

## Transparency in Environmental Governance By Vivek Ramkumar and Elena Petkova

### A New Paradigm in Environmental Governance

In December 1984, a factory explosion released a lethal toxic chemical among unsuspecting citizens in the north Indian city of Bhopal, killing some 2,000 people within hours of the release and leaving several thousand others permanently handicapped. Another 15,000 died prematurely due in part to the after-effects of their exposure. The explosion occurred in a local Union Carbide factory – a subsidiary of the American company Dow Chemicals. An investigation of the disaster revealed that the company’s management had ignored warnings about the poor conditions of the Bhopal factory’s infrastructure.<sup>1</sup>

The Bhopal gas tragedy provoked international condemnation.<sup>2</sup> Under the glare of public outrage, American legislators enacted the Emergency Planning and Community Right to Know Act in 1986. Among other things, this law required industries to disclose the volume of certain chemicals released annually by them into the environment. As required by the law, the U.S. Environmental Protection Agency (EPA) – the agency in charge of environmental regulation in the United States – developed a matrix called the Toxic Release Inventory (TRI) to tabulate the various chemical releases reported by industries and made the data publicly available beginning in 1988. The results were dramatic: over the next 3 years, chemical releases fell seven percent annually, even as production and manufacturing were rising. Since the enactment of the law, the total volume of chemical releases in the U.S. has been nearly halved.

The U.S. response to the Bhopal tragedy represented a paradigm shift in environmental regulation. Prior to Bhopal, environmental regulations set limits on environmental emissions, often requiring the use of specific technologies or equipment to ensure improved environmental performance. The Community Right to Know Act took a fundamentally different approach to environmental regulation. It set no limits on emissions. It simply required companies to report their emissions levels – data which most companies had not previously compiled, much less publicly revealed. The law significantly strengthened the role that citizens were able to play in environmental governance by empowering them to take more active roles in making and enforcing decisions about environmental governance. This new approach, now often referred to as “regulation by revelation,” has been increasingly accepted by many countries around the world. This new approach forms an essential part of environmental governance frameworks that are centered on expanding transparency to improve environmental outcomes.<sup>3</sup>

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<sup>1</sup> Mary Graham, *Democracy by Disclosure: The Rise of Technopopulism*, Washington DC: Brookings Institution, 2002), 25.

<sup>2</sup> The Bhopal gas tragedy was one of many accidental chemical releases that occurred in the 1970s and 1980s. A dioxin leak in Seveso in northern Italy in 1976 affected more than 37,000 people and rendered farm land unusable for agricultural production. A nuclear radiation leak in Chernobyl, Ukraine, in 1986 killed more than 30 people immediately and resulted in a 64% increase in the cancer rate among people who received the greatest exposure; the leak also contaminated land and food products in large areas of land near Chernobyl. The Seveso, Chernobyl, and Bhopal accidents provoked strong condemnation of industrial safety protocols from the international community and mobilized national movements demanding increased transparency in environmental governance.

<sup>3</sup> The phrase “regulation by revelation” was coined by Environmental Defense attorney Karen Florini and first appeared in print in Ann Florini, “The End of Secrecy,” *Foreign Policy* 111 (Summer 1998).

It is striking that such a law was needed in the United States as late as the mid-1980s, given the U.S. reputation as a leader in citizen access to information. The U.S. enacted its Freedom of Information Act (FOIA) in 1966;<sup>4</sup> the FOIA was subsequently amended and strengthened in the 1970s and again in the 1980s. The FOIA required the U.S. government to publish several categories of information and ensured that citizens had the right to access information by filing information requests. Since this law made information about all aspects of environmental governance available upon request (including information collected by the U.S. government on tragedies like the Bhopal toxic chemical release), why was an additional law specifically treating environmental information deemed necessary?

Under FOIA, citizens can request all types of information (subject to conditions) from public agencies; however, if requested information is not available or is not collected by public agencies, then this law is of little use to citizens. Thus, under FOIA, the onus for initiating action is on the citizen – whose requests are necessarily limited by the availability of data. Prior to the enactment of the Community Right to Know Act, much environmental information of the kind required by the Act was simply not collected.

Despite its apparent effectiveness in reducing toxic chemical releases, the Community Right to Know Act has come under criticism. Critics have claimed that the information released under the law is difficult to understand; that the collection and publication of such information imposes significant financial burdens on industry (which are passed on to consumers); and that the release of such information may reveal sensitive business secrets among competitors (thus expanding the possibility that industrial sabotage may occur). Further, critics charge that while the TRI provides information on the total volume of chemicals released by industry, information is not provided on the toxicity of these releases and on the specific risks these releases pose to human health; as a result, people may not be able to use this information to make choices that will protect their health. Finally, critics argue that the TRI discloses information only on emissions from point sources, which are only one among several types of emissions sources.

Supporters of the disclosure-based regulatory approaches argue that non-governmental organizations and other groups can assist citizens in understanding the information provided through TRIs, and that concerns regarding industrial espionage are greatly exaggerated as most industrial espionage is conducted by industry insiders who have access to far more sensitive information than the information that is made available through the TRIs. Further, supporters argue that while TRIs are not comprehensive catalogs of all chemicals released into the environment, still the information contained in TRIs covers major polluting industries and the TRIs themselves are first steps in active disclosure processes that can eventually be expanded to cover other pollution sources.

Many governments have concluded that the strengths of the disclosure-based approach to environmental regulation outweigh its weaknesses. At the urging of the Organization for Economic Cooperation and Development (OECD), most of the world's wealthier countries have adopted TRI-like systems, commonly termed pollutant release and transfer registers (PRTRs). The results of the compilation of these PRTRs are beginning to achieve impacts on reducing

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<sup>4</sup> The first steps toward empowering citizens through the provision of information were taken in 1946, when the Administrative Procedures Act was enacted. Among other things, this Act required that citizens be given both notice of proposed government regulations and an opportunity to comment on these proposed regulations.

toxic releases. In Britain, for example, the PRTR reportedly resulted in a 40% reduction in the release of carcinogenic chemicals across England and Wales between 1998 and 2001.<sup>5</sup>

The Community Right to Know Act's approach provides citizens with access to information. Information access alone, however, is only one part of the new paradigm of disclosure-based environmental governance. As the 1992 World Summit on Environment and Development held in Rio de Janeiro affirmed, for citizens to truly play a role in environmental governance, they must not only have access to environmental information, they must be able to participate in decision making process and have public access to redress and remedy. This is especially key in those developing countries where democracy has not been adopted as a governance structure or is still nascent. As the rest of this chapter will show, these three principles – information, participation, and access to justice – are increasingly being incorporated in regional agreements, national laws, and regulations promoting environmental transparency and participation. As we examine the development of these new governance paradigms, we will examine the crucial role played in this new paradigm by non-governmental actors. Finally, we will end the chapter by examining the issues and challenges that will likely confront a disclosure-based approach to environmental governance in the future.

