

IMPLEMENTATION MATTERS

Protocols to the Climate Convention: Prospects, Problems and Proposals



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**IMPLEMENTATION MATTERS:
PROTOCOLS TO THE CLIMATE
CONVENTION: PROSPECTS,
PROBLEMS AND PROPOSALS**

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Executive Summary

The commitments in the Climate Convention are perceived by many states to be inadequate to meet the aims of the agreement. Some governments are thus in favour of strengthening the commitments by adding a protocol to the Convention which will oblige the parties to the protocol to significantly cut emissions. This document describes some of the features which any protocol should contain if it is to be effective. The main recommendations arising from the paper are as follows.

- If a protocol is to be added to the Convention then it needs to contain substantial additional commitments.
- Any protocol to the Convention should be clear and unambiguous and, in particular, the commitments should be clearly specified.
- The aims, targets and operational requirements of any protocol should be realistically achievable. Failure to achieve overambitious targets could undermine confidence in the agreement.
- Targets, timetables and reporting requirements should apply equally to all parties.
- Commitments to emission reductions or sink enhancement should be measurable with reasonable (specified) accuracy, otherwise it will be impossible to gauge the state of implementation and effectiveness of the protocol.
- Reporting and review processes concerning implementation should be carried out frequently. To aid the assessment process, reports should be in a compatible format and be compiled using the same, or comparable, methodologies.
- The parties to a protocol should report on and review implementation, but it would probably be inadvisable for them to review either policies and measures or the adequacy of commitments independently of the Convention.
- Measurements or estimates of emissions by the parties to a protocol should be amenable to independent checking, and indeed, should be independently checked.
- A more detailed, disaggregated methodology than that used in the Convention would probably be more suitable to a protocol whose implementation would need to be checked in some detail. Ideally, a candidate inventory compilation system should be identified at the same time as negotiating a protocol because otherwise any protocol could get off to a slow start.
- It would be more effective if the institutional arrangements for a protocol were kept separate from those for the Convention. A separate conference of parties and secretariat could then concentrate specifically on complying with the commitments in the protocol.
- A protocol should establish an "Implementation Committee" to conduct the more routine, technical aspects of the reporting and monitoring processes, leaving the conference of parties to deal with more contentious issues and overall strategy. The implementation committee could also oversee the operation of any independent monitoring mechanism.

Introduction

Two protocols to the Climate Convention have been proposed, and will be discussed at the first Conference of the Parties (CoP) in March 1995¹. However, most of the Parties to the Convention have not yet considered in any detail either the sorts of commitment that protocols should contain if they are to be implemented effectively or the types of mechanism which will be needed for their successful implementation. Neither have they given much thought to the operational relationship between the Convention and any protocols. Yet serious consideration of factors such as these is likely to be essential if the Convention is to develop into an effective instrument for dealing with climate change. The introduction of ill-thought out protocols could impair, rather than enhance, the chances of the agreement achieving its aims. A poorly implemented and ineffective protocol could undermine confidence in the Convention as a whole and result in widespread non-compliance. The aim of this paper is to highlight some of the issues that need to be addressed by the Parties if they are to adopt amendments or subsidiary agreements, such as protocols, which will strengthen the Convention and will really help to achieve the goal of preventing dangerous anthropogenic interference with the climate system.

This paper first examines some of the pros and cons of agreeing protocols to the Convention, rather than amending the main text of the document. The types of commitment that should be included in any protocol if it is to be effective are discussed, and questions that might arise from different levels and types of states' participation in protocols, as opposed to in the Convention itself, are considered. Next, the paper examines the sorts of reporting, review and monitoring mechanisms that will be needed to ensure that any protocols are well implemented, and looks briefly at the sorts of institutional links that protocols might have to the parent agreement. Finally, some conclusions are drawn as to the general features that any successful protocol should contain.

