

## Research Articles

# Global Environmental Governance and Regional Centers

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### Introduction

As global governance grows more institutionally and politically complex, there remain often significant gaps between stated policy goals in multilateral environmental treaties and what parties have actually done domestically. Addressing these critical implementation gaps requires better integration of policy-making and implementation across different geographical scales of governance. In this respect, regional governance can be a way to better connect global policy with local management needs. However, the use of regional forums has often been overlooked in the design and operation of global environmental agreements. As an exception, however, the parties to the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the 2001 Stockholm Convention on Persistent Organic Pollutants have, based on mandates in the two treaties, established regional centers focusing on capacity building and technology transfer.<sup>1</sup> These have been set up to assist countries struggling with treaty implementation due to a lack of resources (as opposed to a shortage of political will).

The kinds of regional centers established by conferences of the parties (COPs) to the Basel and Stockholm Conventions do not exist under any other global environmental agreements, and they have received little scholarly attention. They are, however, in many ways interesting organizational experiments as regional focal points for collaboration. Operating in between global treaty bod-

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1. The Basel and Stockholm Conventions call for the creation of "regional or subregional centers." The Basel Convention parties have established "regional centers" and "coordinating centers," while the Stockholm Convention parties have created "regional centers" and "sub-regional centers." Because there is no fundamental difference in their creation or operation, this article uses "regional centers" as a generic term for all the centers operating under both conventions.

ies and national forums, a few regional centers are mandated to operate under both agreements, while most are established under the auspices of one of the two conventions. By 2012, there were fourteen Basel Convention regional centers and fifteen Stockholm Convention regional centers. Six of the Basel Convention centers are also active under the Stockholm Convention. In general, there are surprisingly few studies of treaty bodies in global environmental politics despite the fact that they perform many tasks.<sup>2</sup> However, even if it is recognized that treaty-related bodies such as regional centers can shape events and outcomes, their activities must not simply be assumed to be important; that should be evaluated through empirical analysis.

This article—which provides an initial rather than final examination of the regional centers and their operations—connects with literatures on multi-level governance, international institutions and organizations, regionalism, capacity building, and technology transfer. Analyzing the creation and activities of the regional centers, this article explores the following basic but important questions: Why did the parties to the Basel and Stockholm Conventions establish the regional centers? What roles do the regional centers play in treaty implementation and multilevel governance? The analysis carried out to answer these two questions is informed by reviews of primary documents produced by treaty secretariats and regional centers, personal observations at international meetings, and communication with regional center personnel, secretariat staff, and national officials. Empirical data from these different sources were collected and examined to gain a better understanding of the different ways in which the regional centers operate and may be influential (instead of providing a detailed assessment of an individual regional center).

The article argues that the parties have set up regional centers in response to three partially overlapping sets of developing and industrialized country interests with respect to improving multilevel governance: expanding regional cooperation (both developing and industrialized countries); attracting more resources for treaty implementation (mainly developing countries); and supporting implementation projects across smaller groups of countries (mainly industrialized countries). Further, the article finds that the regional centers collectively operate in three broad areas important to treaty implementation: raising awareness, strengthening administrative ability, and diffusing scientific and technical assistance and information. However, the ability of the regional centers to better work with national governments and other stakeholders in closing implementation gaps depends on additional resources and stronger political support. There may also be benefits to expanding regional center mandates to support stronger mechanisms for monitoring and compliance, as a way to improve multilevel governance.

The article starts with a discussion of global multilevel governance, institu-

2. For some of the few studies of the operation and influence of treaty bodies, see Kohler 2006; Biermann and Siebenhüner 2009; and Jinnah 2010.

tional linkages, capacity building, and technology transfer, and discusses how these interrelated issues are connected to the establishment and activities of the regional centers. Next is an introduction to the Basel and Stockholm Conventions and an examination of parties' different interests in creating the regional centers, as part of a larger attempt to close implementation gaps and advance the overall effectiveness of these two treaties (thereby improving environmental and human health protection from hazardous chemicals and wastes). This is followed by a presentation of the formal mandates of the regional centers and an examination of three broader areas in which they operate to build up regional governance in support of domestic management and treaty implementation. The article ends with a discussion about current and future multilevel governance of hazardous chemicals and wastes through regional centers, also identifying areas ripe for more empirical research and analysis.

### **Global Multilevel Governance and Institutional Linkages**

Much global environmental governance is shaped by institutional linkages operating both horizontally and vertically. Horizontal linkages exist between instruments and programs at similar levels of social organization, such as connections between two global treaties like the Basel and Stockholm Conventions and their associated treaty bodies, including secretariats and COPs. Vertical linkages exist among instruments, organizations, and management activities at different levels of social organization. Examples include connections between global, regional, national, and local regulations and management efforts on hazardous chemicals and wastes, including the use of regional centers to support domestic implementation under one or both of the Basel and Stockholm Conventions. At the same time, public and private sector actors may seek to upload standards and ideas from domestic to international levels of authority to shape the development of rules and standards under multilateral agreements. Both horizontal and vertical linkages are important in the policy area of chemicals and wastes, but this article focuses primarily on vertical linkages in multilevel governance.