## **The Principles of Good Environmental Governance**

The new environmental governance paradigm requires that citizens be empowered to influence environmental outcomes. For such empowerment to occur, the governance framework must enable citizens to have access to:

- environmental information;
- decision making processes and the opportunity to participate in them; and,
- redress and legal remedy to contest the denial of information and the denial of opportunities to participate in decision making.<sup>6</sup>

These three types of access are defined in most international documents and decisions as essential “principles” of transparency in environmental governance. In any country – or any environmental governance framework – in which citizens are denied one or more of these principles of access (or in which one or more of the principles of access is (are) sharply curtailed), the effectiveness and legitimacy of environmental governance is limited.

### **Access to Information**

Access to information is the foundation that makes transparency in governance possible. It is possible to justify expanded information access on four grounds: equity, legitimacy, accountability, and self-protection. Each of these justifications is examined in more detail below.

Transparency is essential to promoting *equity* and justice in environmental decision making. Poor communities in almost all developing countries rely heavily on natural resources for subsistence and income and they are therefore especially vulnerable to any changes in the natural environment. One of the most effective ways of empowering citizens to make their voices heard

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<sup>5</sup> Friends of the Earth, “Safer Chemicals: Factory Watch,” [http://www.foe.co.uk/campaigns/safer\\_chemicals/resource/factory\\_watch/index.html](http://www.foe.co.uk/campaigns/safer_chemicals/resource/factory_watch/index.html) (July 27, 2004).

<sup>6</sup> World Resources 2002-2004, *Decisions for the Earth: Balance, Voice, and Power*, (Washington, DC: World Resources Institute, 2003), 20.

in the political processes that govern projects with significant environmental impacts (such as mining projects or dam construction projects etc.) is by providing them with information on the project or program that will enable them to defend their own interests.

Transparency also lends *legitimacy* to environmental decision-making processes. A government that operates behind the veneer of secrecy is often unable to win either the trust or the support of its citizens.<sup>7</sup> When people live in an environment in which information is closely guarded, it leads them to speculate on government action – and such speculation is usually predicated on the assumption of sinister motives. Rumour mongers and conspiracy theorists become the primary sources of information for the people in such situations, and the “information” they provide may make citizens highly suspicious and combative.<sup>8</sup> It is in a government’s interest to seek legitimacy and credibility for its decisions by building public support. Such support is particularly critical in the case of major environmental projects that entail significant trade-offs among “competing” constituencies, e.g., a major dam may affect some farmers positively by providing them with water for irrigation and with electricity but will affect other farmers and fisherman negatively by causing flooding, salination, and related impacts. By providing timely and relevant information about their intentions in building such projects and about the costs and benefits of the projects, governments can anticipate and seek to manage serious conflicts.

Transparency makes government – and environmental polluters – directly *accountable* to citizens. The Community Right to Know Act in the U.S. is a good example of how simply by releasing information, the government made corporations directly accountable to two sets of actors in addition to government regulatory agencies – viz., their customers (who exerted economic pressure on them) and voting citizens (who exerted political pressure on environmental policy makers). Similarly, in developing countries where fewer curbs have been put in place to slow environmental exploitation and where corruption in environmental management is common, citizens can be empowered to assist government in regulating environmental management by being given access to information.

Finally, when citizens have access to information, they can take action to protect themselves from some health risks and hazards. For example, the provision of information about the potential health impacts of contaminants in drinking water can empower communities to make informed decisions about whether they should drink public water. In 2000, the LASKA Pure Water Plant in Hai Duong City, Vietnam, sold 217,000 bottles of “mineral” water nationally. These bottles were not, however, sold in Hai Duong. The people in Hai Duong refused to drink locally bottled water because they knew that when the LASKA mineral spring went dry in 1999, unused “mineral water” labels were subsequently affixed to bottles containing river water.<sup>9</sup>

Importantly, the effectiveness of an environmental governance framework based on transparency requires the full and accurate disclosure of information – rather than the selected release of incomplete (or, worse yet, inaccurate) data. The effective use of information also

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<sup>7</sup> Against the background of the terror attacks in the U.S. in September 2001, concerns that terrorists might use publicly available information to plan future attacks have led many to question whether sensitive environmental information should be made widely available. The rollback of some disclosure policies has been a setback to the expansion of transparency and access to information.

<sup>8</sup> Richard Calland and Alison Tilley, eds., *The Right to Know, the Right to Live: Access to Information and Socio-Economic Justice*, (Cape Town, South Africa: Open Democracy Advice Center, 2002), xi.

<sup>9</sup> Elena Petkova, Crescencia Maurer et al *Closing the Gap, Information, Participation, and Justice in Decision Making for the Environment*, (Washington, DC: World Resources Institute), <[http://pdf.wri.org/closing\\_gap\\_ch03.pdf](http://pdf.wri.org/closing_gap_ch03.pdf)> (June 24, 2005). Pg 45.

requires that parties acting on the information understand the information so that the possible outcomes of different responses can be weighed in a broad context. In 1991, local water officials in Lima, Peru, responded to an EPA study showing that some by-products of water chlorination could cause cancer by ending the chlorination of the city's drinking water supply. This action led to the outbreak of a cholera epidemic that is thought to have killed more than 3,500 people that year.<sup>10</sup>

If access to information is the foundation of a governance framework based on transparency, then the enactment of laws guaranteeing access – and prescribing the process through which information can be obtained – is the cornerstone of the foundation. Such laws must also provide citizens with recourse to justice in those circumstances in which information is illegally withheld. Mere enactment of laws requiring transparency, however, is not sufficient to ensure that citizens will actually be able to access information. Following the enactment of laws, procedural and administrative frameworks must be established to collect and disseminate information in a regular manner.

The strongest laws regarding information access are those – like the Community Right to Know Act – that explicitly require the release of environmental information. In some cases, however, countries that have not enacted such targeted laws have incorporated provisions regarding access to environmental information in their environmental protection laws. During the nearly 15 years that have passed since the Earth Summit in Rio, national environmental protection laws that include provisions guaranteeing access to environmental information have been enacted in several countries; in some countries, the enactment of such laws has even preceded the enactment of wider information disclosure laws. For example, the Environmental Management Act passed in Indonesia in 1997 was the first legislation in that country to treat the issue of access to information on any subject. Two years after this legislation was enacted, the Indonesian Constitution was amended to include general guarantees protecting the right to information. In Mexico, environmental protection legislation guaranteeing access to environmental information was enacted even before that country enacted a FOIA in 2002; similarly, provisions in environmental legislation explicitly protecting access to information also preceded the enactment of FOIA-like laws in Chile, Bulgaria, and Ukraine. Such cases show how transparency in environmental governance is often among the first steps leading to the introduction of transparency in all governance arenas.