1. Both the Government of Germany and the Alliance of Small Island States (AOSIS) have submitted proposals for protocols in time to be considered at the first Conference of the Parties.

Protocols versus amendments

The need for protocols or amendments to the Climate Convention derives from the perception of many states that the commitments in the agreement are inadequate to prevent dangerous anthropogenic interference with the climate system. This is not surprising as the current commitments are the result of a compromise reached under considerable time pressure at INC 5, just before the Convention was opened for signature at UNCED². At the time, the commitments were not generally regarded as a long-term solution to the possible problems of climate change, but rather as an interim measure pending the availability of more precise information on the rate and magnitude of climate change and, more importantly, its impacts. For this reason, the Convention was drafted as a "Framework" which could be amended in the light of scientific evidence on climate change and its impacts. The debate on whether or not to amend the agreement derives mainly from different interpretations by states as to the likelihood of significant climatic change and the severity of its impacts on humankind.

Unfortunately, the most authoritative source of information on climate, the Intergovernmental Panel on Climate Change (IPCC), will not report on the possible impacts of any changes until well after the first Conference of the Parties to the Climate Convention. It is thus unlikely that the CoP will be much better informed about impacts than the INC was before Rio.³ However, some governments, notably the USA, have changed their views on the likelihood of adverse impacts occurring. There is thus a prospect of agreement being reached between at least some states on protocols or amendments to the Convention at the CoP. If the commitments in the Convention are to be strengthened in this way then the question arises as to whether it would be better to amend the commitments in the Convention or whether to add a protocol containing new commitments.

The main advantage of amending the Convention itself is that the new agreement could then involve all of the parties, and thus it would be more effective globally. However, the prospects of reaching agreement between all of the parties are not good, given the difficulties encountered in negotiating the original agreement, with its quite vague commitments, and the fact that there is little new information of substance regarding impacts. Negotiating a protocol, which might be binding on comparatively few parties, would be much easier. On the other hand, an agreement between fewer parties would obviously have less effect on global emission levels, and hence atmospheric concentrations.

Currently, the mood in the INC seems to be that it would be most practical for the CoP to try to negotiate a "carbon dioxide" protocol primarily amongst the developed country parties. It is probably feasible to negotiate a carbon dioxide protocol between many of the Annex 1 Parties, in that it is already EU policy to have such a protocol, and that the USA and Japan are not fundamentally opposed to one. In addition, such a course of action is sensible from a practical point of view. Carbon dioxide is the major

2. For a fuller description of this process see "The Role of Science in the Global Climate Negotiations", John Lanchbery and David Victor, forthcoming in the *Green Globe Yearbook 1995*, Oxford University Press, or see "The United Nations Convention on Climate Change", D. Bodansky, *the Yale Journal of International Law*, 18:2, (summer) 1993.

3. See Lanchbery and Victor, reference number 3.

greenhouse gas⁴ in terms of its overall effect on climate, and the developed country parties are the main carbon dioxide emitters. A protocol limiting emissions of carbon dioxide could thus have a significant effect on climate change. Also, most sources of the gas are well known and can be measured with reasonable accuracy. Possible problems relating to inaccurate monitoring and reporting could thus be avoided, and it would generally be easier for states parties to draw up workable strategies for carbon dioxide emission abatement than for other greenhouse gases.

One of the most important advantages of having a new protocol covering a specific aspect of the overall agreement, such as carbon dioxide, is that it presents the parties with an opportunity for a much clearer agreement, without the ambiguities inherent in the Climate Convention. Serious questions remain, however, about exactly what commitments a protocol should contain and, consequently, which states might sign up to it, the types of links it should have to the Convention (in terms, for example, of institutional arrangements) and what provisions it should contain for monitoring and reviewing implementation.