Growing institutional and organizational density, coupled with an increase in the number of international actors and their activities, create a need for analysts and practitioners to take seriously characteristics and implications of institutional linkages.<sup>3</sup> To facilitate analysis and separate the influence of structures and of participants, it is helpful to distinguish between governance linkages and actor linkages (both of which may exist horizontally as well as vertically). Governance linkages exist when principles, norms, rules, or decisions in one forum affect activities or outcomes in another. Actor linkages are agent-

3. Young 2002; Selin and VanDeveer 2003 and 2011; Raustiala and Victor 2004; Oberthür and Gehring 2006; Chambers 2008; Alter and Meunier 2009; Selin 2010; and Keohane and Victor 2011.

based linkages across institutions as states, IGOs, and NGOs interacting within and across policy venues create important connections between different forums. Many of the same participants collaborate under separate chemical and waste treaties and in different treaty bodies. As a result, there are a multitude of actor linkages formed by parties and observers who interact on policy-making and management activities across forums. Both governance and actor linkages shape political processes and the interests and strategies of regime participants, linking decisions and outcomes across forums.<sup>4</sup>

The institutional framework for governance of hazardous chemicals and wastes is fragmented.<sup>5</sup> It consists of several formally independent treaties negotiated at different times. However, even though they are free-standing, and no single agreement is superior to the others under international law, they are cognitively and practically connected through a multitude of governance and actor linkages, including when it comes to the creation and operation of the regional centers. Cognitively, states, IGOs, and NGOs perceive many treaty issues to be closely connected, and they formulate policy responses and management efforts based on these conceptual linkages. Practically, states, IGOs, and NGOs realize that many policy and management issues are linked across forums, as political developments under one instrument shape debates and actions in other forums also. Since the 1990s, the international community has taken several legal, political, and organizational measures to capture synergies across treaties and programs intended to promote more harmonized policy-making and implementation. This includes encouraging regional centers to take on activities across multiple treaties.

The parties intend for the Basel and Stockholm Conventions regional centers to play a number of different roles in treaty implementation, as they seek to strengthen regional governance for the purpose of supporting local management. The regionalism literature identifies several political, economic, cultural, and physical reasons for the socially constructed delineation of regions and the establishment of regional governance structures and bodies.<sup>6</sup> At a very basic level, centers are regional in the sense that they operate at a multilateral governance scale between the global and the local, assisting several countries at once, which do not necessarily share national borders. The regional centers are furthermore politically and geographically linked to the five traditional UN regions: Africa, Asia and the Pacific, Central and Eastern Europe, Latin America and the Caribbean, and Western Europe and Others. Regional center nominations are made collectively by the countries within each region and then must be formally approved by the COPs, which have expressed support for the creation of regional centers in all UN regions as well as for multiple centers within a region.

4. Selin 2012.

5. Selin 2010.

6. Balsiger and VanDeveer 2010.

The parties to the Basel and Stockholm Conventions have set up the regional centers to address a wide range of capacity-building and technology-transfer issues important to treaty implementation. In this respect, the regional centers are primarily driven by demand. As the regional centers operate alongside other treaty bodies, including COPs, secretariats, and other kinds of political, scientific, and technical groups, they exist to provide specific services for which there are stated regional and domestic needs. This article characterizes the regional centers as “linkage organizations,” based on their treaty-based mandates and functions. Organizationally linking global forums and policy with domestic actions, the regional centers operate as independent entities, but possess limited rule-making authority because they are mandated to address treaty-specific regional and domestic management issues and needs. Their creation was based on a dual recognition by the parties. First, many countries need different kinds of assistance to meet treaty-specific obligations and commitments. Second, treaty-based regional bodies can be one way to provide at least some such assistance.

The need for treaty-related assistance draws attention to capacity-building issues, which are politically controversial under many multilateral environmental agreements.<sup>7</sup> Often a complex activity, capacity building is intended to increase the efficiency (time and resources required to produce a given outcome), effectiveness (appropriateness of efforts undertaken to produce a desired outcome), and responsiveness (links between communication of needs and capacity to address them) of government performance.<sup>8</sup> Related efforts can target a wide range of domestic needs and stakeholders. Achieving these open goals of capacity building may involve a broad range of activities, including improving regulatory clarity, enhancing administrative capabilities, facilitating technology use, training public officials, and increasing public awareness and education levels. There are long-standing debates about the most appropriate governance scales and sites for capacity-building activities, as well as how they should be funded, designed, and carried out.<sup>9</sup> The parties to the Basel and Stockholm Conventions have created the regional centers in part to strengthen treaty-based capacity-building efforts.