In still other countries, provisions have been included in national constitutions guaranteeing the right to information. For example, recent amendments to the constitution of Thailand are the first laws in that country to contain a special provision on access to environmental information. Even in those countries that lack specific constitutional guarantees of freedom of information or specific laws treating either freedom of information in general or access to environmental information in particular, other constitutional rights can sometimes support (albeit indirectly) citizens' demands for information. In India, for example, prior to the enactment of its access to information law the constitutional guarantee to freedom of expression was interpreted by some courts to include an implied right to information.

## **Public Participation in Decision Making**

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<sup>10</sup> Susan E. Dudley, "It's Time to Reevaluate the Toxic Release Inventory," Testimony before the Subcommittee on Regulatory Reform and Oversight, Committee on Small Business, United States House of Representatives, June 13, 2002, <<http://www.mercatus.org/pdf/materials/426.pdf>> (July 29, 2004).

The rationales cited to justify the provision of access to information can also be cited to justify the second principle of the new paradigm of environmental governance: access to decision making process. We have earlier discussed how citizens could use information on the environment to inform their decisions as voters and consumers. In countries where democracy is not developed – or in countries where there is significant poverty – people may not have the opportunity to vote and/or they may not have the wealth to affect policy through their consumption decisions. In these types of situations, it is essential that structures be created to provide citizens with formal access to decision making processes.

The impact of formal community participation in decision making on environmental issues has been examined in several studies.<sup>11</sup> These studies have found that public participation in decision making frequently helps ensure that government decisions are informed by and responsive to citizen concerns. Citizens who are in direct contact with the environment bring first-hand knowledge of many of the issues that government seeks to address in environmental policies. By drawing on their knowledge and experience, government can reduce the risk that new projects, programs, and policies will fail to address actual needs and/or will create unintended environmental impacts. Thus, for example, in early 2000, the Federal District Government of Mexico City organized extensive public hearings on a proposed land-use plan and conservation program for the Valley of Mexico. As a result of the public consultations, the Mexico City government was able to incorporate citizen suggestions regarding such previously untreated issues as the conservation of areas that recharge groundwater aquifers.<sup>12</sup>

Public participation in environmental governance can legitimize and strengthen environmental ministries. In developing countries, the establishment of an independent environment ministry is often only the first step in providing political voice to environmental concerns. Many times, the newly constituted environment ministry competes with other ministries – like the mining, chemicals, tourism, heavy industry and investment ministries etc. – which are more established than the environment ministry and which can bring the power of the revenues generated by their industries to bear in policy discussions (often placing the environment ministry at a distinct disadvantage). In such a scenario, increasing the awareness of environmental issues among citizens public can provide a strong political base that the environmental ministry can draw on to strengthen their arguments vis-à-vis. competing ministries.

While these arguments support increased public participation in environmental decision making, it is also true that public participation in such decision making entails costs and benefits that must be weighed in determining how and to what degree the public participates in these processes. Some types of environmental decisions cannot easily involve public participation. For example, decisions on the management of a river that runs across several countries necessarily involve decisions and negotiations among the governments of all affected countries. In such a circumstance, each government will be responding to the demands and positions of the other governments and it will therefore require a special effort on the part of these governments to inform the public about the (changing) provisions under consideration and to enable the public to voice their opinions about these evolving provisions. Even when there is active public participation in an environmental decision, the concerns of minorities may easily be overlooked

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<sup>11</sup> Lamont C. Hempel, *Environmental Governance: The Global Challenge*, (Island Press, 1996), 6.

<sup>12</sup> Elena Petkova, Crescencia Maurer et al *Closing the Gap, Information, Participation, and Justice in Decision Making for the Environment*, (Washington, DC: World Resources Institute), <[http://pdf.wri.org/closing\\_gap\\_ch04.pdf](http://pdf.wri.org/closing_gap_ch04.pdf)> (June 24, 2005). Pg 65.

– particularly in pluralistic societies in which the interests of minority communities frequently clash with those of the majority. Similarly, in some countries, certain sections of society (women, children, the poor, etc.) are constrained from freely voicing their opinions and participating in decision making by long-standing societal prejudices or even by legal restrictions. Further, the costs in terms of time and money of facilitating public participation must also be considered. For example, if public participation takes the form of national referendums – which are generally regarded as the most direct form of democracy – this can place a heavy burden on the government both in terms of time and expenses. (At the same time, however, citizens must be vigilant when governments attempt to cite time and resource constraints as reasons for rejecting all public participation.)

On the other hand, excluding the public from environmental decision making also entails costs. The last few decades have witnessed a marked increase in the number of people's movements that have arisen to champion the cause of the environment – particularly when planned actions have threatened to disproportionately affect poor and marginalized communities. Movements like the Narmada Bachao Andolon (NBA) in India and the Amazon forest preservation movement in Latin America have developed precisely as responses to non-participatory decision making processes. The popular dissent expressed and channelled by these groups has in several cases delayed project implementation schedules – which in turn has imposed huge costs on the affected projects (causing them to exceed their intended budgets by significant amounts). Thus, project sponsors – particularly governments – must weigh the costs of making decisions on environmental issues in non-participatory ways against the costs that can arise when citizens (who are increasingly aware of their rights) intervene in the implementation of projects in which they have had no say.

As with the issue of access to information, the existence of laws is not sufficient to ensure that citizens will be able to participate in decision making and/or that their opinions will inform decisions. Procedural and administrative frameworks must be established to ensure that citizens are informed and consulted and that their opinions and concerns are incorporated into decisions. These frameworks have to address such issues as (1) in what stage of the decision making cycle public participation will occur; (2) which members of the public will participate and how their participation will be solicited; (3) what actions must be taken to respond to comments provided during public forums; and (4) whether and how the public will be informed of the outcomes of the decision making processes in which they have participated. While such matters appear to be mundane administrative issues, the determinations made by government regarding these critical procedural issues define the type and degree of access citizens have to decision making. Even if the principle of public participation is incorporated in official laws and policies, it is the procedural and administrative frameworks that put these laws and policies into practice.

