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Non-governmental monitoring of international agreements

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Over the past decade, the practice of verifying state party compliance with international agreements has expanded rapidly. The conclusion of major multilateral arms control and disarmament treaties such as the Chemical Weapons Convention (CWC) and the Comprehensive Nuclear Test Ban Treaty (CTBT), which are independently monitored by dedicated international agencies, has increased the demand for verification expertise. Unlike their predecessors, new multilateral environmental agreements (MEAs), such as the 1987 Montreal Protocol[1] and the 1997 Kyoto Protocol,[2] contain explicit provisions for verification. New verification technologies are being developed and new actors are becoming involved in monitoring compliance with international agreements.[3]

Much has been written about the role of non-governmental organisations (NGOs) in initiating and influencing negotiations on multilateral agreements.[4] However, NGOs are also increasingly involved in the implementation of such agreements, sometimes directly and sometimes by assisting states parties in implementation.[5] NGO involvement includes monitoring the activities of governments and non-state actors in order to detect and publicise breaches. In some cases NGOs assist states in bringing themselves back into compliance.

This chapter begins by describing the involvement of NGOs in the monitoring of existing or anticipated arms control and environmental agreements. It then identifies the strengths and weaknesses of treaty monitoring by such civil society actors[6] and examines the dilemmas facing them in undertaking such activities. Finally, the concluding section suggests ways in which the interaction between official verification mechanisms and non-governmental actors can be improved.

Although much of the evidence presented here is anecdotal, we hope to show that NGO monitoring and official verification mechanisms are complementary

and that verification can be strengthened if the two work hand-in-hand, while maintaining their autonomy.

NGO involvement in monitoring multilateral agreements

NGOs collect, analyse and disseminate data relevant to compliance with international agreements:

- officially, as part of a formal international verification mechanism;
- quasi-officially, loosely linked to official mechanisms; or
- informally, outside official verification mechanisms.

Official roles for NGOs

In some cases, NGOs have been able to establish formal links to official verification mechanisms. While such links are rare in the field of arms control, MEAs are more open to involvement by civil society actors, who often play a central role in the monitoring of such agreements. Since the mid-1980s it has become standard practice in MEAs to give individuals and groups the right to observe official meetings, unless states parties object.[7] NGOs usually also have access to official documents and sometimes the right to make statements to meetings of states parties.

NGOs with an official role in the verification of an MEA tend to have been deeply involved from the outset in its inception and negotiation. Examples are the two 'flagship' wildlife agreements, the 1973 Convention on International Trade in Endangered Species (CITES) and the 1971 Ramsar Convention on Wetlands. Both make formal provision for the participation of NGOs in their implementation and verification procedures.

CITES provides for 'suitable' NGOs to assist the Secretariat 'to the extent and in the manner [the Secretariat] deems appropriate'.[8] National reports under CITES are supplemented by information compiled by NGOs involved in two monitoring mechanisms. First, the Wildlife Trade Monitoring Unit (WTMU), operated by the World Conservation Monitoring Centre (WCMC), is under contract to the CITES Secretariat to monitor trade records of wildlife species listed in the appendices to the Convention. The WTMU maintains a database extending back to 1975 which contains over half a million records. These records allow the imports and exports of CITES parties to be cross-checked. When records do not match, the WTMU

reports the anomaly to the CITES Secretariat. Second, Trade Records Analysis of Fauna and Flora in Commerce (TRAFFIC) collects information on illegal trade in wildlife and transmits such information directly to the Secretariat and national authorities.[9] Both organisations were established by NGOs, although the WTMU is now a part of the United Nations Environment Programme (UNEP).[10]

The World Conservation Union (IUCN)—a distinctive government/non-government hybrid—essentially acts as the secretariat to the Ramsar Convention.[11] The Ramsar Secretariat has signed memoranda of co-operation with other NGOs, such as Wetlands International, Birdlife International, the Nature Conservancy and the Society of Wetlands Scientists.[12]

The 1993 North American Agreement on Environmental Cooperation (NAAEC) permits public exposure of governments which fail to enforce domestic environmental laws in Canada, Mexico and the US. Under the Citizens Submissions on Enforcement Matters mechanism, individuals and NGOs can submit documented assertions that an NAAEC party is failing to enforce its environmental law to the North American Commission for Environmental Cooperation. The Commission may investigate the claim and publish a factual record of its findings.[13] NGOs have attempted to use the NAAEC to highlight non-compliance by the three countries with some multilateral environmental agreements to which they are party.[14]

Under the Kyoto Protocol on climate change, NGOs may be eligible to submit evidence directly to the agreement's Compliance Committee. The rules for that Committee are not yet agreed, but the latest draft states that during a compliance proceeding 'competent intergovernmental and non governmental organisations may submit relevant factual and technical information to the relevant branch'.[15] The Committee is not obliged to do anything with such information, but, according to the draft, 'may seek expert advice', including from NGOs.

