International Best Practices and Innovation -- Strategically Harvesting Environmental Lessons from Abroad

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Introduction

As state, regional, and local governments in the U.S. respond to demanding and complex environmental challenges such as urban sprawl, non-point source pollution, brownfields, and degraded water infrastructure, environmental policies and best practices from overseas are serving as important models. The reasons are clear -- countries such as Germany, the Netherlands, Sweden, Denmark, and Australia have addressed similar environmental challenges by developing and implementing creative and often highly successful solutions. The policies of other Organization for Economic Cooperation and Development (OECD)-member countries have helped promote low-impact development to manage stormwater, constructed wetlands to treat wastewater, "green" buildings and renewable energy to address climate change and air pollution, and industrial ecology to support pollution prevention and brownfields revitalization.

In these countries, creative state, regional, and local governments have led the way in the development of these innovative polices and projects, which are environmentally sound and economically practical. As they plan new initiatives, projects, and policies, and seek new and different approaches to existing challenges, environmental officials and policy makers in states such as California, Connecticut, Florida, Illinois, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, Oregon, Rhode Island, Virginia, New Hampshire, and Wisconsin, are looking across the Atlantic -- and often beyond -- to observe and integrate these international lessons learned. International state-to-state, region-to-region, and city-to-city environmental partnerships are growing. Through these mechanisms for transferring lessons learned, U.S. states, regions, and cities are developing new, concrete ideas that produce projects and policies with environmental and economic benefits.

Adding a New Paradigm in International Environmental Activities

The adaptation of international best practices and innovation in environmental policies represents an important and powerful paradigm shift -- from one of exporting environmental expertise and dollars, to one of importing best practices from around the globe. While the former is most often perceived as humanitarian aid and an overall cost to participating agencies, the latter results in concrete, domestic environmental, economic, and social benefits. The results thus far have been clear: that small investments in this paradigm shift result in powerful returns -- an ever-present concern in today's era of tight fiscal budgets.

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Why We Can Learn From Abroad

There are three primary factors why U.S. states, regions, and cities can and do adapt lessons learned from innovative environmental policies in European Union (EU) and OECD-member countries: 1) similar socio-economic profiles; 2) similar environmental, economic, and social pressures to develop sustainable policies; and, 3) more environmentally efficient use of resources in certain areas in many of these countries. While there are lessons to be learned from all parts of the world, for these reasons, OECD-member countries offer particularly fertile ground for harvesting lessons learned.

In many EU and OECD-member countries, it is common to find highly developed economies, democratic political structures, informed citizens, and strong environmental institutions with comparable environmental standards. Thus, while there are certainly different environmental legal regimes across these countries, best practices and innovation in planning and development policy, new technologies, voluntary approaches, and pilot projects are often highly transferable.

In addition to the relative ease of transferring and applying lessons learned, these countries face environmental and economic challenges similar to those in the United States. Dense populations and resource and land constraints have compelled countries like Germany, Japan, the Netherlands and Denmark to develop urban policies characterized by emphasis on low-impact development and integrated land-use and transportation planning. The same land-use and urban environmental policies are reflected in these countries' creative brownfields redevelopment, renewable energy, and industrial ecology programs. For example, it is now national policy in Germany to support reductions in urban land consumption from a national rate of 129 hectares per day to 30 hectares by 2020.[1]

Given certain social, political, and environmental pressures, many OECD-member countries are known for their environmental efficiency in particular areas including transportation, economic and business practices, and resource use. For example, C02 emissions per capita from the transportation sector in Copenhagen are one-half of Houston's, due to the city's reliance on bicycles, pedestrian-friendly central business districts, and public transportation.[2] The Netherlands, a nation with 15 million people living in the same amount of space as New Jersey, has a per capita rate of municipal waste recycling approximately fifty percent higher than that in the United States.[3] Water use per capita in the United States is nearly double the OECD average and more than seven times higher than that in Denmark and the United Kingdom.[4] Lessons learned from more environmentally efficient countries can help U.S. environmental policy-makers adopt policies and practices that will help reduce stresses on their own environments.