Several formalized processes and procedures are used in different countries to give citizens the opportunity to participate in environmental decision making, including the holding of public hearings, provision of notice and comment periods, formation of advisory committees, and establishment of project information offices. Perhaps the method that is most central to ensuring effective participation, however, is the conduct of a thorough environmental assessment. A formal environmental assessment provides citizens with access to key information on a project – and specifies the legal procedures that will be followed to ensure that the environmental implications of decisions are available for public review and that the public has the opportunity to comment on them – and participate in decision making.

To conduct an environmental assessment, government agencies (or other project/program sponsors as appropriate, including public contractors) analyze the likely effects of a proposed course of action on the environment and release findings to the public. Using the information contained in such assessments, project sponsors are then often required by laws governing environmental assessments to organize public forums among affected communities to receive comments and suggestions on the proposed project/program and its environmental impacts.

Since the 1992 Earth Summit, many countries have adopted national laws and/or policies to require that environmental assessments be conducted prior to the implementation of development, construction, or planning activities etc. Such laws or policies currently exist in 14 Latin American and Caribbean countries; all 14 include provisions requiring public participation, though they differ on such issues as the scope of participation required and the stages in the decision making cycle during which the public consultation must be conducted.<sup>13</sup>

On May 21, 2003, the parties to the United Nations Economic Commission for Europe (UNECE) Espoo Convention meeting in Kiev signed the first protocol on strategic environmental assessments. Among other provisions, this protocol requires signatories to evaluate the environmental impacts of all official draft plans and programs and requires extensive public participation in government decision making in numerous development sectors. Thirty-seven UNECE countries had signed the protocol by the end of 2003.<sup>14</sup>

### **Redress and Remedy – Access to Justice**

The third principle of transparency is the provision of access to justice, which enables citizens to seek redress when information is withheld or to challenge a decision that they consider to have been reached through illegal processes. In many countries, litigation involving environmental issues was rare as recently as a decade or two ago. However, the number of environmental litigation cases is increasing and redress is now being sought not only on disputed decisions but also when there has been a failure on the part of government to provide either access to environmental information and/or to allow public participation in decision making as required by extant laws (particularly environmental assessment laws).

As with access to decision making, the extent of citizens' access to justice is defined both by legal provisions and by procedural matters; in the judicial arena, legal and procedural matters often intertwine. Forums through which adjudication is commonly sought on matters pertaining to transparency in environmental governance include administrative and appeals tribunals, judicial courts, offices of the ombudsman, and alternative dispute settlement tribunals.

Among the critical legal and procedural issues that determine the extent of access to justice are whether legal aid and advice is widely available and at what cost; whether class action suits are admissible; whether multiple types of dispute settlement options exist (including such options as alternative dispute resolution and small claims courts); whether claimants have to prove interest or harm; which types of courts can deal with environmental lawsuits (criminal, civil, and/or administrative); and how long it takes a case to be adjudicated (i.e., how efficient the legal system is in hearing and ruling on cases). An Access Initiative<sup>15</sup> report from Hungary argues

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<sup>13</sup> Lina Ibara, *Public Participation Provisions in Environmental Impact Assessment: Law and Policies of Latin American and Caribbean Countries*, (Washington, DC: World Resources Institute, 2002).

<sup>14</sup> Protocol on Strategic Environmental Assessment, (Kiev, 2003), United Nations Economic Commission for Europe, <[http://www.unece.org/env/eia/sea\\_protocol.htm](http://www.unece.org/env/eia/sea_protocol.htm)> (August 11, 2004).

<sup>15</sup> The Access Initiative is a network of civil society groups formed in 2002. Members include the World Resources Institute and non-governmental organizations active in Chile, Hungary, India, Indonesia, Mexico, South Africa, Thailand, Uganda, and the United States.



that environmental cases may linger in that nation's court system for years; as a result, by the time decisions are handed down, they may no longer be relevant.<sup>16</sup> Similarly, in countries like India where the judicial system is confronting a backlog of more than 10 million cases, the opportunity for prompt redress of grievances is limited. Together, the legal and procedural decisions made on such issues determine whether a country's legal framework is fair and equitable across class and economic issues.

One of the most important issues regarding the extent of access to justice available to a country's citizens is the issue of legal standing. In the legal sense, if a person or group has standing, the person or group has the right to appear in court or bring a legal suit on an issue. Standing is critical to determining the ability of concerned citizens as well as environmental associations, ad hoc groups, and NGOs to access justice on environmental issues. In countries that have enacted legislation guaranteeing citizens' rights to access information and participate in decision making, the issue of legal standing often remains inadequately addressed and thus is frequently a barrier that prevents citizens from effectively claiming their rights. In countries like Mexico, standing is limited by law to "affected" people; the vagueness of this term gives courts and other administrative officials wide discretion in limiting who actually has access to the court system regarding an environmental matter.<sup>17</sup> Similarly, in other countries, a person is "affected" only when (s)he can show proof that (s)he has been harmed by the environmental action addressed in a proposed suit; in many of the countries, however, it is unclear what level of "harm" is sufficient to bestow standing on a party.

Equally important to the guarantee of standing to individuals is the establishment of legal standing for NGOs and other associations and ad hoc groups. NGOs and ad hoc groups frequently have the resources to pursue cases that individuals lack – particularly class action suits that demand redress for an entire group of people affected by an environmental issue. In addition, NGOs can use lawsuits as part of on-going campaigns to raise awareness of environmental issues and/or to prevent actions that they believe might violate environmental regulations.

## **The State of Environmental Transparency**

The rise of the new disclosure-based approach to environmental governance has both causes and consequences for broader political developments around the world. The Ecoglasnost movement in Bulgaria, for example, began as a demand for information on environmental issues and eventually contributed to the change-over from the Communist to a more democratic, accountable government in that country.

The Ecoglasnost movement was initiated in 1985 by the Committee for the Ecological Protection of Ruse. Located on the Danube river near Bulgaria's border with Romania, Ruse was exposed to pollutants released by a chemical plant located just inside the Romanian border. By the late 1980s, the members of Ecoglasnost had organized public demonstrations and petitions demanding "glasnost" or openness regarding environmental information – particularly about pollution that threatened public health. The Communist government of Bulgaria undertook a crackdown against the members of Ecoglasnost and arrested several of the

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<sup>16</sup> *Closing the Gap, Information, Participation, and Justice in Decision Making for the Environment*, (Washington, DC: World Resources Institute), <[www.accessinitiative.org](http://www.accessinitiative.org)> (August 10, 2004).

<sup>17</sup> World Resources 2002-2004, *Decisions for the Earth: Balance, Voice, and Power*, (Washington, DC: World Resources Institute, 2003), 60.

movement's leading members merely for asking for information and leading efforts to mobilize public opinion.<sup>18</sup>

Following the crackdown, the activists began to leverage their demand for environmental information to demand broader access to government information as well as increased accountability from all elements of government; ultimately, the environmental activists joined with those throughout Bulgaria who were demanding a democratic government. In this way, the movement for increased transparency in environmental governance contributed to the general anti-Communist movement in the country. After the fall of Communism, this movement participated in demanding from the post-Communist government new governance procedures that would give citizens access to government-held information.