Interaction between NGOs and official arms control and nonproliferation institutions is, by comparison, limited. Under most multilateral agreements, the formal contribution of NGOs to implementation is restricted to statements delivered to meetings of state parties. For example, it has become common practice in the review conferences for the Nuclear Non-Proliferation Treaty (NPT) and the Biological and Toxin Weapons Convention (BWC) to set half a day aside for NGO statements to the plenary.[16]

A somewhat more expansive role for NGOs is envisaged in respect of agreements that bridge arms control and international humanitarian law. The International Committee of the Red Cross (ICRC) safeguards and promotes humanitarian treaties, such as the 1949 Geneva Conventions and their 1977 Protocols, the 1954 Hague Convention on the Protection of Cultural Property During Armed Conflict, the 1980 Convention on Certain Conventional Weapons (CCW) and its protocols, the 1997 Ottawa Convention banning anti-personnel landmines and the 1998 Statute of the International Criminal Court. In trying to assist states to implement such agreements, the ICRC has encouraged them to establish national inter-ministerial committees on international humanitarian law. These are responsible for taking all necessary measures, including the monitoring of national obligations. These committees are open to participation by non-governmental experts, but NGOs hardly ever seize the opportunity.[17]

The sole example of a formal agreement between a non-governmental body and an international arms control verification organisation is that between the Stockholm International Peace Research Institute (SIPRI)—an independent institute established and largely funded by the Swedish government—and the Preparatory Commission for the Organization for the Prohibition of Chemical Weapons (OPCW), which set up the verification system for the CWC. The two institutions exchanged letters which established rules for sharing (unclassified) information. The exchange of letters was repeated after the CWC entered into force in 1997.[18]

Quasi-official roles

Frequently, NGOs interact with formal verification systems quasi-officially, but without the benefit of a treaty provision or a formal mandate from the official verification organisation concerned. Most of these NGOs provide information relevant to non-compliance.

Under some MEAs, NGOs are able to submit evidence of non-compliance to the verification organisation, secretariat or compliance committee. Such documents are distributed to member states and may be considered official documents if the relevant body so decides. One example is the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) which, as part of the 1959 Antarctic Treaty System, is dedicated to conserving marine life in the Southern

Ocean. NGOs which are members of the Antarctic and Southern Ocean Coalition (ASOC) have used the document submission procedures under the CCAMLR to name countries or citizens of countries that they consider to be in non-compliance with the convention. For example, ASOC in the early 1990s reported violations by the Russian fishing industry which Russia ultimately admitted.[19]

NGOs can also have indirect input into the official system by assisting parties with their reporting. In 1999 the Environmental Investigation Agency (EIA), a London-based NGO, purchased communication and surveillance equipment to help Kenyan Wildlife Service rangers monitor elephant poaching, which is illegal under CITES.[20] Some MEAs expressly encourage NGO involvement in the preparation of national reports. The Fifth Conference of the Parties to the Convention on Biological Diversity in May 2000 agreed new reporting guidelines for parties' second national reports, recommending that they be prepared through a consultative process involving all relevant 'stakeholders', presumably including NGOs.

Compared to their role in MEAs, NGOs generally have a less formal role under arms control and nonproliferation agreements. Under the Ottawa Convention,[21] which provides only a rudimentary verification mechanism, NGOs have assumed a quasi-formal role in monitoring the landmine ban. Landmine Monitor, a coalition of NGOs, collects information on national compliance and assesses progress and problems in implementation. The network consists of 115 researchers from 95 countries and produces an annual report, currently in its third edition, covering every country in the world.[22] Landmine Monitor works closely with governments and is funded in large part by them, but is not formally recognised either in the treaty or by the treaty's implementation bodies.[23]

However, as an initiative of the International Campaign to Ban Landmines (ICBL)—a driving force behind the Ottawa Convention—Landmine Monitor's findings carry significant weight. They are tabled at the annual conferences of states parties and introduced by an ICBL representative. Alleged state party violators are named, as are signatories that have allegedly violated the spirit of the agreement and, unusually, non-states parties that would be in violation had they signed the treaty. At the Third Conference of States Parties, held in Managua, Nicaragua, in September 2001, one state party, Uganda, was accused, along with six signatories (Angola, Burundi, Eritrea, Ethiopia, Rwanda and Sudan), of having used mines.

Another example of an NGO providing information for a treaty-based verification system is the interaction between the Center for Nonproliferation Studies (CNS), Monterey Institute of International Studies, and the International Atomic Energy Agency (IAEA). The CNS maintains five databases of current and archived information, based on open-source data compiled from over 340 source publications, on the global proliferation of weapons of mass destruction and their delivery systems.[24] The IAEA uses information from these databases (and other open sources) to supplement its own data from states' declarations and on-site activities. Inconsistencies between official data and open sources can trigger further verification activities.[25]

Unofficial roles

In the majority of cases, NGOs monitor compliance with an international agreement completely outside the formal system. These 'citizen watch' activities take place with regard to both environmental and arms control agreements. They range from collecting and analysing open-source information to monitoring test sites on the ground or watching whaling boats.

Such independent monitoring efforts are often based on the systematic collection and evaluation of open source information. The information collated can be disseminated to expose non-compliant behaviour and embarrass governments into compliance.[26] To do this NGOs often have their own publications[27] as well as working directly with the media and modern communication technologies like the Internet. There is now a myriad of cost-free, issue-specific e-mail list servers and newsletters which distribute verification-related information globally.[28]

In addition, some NGOs make their information directly available to international institutions and national and international decision-makers, including diplomats and the staff of international verification agencies. They also play a watchdog role at the national level, alerting governments to infractions, investigating illegal operations and pressuring state authorities to improve domestic laws and enforcement.

NGOs analyse the work of verification institutions in both environmental and arms control regimes. This includes following the proceedings of such institutions, attending meetings when they are permitted to, disseminating information about their work and—last but not least—highlighting deficiencies and making proposals for improving their operations.[29]

The strengths of NGO monitoring

NGOs have strengths which commend them for a more substantial role in the monitoring of international agreements.