Examples of International Innovation and Harvesting Lessons Learned

Now more than ever, U.S. states and regions are poised to import innovative environmental lessons from other countries in order to address the most pressing environmental challenges in the U.S.

Brownfields

Brownfields redevelopment in the United States is frequently suppressed because of a lack of environmental restrictions on urban and suburban sprawl development, creating an uneven playing field between greenfields and brownfields. In many European countries, a variety of policy tools to address sprawl development and promote brownfields revitalization have been successfully developed and applied. In the Netherlands, national spatial planning policies, such as the "ABC Policy," integrate land-use and transportation planning and have been successful at restraining sprawl and promoting compact urban form. This has inspired transportation and housing planning in cities such as Groningen, where approximately 50 percent of inner-city travel is by bicycle.[5] Brownfields development in Europe has also been strengthened by the inclusion of international design competitions which often foster creation of "green" buildings, redeveloped open-spaces and landscapes, and preservation of historic structures and buildings.

Air

The cache of innovative smart growth policy tools common in many OECD-member countries also has preserved open space, supported urban forests, and created greenbelts around many cities -- especially in Europe. Greenspace planning in Stuttgart, Germany, and in Stockholm, Sweden, is linked into sophisticated networks of "green" air corridors designed to mitigate the negative effects of urban heat islands and to reduce air pollutants. In 2001, to address urban heat island effects, the metropolitan government of Tokyo enacted a law requiring all new or reconstructed buildings, public and private, located on plots of 1,000 square meters or more, to plant "green" rooftops on at least 20 percent of their roof space.[6] Air pollution in Europe is also being addressed through devoting significant resources to public transportation. In France and England, nearly 40 to 60 percent of spending for transportation is devoted to passenger railroads and mass transit systems.[7]

Water

EU-member and OECD-member countries have demonstrated innovation in the realm of watershed management, water infrastructure, and renwable energy use. In the 1950s, twenty years before the U.S., Germany was beginning to research the treatment and cost efficiencies of constructed wetlands and demonstrate how constructed wetlands could serve as a viable alternative to conventional water treatment processes. Moreover, ultraviolet treatment of drinking water, rather than chlorine, is commonly applied in France and Germany. Australia is a global leader in total asset based management in water infrastructure, and has developed several ambitious, state-level water demand management policies and programs. In 2000, the state of New South Wales cancelled plans for a major dam and instead set legally binding requirements and operating licenses for Sydney Water to reduce water demand by 35 percent from 1991 levels by 2011.[8]

Success Stories – Regional Level

A number of U.S. regions are increasingly looking overseas for creative solutions to some of their most pressing environmental, economic, and social challenges. The Northern Virginia Regional Commission (NVRC) and the Verband Region Stuttgart initiated one of the

first international region-to-region partnerships. As a direct result of this partnership and exchange between the NVRC and the Verband Region in Stuttgart, Germany, the Virginia State Legislature passed a bill last spring initiating a Geographic Information Systems (GIS) project for the purpose of sharing air flow mapping and health data. Northern Virginia Regional Commission Executive Director G. Mark Gibb reported to U.S. EPA: "This is just one of many useful ideas that are being discussed and implemented in Northern Virginia as a result of our eight-day trip in the summer of 2000. Other localities are implementing rooftop gardens, car sharing, new traffic calming techniques, open space planning, and town modeling as a result of our trip and information exchange. I think it is important to know that our international partnership is paying back with both interest and dividends."[9]

The *Rethinking the Niagara Frontier* bi-national effort is an example of another multi-stakeholder, long-term undertaking aiming not only to exchange best practices from abroad, but also working across international borders to create a new form of regional cooperation. The effort is a collaborative process and involves dozens of organizations in government, business, education, environment, philanthropy, and community advocacy on both the New York and Canadian sides of the Niagara Falls region. This initiative seeks to seize "opportunities in promoting the growth of heritage and cultural tourism, the improvement of the built and natural environment, creative redevelopment of former industrial lands, investments in trade and transportation, and development of knowledge based industries."[10] One of the models researched, analyzed and applied in the context of this effort was the work of the International Building Exhibition, Emscher Park, in Germany's Ruhr Valley. As a result of a three-year effort involving collaboration between these two regions, Niagara Falls has adopted a regional 'green infrastructure' plan, modeled after the IBA Emscher Park.[11]