Like capacity building, efforts labeled as technology transfer can involve a multitude of activities important in many aspects of treaty implementation. At a very basic level, technology transfer includes the physical movement of existing technologies from one geographical area or organization to another for the purpose of upgrading equipment and standards. Technology transfer can also involve the communication of technical and scientific knowledge and skills from one policy forum or organization to another.<sup>10</sup> In international environmental

7. Haas, Keohane and Levy 1993; Keohane and Levy 1996; Victor, Raustiala and Skolnikoff 1998; and VanDeveer and Dabelko 2001.

8. Grindle 1997, 5.

9. Sagar 2000; and VanDeveer and Dabelko 2001.

10. Bozeman 2000; Luken and Navratil 2004; and Van Berkel 2010.

politics, most discussions about technology transfer focus on diffusion of technology and information from highly industrialized countries to less-industrialized countries. Thus, even if the development and application of “greener” technology are important sustainable development issues for all countries, debates and efforts under the Basel and Stockholm Conventions focus on the needs of developing countries and countries with economies in transition, as the parties express hopes that the regional centers can facilitate transfer of treaty-relevant technologies and related information.

### **Why Regional Centers?**

The Basel Convention controls the generation, transboundary movement, and environmentally sound disposal of hazardous wastes (including discarded hazardous chemicals or used goods containing such chemicals). The agreement was adopted in 1989 and entered into force in 1992. By 2012, 177 countries and the European Union (EU) had become parties. The Basel Convention prohibits export of hazardous wastes to Antarctica and to parties that have taken domestic measures to ban such imports. Hazardous waste transfers from one party to another are permitted only if an importing party first gives explicit prior informed consent (PIC). Exports of hazardous wastes to non-parties must also be subject to an agreement at least as stringent as the requirements under the Basel Convention. Over the years, parties have collaborated to strengthen legal structures and requirements for waste transports, and have developed a multitude of technical guidelines for the environmentally sound management of particular waste categories and streams.

The Stockholm Convention regulates the production, use, trade, disposal, and emissions of persistent organic pollutants (POPs), a sub-category of particularly long-lived and toxic chemicals. The convention was adopted in 2001 and entered into force in 2004. By 2012, 175 countries and the EU had joined, and the agreement covered twenty-two POPs listed in three annexes to the treaty—more chemicals are subject to evaluation and likely to be added in the near future. The production and use of commercial POPs (pesticides and industrial chemicals) listed in Annex A are generally prohibited, but parties may apply for country-specific and time-limited exemptions. Annex B lists commercial POPs for which only specified uses are allowed. Annex C lists POP byproducts of combustion and production processes that are regulated through best available techniques and best environmental practices for their minimization. In order to complement the requirements of the Basel Convention, regulated pesticides and industrial chemicals can only be imported and exported under specific exemptions or for the environmentally sound management and disposal of discarded chemicals.

By 2012, parties had established fourteen Basel Convention regional centers and fifteen Stockholm Convention regional centers. Table 1 lists the locations of all these centers and their approval dates. While the selection of the

Basel Convention regional centers is not formally time-limited, the Stockholm Convention centers were initially only endorsed for a period of four years (with the possibility of re-approval).<sup>11</sup> Given the multitude of IGOs working on capacity-building and technology-transfer issues important to the strengthening of domestic regulations and management, why did the parties to the Basel and Stockholm Conventions add to this already dense organizational landscape by creating the regional centers (and expanding their numbers over time)? Personal observations at international meetings, and communications with national officials and secretariat staff, reveal at least three reasons. In general, these reasons overlap rather than contradict each other, but countries do not necessarily put an equal amount of stress on each of them.

One reason is that many parties express an interest in expanding regional cooperation, linked to a belief in the existence of regional commonalities. Numerous scholarly publications and policy reports have described the gap between global policy goals and domestic policy implementation and management changes.<sup>12</sup> While states and stakeholders are encouraged to think globally and act locally, the regional level has often been neglected by both policymakers and analysts. The major exception is Europe, where the twenty-seven EU member states engage in extensive regional collaboration and lawmaking on a host of environmental issues, including many related to the management of hazardous chemicals and wastes.<sup>13</sup> However, in no other geographical region have countries created similarly elaborate legal and political structures to address shared environmental issues.<sup>14</sup> Still, many countries articulate support for more region-based cooperation and hope that regional centers allow for expanded region-specific approaches to capacity building and technology transfer, so that geographically close countries can address issues of common concerns without having to cater to the needs of parties on other continents.<sup>15</sup>

A second reason for the development of regional centers stems more from a desire primarily of developing countries as well as countries with economies in transition to generate more treaty-specific resources supporting capacity building and technology transfer. Like many multilateral environmental agreements, the Basel and Stockholm Conventions stress the importance of resource and capacity issues. However, developing countries and countries with economies in transition continuously complain that too many donor promises have never been fulfilled, as the regional centers are mandated in the treaty texts but not guaranteed funding (having failed to convince industrialized countries

11. Stockholm Convention 2009.

12. Selin 2010; and Young, King and Schroeder 2008.

13. Selin 2007 and 2009; and Selin and VanDeveer 2006.

14. Balsiger and VanDeveer 2010.

15. It is, of course, not a given that two neighboring countries share identical problems and needs. When it comes to a specific incapacity issue, a country may have more in common with a far-away country than with one close by. In the UN system, however, countries often work through regional blocs, and UN bodies regularly organize region-based workshops.