Access to information

Official verification procedures often depend on limited information. States parties determine what kind of information can be used by their official verification organisations. NGOs, though, are free to use whatever information and information sources they wish. Under most arms control agreements NGOs have little or no access to confidential information supplied by states to international verification organisations[30] and depend for their monitoring activities entirely on information obtained outside the formal system. This limitation is increasingly turning into a strength. In many cases, open-source information can prove just as effective as officially declared information in detecting breaches of international commitments.[31]

In the environment field there has been a movement towards freedom of access to information in recent years which has helped NGOs gather information from government sources. For example, Principle 10 of the 1992 Rio Declaration on Environment and Development provides that: 'At the national level each individual shall have appropriate access to information concerning the environment that is held by public authorities . . . Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided'. This principle is enshrined in the 1998 Convention on Access to Information, Public Participation in Decision Making, and Access to Justice in Environmental Matters (the Aarhus Convention) which gives the citizens of the parties rights in environmental matters.[32] The Convention requires all public authorities to disclose information related to the state of the environment and to the environmental impact of policies and projects.

NGOs can also use information provided by 'whistle-blowers' to expose breaches of international commitments or norms. One of the most dramatic examples is that of Alexandr Nikitin, who exposed information on radioactive contamination of the Arctic seas resulting from accidents involving nuclear submarines belonging to Russia's Northern Fleet. The report was published by the Bellona Foundation, a Norwegian NGO working on environmental and arms control issues.[33] Andrei Zolotkov, a former Russian radiation safety engineer, also provided NGOs with

information exposing Soviet dumping of high-level nuclear waste in the Arctic seas. This information was presented by Greenpeace to the 1991 Consultative Meeting of the parties to the London Dumping Convention[34] and was partly responsible for triggering a wide array of regulatory responses from the parties.[35]

The use of remote sensing technologies by NGOs to detect treaty violations is a relatively new development,[36] made possible partly by improvements in the availability and quality of commercial satellite imagery. It has been successfully used to detect violations of major arms control agreements.[37] Seismic networks established for scientific research purposes can also be used to monitor compliance with the nuclear test ban.[38]

NGOs can sometimes collect their own information on-site and may even have access to locations that are out of bounds to official verification mechanisms. It was, for example, an NGO which in 1998 initiated an on-site investigation of the Iraqi chemical weapons attack on the Kurdish town of Halabja that had taken place 10 years earlier.[39]

In the environment field, NGOs often gather their own information when official monitoring appears to be inadequate. For example, NGOs have independently collected data on elephant poaching following the resumption of sales of ivory under CITES. The World Wide Fund for Nature's (WWF) Southern Africa Regional Programme Office has carried out its own aerial survey of elephants in Zimbabwe which showed a large number of carcasses, indicating increased poaching.[40]

The use of a wider range of information sources can expose weaknesses in the formal verification procedures of MEAs. The formal monitoring procedures set up for ivory sales under CITES in 2000, based on relatively limited official reporting, did not show a rise in elephant poaching. The EIA considered the system too weak and used open sources, such as the WWF aerial survey, to show both a dramatic increase in poaching and a rise in major illegal ivory seizures worldwide. Furthermore, it alerted the CITES Secretariat to inconsistent reporting of ivory stocks by Zimbabwe and alleged that this was done by corrupt government officials.[41]

Assessment capabilities

The ability of NGOs to assess the implementation of international commitments can rival that of governments or international organisations. The non-governmental

International Waterfowl Research Bureau (IWRB), for example, plays a central role in monitoring compliance with the Ramsar Convention on Wetlands because of its technical competence. The IWRB even developed the computerised database of Ramsar sites for the Secretariat.[42]

In many cases the sheer number of NGOs and the size of their membership provides an effective means to monitor international commitments. This strength can be multiplied if NGO monitoring efforts are coordinated internationally, either by an umbrella NGO or by an international agency. Thus, TRAFFIC International is able to provide a considerable amount of compliance information in respect of CITES because it has 22 offices worldwide, connected to a network of local and regional NGOs.[43] Landmine Monitor has researchers, mostly based *in situ,* investigating the landmine situation in every country.

NGOs can also enlist the help of citizens around the world in establishing a global network of monitors. The prohibition against the use of biological weapons (BW) is being *de facto* verified by the international community of doctors and epidemiologists as they monitor for unusual outbreaks of disease. These efforts, which are undertaken with the goal of improving public health, are co-ordinated by the World Health Organization (WHO) and an NGO, the Federation of American Scientists (FAS).[44]

In many instances, peer review processes guarantee the accuracy of information provided by NGOs. Those working on the same issue check the veracity of each other's assessments. These, in turn, will be scrutinised by the media and, most intensely, by governments and the relevant international organisations. Scientific peer review, for example, is at the core of non-governmental assessments of seismic events which are alleged to be nuclear tests.[45]

Speed

Since NGOs do not have to act within formal verification procedures, they can provide relatively quick assessments of (non-)compliance. This can be essential when grave violations of treaties are suspected, for example, those relating to weapons of mass destruction. The Internet and other modern communication technologies disseminate NGO assessments instantaneously. VERTIC helped pioneer this in the test ban monitoring field with regard to a Chinese nuclear test in October

1993. Through a mixture of 'techno-detective work, policy inference, bureaucratic hassles, and electromagnetic glitches' the organisation was the first to warn that a test was about to happen and to provide details of the actual explosion only three hours after it had been conducted.[46]

Focus

Unlike official verification systems, which have to monitor treaties universally, and perhaps more like national intelligence agencies, NGOs can focus their verification efforts on specific areas and countries of concern. Some nuclear test sites are now monitored from space by NGOs which buy commercial satellite photographs and post them on the Internet.[47] The EIA has focused its elephant poaching investigations on Zimbabwe, a country of particular concern.

