Preface

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Since the 1972 Stockholm Conference on the Human Environment, which produced the UN Environment Programme, the number of multilateral environmental agreements (MEAs) has risen sharply. Most of the newer agreements contain some kind of verification mechanism (even though the term is rarely used in MEAs) to monitor and assess parties' compliance. For these, negotiators incorporated provisions for the reporting, assessment and review of treaty implementation right from the start of their negotiation, as in the case of the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer. However, such mechanisms have even evolved for older agreements which originally lacked verification provisions. The trend towards stronger monitoring provisions for assessing compliance with MEAs continues, indicating that effective verification is increasingly considered a prerequisite for their successful implementation. The Kyoto Protocol, which includes extensive and rigorous provisions for reporting and review, is an excellent example of this new generation of MEAs.

In response to growing scientific evidence, parties to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) now acknowledge the need for quicker and tougher measures to reduce the burning of fossil fuels—the biggest contributory cause of global warming. The adoption of the Kyoto Protocol to the convention in 1997 was an important first step towards tackling the problem by establishing—for the first time—legally binding emissions reduction targets for greenhouse gases. Agreement on the Marrakech Accords in October 2001 paves the way for the Kyoto Protocol to enter into force in 2003 once the necessary ratifications have been deposited.

The verification system, which is based on self-reporting and expert review, will be fundamental to the successful implementation of the Kyoto Protocol. The main objective of the system will be to judge each country's compliance with its emissions reduction targets. The verification provisions will also encourage the open and transparent exchange of information, which is important for several reasons.

First, transparency is key to reassuring parties that the burdens of implementation are being shared fairly. This is vital, because many parties anticipate that the costs of implementing emission reductions will affect commercial competitiveness and trade. To create a level playing field, each ton of carbon claimed by parties against their targets must be verified as authentic and equivalent according to established standards.

Second, many of the provisions of the protocol are innovative and untested. The open exchange of information will help countries learn from each other's successes and mistakes as national policies are developed.

Third, and most important, transparency is key to protecting the integrity of the protocol. The reporting and review mechanisms agreed at Marrakech will provide a framework for parties to show that they are taking their obligations to protect the environment seriously. Any suggestion that the system is being cheated could jeopardise the treaty by undermining public confidence in it.

The Kyoto Protocol's verification regime is unique among MEAs. Its complex and stringent provisions are designed to provide strong incentives to parties as they implement their obligations. This has been achieved by integrating verification into all operational elements of the protocol. Under the protocol, parties can choose to meet their emission reduction targets using a combination of domestic measures, land-based sinks, emissions trading and the project mechanisms. The resulting complex web of measures is more difficult to monitor and verify than a system based on only one measure. However, this has also made it possible to be innovative, using penalties and economic incentives to strengthen the role of verification. One example of this 'stick and carrot' approach is that parties are rewarded for submitting high-quality inventories on time by becoming eligible to participate in the emissions trading mechanism. Failure to meet reporting obligations, on the other hand, results in withdrawal of such entitlements.

Reporting requirements under the Kyoto Protocol are more stringent than under other MEAs because reporting is strongly linked to the assessment of compliance. This was felt necessary given the legally binding nature of the emissions reduction targets. Building on requirements under the UNFCCC, developed countries will submit an annual inventory listing emissions of greenhouse gases from their energy, transport, waste, industrial and agricultural sectors, and the absorption of greenhouse

gases by land-based sinks. Guidelines have been developed which provide default methodologies for calculating inventory estimates and which set standards to ensure that parties implement quality control and uncertainty assessment systems. This standardisation is designed to maximise comparability and facilitate independent compliance assessment by expert review teams.

