

# A GUIDE TO VERIFICATION

for environmental agreements



## What is verification?

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Verification is the process of gathering, compiling and interpreting information to make a judgement on whether parties to an agreement are complying with, neglecting or, in the worst case, cheating on their legal commitments. Verification should confirm compliance, detect non-compliance and deter potential violators.

In environmental agreements such commitments may involve reducing pollution, managing wastes, protecting biodiversity or regulating the use of scarce natural resources. Since environmental problems may be subject to significant scientific uncertainty, it may be difficult to monitor and verify compliance. Environmental agreements thus tend towards encouraging and assisting states to comply, rather than threatening them with punishment if they do not. Increasingly, however, when such 'soft' measures do not work, consideration is given to stronger enforcement measures, especially in cases of deliberate non-compliance.

## How does verification work?

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A verification 'system' comprises institutions, arrangements, techniques and technologies. How such elements are designed and combined depends on the specific requirements of each treaty.

**Reporting** systems require parties to provide information on national implementation, either directly to each other or through a designated treaty body. Reporting, which may be mandatory or voluntary, is often done according to a standard format, by following guidelines or by completing questionnaires.

**Monitoring** is the collection of information on parties' implementation of their obligations. The parties themselves undertake such monitoring, but it may also be an obligation of treaty bodies or even devolved to non-governmental organisations (NGOs). Different techniques may be used for gathering data, including on-site inspection, on-site monitoring and remote sensing.

**Reviewing** information collected is fundamental to judging parties' compliance and determining how effective an agreement is. This task is normally mandated to treaty bodies, but other international organisations and/or NGOs may be involved.

**Compliance** and/or **enforcement** measures may be required if a party is found to be violating its obligations. Environmental agreements mostly envisage 'soft' measures, such as agreed action plans or financial and technical assistance, but in some cases they permit tougher penalties, such as fines and sanctions.

## Why is verification important?

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Effective verification is a powerful tool for building confidence between parties to an agreement. As the economic costs of implementing environmental agreements may be substantial, parties will want reassurance that there are no 'free riders' among them. By requiring parties to jointly manage environmental initiatives, establish a treaty organisation or simply implement data exchanges, verification also promotes cooperation between the parties. Finally, a verification system adds 'muscle' to an agreement by permitting continual assessment of its effectiveness and providing data on which to base improvements.

## Who is involved in verification?

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**Governments** initiate, negotiate, sign and ratify, and have ultimate responsibility for implementing environmental agreements. They collectively determine the strength of each agreement's obligations and the robustness of its monitoring, verification and compliance systems. Governments also monitor each others' compliance using their own national means.

## Verifying... trade in endangered species

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The 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) aims to protect species of wild animals and plants threatened with extinction due to international trade. The Convention currently lists over 30,000 such species. CITES subjects international trade to controls, such as import and export permits and re-export certificates issued by national Management Authorities.

**Reporting** Parties are required to report to the CITES Secretariat on their trade activities (annually) and on their legislative, regulatory and administrative efforts to implement the treaty (biannually). Reporting is facilitated by guidelines.

**Assessing compliance** Information in national reports is reviewed by the Secretariat, the Animals and Plants Committees, the Conference of the Parties and in some cases by two independent organisations, the International Union for the Conservation of Nature (IUCN) and Trade Records Analysis of Fauna and Flora in Commerce (TRAFFIC). The Secretariat cooperates with Interpol and the World Customs Organisation in obtaining additional information and may, in certain circumstances, conduct on-site inspections to confirm compliance. Information from annual reports is managed and stored by the Wildlife Trade Monitoring Unit of the World Conservation Monitoring Centre (WCMC).



**Enforcement** CITES relies on national regulatory legislation and, as a last resort, trade suspensions.

**More information** [www.cites.org](http://www.cites.org); and Rosalind Reeve, 'Verification mechanisms in CITES', *Verification Yearbook 2001*, VERTIC, London, 2001.