Scope

NGOs themselves define the scope of their monitoring efforts and, unlike verification agencies, are not bound by narrow interpretations of their mandates. Generally they are concerned not only about compliance with the letter of an agreement, but also with its spirit.[48] Greenpeace, for example, has for many years monitored the compliance of 'problem states' Norway and Japan with the 1946 International Convention for the Regulation of Whaling (ICRW). Even though these two countries are formally in compliance with the treaty, Greenpeace publicises their whaling practices because it believes they are unacceptable.

NGOs are also free to monitor non-parties to an accord, including sub-state actors, such as companies and rebel forces. Thus, Landmine Monitor monitors the compliance of all states with the Ottawa Convention whether they have signed it or not. NGOs thus help to universalise the norms contained in such treaties.

Political independence

Accusing powerful states of non-compliance may be politically difficult both for international verification organisations and for states parties to an agreement. Politically independent NGOs, however, may feel no such inhibitions. Members and funders of NGOs often expect these organisations to criticise all states, including those which are usually able to use their power and influence to avoid criticism by other states.[49]

Because NGOs generally do not have access to political decision-making procedures, their main recourse is to embarrassing governments or other treaty parties into better behaviour. 'Naming and shaming' is not only an effective means of exposing treaty violations; it can also help deter non-compliance. This is well illustrated by the European Union's environmental directives, which were often poorly implemented by member states until compliance information started to become public. Exposure to public scrutiny and criticism led many member states to improve their performance.[50] And it was only after public exposure by NGOs that Australia and other countries cut the number of landmines retained for training purposes under the Ottawa Convention.

The weaknesses of civil society monitoring

In addition to having notable strengths, NGOs can be hampered by a range of external or self-imposed limitations.

Limited access to information

Lack of access to official information or to locations of suspected or potential treaty violations limit NGO monitoring efforts in some fields. Many violations of arms control agreements occur, for instance, at or near military facilities. NGOs and independent scientists are usually not allowed to monitor the nuclear test ban at or near test sites. In the environmental area, too, NGOs will often not have ready access to remote locations where treaty transgressions may occur.

Limited reporting

Many NGOs focus on monitoring their own governments. Comparatively few have an international perspective or the resources to monitor treaties globally. Non-governmental attempts to monitor treaty-relevant developments comprehensively are rare. Prime exceptions are the *Landmine Monitor Report* and the monitoring of states parties' implementation of CITES by TRAFFIC.

States with open political systems tend to have more NGOs and they are able to operate freely.[51] Since it is easier to monitor their host countries, it tends to be the compliant rather than non-compliant states which are most closely scrutinised. There is also a North–South divide, with more and better endowed NGOs in developed than in developing countries. Those in developing countries are often

funded and/or managed by developed country headquarters. Even *Landmine Monitor Report,* the most comprehensive attempt at civil society monitoring, generally contains better information on developed states which are in compliance than on those developing states which are the cause of compliance concerns. The Climate Action Network has just 42 member organisations in Africa compared to 84 in Western Europe.[52]

Many NGOs focus on issues that are likely to attract maximum press exposure rather than those of less public interest. The alleged threat of depleted uranium is much more attractive to the press than the negotiations on a protocol to verify the BWC, although the latter is far more important to human welfare than the former. Major compliance issues relating to weapons of mass destruction or environmental or wildlife protection are attractive and can easily be 'sold' to the media. They in turn create public interest and help garner new supporters for the NGO cause. Relatively minor compliance issues, such as non-payment of dues or delayed declarations, are often ignored by NGOs, even though these can, in the long run, pose a serious threat to an international agreement.

Inconsistency

International verification agencies are mandated to track treaty-relevant behaviour continuously. NGOs, however, often have relatively short attention spans and switch issues as they wish. Their monitoring priorities are often not dictated by consistent criteria but by funding opportunities and the preferences of board members, leaders or members.[53] One result is that NGO interest usually peaks around major events, such as review conferences, or when suspicions about high-profile treaty violations emerge. Attention to newly negotiated treaties may fall away once the day-to-day business of implementation begins. For example, NGO attendance at the Conference of States Parties to the 1979 Convention on the Conservation of Migratory Species of Wild Animals fell from 30 organisations in 1985 to only 10 in 1994.[54] Just as official verification organisations may have difficulty sustaining their focus, so do NGOs, especially if treaty violations are expected to be rare.

Unreliability

The reliability of information supplied by NGOs varies considerably. This may be partly explained by a lack of access to official information, resources and technical

expertise. But the ethos, leadership, composition and membership of NGOs also matter. Some are volunteer organisations whose members may not have the time and resources to consistently check the reliability of their information. Others may just be inattentive or careless.

Bias

In choosing the focus and scope of their activities, NGOs may display a political bias in reporting compliance issues. NGOs disagree among themselves, for instance, over whether certain nuclear weapon research activities, such as subcritical nuclear testing, constitute a breach of the letter and/or spirit of the CTBT. NGOs can also be manipulated and used by governments.[55] Their political independence is relative: organisations depend on funding from members and/or foundations, and sometimes governments, with their own political priorities. Many NGOs rely on the media to publicise their findings, obliging them to focus on subjects of interest to journalists and to simplify the issues involved. The media can readily misunderstand, exaggerate or misuse information provided by NGOs, especially those unskilled in handling the media.