**Table 1**

Location of Basel and Stockholm Conventions' Regional Centers and the Dates of Their Approval by the Conferences of the Parties (COPs)

<i>Location</i>	<i>Basel Approval<sup>a</sup></i>	<i>Stockholm Approval<sup>a</sup></i>
<i>Africa</i>		
Cairo, Egypt	COP-3 (1995)	
Ibadan, Nigeria	COP-3 (1995)	
Pretoria, South Africa <sup>b</sup>	COP-3 (1995)	COP-5 (2011)
Dakar, Senegal	COP-6 (2003)	COP-5 (2011)
Algiers, Algeria		COP-5 (2011)
Nairobi, Kenya		COP-5 (2011)
<i>Asia and the Pacific</i>		
Beijing, China	COP-3 (1995)	COP-4 (2009)
Jakarta, Indonesia	COP-3 (1995)	
Tehran, Iran	COP-6 (2003)	COP-5 (2011)
Apia, Samoa	COP-6 (2003)	
Kuwait City, Kuwait		COP-4 (2009)
Nagpur, India		COP-5 (2011)
<i>Central and Eastern Europe</i>		
Bratislava, Slovakia	COP-3 (1995)	
Moscow, Russia <sup>c</sup>	COP-3 (1995)	COP-5 (2011)
Brno, Czech Republic		COP-4 (2009)
<i>Latin America and the Caribbean</i>		
Buenos Aires, Argentina	COP-3 (1995)	
San Salvador, El Salvador	COP-3 (1995)	
Port of Spain, Trinidad & Tobago	COP-3 (1995)	
Montevideo, Uruguay	COP-3 (1995)	COP-4 (2009)
Sao Paulo, Brazil		COP-4 (2009)
Mexico City, Mexico		COP-4 (2009)
Panama City, Panama		COP-4 (2009)
<i>Western Europe and Others</i>		
Barcelona, Spain		COP-4 (2009)
<b>TOTAL</b>	<b>14</b>	<b>15</b>

a. Some regional centers existed before they were formally approved by the COP and state that they were active before the date given in the table. However, some regional centers did not become fully operational until after a country had been awarded one.

b. The first Basel Convention regional center in South Africa was liquidated in 2007 due to a lack of funds. The Africa Institute, established in 2009, took over and was also approved as a Stockholm Convention regional center.

c. By COP-5 in 2011, Russia was not yet a party to the Stockholm Convention. Therefore, the approval of the Stockholm Convention regional center in Moscow will not become official until Russia joins the Convention.



to commit to mandatory contributions). As a result, financial issues are front and center in heated debates during meetings of COPs. Many countries seeking assistance also express skepticism about the Global Environment Facility (GEF), the designated financing mechanism under the Stockholm Convention but not the Basel Convention, and its project requirements. As such, recipient countries hope that the regional centers can help attract additional resources from donor countries and IGOs as they provide different kinds of assistance.

A third reason for the establishment of regional centers is that at least some leading donor countries believe that regional collaboration can provide a valuable way to support treaty-specific capacity building and technology transfer projects with groups of recipient countries. Many industrialized countries recognize that there is a need for smaller treaty-based projects alongside larger and more costly IGO-operated projects, even as they have rejected calls for mandatory funding. Regional approaches may help reduce risks of duplication of efforts and programs across countries in situations where each donor country works exclusively with one recipient country at the time. In this respect, the regional centers can permit donor countries to work with groups of recipient countries. This reason for supporting regional centers is a scaled-down version of why industrialized countries wanted to create the GEF: to pool resources and efforts. As such, donor and recipient country interests overlap somewhat with respect to the regional centers (but with little agreement about what constitutes appropriate levels of funding).

## Regional Center Mandates and Activities

The Stockholm and Basel Conventions stipulate that the regional centers shall engage in capacity building and technology transfer, even if the exact wording of their mandates in the two treaties differs slightly.<sup>16</sup> The first Basel Convention regional centers were approved by the third COP in 1995. Several of these also informally took on tasks related to the implementation of the Stockholm Convention following its adoption in 2001 and entry into force in 2004. The first Stockholm Convention regional centers were granted formal approval at COP-4 in 2009. The treaty-based regional center mandates are fairly short and vague. Instead, the COPs have the responsibility of supervising the regional centers and their activities. The regional centers must provide regular reports to the COPs of their activities to assist parties in implementing treaty-related commitments and obligations. In turn, the respective COPs should evaluate the performance of the regional centers and provide guidance for their continued operation and development.