## Verifying... climate change mitigation

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The 1997 Kyoto Protocol to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) addresses the threat of global climate change caused by greenhouse gas emissions originating from human activity. Expected to enter into force in 2003, it establishes legally binding emission reduction targets for developed (Annex 1) parties in the commitment period 2008–2012.

**Reporting** All parties are encouraged to submit periodic National Communications on their compliance efforts to the UNFCCC Secretariat. Annex 1 parties are also required to submit an annual report on their efforts to implement the Protocol, including an inventory of their anthropogenic greenhouse gas emissions and their absorption by sinks.

**Assessing compliance** The Protocol will have one of the most rigorous compliance regimes among environmental agreements. Expert Review Teams, coordinated by the Secretariat, will analyse all information submitted. Implementation questions will be submitted to a Compliance Committee. Its Facilitative Branch will provide advice and assistance to parties, while its Enforcement Branch will have the power to penalise non-compliant parties.

**Enforcement** A party that does not meet its reduction target by 2012 will be required to make up the difference in the second commitment period (2013–2017) and will be penalised an extra 30%. It may also have its emissions trading privileges suspended and be required to prepare an action plan to bring it into compliance.

**More information** [www.unfccc.int](http://www.unfccc.int); and Molly Anderson, 'Verification under the Kyoto Protocol', *Verification Yearbook 2002*, VERTIC, London, 2002.

**Treaty bodies** facilitate implementation, receive, collate and analyse national reports, undertake monitoring and verification, conduct or coordinate reviews of implementation and assess compliance. Many environmental agreements establish such bodies, including secretariats and subsidiary bodies that provide technical or policy advice. Examples are:

- *Secretariat of the 1989 Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention)*: assists parties by receiving, coordinating and conveying information on compliance ([www.basel.int/pub/protocol.html](http://www.basel.int/pub/protocol.html)).
- *Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to the 1992 Convention on Biological Diversity*: provides expert advice on implementation issues ([www.biodiv.org/convention/sbstta.asp](http://www.biodiv.org/convention/sbstta.asp)).

**Other international organisations** act as forums for the exchange of views and information relevant to verification, as well as initiating cooperative endeavours and conducting research. Examples are:

- *Commission on Sustainable Development*: functional commission of the UN Economic and Social Council (ECOSOC), responsible for monitoring and reviewing progress on implementation of a wide range of agreements included in Agenda 21, agreed at the 1992 Earth Summit in Rio de Janeiro, Brazil ([www.un.org/esa/sustdev](http://www.un.org/esa/sustdev)).
- *United Nations Environment Programme (UNEP)*: the lead UN agency on environmental matters, promotes global awareness and cooperation ([www.unep.org](http://www.unep.org)).

**Scientists** act as consultants to treaty bodies, advise national governments, and inform and influence a range of environmental stakeholders. Scientific institutes may support monitoring, verification and compliance through research and development. Examples are:

- *European Space Agency (ESA)*: conducts research, *inter alia*, into the use of earth observation satellites for environmental monitoring ([www.esa.int](http://www.esa.int)).
- *Intergovernmental Panel on Climate Change (IPCC)*: established by the World Meteorological Organization and UNEP to assess scientific, technical and socio-economic information on the potential impacts of climate change and options for adaptation and mitigation ([www.ipcc.ch](http://www.ipcc.ch)).



**Non-governmental organisations** lobby governments to make stronger commitments and establish better monitoring, verification and compliance arrangements; collect, analyse and disseminate data and conduct research; and seek to hold governments to account. Some agreements provide for NGOs to officially assist in monitoring compliance or providing policy and technical advice. NGOs operate at international, regional, national and local levels. Examples are:

- *Environmental Investigation Agency (EIA)*: monitors and exposes non-compliance in the areas of global climate, endangered species and forest protection ([www.eia-international.org](http://www.eia-international.org)).
- *Foundation for International Environmental Law & Development (FIELD)*: assists and advises stakeholders on environmental legal issues ([www.field.org.uk](http://www.field.org.uk)).