Conclusions

NGOs have a unique contribution to make to the monitoring of international agreements. Their strengths enable them to identify and highlight treaty violations in ways that established verification mechanisms cannot. Many of the inherent shortcomings of NGO monitoring efforts are obvious and can be taken into account by those using the information.

More serious from a verification point of view are the political dilemmas that NGOs must tackle if they want to move beyond unofficial monitoring roles and become involved with official political mechanisms.

There is a trade-off between political independence and involvement with official bodies. From an NGO perspective, there are benefits to be gained from such involvement, such as better access to information, enabling them to assess problems more accurately and potentially improving the quality of their work. Recognition by international organisations as partners gives them additional legitimacy and may attract additional funding or members. Most are aware of the fact that 'high-

level support is not always necessary . . . but usually little is accomplished without at least some of it'.[56]

NGOs are also aware that 'while you can bite the hand that feeds you, you cannot afford to bite it off'. They may thus self-censor their work for fear of being excluded from official mechanisms. NGO monitoring activities can also become too dependent on official data, impairing NGO's judgement. For example, while TRAFFIC was only allowed to use data provided to the formal system to carry out its official mandate of monitoring elephant poaching, the EIA, using a range of independent sources, was able to identify increased poaching more accurately.[57]

NGOs, just like governments, have to weigh the benefits of publicly accusing states of non-compliance against the benefits of working quietly behind the scenes. Exposing non-compliant behaviour through press releases and other media activity can have great political impact and satisfy the demands of journalists or organisation members. Media coverage can also be used as an indicator of 'success' for funding applications and to publicise the results of individuals' research or campaigning efforts. But such a strategy can be problematic and potentially counter-productive in the long run. Being politically aggressive can undermine the basis for co-operation with governments and international agencies and endanger access to information. Quietly working with the parties involved, trying to find solutions to compliance problems and reporting carefully and in a balanced manner can avoid these problems. But it is less spectacular, creating the public impression that an NGO is not taking a position on the issue and is too close to the official system.

NGOs remain vulnerable and the legitimacy of their role in treaty implementation is not widely accepted. While states are accountable to other parties to treaties and (at least in most cases) to their citizenry, NGOs may derive their legitimacy from a number of sources. Grassroots NGOs speak on behalf of their membership, which may range in size from the tens to the millions. If an organisation works internationally it may derive additional legitimacy from representing diverse constituencies, but there may not always be a mechanism allowing the range of views to be heard. Non-membership NGOs are usually accountable only to their funders, which can be philanthropic organisations, governments or other NGOs, and their governing boards. In these cases it is primarily the quality of the work produced by an NGO that legitimises it.

It is clear from even cursory observation of current political and technical trends that the capacity of NGOs to monitor international agreements is likely to increase. The information revolution is at the heart of this development. First, the amount of open-source information (on which NGOs rely for their monitoring activities) will increase both relatively and absolutely.[58] Improvements in their ability to process and transmit information, as well as better access to remote sensing data, will also enable NGOs to monitor relevant developments better.

This is reinforced by political trends. The number of NGOs is increasing exponentially. They are becoming more professional and often more subtle in their approach to treaty implementation. International organisations are increasingly opening themselves up to interaction with civil society actors.[59] On the down side, closed societies and developing countries, from China to Iran, remain suspicious of NGOs and oppose their involvement in treaty monitoring.

Increasingly, though, the question is no longer whether but how formal and informal mechanisms can interact to make verification more efficient and effective. A few lessons can be learned from comparing NGO involvement in arms control and in environmental agreements. NGO monitoring is most effective when:

- they coordinate their monitoring activities internationally;
- they have good access to official declarations and other relevant information;
- there is a clear legal basis for the interaction between official verification mechanisms and non-governmental actors and/or the verification mechanism provides a role for NGOs; and
- international organisations and states parties are open to NGO contributions.

While it is important that NGOs and international organisations maintain their autonomy and focus on their relative strengths, verification can be strengthened if the international organisations:

- become as transparent as possible, thereby giving NGOs more access to data and information;
- provide better channels for NGOs to supply information to international organisations. While some do have NGO liaison officers, they are usually concerned with procedural issues rather than providing opportunities for interaction on matters of substance; and

- establish clear rules for interaction between NGOs and formal international organisations. In some cases, there may be merit in concluding arrangements detailing the rights and obligations of both sides. This could alleviate some of the difficulties arising from the current *ad hoc* co-operation, which puts NGOs at the mercy of political consensus in the verification regimes' decision-making bodies.

At the same time, NGOs can increase the likelihood that information they provide will be used by official verification organisations if they keep in mind the latter's requirements and constraints. Information should be relevant, appropriately referenced and wherever possible comprehensive and consistent. NGOs should seek to maintain the highest standards of integrity when compiling and using information, especially when accusing states of non-compliance. NGOs need to be as transparent and professional in their operations as they wish governments and international organisations to be.

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Endnotes

[1] 1987 Protocol on Substances that Deplete the Ozone Layer to the 1985 Convention for the Protection of the Ozone Layer.

[2] 1997 Protocol to the 1992 United Nations Framework Convention on Climate Change.

[3] Verification is a process which establishes whether states are in compliance with their treaty obligations. Verification regimes have three goals: detecting cases of non-compliance in a timely manner, deterring non-compliance, and providing a framework for co-operation and confidence-building. See Trevor Findlay, 'Introduction: the Salience and Future of Verification' in Trevor Findlay (ed.), *Verification Yearbook 2000,* Verification Research, Training and Information Centre (VERTIC), London, December 2000, pp. 15–22.