The legal basis of the regional centers has been specified over time. The Basel Convention in 2003 began to conclude framework agreements between

16. Article 14 of the Basel Convention and article 12 of the Stockholm Convention.

the secretariat and either an IGO operating within a region or an organization established under national law taking on a regional role.<sup>17</sup> Ten of the fourteen Basel Convention regional centers had formalized such a framework agreement by early 2012. The Stockholm Convention parties have not utilized the same approach, but instead the COPs' approval of each center in four-year intervals creates opportunities for evaluation before possible re-approval. Many Stockholm Convention parties encouraged the Basel Convention regional centers to also serve as Stockholm Convention regional centers, because they believed that joint regional centers could support harmonized implementation in a resource-efficient manner.<sup>18</sup> However, only six regional centers operate under both agreements, as some countries not hosting a Basel Convention regional center sought the political prestige of housing a Stockholm Convention regional center, also wanting to connect a domestic entity to treaty-based regional implementation efforts.

Several regional centers are housed in national governmental or regulatory agencies, but others are located in universities and research organizations (for example, in China, the Czech Republic, and Egypt). In addition, the regional center in Brazil is linked to a state (as opposed to federal) agency, the one in South Africa is set up as a separate IGO, and the one in Spain is located within the Regional Activity Center for Cleaner Production under the Mediterranean Action Plan (which is part of the United Nations Environmental Programme's Regional Seas Programme). No matter where they are located, however, the regional centers should operate independently from the organizations with which they may be associated. To this end, the Stockholm Convention COP specifically noted in a decision that the regional centers "should be perceived as independent legal entities from the hosting institution and Government and operate, to the extent permissible by national laws, as separate legal entities."<sup>19</sup> As an important part of such independence, financial resources given to a regional center should be kept separate and only be used for activities relating to treaty implementation.

Countries engage with regional centers on a voluntary basis. However, a country's selection of which specific regional center to collaborate with is based on more-or-less explicit criteria. Countries are generally expected to interact with centers located within their UN region. However, other factors may also influence which regional center a country chooses to engage. For example, in Africa, francophone countries join together through the regional center in Senegal, whereas English-speaking countries connect through the center in South Africa. Many regional centers collaborate with a group of ten to twenty countries. A specific country may also engage multiple regional centers. For example,

17. Basel Convention 2002.

18. Stockholm Convention 2007.

19. Stockholm Convention 2006.

Latin American countries are free to work with any of the regional centers in South and Central America on separate projects and initiatives. There is also no formal obstacle preventing a country from working with a regional center located in another geographical region. Furthermore, regional centers can collaborate, including across geographical regions. The two centers in Kuwait and the Czech Republic, for instance, have worked together on specific project proposals.

A few regional centers, most notably the one in South Africa, have established formal agreements with states to gain recognition and build up their official membership. Others have opted for less-formal relationships as they interact with different groups of countries. For basic operations, the host country is expected to provide some financial and in-kind support, and member states may be required to pay an annual fee. Regional centers can also seek support from small implementation funds set up under the Basel and Stockholm Conventions, from donor countries, and from public and private sector actors for providing services. Donor countries that have supported the regional centers include traditional ones such as Denmark, Finland, Norway, Germany, Sweden, and Switzerland. Their support ranges from tens of thousands to over one hundred thousand US dollars per project. The EU, the United Nations Environmental Programme (UNEP), the Strategic Approach to International Chemicals Management (SAICM), and the GEF have provided similar assistance.<sup>20</sup> Regional center staffs are relatively small. Many centers are run by five or fewer full-time or part-time employees. Regional centers may also use external consultants for specific projects.

To date, the various projects and activities of the regional centers intended to support national policy-making and management of hazardous chemicals and wastes have tended to fall into one of three broad areas: raising awareness, strengthening administrative ability, and diffusing scientific and technical assistance and information.<sup>21</sup> The division of regional center operations into these three areas is somewhat artificial as activities overlap—but this structure informs the analysis of the ways in which they engage treaty implementation and multilevel governance. Furthermore, regional centers build up specialized competencies, in part influenced by their location and expertise. For example, regional centers linked with research bodies tend to focus on scientific and technical issues, while regional centers connected to political bodies often work more on policy-related issues. The three operational areas are discussed below, with examples of particular activities performed by different regional centers, but this is not a comprehensive list, and no one regional center performs all of the activities.

20. This is not intended to be an exhaustive list of all donor countries and IGOs that have supported the regional centers, but should be seen as illustrative examples.

21. Work plans and activities reports for most regional centers are available through their own websites and the websites of the secretariats to the Basel and Stockholm Conventions.

