be further developed at the first Conference of the Parties, probably early in 1995. The idea of JI is to be able to achieve a given global greenhouse gases (GHGs) emission target at a lower cost than otherwise possible. There are indications that the variation in GHGs abatement costs show large variation between countries due to different resource base, economic structure, and technology. Since the costs of achieving substantial reductions in global GHGs emissions could be large the potential cost saving could be considerable. Even if an international regime of taxes or tradable emission allowances could be more cost-efficient than a system of JI investments, these options are not realistic in the near future. Given the present international regime and the FCCC, JI could serve as the best intermediate mechanism for international cost-efficiency available. Norway has been a main initiator of JI and cost efficiency during the FCCC negotiations. The strategy should now be to develop *sufficient prerequisites for the Joint Implementation mechanism to operate as intended*, which according to the FCCC is to contribute to lower global GHGs emissions, and in a cost-efficient manner. These prerequisites will have implications for the design of a joint implementation mechanism. Thus many questions pertaining to the operationalization of JI remain to be analyzed and solved, which should be an important area of applied research in the next few years.

Prerequisites for JI projects

There are four main prerequisites for JI projects:

- i) JI projects should contribute to the attainment of the ambitions of the FCCC in terms of reducing global GHG emissions.

- ii) One must be able to control and verify the reduction in GHG emissions.

- iii) The cost of achieving a global GHG emission target should be lower than those limited to purely national investments.

- iv) Both the investing country(ies) and the receiving country(ies) must be better off implementing the JI project than not, calculating total costs and benefits (economic costs and benefits, local environmental effects, compliance with the FCCC, and spin-offs in terms of technology transfer, etc.).

The main critique

The main criticism of JI can be summarized in seven points. These critical remarks refer to some potential problems and difficulties of a JI mechanism. However, one of the challenges is to design a JI mechanism that avoids or minimizes such difficulties. Thus the following comments can be made to the seven points of critique:

1. There is no guarantee that JI projects lead to lower global emissions if they are carried out in countries with no national emission target (e.g. developing countries). The "baseline" of such countries is difficult to define.

Comment: In general there can be extra control and baseline problems of implementing JI projects in countries without a national emission target. One option, however, is to limit JI to micro projects, whereby the JI investment contributes to substituting a specific new and more environmentally benign technology for an older existent technology responsible for high GHG emissions. One example could be the replacement of a coal-fired thermal power plant with a gas-fired thermal power plant. GHG inventories are required to calculate the present baseline and to check the reduction in emissions from JI investments. To

compensate for the uncertain effect on global emissions a "risk premium" can be introduced by giving the investing country(ies) less than full credit for emission reduction. Thus the investing country(ies) can be induced to do additional investments to achieve a given national emission reduction target.

Furthermore the receiving country can be induced to establish a national emission target at the prospect of receiving JI investments.

2. JI is "a cheap way out" for industrialized countries.

Comment: A JI mechanism is "a cheap way out" in the sense that there is a cost saving associated with achieving an emission target compared to being confined to domestic investments. This saving should be to the benefit of both the investing country(ies) and the receiving country, since the benefit should be shared among them. Both groups of countries must be better off with the JI arrangement than without to induce them to participate. JI should be considered as an extra source of financial and technological transfer to receiving countries, be it East European countries or developing countries. There would probably be a loss of credibility to an industrialized country in the international community if it undertakes JI investments while giving low priority to domestic policy to reduce GHG emissions. There may well be some domestic projects that are more cost-effective than most potential JI projects. Thus JI projects should not replace domestic GHG abatement investments, but be complementary and an outlet for realizing some of the cost saving potential due to cost differences between countries.

Since the commitments under the FCCC are voluntary some countries might lower their national emission target ambitions if JI investments are not available in view of higher costs, and, vice versa, countries might increase their national emission target ambitions due to the existence of the JI option. The present economic situation may discourage the willingness of many industrialized countries to establish further commitments.

3. JI is a new form of colonialism where industrialized countries "buy the right to pollute" and influence the policy of developing countries.

Comment: To some extent the investing country(ies) influence the policy of the receiving country, but this must be in accordance with the receiving country in a setting accepted by this country based on the net national benefits related to the project (which can be economic, local environmental, compliance with the FCCC, and various spin-offs). This type of influence among nations is inherent in any sort of integrated international action.

4. There is a suspicion that JI funding is not additional, but will replace development aid.

Comment: JI investments are not development aid so the mechanism is supposed to supply additional funding to receiving countries. Of course it is not possible to guarantee the level of development aid since it depends on political priorities and annual budgets.

5. Norway has gone beyond the intentions of the FCCC.

Comment: It is not surprising that Norway has been in the forefront of developing JI pilot projects due to its role as a main initiator of JI during the FCCC negotiations. Even if the JI mechanism will be further developed under the first Conference of the Parties it will probably not be possible to design an operational mechanism in all details at that time. This should be a good reason for carrying out JI pilot projects to investigate different aspects of a JI mechanism, even if no credits are involved. Such initiatives can be valuable and should not be controversial as long as the pilot projects do not imply any formal precommitments to the design of the JI mechanism by the Conference of the Parties.

6. There are particular problems related to JI projects to develop GHGs sinks, e.g. through reforestation.

Comment: The difficulties related to JI projects to develop sinks, e.g. reforestation to sequester carbon dioxide, are similar to the general problems of JI projects in countries without national emission targets mentioned under point 1. The control and verification problems with the baseline in these cases are potentially larger than for JI projects that e.g. curb carbon dioxide emissions from fossil fuel combustion through fuel switching and energy efficiency improvements. Furthermore, there could be particular problems involved in assessing the alternative value of e.g. forest areas for a long time horizon. Still, JI projects to develop sinks should be considered since sink enhancement is specifically mentioned in the FCCC, since such project may be more cost-effective than other projects, and since the potential for sink enhancement seems to be large, and particularly in major developing countries that are important to include in global abatement efforts. As indicated under point 1 one possible option is to choose a micro approach for defining the baseline. These questions need to be further elaborated and investigated, however.

7. Receiving countries may face relatively higher future emissions abatement costs in a future regime of specific emission targets if many cost-effective options are realized through JI projects and emissions credits given to the investing country(ies).

Comment: The existence and size of such an additional future emissions abatement cost will depend on the future regime in terms of measures chosen (such as specific emission reduction targets, taxes, and tradeable emission allowances, etc.), the emission target, and the baseline definition. Even if there is a potential additional future cost to the receiving country this can be an optimal choice as long as the short-term benefits of JI projects are sufficiently large. These questions need

to be further investigated.

Additional difficulties

There are many more questions pertaining to operationalization of a JI mechanism. These are related to issues such as national economic and environmental benefits from JI projects that are difficult to determine and monetize, the issue of what time horizon and discount rate should be applied for the calculations, how uncertainty should be handled and risk shared among the investing and receiving countries, the problem of controlling and verifying national emissions (relative to the national target or baseline), and what the time horizon of GHG offset credits should be, etc.

These questions show that a mechanism for JI needs to be further developed and operationalized on the basis of ambitions of the FCCC and the prerequisites above.

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