4. *Other than water vapour*

Types of commitment

If a protocol is to be added to the Convention then it needs to contain substantial additional commitments, otherwise there would be little point in negotiating it and, more importantly, it would be unlikely to be implemented, thus undermining confidence in subsequent protocols. Substantial commitments need not, however, relate solely (or at all) to emissions. They could, for example, relate to monitoring (as in the case of the EMEP protocol to the Long Range Transboundary Air Pollution Agreement). However, in the case of the Climate Convention it seems likely that the primary focus of any protocol negotiated in the immediate future will be more substantial commitments to emission reductions, and this paper therefore concentrates on this type of agreement.

If a protocol is to be effectively implemented it needs to fulfil the following basic requirements:

1. Its aims, targets and operational requirements should be realistically achievable. States' failure to achieve the goals of the protocol would undermine confidence in it. Any tendency for states to overcommit themselves should thus be avoided, even if this means that any commitments to emission reductions appear too "weak". It is always possible to include provisions for more substantial commitments to be negotiated should the parties achieve their initial objectives as, for example, in the case of the ozone agreements.
2. Commitments should be well specified. There is little point in adding a framework protocol to a framework convention, and a vague set of commitments would be likely to lead to poor implementation and, again, undermine confidence in the agreement and in any future protocols.
3. Commitments to emission reductions or sink enhancement should be measurable with reasonable (specified) accuracy, otherwise it will be impossible to gauge the implementation and effectiveness of the agreement. At present, this implies that any protocol will probably concern carbon dioxide primarily, because other emissions cannot be measured very accurately. Although some states could commit themselves to, say, substantial, measurable methane emission reductions, other states could not, because their sources might not be measurable to sufficient accuracy to make any such commitment meaningful. In principle, it does not matter if one state commits to cutting methane and another to carbon dioxide, as long as all commit to reductions which have the same effects, pro rata, on radiative forcing. In practice, however, the effects of the different gases on radiative forcing are not well defined, and are subject to change. Any "mixed gas" protocol is thus likely to run into disputes about the comparability of commitments. A protocol in which emissions are offset against sinks is, for similar reasons, likely to run into the same sorts of problems and would thus be equally inadvisable.

Another reason for negotiating a single gas protocol is that if the commitments to emission reductions in any protocol are substantial they are likely to "hurt" more when applied in some sectors than others. States are unlikely to enter into an agreement where they consider that implementing their commitments hurts them more than other states. For example, a commitment implemented by eliminating methane emissions from landfill might be perceived as likely to cost a lot less than the same commitment

implemented by cutting energy-related carbon dioxide emissions. If states are to enter into costly commitments they need to be assured that others are doing the same.

4. Linked to the need for readily measurable commitments is the requirement that such measurements should be capable of being independently checked, and indeed, should be independently checked. If states are to enter into commitments which are substantial, and which could cause them to incur significant costs, then they are likely to want rather more reassurance that other states are abiding by their commitments than is provided by a self-reporting system of the type mentioned in the Convention. Such reassurance could be provided by an independent verification system.

In summary, the commitments in any protocol to the Convention should be substantial, realistically achievable, well specified, quantifiable with reasonable accuracy, and verifiable. At present, these requirements imply a single gas protocol and no use of the comprehensive approach (counting in sinks). To achieve a balance between substantial, and realistically achievable, commitments a protocol should contain provisions for revising its commitments.

In conclusion, it is worth mentioning that some governments⁵ advocate couching commitments in terms of policies and measures, rather than targets, and this seems to have a number of advantages. Notably, such an approach should ensure that states make the sorts of long-term structural changes which will ensure that emissions come down and stay down. It could also encourage states to adopt more realistic, achievable measures. However, different circumstances within states would tend to mitigate against them all being capable of selecting the same sorts of policies and measures and would also mitigate against the measures having the same effects on emissions. Therefore, states would have to select, from a range of policy options, those which were appropriate to them, and problems would almost certainly arise in comparing the relative effectiveness of different options. Indeed, such an approach is likely to give rise to more difficulties regarding comparability than the mixed gas targets approach mentioned above. Thus, although it might be a good idea for a protocol to contain provisions for states to report on their policies and measures, as in the Convention, and for these to be periodically reviewed, it would probably not be a good idea to substitute these for commitments to specific emission reductions. Above all, any commitments should be clear and unambiguous. Emission reduction targets can be clear and unambiguous whereas commitments to particular measures may not be.