### *Raising Awareness*

IGOs like UNEP, the World Health Organization (WHO), and the UN Food and Agriculture Organization (FAO) have been engaged in awareness-raising activities for a long time, partly to prepare for the negotiations of multilateral environmental agreements and to support their implementation by increasing the knowledge among stakeholders about different aspects of environmental and human health issues. There are many ways to raise awareness, including information campaigns and workshops or training sessions that focus on specific policy and management issues. For example, regional awareness-raising workshops were critical to communicating basic scientific and socioeconomic knowledge and building political support for the negotiations of the Stockholm Convention.<sup>22</sup> Complementing these kinds of IGO activities, the Basel and Stockholm Conventions' regional centers provide a more institutionalized way of handling some awareness-raising issues at the regional level, compared to the traditional organizing of ad hoc meetings. In this respect, regional center activities in this area can be seen as a continuation of a long history of similar efforts, rather than something completely new.

At least two kinds of awareness are fundamental to treaty implementation and effectiveness. The first kind has to do with knowledge about the content and scope of the environmental and human health aspects of a problem. For national governments, stakeholder groups, and individuals to engage in meaningful action and take basic protective measures, they must be aware of the problems associated with hazardous chemicals throughout their lifecycle, as well as means available to reduce exposure. Many public officials and people directly handling hazardous chemicals and wastes remain unaware of the risks of specific substances and waste categories. To raise such awareness, regional centers have generated and communicated basic scientific and socioeconomic information on different aspects of the environmentally sound management of chemicals and wastes. Spreading such basic information has been a central aspect of capacity-building efforts for decades, and remains a critical aspect of fulfilling global policy goals for the environmentally safe handling of chemicals and wastes.

Regional centers have engaged in educational programs and workshops designed to inform public and private sector actors about chemicals and wastes problems. Centers in the Czech Republic, Mexico, Senegal, Spain, and South Africa have aided in national and local dissemination of information about, for example, controls and restrictions on specific chemicals, practices for safe handling, and rights and responsibilities of different groups involved in the handling of chemicals and wastes. This includes activities that help countries design and implement domestic public awareness programs and campaigns on the prevention and handling of hazardous wastes. Similarly, regional centers ad-

22. Selin 2010.

dress awareness issues associated with the management of POPs controlled by the Stockholm Convention. This includes raising awareness about risks such as the use of PCBs; releases of dioxins, furans, and other byproducts; the application of pesticides in agricultural production; and the use of DDT against malaria-carrying mosquitoes.

A second important kind of awareness relates to the substance of international rules and standards. Many treaty obligations and standards are vague and open to interpretation. Officials, who have not been part of national delegations to treaty negotiations or COP meetings, but who are responsible for domestic rule-making and enforcement, often do not know about or understand all the requirements under different multilateral agreements. Therefore, simply increasing awareness of international rules and standards among domestic public, private, and civil society actors can help promote effective implementation. Regional centers in Argentina, Egypt, Indonesia, and Slovakia have organized workshops on steps needed for ratification and implementation of the Basel Ban Amendment, the Basel Protocol on Liability and Compensation, and the Stockholm Convention. On such legal issues, the regional centers can act as important links between secretariats and domestic authorities. In addition, many awareness-raising efforts on rules and standards are closely linked to issues of administrative capacity.

### *Strengthening Administrative Ability*

The institutions and capacity building literatures have long stressed that countries with relatively strong administrative capacities are in a better position to implement and enforce international commitments and standards than countries with relatively weak administrative capacities. Thus, enhancing countries' administrative abilities to meet treaty obligations is often a critical aspect of capacity building. As with awareness-raising, this is an area where IGOs such as UNEP, the World Bank, and the United Nations Institute for Training and Research (UNITAR) have worked for a long time, but where parties express the hope that regional centers can take over at least some treaty-specific tasks. Furthermore, the ability to effectively incorporate the Basel and Stockholm Conventions into national law is dependent on having well-developed domestic regulations for waste and chemical management. As such, regional centers have designed programs and organized training sessions on the development of chemicals-and-waste legislation, to help build a legal platform for parties to address the implementation of a wide range of treaty-based commitments.

The regional centers focus on several aspects of strengthening countries' administrative ability. One important issue concerns assisting national governments in the transfer of international rules and standards into domestic law. Under the treaty, each party to the Stockholm Convention must prepare a National Implementation Plan (NIP) outlining how they are going to implement

treaty obligations, and make efforts to operationalize the plan. These NIPs should also be reviewed and updated periodically to address new obligations under the Convention, including the management of additional POPs. Regional centers in India, Senegal, Spain, and Uruguay have run projects to help develop NIPs and national review reports. The Basel Convention does not require the development of NIPs, but many issues of national reporting and transfer of international rules into domestic laws are similar to those under the Stockholm Convention. Regional centers have also worked with countries on issues such as the domestic operation of the PIC scheme for waste transfers and the development of border controls.