During the first commitment period (2008–2012), the national inventories themselves will not show whether individual parties will meet their emissions reduction target at the end of 2012. This can only be judged by projecting the effect on existing emission trends of policies that are still being implemented. Parties will therefore also be obliged to report on a range of qualitative measures, including actions taken domestically to reduce greenhouse gas emissions. While non-compliance with these aspects of implementation may be harder to judge, this does not make such information less valuable. On the contrary, a true overall assessment of compliance can only be made by combining the quantitative and qualitative information submitted by parties.

The climate regime is now moving into uncharted territory. The innovations of the Kyoto Protocol are designed to reduce emissions cost-effectively and efficiently, but there will be much 'learning by doing' as each element of the agreement becomes operational. To facilitate this process, parties should seize opportunities to exchange information and share experience. One such opportunity is the 'demonstrable progress' report that parties are urged to submit by 1 January 2006. The report is designed as an early-warning mechanism, putting under the spotlight those parties which are not taking tough enough measures to meet their commitments by 2012. The sooner parties begin implementing their national policies and systems in the pre-commitment period, the longer they will have to resolve problems prior to their becoming formal questions of implementation under the remit of the compliance mechanisms.

One likely difficulty for the implementation of the verification regime is the scarcity of suitably qualified and experienced personnel to undertake the expert review of parties' national reports. There will be a need for continuing capacity-building, particularly in developing countries and countries undergoing economic transition. Assistance is also required to facilitate the development of national systems and promote scientific research in order to further develop inventory methodologies,

taking national circumstances into account. The overall aim should be to harmonise methodologies and, where possible, simplify the inventory process. This would be helped by the development of global databases of emission factors and activity data. The wider use of earth observation data should also be explored as a way of reducing countries' reporting burdens.

A problem in all MEAs is the need to keep pace with scientific advances. Fortunately there are provisions in the Kyoto Protocol permitting the updating of the reporting and review guidelines to incorporate new research, methodologies and experience. As climate science matures and new issues emerge, linkages with other international agreements will also become apparent. Parties to the Kyoto Protocol and the Montreal Protocol already share an interest in reducing ozone-depleting gases, and finding and using alternatives that do not contribute to global warming. Linkages have also already become apparent between the Kyoto Protocol and the 1992 Convention on Biological Diversity, the 1994 Convention to Combat Desertification and the United Nations Forum on Forests as a result of the inclusion of sinks activities in the climate change regime. Identifying these linkages, filling the gaps between agreements and exploiting synergies in order to maximise resources will become increasingly important, as countries strive to implement the broad objectives of the World Summit on Sustainable Development, which took place in Johannesburg, South Africa, in September 2002.

Non-governmental organisations (NGOs)—such as VERTIC—are playing an important role in the evolving climate regime. They exert political pressure and contribute expertise, helping to establish the strong rules and systems that form the basis for effective implementation. While parties negotiate primarily with their own national interests in mind, NGOs can act on the side of the environment, championing the integrity of the Kyoto Protocol's objectives. Furthermore, as parties begin implementing their commitments under the protocol, NGOs can engage with and educate the public about the complex issues arising from climate change and attempts to deal with it. Governments, NGOs and other stakeholders must work together to raise the profile of environmental protection and encourage tough, effective action.

NGOs can also monitor countries' actions under the protocol. Open access to national information via the UNFCCC website will leave countries' policies and actions exposed to public scrutiny. This external monitoring will function parallel

to and independently of official expert review and compliance procedures under the protocol. NGOs will also undoubtedly undertake independent reviews of projects undertaken under the clean development mechanism (CDM). Public participation in the CDM is formalised in the operational rules, allowing interested groups to submit their views about proposed projects, including their objections.

Continuous monitoring by a range of stakeholders will be necessary to ensure that projects are managed with integrity and contribute to real and verifiable emission reductions over their lifetime. It is important that the role of third parties in the implementation of the Kyoto Protocol is not weakened. VERTIC's *Verification Yearbook* plays a unique role in sustaining interest in and attention to verification and monitoring, not only in respect of environmental agreements but with regard to other co-operative multilateral endeavours on which the future of our planet depends.

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