5. For example, France and Germany

Participation

The issue of how many (and which) states participate in a protocol is evidently crucial in determining how effective it will be in meeting the aims of the Convention. All other factors being equal, the global effectiveness of any protocol in limiting greenhouse gas emissions will depend on the number of parties and their emission levels. However, equally obviously, the number of parties to such an agreement will depend on the level of commitments in it and the perceived need for them. Less obviously, in the case of an agreement to significant emission reductions, participation will also depend strongly on exactly which states join, and on how well they comply, or are perceived to comply, with their commitments. A protocol with a commitment to cut carbon dioxide emissions by 25% would, for example, probably need the participation of the USA, the EU and Japan to stand any chance of being effective: not only because these states are major emitters of greenhouse gases and their participation would be needed to achieve significant reductions globally, but also because a commitment to cut carbon dioxide emissions implies a cut in energy use which, in turn, tends to imply increased industrial costs. Few countries would be willing to limit their greenhouse gas emissions due to energy use unless they could be sure that their main industrial competitors did the same. Indeed, amongst the developed states, this was the one of the main obstacles to getting more substantial commitments to emission reductions into the Convention in the first place.

If we assume that a carbon dioxide protocol is the type most likely to be negotiated, then it is important that the protocol includes measures which will encourage the states that emit most of the gas to join the agreement. In particular, it should include provisions for verification, for the reasons given in the previous section.

In the Convention there are significant disparities between the reporting requirements for Annex 1 states and those for other states, and this undoubtedly encouraged some less developed states to join the agreement. The same is unlikely to be true of a protocol containing commitments to significant emission reductions. If states are to be encouraged to enter such an agreement they not only need to be sure that their commitments regarding emissions are the same as other states, but also that their reporting requirements are the same. Any other arrangement might be perceived as unfair, and disputes about differing rates and levels of implementation would be likely to arise. In addition, it is evidently important to the effective review of implementation of a protocol that the reports are comparable.⁶ Having undifferentiated commitments and reporting requirements for all states parties to a protocol may, of course, be perceived as being unfair to some developing countries and may indeed discourage their participation. But if this is the case, it would probably be better if they did not join a protocol in the first place. They would still be members of the Convention and could therefore join an effective carbon dioxide protocol when they felt able to do so.

In summary, if a protocol to significant emission reductions is to maximise its effective participation it should have simple, well defined commitments both in respect of targets and reporting requirements, and these should apply equally to all parties.

6. *Questions regarding the comparability of reports have already arisen in the INC on debates about joint implementation (JI), where it has generally been agreed that all parties to the JI agreements would have to report in the same way.*

Reporting and reviewing implementation

If a protocol is to be seen to be implemented then the parties should regularly report on their progress towards complying with their commitments and the reports should be reviewed by the other parties. Such reporting and review processes also encourage states to implement the agreement, both by regularly drawing their attention to their obligations and by exposing them to the risk of being found out if they deliberately do not comply. (Any reporting and review process should encourage parties to report fully, and non-compliance should not be penalised unless the other parties consider it to be a deliberate attempt by a state to avoid its commitments.)