Strengthening administrative abilities is not just relevant to national-level policy makers and regulators; it also involves education and empowerment of local officials. Many of the monitoring and enforcement activities that ultimately determine treaty effectiveness—for example, the implementation of the PIC scheme for the international trade in hazardous wastes and the handling of specific POPs and waste categories—are the responsibility of local public servants. Dealing with these kinds of capacity issues, regional centers in Egypt and South Africa have organized training seminars for port enforcement officers to increase their ability to combat and prevent illegal traffic of hazardous substances and wastes, as well as providing training sessions on the environmentally safe handling of such materials. Further strengthening administrative abilities at both national and local levels will require the inclusive and active involvement of people from all domestic sectors, as well as an increase in collaboration between public, private, and civil society sectors.

In addition, regional centers have organized activities to help parties capture synergies in implementing commitments across treaties. This includes identifying the many ways in which different chemicals and wastes treaties and their mandates are connected. Importantly, the implementation of one treaty can facilitate the implementation of another, especially in those instances when the Basel and Stockholm Conventions cover the same substance or mandate the use of similar technical standards for the environmentally sound management and disposal of wastes. These kinds of synergy issues are also important to the fulfillment of national reporting requirements. In this respect, the work with parties on data generation and communication that many regional centers are engaged in can help parties meet reporting requirements under multiple treaties. This work also draws attention to the importance of parties having access to scientific and technical assistance and information relevant to treaty implementation.

### *Diffusing Scientific and Technical Assistance and Information*

Availability of technical and scientific resources as well as expert knowledge is central to the implementation of a plethora of standards and regulations on

hazardous chemicals and wastes. Treaty implementation and compliance may be improved with a better flow of relevant technical and scientific information in a format useful to governments and other stakeholder groups.<sup>23</sup> This draws attention to related issues of capacity building and technology transfer under the Basel and Stockholm Conventions, as well as the need for scientific assessments of regional and national conditions and evaluations of management needs. To date, regional centers have focused less on transferring actual pieces of technology and more on identifying best available techniques and best environmental practices, and in assisting parties that want to take measures to upgrade technologies and standards. This is consistent with many other activities, including those conducted by the United Nations Industrial Development Organization (UNIDO) and UNEP on national cleaner production centers.<sup>24</sup>

For the environmentally sound management of hazardous wastes, the Basel Convention relies heavily on technical guidelines, based on best available techniques and best environmental practices. Similarly, the Stockholm Convention sets technical standards for the control of emissions of byproducts from stationary and mobile sources. Both conventions also focus on the importance of switching to alternative, less hazardous, chemicals and non-chemical practices. Thus, disseminating information about the latest technical standards and alternatives and facilitating their application is an important part of treaty implementation. To this end, regional centers in Brazil, China, Czech Republic, Kuwait, Mexico, Senegal, Spain, and Uruguay have organized programs designed to build scientific capacity and train national officials and other stakeholders on issues such as (1) knowledge about cleaner production and waste minimization; (2) development of technical methods of waste disposal; and (3) guidelines on the management of specific wastes, such as electronic, biomedical, and healthcare wastes.

Access to scientific and technical information is important not only for domestic implementation, but also so that parties can engage in critical discussions. However, the generation and dissemination of scientific and technical information across a diverse set of parties can be complicated and controversial.<sup>25</sup> Under the Basel Convention, parties have continuous discussions about the development of technical standards and guidelines for the environmentally sound management of a growing number of waste categories and streams. The application of technical standards, guidelines, and toolkits is important for the effective control of POPs under the Stockholm Convention. Consequently, the activities of many regional centers relate to these kinds of scientific and technical implementation issues. In addition, the operation of the Persistent Organic Pollutants Review Committee for the evaluation of additional substances involves extensive use of scientific and technical data.<sup>26</sup> Recognizing the importance of these

23. Brown Weiss and Jacobson 1998.

24. Luken and Navratil 2004; and Van Berkel 2010.

25. Mitchell et al. 2006.

26. Kohler 2006; and Selin 2010.



assessments, the regional center in the Czech Republic has organized events relating to effective country participation in this committee's work.

In several ways, the interplay between science and policy figures large in the implementation of the Basel and Stockholm Conventions. Implementation also depends on periodic scientific reassessments of related environmental and human health conditions. However, many developing countries, in particular, express great concerns about the fact that they often lack human resources to participate in many of the regional and global activities to obtain scientific and technical information. The regional centers can help to improve this situation. Centers in Brazil, China, the Czech Republic, Spain, and Uruguay have generated and disseminated basic scientific and technical information about chemicals and wastes to support domestic implementation as well as global discussions and regulatory developments. For example, they have informed parties and stakeholders about environmental and human health problems associated with particular POPs, as well with a growing array of electronic wastes.