[4] The literature on the role of NGOs in the fields of arms control and the environment is now abundant. Examples include Elmar Altvater, Achim Brunnengräber and Markus Haake (eds), *Vernetzt und verstrickt,* Westfälisches Dampfboot, Münster, 1999; Elin Enge and Runnar I. Malkenes, 'Non-Governmental Organisations at UNCED: Another Successful Failure?' in Helge Ole Bergesen and Georg Parmann (eds), *Green Globe Yearbook of International Co-operation on Environment and Development,* Oxford University Press, Oxford, 1993, pp. 25–35; Matthew Evangelista, *Unarmed Forces: The Transnational Movement to End the Cold War,* Cornell University Press, Ithaca, NY and London, 1999; Cathleen S. Fisher, 'Reformation and Resistance: Nongovernmental Organizations and the Future of Nuclear Weapons', *Stimson Center Report no. 29,* The Henry L. Stimson Center, Washington, DC, May 1999; Ann M. Florini (ed.), *The Third Force: The Rise of Transnational Civil Society,* Japan Center for International Exchange and Carnegie Endowment for International Peace, Tokyo and Washington, DC, 2000; Margaret E. Keck and Kathryn Sikkink, *Activists Beyond Borders: Advocacy Networks in International Politics,* Cornell University Press, Ithaca, NY and London, 1998; Kal Raustiala, 'States, NGOs, and International Environmental Institutions', *International Studies Quarterly,* vol. 41, no. 4, 1997, pp. 719–740; Philippe Sands, 'International Law, the Practitioner and Non-State Actors' in Michael Anderson (ed.), *The International Lawyer as Practitioner,* British Institute of International Comparative Law, November 1998; and Nina Tannenwald, 'The Bomb and Its Discontents', *International Studies Review,* vol. 1, no. 3, fall 1999, pp. 105–188.

[5] Rebecca Johnson differentiates between three types of NGOs: elite, public movement campaigns and non-violent direct action. Only the first two are relevant to treaty monitoring, although 'elite' research organisations predominate. See Rebecca Johnson, 'Advocates and Activists: Conflicting Approaches on Nonproliferation and the Test Ban Treaty' in Florini (ed.), pp. 49–81 and 52–53.

[6] This is another term for 'societal verification', 'the involvement of civil society in monitoring national compliance with, and overall implementation of, international treaties or agreements'. See Dieter Deiseroth, 'Societal Verification: Wave of the Future?' in *Verification Yearbook 2000,* p. 265.

[7] Raustiala, p. 723.

[8] Convention on the International Trade in Endangered Species (CITES), Article 12.1.

[9] John Lanchbery, 'Long-Term Trends in Systems for Implementation Review in International Agreements on Fauna and Flora' in David Victor, Kal Raustiala and Eugene Skolnikoff (eds), *The Implementation and Effectiveness of International Environmental Commitments,* MIT Press for the International Institute for Applied Systems Analysis (IIASA), Cambridge, Mass., 1998, p. 71.

[10] The history of these organisations is convoluted and illustrates the degree to which NGOs and the formal systems are related in the environment field. TRAFFIC was founded in 1978 by the World Wildlife Fund (WWF) and the International Union for the Conservation of Nature (IUCN). The WCMC was established later, by the IUCN, WWF and UNEP, under TRAFFIC. In 1990 TRAFFIC and WCMC became separate organisations and in 2000 the WCMC became part of UNEP. See www.wcmc-unep.org; and Lanchbery, p. 71.

[11] Raustiala, p. 723.
[12] www.ramsar.org.
[13] www.cec.org.
[14] One submission awaiting a decision from the Council alleges that the US government is failing effectively to enforce part of its Migratory Bird Treaty Act (MBTA) which prohibits the killing of migratory birds without a permit. NGOs, including the Centre for International Environmental Law, claim that the MBTA implements four international treaties aimed at protecting migratory birds. See www.ciel.org.
[15] United Nations Framework Convention for Climate Change (UNFCCC) document UNFCCC/CP/2001/2/Add. 6 Article 8, paragraphs 4/5.
[16] NGOs usually try to collaborate on statements to meetings of states parties. Many official disarmament conferences, however, still either take place behind closed doors (for instance, CTBT Preparatory Commission meetings) or give NGOs access only as observers (for example, meetings of the Conference on Disarmament in Geneva, Switzerland).
[17] Private communication. Information about these mechanisms can be found on the ICRC website at www.icrc.org.
[18] Private communication with Jean Pascal Zanders, Stockholm International Peace Research Institute (SIPRI).
[19] Glenn Wiser, *Transparency in Twenty-First Century Fisheries Management,* Center for International Environmental Law (CIEL), Washington, DC, July 2000, p. 31.
[20] 'From the Frontline: Allan Thornton Reporting from Kenya', *The Investigator,* winter 1999/2000 (www.eia-international.org).
[21] Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction.
[22] See www.icbl.org; and the chapter by Angela Woodward in this volume.
[23] VERTIC has also produced a guide to assist states parties in completing their compliance reports under Article 7 of the treaty. See www.vertic.org.
[24] See cns.miis.edu.
[25] Anita Nilsson, 'Information Review and Evaluation in the Framework of the Strengthened Safeguards System' in Carlo Foggi (ed.), *Proceedings of a Seminar on Modern Verification Regimes: Similarities, Synergies and Challenges,* European Safeguards Research and Development Association (ESARDA), Helsinki, Finland, 12–14 May 1998, pp. 163–66.
[26] Civil society actors lack other, traditional means of power. Therefore, 'transnational civil society exercises influence through its ability to make someone, policy makers or publics, listen and act. The currency of its power is not force, but credible information and moral authority' (Ann M. Florini and P. J. Simmons, 'What the World Needs Now?' in Florini (ed.), p. 11).
[27] Examples of NGOs providing regular and comprehensive information on compliance include the SIPRI Yearbook, the *Programme for Promoting Nuclear Non-Proliferation's Newsbrief* (on nuclear developments), the *Bulletin of the Harvard–Sussex Program on CBW Armament and Arms Limitation* (on chemical and biological weapons developments) and VERTIC's own periodical, *Trust and Verify*. See www.ppnn. soton.ac.uk (the PPNN Newsletter is now discontinued); fas-www.harvard.edu; and www.vertic.org. The Climate Action Network Europe produces *Hotspot,* which monitors implementation of the UNFCCC.
[28] For example, *Proliferation News* published by the Non-Proliferation Project, Carnegie Endowment for International Peace, Washington, DC; *ChemBio Weapons and WMD Terrorism News* published in Washington, DC, by the Office of the Center for Nonproliferation Studies of the Monterey Institute of International Studies; and *RANSAC Nuclear News* published by the Russian American Nuclear Security Advisory Council.
[29] For example, VERTIC's 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'. Along with verification, VERTIC also concerns itself with the negotiation, monitoring and implementation of such agreements and the establishment of confidence-building measures (CBMs)to bolster them. See www.vertic.org.