To obtain as clear as possible an idea of the state of implementation, and to detect inadequate operation of a protocol at an early stage, the reporting and review process should be carried out frequently (say once per year). Also, to aid assessment, the reports should be in a compatible format and be compiled using the same, or comparable, methodologies. In other words, the implementation review process for a protocol should, in outline, be very similar to that in the Convention. However, in some respects the mechanisms in the Convention (and elaborated in recent INC meetings) are likely to be inadequate. In particular, the IPCC/OECD methodologies may prove inadequate for compiling inventories for a more stringent regime. These methodologies were deliberately devised so as to be fairly simple and to be usable by all states parties to the Convention. A more detailed, disaggregated methodology, such as CORINAIR⁷ would probably be more suitable to a protocol whose implementation would need to be checked in some detail. It would be wise for the parties to a protocol to identify candidate inventory compilation systems at the same time as negotiating a protocol because, although it is always possible to develop a system, such development tends to be time-consuming. Consequently, if a reasonably well defined system is not adopted at the outset, any protocol could get off to a slow start.

The negotiations on a protocol will need to address the question of exactly who reviews implementation. In principle, this will be the conference of the parties, but in practice, this body will probably be too large, and insufficiently qualified to undertake such a task effectively. It may therefore be more effective to set up subsidiary bodies to perform the bulk of the work, and to report more contentious matters to the conference of the parties, much as in the case of the Convention. (This question is considered in more detail in the section on institutional arrangements, page 11–12.) The conference of the parties to a protocol should report to the Climate Convention on its implementation because this will have an important bearing on implementation of the Convention as well.

Assuming that the parties to a protocol agree to an independent monitoring regime then the questions of how and what to monitor, and who should do the monitoring will arise. Ideally, a monitoring regime should not simply measure phenomena in the same way as they would already be measured by states. Although any monitoring process should from time to time validate states' measurement methods, it should ideally use different methods to measure emissions, thereby providing a completely independent

7. CORINAIR was originally developed as a system for the European Community, but has now essentially been merged and developed together with the monitoring system, EMEP, for the Long Range Transboundary Air Pollution Agreement. Many developed countries are thus familiar with the system.

check on accuracy. In the case of a carbon dioxide protocol, for example, states' estimates of emissions made using a "bottom up" methodology based on emission sources in the energy sector could be checked using the IPCC/OECD "top down" methodologies based on energy flows. Indeed, many states already use such comparisons to check their inventories and there is little doubt that other procedures could be developed for other emission sectors. The question of who should do the monitoring is less clear and is discussed at greater length in the next section.

While it seems clear that parties to a protocol should report on and review implementation, the extent to which they should perform the other reporting and review processes mentioned⁸ in the Convention is less obvious. Since the parties to a protocol would almost certainly also be parties to the Convention, and must therefore periodically review the adequacy of the commitments in achieving the goals of the agreement, it seems a little pointless to perform an independent review of the same topic for a protocol. However, the parties to a protocol might choose to interpret the results of such a review differently, and might use such a review to strengthen the commitments in the protocol. In principle, there would be rather more point in reviewing states' policies and measures, but there are inherent difficulties associated with such a process. Firstly, reviewing states' policies on any matter is potentially very contentious and might well lead to futile disputes because, secondly, it would be very difficult to ascertain (until after the event) whether or not a particular state's policies were adequate for reaching its objectives. Moreover, it would always be possible for a state to comply with its commitments fortuitously. For example, many states look likely to meet their present commitments to stabilise, or even reduce, emissions under the Convention because of the economic recession. If a state complies with its commitments, albeit accidentally, it would almost certainly be unwise to adversely review its policies on the grounds that they are inadequate!

Finally, linked to any review processes is the question of how to resolve disputes between the parties to a protocol. Here there are many options to choose from, of which several have been tested in other agreements. One of the most effective appears to be that used in the Mediterranean Convention (among others) where each of the parties in dispute appoints a member of a tribunal and they, in turn, appoint an independent chair. In outline, the three-person tribunal then makes its own rules of procedure, considers the factors in the dispute and comes to conclusions which are final and binding upon the parties. Alternatively, the parties to a protocol might choose to use the dispute resolution processes set up by the Climate Convention which may well be effective if the multilateral consultative process (Article 13) is elaborated well.⁹

8. In addition to reviews of implementation, the Convention also provides for reviews of "policies and measures" adopted by the parties and of the adequacy of the commitments in the Convention.