As this example makes clear, the success of a disclosure-based system of environmental governance depends heavily on the performance of citizens. Citizens must actively use the laws, demand information, participate in the public fora provided, and make use of the existing systems for redress. If they do not engage in decision making processes, government officials who prefer a more centralized approach can claim that the new paradigm simply does not work. Indeed, officials have been known to make such claims even when citizens are being active.

A public opinion poll recently conducted in 47 countries revealed the extent and nature of the demand for each of the three principles of transparency. The poll found that demand for both information and participation is high worldwide, with more than half of respondents – and in some countries more than 80 percent – expressing willingness to spend time and effort to obtain and use relevant environmental information and participate in decision making.<sup>19</sup> The poll also found, however, that governments are not satisfying their citizens' demands for information and participation – only 40% of the respondents were happy with their governments' efforts.

The Access Initiative examined legal and policy trends in the development of laws and policies guaranteeing the principles of access in nine countries – Chile, Hungary, India, Indonesia, Uganda, Mexico, South Africa, Thailand, and the United States. The Initiative found that these governments have made broad strides in the establishment of legal and policy frameworks that guarantee access to information, but have been less willing to provide people with the opportunity to use the information and/or to seek redress when information is withheld. Although most of the nine have Freedom of Information laws and also specific legal provisions on access to environmental information, only a few recently adopted or amended their constitutions to guarantee the right of the public to participate in decisions taken by public authorities. Thailand's constitution, for example, guarantees the right of the public to participate in the policies and decisions made by public authorities. The majority of the national legal frameworks of these countries, however, were found to “exclude or restrict groups from participating,” to “exclude some sectors of the economy from public participation,” and to “lack adequate provisions for participation at different stages of the decision making cycle.”<sup>20</sup>

Such exclusion of the public seriously undermines the effectiveness of environmental governance. Although access to information is the foundation on which participation rests, it is

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<sup>18</sup> Ecological movements in Bulgaria, <<http://www.greenparty.bg/in%20English/non-formal%20movements.htm>> (September 10, 2004).

<sup>19</sup> Gallup International's 2002 *Voice of the People* survey, designed in collaboration with Environics International and conducted from July to September 2002, included face-to-face or telephone interviews with 36,000 citizens across 47 countries on six continents. With this sample, results are statistically representative of the views of 1.4 billion citizens.

<sup>20</sup> World Resources 2002-2004, *Decisions for the Earth: Balance, Voice, and Power*, (Washington, DC: World Resources Institute), 57.

public participation that is instrumental in integrating different perspectives, knowledge, and interests into government policies. In Mexico City, for example, citizens proposed tax incentives and other economically viable measures to preserve wildlife and undeveloped land that shaped the wildlife management plan that was ultimately adopted. Broad consultation with citizens in the development of Uganda's forest policy ensured that issues such as biodiversity and the water generation capacity of forests were taken into account despite opposition from strong vested interests.

The researchers found that access to justice among the nine countries studied is even more circumscribed. Less than half the countries surveyed enabled the public to use administrative and judicial review to contest the way in which national or provincial policies were made.<sup>21</sup> Further, even when access to justice is provided by the legal framework, practical considerations often limit people's access to the court system. Thus, the researchers found that the efficiency, accountability, and independence of judicial systems were very poor in some countries, which hampered the ability of people to seek enforcement of their access rights.

### **The Role of NGOs**

Governments usually adopt a framework of transparency in environmental governance only in response to demands made – and sustained – by citizens. However, individual citizens acting alone can generally have only limited influence on a country's environmental governance scheme.<sup>22</sup> NGOs play critical roles in leveraging and focusing public demands for transparency into campaigns that can impact public policies. These groups have become critical in providing forums in which a number of groups and interests can effectively demand transparency in environmental governance. Although there is limited data on NGOs active in the environmental sector, it was estimated that there were more than 100,000 groups working on environmental protection worldwide by 1990.<sup>23</sup> NGOs now participate effectively in all stages of environmental governance, including agenda setting, negotiation, implementation, and monitoring.

NGOs often work to place overlooked issues on national or international agendas. For example, in the 1980s, forestry concerns were included on the agenda of intergovernmental deliberations as a result of pressure exerted by NGOs. In the 1990s, NGOs highlighted the issue of global warming at a variety of international policy making fora. NGOs working with the United Nations Environment Programme and the Food and Agricultural Organization have successfully utilized the international media to raise awareness of the dangers posed by the use of specific chemical pesticides.<sup>24</sup> Similarly, at the national level, NGOs have succeeded in channeling the concerns, viewpoints, and values of minority or under-represented groups to policy makers.

Sometimes NGOs go to quite dramatic lengths to raise attention to the issues in which they are engaged. In the summer of 1975, a Soviet whaling ship came within 50 miles of the California coast. Armed with a 90-millimeter cannon that was loaded with a 160-pound grenade harpoon, the ship was hunting sperm whales. A group of Greenpeace activists began pursuing

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<sup>21</sup> Ibid, 53.

<sup>22</sup> Barbara Gemmill and Abimbola Bamidele-Izu, "The Role of NGOs and Civil Society in Global Environmental Governance," <<http://www.yale.edu/environment/publications/geg/gemmill.pdf>> (July 15, 2004).

<sup>23</sup> World Resources 2002-2004, *Decisions for the Earth: Balance, Voice, and Power*, (Washington, DC: World Resources Institute, 2003), 69.

<sup>24</sup> Peter M. Haas, et. al., ed., *Institutions for the Earth: Sources of Effective International Environmental Protection* (The MIT Press, 1993), 24.

the Soviet vessel in small rubber dinghies (known as Zodiacs). The activists intended to stop the ship from hunting whales, and one group of activists succeeded in positioning their Zodiac between the whaling ship and a whale. The activists believed that the crew of the whaling ship would not attempt to shoot the whales for fear of hitting the Zodiac. Undeterred by the activists, however, the whaling ship fired its harpoon toward the whale, missing the Zodiac by less than 5 feet.<sup>25</sup>

Though Greenpeace's direct action failed in its immediate goal of saving the whale, it succeeded in generating extensive publicity about international whaling. Greenpeace caught its confrontation with the Soviet vessel on film, and these images were broadcast around the world. These images raised awareness among the general public about whaling, and this and similar events helped engender an international movement to ban whaling.