### **Governance through Regional Centers**

In global environmental politics, gaps in treaty implementation remain a frustrating problem. A lack of compliance can stem from a multitude of reasons, and appropriate approaches to improving compliance differ depending on the issue. The Basel and Stockholm Convention parties may not have identical interests when it comes to the creation and operation of the regional centers, but they constitute an effort to improve treaty implementation by seeking to strengthen region-based cooperation. This article has categorized the multitude of regional center operations into three broad areas: raising awareness, strengthening administrative ability, and diffusing scientific and technical assistance and information. It is too soon to pass definitive judgment on their effectiveness, as many regional centers have not been in operation long enough to do so. However, the diversity in their structures and operations offers an opportunity to start thinking constructively about their use as linkage organizations. This final section offers a few observations on the early activities of regional centers for treaty implementation and multilevel governance.

Because of their broad mandates and the many ways in which they have been set up to engage national governments and different stakeholder groups, the regional centers are still developing organizationally. There is also much diversity in the number and scope of initiatives carried out by different regional centers.<sup>27</sup> Some regional centers have launched many more projects and have engaged with many more countries than others. This may be due in part to how long a regional center has been in operation, but that is not the only deciding factor. The diversity in regional center structures and operations can have the benefit of allowing for some positive organizational experimentation and learn-

27. Basel Convention 2009.

ing, as different regions may also have different needs. Still, the wide range in activities and influence suggests that it is critical that the COPs take their review obligations over regional centers very seriously. This should include taking steps to disassociate the Conventions from regional centers that repeatedly underperform, even if this is a politically sensitive issue.

As parties review existing regional centers and consider new ones, it is important that regional centers contribute to multilevel governance, rather than simply satisfy the political desire of a country to host one. As parties continue to seek ways to capture synergies across forums, there are obvious coordination benefits of having the same regional center take on tasks under multiple treaties, as in the case of those operating under both the Basel and Stockholm Conventions. Regional centers in the Czech Republic, El Salvador, Spain, and Uruguay have also gone further, organizing workshops and training courses on issues relating to the ratification and implementation of the Rotterdam Convention on trade in commercial chemicals, the joint destruction of ozone depleting substances and POPs, and the handling of mercury. Furthermore, during the ongoing negotiations of a mercury convention that is scheduled for adoption in 2013, several countries proposed that regional centers be officially linked to its implementation. If so, this would raise additional questions about how best to harmonize activities and capture synergies across different conventions.

Importantly, the parties have set up the regional centers to non-intrusively assist countries that seek their services. There is very little that a regional center (or any other treaty body) can do when a party lacks the political will to meet an obligation. Many countries protective of national sovereignty are also unwilling to give authority to treaty bodies on issues of data collection and oversight. However, as the parties of the Basel and Stockholm Conventions are in continuous (and contentious) discussion about ways to develop improved mechanisms for monitoring and compliance, involving the regional centers more in these kinds of activities could perhaps serve to build regional support and promote synergies across reporting requirements under different treaties. Developing countries and countries with economies in transition have repeatedly stated that they want more resources for capacity building and technology transfer as part of strengthening monitoring and compliance mechanisms. Thus, expanding the activities of the regional centers might help them to move forward on all of these issues and enhance multilevel governance, if the political will to go down that route were to emerge.

The ability of the regional centers to support regional cooperation and facilitate treaty implementation depends on greater resource availability; without adequate funds it is impossible to run the regional centers in a meaningful way, as evidenced by the forced closure of the first South African Basel Convention regional center due to financial problems. Relatively few new and additional resources have been made available to the regional centers, as the funding of the centers is not assured in the convention texts but relies on voluntary contributions. As a result, issues of levels and sources of funding remain both critical

and contested. However, their ability to help close the implementation gap is shaped by more than just money. The willingness of countries to use the regional centers even for issues that may be politically sensitive will also greatly shape their future operation. In addition, regional centers need to expand their engagement with private sector and civil society groups as partners in carrying out programs and other activities, as nonstate involvement is important but has been relatively limited to date.<sup>28</sup>

As the regional centers undertake activities important to regional cooperation and treaty implementation (albeit some much more than others), the use of treaty-based regional organizations is a topic that warrants further attention and research. Building on insights from different sets of literature on multilevel governance, regionalism, capacity building, and technology transfer, future research should engage in more systematic and in-depth empirical study, comparison, and evaluation of how individual regional centers are set up, organized, and provide specialized support to national governments and stakeholder groups. Such analysis could greatly help implementation and effectiveness of treaties on hazardous substances and wastes. There is also room for further exploring how various types of regional structures and organizations may fit into other areas of multilevel governance such as climate change, biodiversity, or mercury management. It is high time to take the regional level much more seriously in the study of global environmental politics.

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28. Sagar 2000; VanDeveer and Dabelko 2001; Sagar and VanDeveer 2005.

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