[30] Declarations are usually treated as confidential. The exception is the Ottawa Convention. States' declarations are now posted on the website of the UN Department for Disarmament Affairs. See domino.un.org/ottawa.nsf. See also Trevor Findlay and Angela Woodward, 'State Compliance with the Ottawa Convention', *Trust and Verify,* no. 90, March 2000, pp. 1–3. Some information submitted by states parties as part of CBM provisions may be accessible, as in the case of the CBMs under the BWC. See Marie Isabelle Chevrier and Iris Hunger, 'Confidence-Building Measures for the BTWC: Performance and Potential', *The Nonproliferation Review,* vol. 7, no. 3, fall/winter 2000, pp. 24–42.

[31] Open source information is that which is freely available and unrestricted. This includes information from the media, such as newspapers and journals, and publications of specialised institutions. Sometimes human sources, such as observers on the ground, and individual and organisational contacts are also included. Databases can be an important open source, even if they are commercial. See Oliver Meier, 'The Use of Open Source Information in Multilateral Arms Control and Disarmament Regimes' in *Proceedings of the Third INMM/ESARDA Workshop on Science and Modern Technology for Safeguards,* ESARDA, Tokyo, Japan, 13–16 November 2000 (forthcoming).

[32] The Convention was signed at the Fourth 'Environment for Europe' Ministerial Conference in Aarhus, Denmark, in June 1998. Forty member states of the UN Economic Commission for Europe (ECE) and the European Union have signed it, and it is expected to enter into force in 2001.

[33] Nikitin was subsequently charged with treason by the Russian authorities and acquitted after a long imprisonment (see www.bellona.no). Another example is the collaboration of the Institute for Science and International Security (ISIS) in Washington, DC, with Iraqi defector Khidhir Hamza, a former Iraqi nuclear weapons scientist. See, for example, David Albright and Khidhir Hamza, 'Iraq's reconstitution of its nuclear weapons program', *Arms Control Today,* vol. 28, no. 7, October 1998, www.armscontrol.org. More information on whistle-blowers is available at www.whistleblower.org.

[34] Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, London, 1972.

[35] Olav Schram Stokke, 'Nuclear Dumping in Arctic Seas' in Victor, Raustiala and Skolnikoff (eds), p. 495.

[36] One of the first attempts at using remote sensing technology was made in 1986 when the Natural Resources Defense Council, a US non-governmental organisation, and the Soviet Academy of Sciences signed an agreement that led to the installation of seismic monitoring equipment near one of the Soviet test sites, Semipalatinsk in Kazakhstan, and at the US Test Site in Nevada. Even though the agreement was opposed by the US Administration of President Ronald Reagan, as well as by Soviet hardliners, US and Soviet scientists operated seismic stations near a Soviet test site during a nuclear test moratorium and were later allowed to monitor Soviet tests from 600 miles away. See, for example, Philip G. Schrag, *Listening for the Bomb: A Study in Nuclear Arms Control Verification Policy*, Westview Press, Boulder, CO, San Francisco and London, 1989.

[37] One of the largest publicly available databases of treaty-related satellite imagery is the Federation of American Scientists' website, www.fas.org. Others include that of ISIS at www.isis-online.org; and www.globalsecurity.org. Some commercial companies offer satellite imagery for sale over the Internet, including Space Imaging at www.spaceimaging.com; and Terra Server at www.terraserver.com. For a good summary of the role of commercial satellite imagery, see Yahya A. Dehqabzada and Ann M. Florini, *Secrets for Sale: How Commercial Satellite Imagery Will Change the World*, Carnegie Endowment for International Peace, Washington, DC, 2000.

[38] Already more than 1,000 seismic stations transmit data openly, in near-real time and without delay or restriction. The number of these stations is expected to grow to as many as 10,000 over the next 10

years. The CTBT's International Monitoring System, by comparison, consists of 170 seismic stations. See *Report of the Independent Commission on the Verifiability of the CTBT,* London, October 2000, www.ctbtcommission.org; and Gregory van der Vink and Terry Wallace, 'Open Data, International Law, and the Nuclear Test Ban Treaty', *Seismological Research Letters*, vol. 70, no. 6, November/December 1999, pp. 663–65.