As policy makers try to determine how to address environmental issues, NGOs have much to offer in the way of information collection, dissemination, and analysis capacity.<sup>26</sup> During international meetings held to formulate and/or revise multilateral environmental agreements such as the United Nations Convention on Biological Diversity and the United Nations Framework Convention on Climate Change, NGOs produced research and policy documents that shed new light on the costs of inaction and on the appropriateness of specific options for change.<sup>27</sup> At the Earth Conference in Rio in 1992, some 17,000 NGO representatives participated in the NGO parallel forum and 1,400 were directly involved in the intergovernmental negotiations. NGOs helped make the conference a success, claimed an important place in the conference declaration, and played a key role in developing post-conference institutions, like the Commission on Sustainable Development.<sup>28</sup>

NGOs can also mobilize public opinion to support political reform efforts and can even organize constituencies to support politicians who advocate for what are frequently controversial reforms in environmental governance policies. Once policies have been formulated and adopted, NGOs can then also assist in implementing the policies by drawing on their knowledge of operational contexts to guide the formulation of regulations and by mobilizing their members – many of whom are frequently drawn from local communities – to assist in stewarding local resources.

Finally, NGOs can act as guardians or 'watch dogs' of the public interest by monitoring and assessing the performance of political and economic players and the state of environmental resources. Thus, for example, the Chesapeake Bay Foundation in the U.S. state of Maryland publishes an annual "State of the Bay" report that details the current level of pollutants in the Chesapeake Bay as well as the overall health of aquatic animals in the Bay. Similarly, in the international arena, NGOs can help "give teeth" to agreements by monitoring governmental compliance. In this context, NGOs have been extremely effective in highlighting disparities between those who bear the burdens of environmental management programs and those who reap the benefits of such programs. For example, in India, the Centre for Science and Environment publishes ratings that compare companies within a given industry on their

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<sup>25</sup> Kevin Michael DeLuca, *Image Politics: The New Rhetoric of Environmental Activism*, (The Guilford Press, 1999), 1

<sup>26</sup> Abraham Chayes and Antonia Handler Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements*, (Harvard University Press, 1995), 251.

<sup>27</sup> Barbara Gemmill and Abimbola Bamidele-Izu, "The Role of NGOs and Civil Society in Global Environmental Governance," <<http://www.yale.edu/environment/publications/geg/gemmill.pdf>> (July 15, 2004).

<sup>28</sup> James Paul, "NGOs and Global Policy-Making," Global Policy Forum, <<http://www.globalpolicy.org/ngos/analysis/anal00.htm>> (August 10, 2004).

environmental performance.<sup>29</sup> Environmental Defence, a U.S. NGO, has developed a web-based “scorecard” that has done much to enhance the effectiveness of the Community Right to Know Act. The Scorecard (<http://scorecard.org>) presents data from the TRI and other sources in a very user-friendly form, enabling U.S. residents to obtain information on air pollution and toxic releases in their local neighborhood simply by entering their zip code into the web site.

These multiple and often powerful roles for NGOs have raised concerns. Many government officials – particularly elected officials – argue that because NGOs are not elected (and are sometimes not membership-based or democratic in their own structures), they cannot legitimately claim to represent the “will of the people.” National government officials frequently argue that only they have the right to represent the people and therefore only they are entitled to participate in the international political arena on behalf of their countries. While there is some truth to the criticism that NGOs often cannot claim to represent broad membership bases, NGOs respond to this criticism by arguing that the legitimacy of their actions and positions is based on their unique expertise or moral imperatives, or upon popular support for specific issues (even if this support doesn’t necessarily translate into direct support for the organization). Further, NGOs argue that as governments are increasingly soliciting (and even relying on) advice and counsel from “experts” and other non-elected persons, their reluctance to admit NGOs to political discussions is based on unsupportable bias against organized groups of citizens whom they may consider threatening to those frameworks and groups from which they draw their power.

At the international level, the location of multilateral institutions and other trans-national bodies sometimes presents high barriers to the participation of southern NGOs; frequently, then, northern NGOs dominate the limited space allotted for civil society representatives. The absence of significant numbers of southern voices legitimizes the claims of critics who argue that NGOs mirror the inequality observed in the participation of marginalized groups in national governments and other political processes. Such hurdles require that efforts be redoubled to involve southern NGOs, and recent trends confirm that participation among southern NGOs in international fora has been increasing.

### **The Example of Aarhus**

To date, the best example of the new paradigm of environmental governance is the Convention on Access to Information, Public Participation in Decision Making, and Access to Justice in Environmental Matters (commonly referred to as the Aarhus Convention), adopted by country members of the United Nations Economic Commission for Europe (UNECE) and the European Union on June 25, 1998, at the Fourth “Environment for Europe” Ministerial Conference. The Convention aims to provide the public and NGOs with common tools and standards that can be used by them to monitor compliance with environmental laws and engage in all decisions affecting regional environments. In October 2001, the Convention entered into force. Less than two years after entering into force, it adopted its first protocol and established a compliance mechanism. Currently, it has 40 signatories and 27 parties.

*The Innovations Pioneered by Aarhus:* Most multilateral environmental agreements (MEAs) establish specific environmental policies with the intention of achieving measurable improvements in selected areas of environmental management. A good example of the typical MEA is the Kyoto Protocol to the United Nations Framework Convention on Climate Change,

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<sup>29</sup> Ann Florini, *The Coming Democracy: New Rules for Running a New World*, (Island Press, 2003), 189.

which sets specific targets for the reduction of greenhouse gas emissions and establishes a deadline by which countries are expected to achieve these emission reduction targets. By contrast, the Aarhus Convention follows a different paradigm in multilateral environmental regime formation. Rather than set targets that must be achieved through the environmental management decisions made by countries, the Aarhus Convention prescribes the types of decision making processes that governments must employ. With this model, Aarhus takes the first steps toward extending the principles of transparency and accountability in environmental governance beyond the level of the nation-state by establishing common regional standards for good environmental governance with which countries must comply. Aarhus also demands what could be termed “horizontal accountability” from governments and corporations toward stakeholders, including NGOs and citizens, irrespective of their citizenship, nationality, or domicile.<sup>30</sup> Finally, Aarhus endeavors to integrate the environmental interests of the public and NGOs in national economic and development goals by establishing rules and processes for public participation in decision making in those non-environmental sectors that have significant impacts on the environment.

The Aarhus Convention seeks to accomplish the introduction of the new paradigm in environmental regime formulation by embracing the three principles of public involvement in environmental management: access to information, participation in decision making, and access to justice. The specific provisions in Aarhus treating each of these three principles are discussed in more detail below.