**The corporate sector** is an increasingly important partner in monitoring environmental agreements, under contract from governments, and in participating in financial mechanisms designed to provide incentives for environmental protection and enhancement. Examples are:

- *British Standards Institution (BSI)*: undertakes greenhouse gas emissions verification worldwide ([www.bsi-global.com](http://www.bsi-global.com)).
- *Société Générale de Surveillance (SGS)*: provides monitoring services in a variety of areas, including air, soil and water quality ([www.sgs.com](http://www.sgs.com)).

## How to strengthen environmental verification

- *Ensure universality and political support.* All governments should be urged to sign and ratify existing environmental treaties, support their effective monitoring and verification and consider the negotiation of new agreements where necessary. Citizens should contact their parliamentary representatives, foreign ministries and environmental ministries or agencies to express their views and seek information.
- *Increase levels and targeting of funding.* Financial incentives and assistance can increase involvement by countries that see their priorities as being social and economic rather than environmental. Treaty bodies also need sufficient funding to permit them to undertake effective monitoring and verification.
- *Harmonise reporting.* As the number of environmental agreements grows, governments are required to report on an increasing number of environmental indicators. This stretches national resources and capabilities, particularly in developing



‘We have over 500 international and regional agreements, treaties and deals covering everything from the protection of the ozone layer to the conservation of the oceans and seas. Countries have national laws too but unless they are complied with, unless they are enforced, then they are little more than symbols, tokens, paper tigers’

Klaus Toepfer, Executive Director, UNEP, World Summit on Sustainable Development  
Johannesburg, South Africa, 27 August 2002

countries. Harmonising reporting requirements and compliance mechanisms across agreements can reap synergies and be more cost effective.

- *Increase transparency.* All parties should be encouraged to be more transparent about environmental policies and actions. Treaty bodies also need to be transparent about the way information is collected, distributed and used.
- *Use technology.* Advanced technology can vastly improve monitoring and verification; off-the-shelf technology, creatively used, can lower costs and improve participation by developing countries.
- *Involve NGOs and other elements of civil society as key environmental stakeholders.* Governments and treaty organisations can benefit substantially from their commitment, involvement and expertise.

## Further information

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### Publications

*Yearbook of International Co-operation on Environment and Development*

Fridtjof Nansen Institute, Lysaker, Norway

*Earth Negotiations Bulletin*

International Institute for Sustainable Development, New York, US

*Verification Yearbook*

Verification Research, Training and Information Centre (VERTIC), London, UK

### Organisations

International Institute for Environment and Development (IIED), London, UK

[www.iied.org](http://www.iied.org)

Commission on Sustainable Development (CSD), New York, US

[www.un.org/esa/sustdev/index.html](http://www.un.org/esa/sustdev/index.html)

International Network for Environmental Compliance and Enforcement (INECE)

Washington DC, US, [www.inece.org](http://www.inece.org)

Center for International Environmental Law (CIEL), Washington DC, US

[www.ciel.org](http://www.ciel.org)

United Nations Environment Programme (UNEP), Nairobi, Kenya, [www.unep.org](http://www.unep.org)

Verification Research, Training and Information Centre (VERTIC), London, UK

[www.vertic.org](http://www.vertic.org)

VERTIC is an independent, non-profit making, non-governmental organisation. Its mission is to promote effective and efficient verification as a means of ensuring confidence in the implementation of international agreements and intra-national agreements with international involvement.

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**Cover photo** Pollution monitoring: two laboratory assistants monitor emissions from the air pipe exhaust of a chemical production facility in Germany. © Science Photo Library

**Photo of CITES inspectors** Kenyan wildlife wardens carry elephant tusks destined for illegal export by poachers whom they apprehended in February 2003. The African elephant is listed under CITES Appendix 1 as one of the most endangered species. © PA Photos

**ARTEMIS satellite image** The ARTEMIS satellite relays data from environmental monitoring satellites to Europe as part of its telecommunications payload. © ESA

**Photo of Klaus Toepfer** Klaus Toepfer is the Executive Director of the United Nations Environment Programme (UNEP). © UNEP Photo Library

Printed by Corporate and Commercial Printing Limited, 5–8 Helmet Row, London, EC1V 3QJ, United Kingdom

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