[39] See 'Testimony of Dr Christine M. Gosden Before the Senate Judiciary Subcommittee on Technology, Terrorism and Government and the Senate Select Committee on Intelligence on 'Chemical and Biological Weapons Threats to America: Are We Prepared?', US Congress, Washington, DC, 22 April 1998, www.senate.gov.

[40] WWF Southern Africa Regional Programme Office (WWF-SARPO), 'Aerial Survey of Elephants and Other Large Animals in the Zambezi Valley Floor and Dande Safari Area/Guruve Communal Lands', October/November 1999.

[41] 'Lethal Experiment: How the CITES Approved Ivory Sale Led to Increased Elephant Poaching', Environment Investigation Agency, April 2000, www.eia-international.org.

[42] Lanchbery, p. 75.

[43] Lanchbery, p. 75.

[44] Projects such as the non-governmental ProMED mail and the WHO's Global Outbreak Alert and Response Network rely on doctors, medical staff and others reporting regularly on outbreaks of disease. They can be found at www.who.int; and osi.oracle.com. The Food and Agricultural Organization (FAO) and the World Organisation for Animal Health also maintain databases on crop and animal diseases. See www.fao.org; and www.oie.int. For a summary see Mark Wheelis, 'Investigating disease outbreaks under a protocol to the Biological and Toxin Weapons Convention', *Emerging Infectious Diseases,* vol. 6, no. 6, November/December 2000, www.cdc.gov.

[45] See, for example, Lynn R. Sykes, 'False and Misleading Claims about Verification during the Debate on the Comprehensive Nuclear Test Ban Treaty', *FAS Public Interest Report*, *Journal of the Federation of American Scientists*, vol. 53, no. 3, Washington, DC, May/June 2000.

[46] Vipin Gupta and Philip McNab, 'Sleuthing from home', *Bulletin of the Atomic Scientists,* December 1993, pp. 44–47.

[47] The FAS has published lists of (former) Chinese, Indian, Pakistani and Russian test sites. Its Internet site also contains aerial imagery and analysis of such imagery of WMD infrastructure in all relevant countries. See www.fas.org.

[48] Raustiala, p. 729.

[49] 'We are not hamstrung by existing bilateral relations or the existing baggage that most governments carry into their dealings and their assessment', says Gareth Evans, President and Chief Executive of the International Crisis Group, a private multinational organisation which monitors regional crises and reports its findings to governments, the media and the public. He is quoted in Barry James, 'Crisis group aims to fill diplomatic reporting gap', *International Herald Tribune,* 12 January 2000. See www.crisisweb.org.

[50] 'International Environment: Strengthening the Implementation of Environmental Agreements', United States General Accounting Office Report to Congressional Requesters, GAO/RCED/92-188, Washington, DC, August 1992, p. 6.

[51] In 2001, 58 countries restricted Internet access. See the website of Reporters sans Frontières, www.rsf.fr. While access to communications technology is increasing, the gap between North and South remains.

[52] *Climate Action Network International NGO Directory 2000,* Climate Network Europe, Brussels, 2000. This, of course, is a problem for official verification organisations as well, which often concentrate monitoring efforts on countries that are not of concern from a compliance perspective.

[53] Funding is, however, relatively stable for larger NGOs. A 1997 study of US foundations' funding of NGOs in the field of peace and security found that 'a stable core of larger funders have consistently sustained

programmes in peace, security, and international relations'. Shifts in funding seem to be affecting newer and smaller NGOs most. See Mary E. Lord and Mary Soley Stewart (eds), *Trends in Peace and Security Grants: A Study of Funders' Response to the Post-Cold War Era,* ACCESS: An International Affairs Information Service, Washington, DC, 1997, p. 11.

[54] Lanchbery, p. 74.

[55] In 1986 a group of highly regarded US experts were invited to Moscow to receive a briefing on an outbreak of anthrax that had occurred in1979 in Sverdlovsk and was suspected to have been related to a clandestine BW programme. After the visit and a recipricol visit by two Soviet physicians to the US in 1988, the US scientists concluded that the Soviet explanation—that contaminated meat was the cause—was plausible, but required more information to verify. Only after two visits to Sverdlosvk in June 1992 and August 1993 were the US scientists able to conclude definitively that the outbreak was linked to a Soviet BW facility. See Matthew Meselson *et al.,* 'The Sverdlovsk anthrax outbreak of 1979' in Joshua Lederberg (ed.), *Biological Weapons: Limiting the Threat*, Belfer Center for Science and International Affairs, BCSIA Studies in International Security, MIT Press, Cambridge, Mass. and London, 1999, pp. 193–209; and Ken Alibek, *Biohazard: the Chilling True Story of the Largest Covert Chemical Weapons Program in the World—Told from Inside by the Man Who Ran It,* Random House, New York, 1999.

[56] Florini (ed.), p. 214.

[57] 'From the Frontline: Allan Thornton Reporting from Kenya', *The Investigator,* winter 1999/2000, www.eia-internatinal.org.

[58] Andrew Rathmell argues that in the past the ratio between open ('white') and classified ('black') information was 80:20. Now the ratio is more likely to be 90:6:4 ('white':'black':'grey'). See Andrew Rathmell, 'The information revolution and verification' in *Verification Yearbook 2000,* p. 217.

[59] At the time of writing more than 2,000 NGOs were registered with the UN Economic and Social Council (ECOSOC) as having consultative status. See www.un.org.