9. See "A note on the elaboration of Article 13", John Lanchbery, VERTIC, 1994 and "Design Options for Article 13 (Resolution of Questions Regarding Implementation) of the Framework Convention on Climate Change", David Victor, IIASA, 1995.

Institutional arrangements

Protocols to international agreements are separate legal agreements which are not binding on the parties to the original agreement, unless they specifically sign up to them. Typically, as is likely to be the case in protocols to the Climate Convention, they contain different commitments to their parent agreements and they also often have different reporting review and monitoring mechanisms. Thus they usually need different institutional arrangements.

In the case of any protocol to the Climate Convention it would obviously be advisable for the parties to the protocol to report on its implementation to the Conference of the Parties to the Convention, in order to keep them informed of progress towards achieving the goals of the Convention. Apart from this requirement, however, it might be most effective if the institutional arrangements for a protocol were kept separate from those for the main agreement as, for example, in the case of the Montreal Protocol to the Vienna Convention on substances that deplete the ozone layer. A separate conference of parties and secretariat could then concentrate specifically on complying with the commitments in the protocol. Monitoring, reporting and review processes, and dispute resolution mechanisms could all be dedicated to achieving this end, without the risk of their being confused with different requirements in the Convention. Also, funding requirements could be more clearly identified than if lumped in with those for the parent agreement.

If one accepts that the institutional arrangements for a protocol should be separate from those of the Convention then it will first be necessary to establish a secretariat which maintains close links with the parent agreement. Next, the parties will probably need to decide whether they want to make use of the subsidiary bodies set up by the Convention or whether they wish to set up their own bodies. Given that those established by the Convention will almost certainly have members which are not parties to the protocol, states which are parties to the protocol may not wish to use them. However, it is a moot point as to whether a protocol needs a special body to review scientific and technical progress, because this task would already be undertaken by the Convention's Subsidiary Body on Scientific and Technical Advice (SUBSTA). A subsidiary body dealing specifically with implementation of a protocol should, however, be a distinct entity because it would have to deal with the implementation of a different set of commitments, reported in a different way to the Convention.

On balance, it would probably be sensible for a protocol to establish an "Implementation Committee" to conduct the more routine, technical aspects of reporting and monitoring processes, leaving the conference of parties to deal with more contentious issues and overall strategy. It might also be sensible for such an implementation committee to oversee the operation of any independent monitoring mechanism.

There are, of course, potential disadvantages to having different institutional arrangements for the Convention and a protocol to it. One of these may be increased administrative costs, but since the parties will mostly be from developed countries, costs need not be a major problem. Another possible disadvantage could be that of poor communication between the two agreements, and the text of any protocol should thus contain safeguards to prevent this occurring. In general, however, it would seem that the

advantages of having a new, unambiguous agreement with separate institutional arrangements would outweigh the disadvantages. The general structure of the arrangements relating to a conference of the parties, secretariat, reporting and review processes could be based on the fundamentally sound structures in the Convention.

Conclusions

The key to establishing an effective protocol is simplicity. Any protocol agreed in the immediate future should concentrate only on carbon dioxide and should not, in terms of commitments, include sinks. The commitments should be substantial but realistically achievable. Targets and timetables should be clear, simple and applicable to all of the parties. Likewise, there should be a single reporting system with a single set of standards and procedures. The parties should frequently review implementation of the agreement and an independent monitoring regime should be established to serve the protocol.

The conference of parties to a protocol should report on implementation to the Convention and should liaise closely with it, particularly on reviews of adequacy of commitments. However, a protocol should have separate institutional structure from the Convention and this structure should include an "implementation committee".

In summary, the commitments in any protocol to the Convention should be substantial, realistically achievable, well specified, quantifiable with reasonable accuracy, and verifiable.

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