As another example of a regional partnership involving environmental, social, and economic factors, in May 1997 a partnership was formally established between the Lake Winnipesaukee region in New Hampshire and the Sea of Galilee (Lake Kinneret) region in Israel. The partnership's purpose is to "advance international cooperation to help protect each lake's watersheds while promoting economic growth, tourism, and the exchange and sharing of information between local governments, communities, and watershed management professionals."[12] Composed of regional and state agencies, the Sister Lakes partnership includes an Environmental Resource Management Program component that involves exchange programs between environmental officials and members of each community, and includes an annual call to share and compare water quality data between the two lakes. While many of the specific projects and initiatives of this partnership have been on hold due to unrest in the Middle East, it is reported that, "to date, all of the U.S., Israeli, and other Middle Eastern officials that have participated in Sister Lakes sponsored programs have enthusiastically endorsed the partnership and look forward to learning from one another and sharing information."[13]

Smart growth and urban transportation are additional areas where regional officials have been learning from best practices abroad. Reflecting on a visit to Europe in 1999, Jose-Luis Mesa, Director of the Metropolitan Planning Organization Secretariat in Miami Dade County wrote to then U.S. EPA Administrator Carol Browner: "I am writing to share with you the valuable lessons about sustainable urban environments I just experienced in Europe as a environmental fellow of the U.S. German Marshall Fund...After my visits to Europe, I returned

to Miami-Dade County inspired with ideas about how to improve our own approaches to urban transportation systems and about how to promote sustainable urban environments. For example, I believe we can pursue the planning of a light rail system like the one we saw in Strasbourg, France...My experiences through the Transatlantic environmental exchange of the U.S. German Marshall Fund have given me inspiration, tools, and a clear vision to address the challenges confronting Miami-Dade County."[14]

Success Stories – States and Municipalities

At the state and local level, adaptation of innovative practices from abroad is equally evident. This past June, Maryland and the German state of Schleswig-Holstein established state-to-state environmental partnership with an agreement to work collaboratively on exchanging information, data, and technical experts on the subjects of smart growth, green buildings, and renewable energy. Already, this partnership is bearing fruit -- Maryland is now pursuing the development of two wind farms. This current relationship builds on Maryland's successful history of adapting best practices from abroad. In a letter to Senator Barbara Mikulski in 1999 about Maryland's benefits from the Environmental Transatlantic Exchange Program focused on regional responses to the issue of sustainable development, Jane Nishida, then Secretary of Maryland's Department of Environment wrote: "We are writing to draw your attention to the success of an international environmental exchange program that includes several participants from the state of Maryland...As members of the Maryland delegation to this exchange, we have witnessed first hand how valuable such cross-fertilization is to our efforts to promote "smart growth" in our own state as well as the other participating states (New Jersey and Minnesota) and abroad."[15]

As a result of several peer-to-peer technical exchanges among brownfields and state planners in New Jersey and Germany, New Jersey's state plan for brownfields redevelopment has been directly modeled after regional land-use planning used in the Ruhr Valley. Moreover, New Jersey's pollution prevention efforts have drawn directly from the model of the Dutch "covenants." In 1995, shortly after two trips to the Netherlands by New Jersey government, business, and NGO representatives, then- Governor Christine Todd Whitman formed the Green and Gold Task Force to explore how the Dutch model could be applied in the state.[16] Continuing this strong relationship, New Jersey and the Netherlands in 1998 signed a landmark agreement to work collaboratively on regional solutions to climate change.[17]