*Public Access to Environmental Information:* The Convention requires governments at all levels to disclose environmental information to the public (Articles 4 and 5). Its first section specifies the types of information that should be made public as well as the channels through which information should be disclosed and the frequency with which disclosures should be made. In specifying the types of “environmental information” that should be made public, the Convention requires not only that information on levels of pollution releases be made public but also that information be publicized about (1) the specific sources of the pollution; (2) the impact of the pollutants on the environment and on human health; and (3) planned and operational measures taken to reduce the release of pollutions and mitigate their impact. The Convention’s first section also stipulates that governments should institute PRTRs or other registries and inventories documenting performance by industry and other polluting groups.

*Public Participation in Decision Making:* The second pillar of the Aarhus Convention defines the rules for public involvement in three kinds of environmental decisions. First, decisions regarding specific development activities as described in Annex I of the Convention must be subjected to public review and consultation (Article 6). Second, in formulating plans, programs, and policies, governments at all levels must provide forums for public participation in the formulation process if the plans involve environmental issues (Article 7); examples of plans and policies subject to this requirement include environmental action programs and waste management policies. Third, Aarhus establishes a limited right to public and NGO involvement in the formulation of regulations promulgated by executive agencies and in legislation and legally binding agreements (Article 8). In essence, this section of the Convention establishes a framework that requires governments at regional, national, and sub-national levels to ensure that

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<sup>30</sup> Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (Aarhus Convention), <<http://www.unece.org/env/europe/>> (August 10, 2004).

competing interests are represented in decision making processes. Underlying this requirement is the assumption made by Aarhus that participation provides the best opportunity for the formulation of policies, plans, and projects that are fair to all parties.

*Access to Justice:* The third pillar of the Aarhus Convention guarantees to individuals and NGOs the ability to access institutions of justice when public authorities or corporations do not comply with the rules established in the Convention (Article 9). Specifically, Aarhus defines who has the standing to seek justice in a court of law or other impartial body and in what types of cases. NGOs are explicitly included under the definitions of “the public” and “the public concerned” set out in Article 2, Sections 4 and 5 of the Convention, though their standing is subject to the criteria, if any, laid down in national law. In an effort to ensure that justice is timely and fair, Aarhus also mandates the establishment of equitable, affordable, and efficient judicial procedures.

*The Role of NGOs in Developing the Aarhus Convention:* Even though voting rights in the Aarhus convention remained formally confined to governments, NGOs played a central role in drafting and negotiating the Aarhus Convention. Environmental NGOs participated in the intergovernmental working groups set up to conduct negotiations and their representatives were present on the Committee on Environmental Policy, which approved the draft text of the Aarhus Convention before it was transmitted to country ministers for final adoption. NGOs also participated in smaller drafting and advisory groups established on an ad hoc basis during the negotiations to resolve contested issues. Thus, departing from the norms of most prior international convention negotiations, NGOs were not excluded from official negotiations; during much of the Aarhus negotiation process, they assumed the status of full and equal partners for all practical purposes. NGO representatives now participate as experts on the Compliance Committee established by the Parties, and have formal standing to submit complaints directly to that Committee regarding alleged non-compliance on the part of national governments.

Although NGOs and other non-state stakeholders have been full participants in several other international fora for environmental policy-making – including the World Commission on Dams and the Forestry Stewardship Council – the Aarhus process constituted the first time NGOs played a central role in creating a legally binding international treaty and in ensuring governments’ compliance with it. The Aarhus process therefore presents a new model for the formation of multilateral public policy – one that affords to public interest groups the opportunity to actively draft and negotiate international law.

## **Looking toward the Future...**

As we have seen, the trend toward more transparent and participatory environmental governance has seen real progress. In the future, advances in technology and the increased acceptance of citizen participation in governance, may combine to expand transparency and thus regulation by disclosure in environmental governance. But expanded transparency may present both the public and governments with increasingly complex questions regarding the trade-offs between competing goals that a commitment to transparency raises but that a commitment to transparency alone cannot resolve.

Transparency may be supported – and expanded – by a variety of new technological innovations. Satellite imagery, for example, provides real-time information that people can use to press for changes in environmental management; to monitor compliance with new agreements,

laws, and paradigms; and even to generate plans for ecosystem revitalization.<sup>31</sup> Several large NGOs have actively embraced the use of this technology as part of their environmental campaigns. In 1998, a major paper producer in Russia, the Svetogorsk Pulp and Paper Mill, announced that it would phase out the use of ancient forest wood in its production entirely. Russia has more ancient forests than any other country in the world and they are especially threatened by industrial logging; it is estimated that 80 percent of the large ancient forest areas in Russia have already been destroyed by commercial exploitation.

Maps produced by Greenpeace and the Biodiversity Conservation Centre documenting the decline in ancient forests served as major sources of information on the impact of logging on forests in Russia. Greenpeace used satellite technology and on-the-ground verification to produce detailed maps showing forest areas down to 20,000 hectares in size. The maps provided information to companies involved in the production and use of wood products in Russia and in Europe that showed exactly which areas should be protected. The maps can now also be used by companies to ensure that products supplied by wood companies do not contain old growth wood.<sup>32</sup> Such data are now readily available: Global Forest Watch maintains a website that allows users to download more than 35 gigabytes of up-to-date map data free of charge from their data warehouse.<sup>33</sup>

But technology is not a panacea. Citizens must often continue to rely on highly trained specialists (who are frequently members of NGOs) to interpret the data (e.g., to interpret satellite imagery) and such specialists can often be uncertain – or disagree among themselves – about the meaning of what they are seeing. Further, there are often significant capital costs involved in the utilization of technology to gather and publicize information – satellite imagery, for example, requires the development, launch, and operation of very expensive satellites – that limit the ability of some environmental organizations to make full use of the technology and/or ensures that richer organizations have access to better and more detailed information. In many cases, such technology is so prohibitively expensive that NGOs must continue to rely on data gathered by governments (primary users), which are focused on gathering information to serve their own ends rather than those of NGOs or other groups that are incidentally relying on this data.

Another issue reveals just how complex disclosure-based regulation can be. One of the most controversial issues in world trade currently is the use of Genetically Modified Organism (GMO) technology to enhance food plants. Specifically, GMOs are foods that have been created or modified by the use of genetic engineering techniques in which Deoxyribo Nucleic Acid (DNA) – which are the molecules that carry the genetic information necessary for the organization and functioning of most living cells and that control the inheritance of characteristics – has been introduced, deleted, or inhibited.

The opponents of GMO products argue that the long-term effects of GM products are unknown and that such products may potentially be harmful to consumers' health. They argue that intellectual property rights and monopoly control of seeds by multinationals will not enable farmers in poor countries to obtain all the benefits from GMOs that proponents argue are possible. The proponents of GMO products counter by pointing to the rapid growth and

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<sup>31</sup> Ann Florini and Yahya Dehqanzada, "Secrets for Sale: How Commercial Satellite Imagery will change the World," by Carnegie Endowment for International Peace, 2000, <<http://www.ceip.org/programs/transparency/FINALreport.pdf>> (August 10, 2004).

<sup>32</sup> Alexey Yaroshenko, "Greenpeace Satellite Mapping Moves the First Major Producer to Phase Out Ancient Forest Use," December 1998, <<http://archive.greenpeace.org/pressreleases/forests/1998dec17.html>> (July 29, 2004).

<sup>33</sup> GFW Data Warehouse, <<http://www.globalforestwatch.org/english/datawarehouse/index.asp>> (July 20, 2004).



acceptance of such products among farmers around the world – including farmers in developing countries. They claim that biotechnology is actually helping farmers increase yields, lower pesticide use, and improve soil conservation and prevent water pollution, and that biotechnology is therefore helping reduce hunger and poverty around the world.

Whatever the technical merits of GMO products, efforts to deal with the GMO controversy underline important points about transparency and environmental regulation – particularly about the potential limits of transparency in enabling consumers to make truly informed decisions. In a controversial move, the European Commission unveiled a regulation in 2001 that requires that GMO products be tracked through the food chain “from farm to table”<sup>34</sup> and that all GMO food products be labeled as such. In the United States (where consumer sentiment has not taken an aggressive stance against GMOs), the labeling of products as GMO products is not mandatory – though firms can choose to label their products as GMO products. Following the EU decision, several other countries including Indonesia, Brazil, Chile, the Czech Republic, Malaysia, Russia, and Saudi Arabia, have introduced (or have announced that they plan to introduce) similar regulations to require the labeling of GMO products. These countries argue that labeling will enable consumers to decide whether or not to buy GM food and thus ensure that consumers’ right to know about their foods is protected by law.

However, while the issue of GMO food labeling is often presented as a simple matter of defending consumers’ right to know, the issue involves more than merely questions about policy choices for or against information disclosure. GMO labeling requirements – particularly the onerous requirements imposed by the EU – impose significant new costs on such foods and can have profound impacts on the international trade of such products and thus on the very future of biotechnology in food production.

The high penetration of different types of GMO products in the food chain in some countries makes it difficult for manufacturers of food products to certify the presence or absence of individual GM items among their products. The issue of labeling – and in fact the identification of what is a GMO product – is further complicated by the lack of consistency in labeling laws; thus, the EU allows only a 1% threshold for GMO content in any product while Japan, for example, has set a 5% threshold.<sup>35</sup> Further, for such thresholds to be meaningfully enforced, regulators must have the capacity and the equipment to identify the precise GMO content of food products while exporting countries must have similar capacities for measurement (and similar definitions of GMOs); exporting countries must also have the capacity to keep GMO and non-GMO products separated throughout the entire production and exporting process – which only adds to the production costs of both types of products.

Not surprisingly, labeling requirements are viewed by the proponents of GMO products as “technical barriers to trade” that are not actually intended to enshrine the right to know but are instead intended to replace (illegal) bans by playing on consumers’ fears (which may be unjustified) to slow the sale of GMO products. Proponents of GMO foods advocate for voluntary labeling of GMO-free goods and of specific GMO attributes in other goods. They argue that voluntary labeling will allow firms incurring additional costs for including such labels on their products to charge a premium or rent on their products specifically because of their GMO content. They also argue that the level of scientific sophistication associated with the

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<sup>34</sup> Organic Consumers Association, “Detailed Description on New GMO Labeling Rules,” in EU European Report, July 28, 2001, <<http://www.organicconsumers.org/gefood/gmolabeling080101.cfm>> (July 24, 2004).

<sup>35</sup> Hera Diani and Maria Endah Hulupi, “Indonesians Demand GMO Labeling,” *The Jakarta Post*, November 4, 2001, <http://www.organicconsumers.org/gefood/indonesia110801.cfm> (July 25, 2004).

production of GMOs makes it difficult for consumers to know or completely understand the scientific techniques that have been utilized in the production of the good; the impact of consumption on human health and safety, both in the short-term and over the long-term; or the impact of production and consumption upon broader consumer concerns such as animal welfare, environmental protection, or moral, ethical, and religious issues. They also point out that there is a lack of universal definitions of what constitutes a risk to human safety, animal and plant welfare, or the environment and that this lack of universal agreement leads to the differences in the types of information that countries are requiring to be provided on food labels.

The end result of this type of disagreement between countries may be that a product is denied access to foreign markets. It is for this reason that the one country's labeling requirements may be viewed by another country as trade protectionism. Such disagreements – conducted as they are in the absence of perfect information – emphasize that even when all available information is disclosed, consumers may still be unable to make rational consumption decisions – and the disclosure of certain pieces of information may in fact be producing unintended negative consequences on the food supply and on future food production options. Such complex issues force policy makers to weigh the costs and resource requirements of disclosure policies against their potential benefits.

## **Conclusion**

This chapter has examined the structures that underpin disclosure-based environmental regulation by creating transparency in environmental governance. We have argued that the term 'transparency' must be broadly defined to encompass three essential principles which must be present if citizens are to have a meaningful role in environmental governance. Access to information is the foundation of transparency – but it is not in all cases sufficient by itself to empower citizens to meaningfully impact environmental decisions. Access to information must be coupled with access to decision making processes and with access to justice.

We have also examined how transparency can be institutionalized as an essential component of environmental governance through the constant vigilance of intermediaries, like civil society groups. In the past few decades, civil society organizations – including grassroots environmental movements and trans-national non-governmental organizations – have come to play very important roles in shaping domestic and international environmental governance policies and confronting these vested interests. Such groups frequently spearhead the demand for increased transparency in governance and, gradually, governments have begun to accede space to them. The development of the Aarhus Convention represents one of the biggest achievements of NGOs to date in influencing the development of environmental governance frameworks. In many ways, the Aarhus Convention also provides a road map for the development of future regional and international environmental treaties.

Looking toward the future, we have argued that disclosure-based environmental regulation is likely to become an even more effective part of environmental governance throughout the world as technological innovations continue to be made and as basic norms of transparency and citizen participation are integrated into governance frameworks.

Ultimately, policy making is essentially a power struggle among competing interests – governments, citizens, corporations, non-governmental organizations, and multilateral organizations. In the creation of institutional frameworks in which the principles of transparency are enshrined as rights, a more level playing field may be created in which citizens can protect their interests against those of more powerful actors.