Numerous municipalities are also adapting innovative programs and practices from overseas. Portland, Oregon is adapting climate protection strategies from Stockholm, Sweden and Copenhagen, Denmark. Car sharing programs in Seattle, Chicago, Denver, New York, Washington, Portland, and Boston are being inspired by Germany and Switzerland. Brownfields redevelopment in Lawrence, Massachusetts and Bridgeport, Connecticut has followed the United Kingdom "Groundwork" model, and the 197-a plan for waterfront revitalization and brownfields redevelopment in New York City's Greenpoint/Williamsburg neighborhood has drawn from Duisburg, Germany. Cape Charles, Virginia's concepts of ecological industrial parks are taken from Kalundborg, Denmark, and "green" rooftops in Chicago emanated straight from its sister-city, Hamburg, Germany. The Cape Charles Industrial Park also exemplifies the international investment and business ramifications of such efforts: two of the park's major residents are a German wind energy turbine manufacturer and a Swiss photovoltaic firm. These examples of

state, region, and city international collaboration and harvesting of lessons learned are but a sampling of the many success stories from across the country. The conclusion of all these stories is the same: a small investment in learning from and adapting international best practices pays back many fold -- environmentally, economically, and socially.

Tools and Resources to Harvest Innovation

Financial and logistical support from a growing number of national and even local community foundations is available to states and cities that are endeavoring to reach out and learn internationally. State, regional, and local governments who have successfully adapted international lessons have found it easiest to justify spending taxpayer dollars for international projects that clearly demonstrated domestic benefits. National and community foundations also have found it easiest to rationalize working in an international context when there are clear domestic benefits. U.S. EPA's own experiences have supported this: for nearly every dollar spent by U.S. EPA in support of international lessons learned, approximately three dollars from private foundations, state or national governmental agencies, and even international organizations was leveraged. Even private corporations, such as the energy, waste, and water services company Suez, recognize the importance of learning from the policies of other countries and facilitate trips to sites of best practices for state and municipal officials. Global non-governmental organizations, such as the International Council for Local Environmental Initiatives[18], and international governmental organizations, such as the European Commission's LIFE-Environment program[19] and United Nation-Habitat's Best Practices Database[20], have extensive libraries of case studies and other information available to local authorities eager to look globally for best practices and successful innovation. The EU Council of the Regions represents an additional organization in a position to potentially support Trans-Atlantic regional partnerships.

U.S. EPA and the Ministry of the Environment of Ontario, Canada are also each working to facilitate the harvesting of international lessons learned in best practices and innovation by federal, state, regional, and local officials. U.S. EPA is currently exploring how to best promote and support strategically harvesting international lessons learned across all levels of government. Possibilities include producing a general strategy that outlines various mechanisms for learning from abroad and provides a variety of information sources and success stories as well as looking into potential international partnerships on sharing lessons learned in innovation. The Ontario Ministry of the Environment's Research and Best Practices Section is undertaking a similar effort to identify, track and analyze the domestic applicability of international best practices, initially focusing on the areas of voluntary environmental initiatives, incentive programs, reporting and monitoring, and place-based planning.[21] The Ministry is dedicating FOUR full-time staff to this effort, a clear indication of the profound potential and benefit seen in harvesting international lessons learned. Hopefully the success of these efforts will lead to similar initiatives in other provinces, states, regions, and federal agencies.

Next Steps – A New Generation of Harvesting

The universe of issues for harvesting environmental best practices and innovation is practically endless. The next generation of harvesting international innovation could start with

analysis of emissions trading, tax incentives, standards setting (especially drinking water standards), forestry management, corporate environmental stewardship, or comparative risk. Successful harvesting of the international library of innovation simply requires matching domestic needs with the appropriate global leaders and innovators in that area.

Conclusion

The prevailing paradigm on international environmental activities is undoubtedly shifting. The tremendous benefits of importing lessons learned in best practices from around the globe are undeniable. The U.S. does not have a monopoly on solutions to environmental problems, and it is beneficial to all parties to share successes. As regions such as Northern Virginia, Niagara Falls and others have demonstrated, looking overseas for innovation will invariably be rewarded with new approaches and policies to environmental protection that are cost-effective, practical and sustainable. To reiterate the words of Northern Virginia Regional Commission Executive Director G. Mark Gibb, sharing and harvesting lessons learned in best practices abroad pays back "with both interest and dividends."[22]

Authors

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[21] *For more information please contact Lucy Hargreaves of the Ontario Ministry of the Environment at lucy.hargreaves@ene.gov.on.ca or (416-314-3899)*

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