Part One

A Fence on the United States-Mexico Border

Border Fence
Photo: Jim Rorabaugh

This section includes general reflections on walls, their origins and their consequences, both from the environmental perspective as well as that of their implications on human societies and relationships between neighbors. Three of these chapters are based on the keynote presentations given at the workshop.

Environmental Protection and U.S.-Mexican Border Security: The Border Fence Issue in Context

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Introduction

The following summarizes the substance of the 10th report of the Good Neighbor Environmental Board (GNEB), *Environmental Protection and Border Security along the U.S.-Mexico Border.* The 10th GNEB report relates directly to the ongoing discussion of the construction of the fence along the U.S.-Mexican border. This essay also comments on the context of the border fence discussions and the implications of the security-related issues for border and U.S.-Mexican cooperation. And while it presents parts of GNEB's 10th report, additional material, interpretation, and conclusions are the sole responsibility of the author and do not reflect GNEB policy.

The Good Neighbor Environmental Board is a U.S. federal panel that each year submits an advisory report to the President and Congress on border environmental issues. Made up of representatives of U.S. federal agencies, representatives from border states and municipalities, border tribal representatives, academics, members of the private sector, and representatives of nongovernmental organizations, the board is broadly representative of the border and its environmental issues. GNEB's tenth report was released in March 2007.

For its 10th report to the President and Congress, the Board examined how environmental protection and homeland security activities intersect along

the U.S.-Mexican border. The report includes a set of recommendations on how the U.S. federal government can help maintain strong environmental protection along the border while also strengthening border security activities. While recognizing that some unauthorized human crossings take place via vehicles at major ports of entry, the Board decided to focus primarily on undocumented crossings, security concerns, and environmental issues in rural areas. The report also looked at the movement of hazardous materials through ports of entry, but this topic is not directly related to issues of the border fence and will not be treated here.

Before discussing aspects of GNEB's 10th report related to the border fence discussion, background on events and trends that led up to the heightened attention on border security and the border fence will be presented. These include the complex interaction of immigration, security, public safety, and the environmental issues in the border region over the past decade and a half.

Background

NAFTA and Immigration

One part of the debates about the North American Free Trade Agreement (NAFTA) centered on the issue of immigration. The supporters successfully argued that NAFTA would lead to job creation in Mexico that would reduce migratory pressures to the United States. Ironically, the first decade or so of the NAFTA era saw undocumented migration into the United States on an unprecedented scale. By 2005, there were almost 12 million undocumented immigrants residing in the United States. This meant that undocumented immigration became a truly national issue and not just a regional border topic of political debate.

Hardening the Border

Recent U.S. national policy regarding undocumented immigration was driven by Congress and the emphasis was largely on enhancing border enforcement, with added personnel deployment and infrastructure construction along the border. Over a five-year period, programs were added for different sectors of the border: Hold the Line (El Paso, 1993); Gatekeeper (San Diego, 1994); Safeguard (Central Arizona, 1995); and Rio Grande (South Texas, 1997). As these programs were announced, Congress significantly increased the

budget of the Border Patrol for expansion of personnel and infrastructure that included fencing, lighting, sensor technologies, construction of access roads, building of boat ramps, clearing of vegetation, and addition of interior checkpoints away from the international boundary.

These programs had a number of effects. Gatekeeper and Hold the Line, for example, were initially concentrated on the heavily urbanized El Paso and San Diego regions and significantly reduced the flow of undocumented crossers in those targeted areas. In the San Diego sector, those actions redirected the flow of migrants to the mountains to the east of the urban areas and as the rural areas of San Diego saw increased enforcement, the flow was again redirected to the desert areas of California and Arizona. An unintended consequence of these policies was increased dangers for migrants and loss of life from exposure in the difficult terrain and extremes of weather as well as an alarming number of traffic accidents involving transport of migrants by smugglers.

Drug Trafficking and Human Smuggling

During the 1990s, drug trafficking across the U.S.-Mexican border increased as did drug-related violence in Mexican border cities that occasionally spilled over to U.S. border communities. Smuggling of immigrants across the border sometimes involved movement of drugs, which heightened concern about the porosity of the border. The mixture of drug trafficking and human smuggling across the land border injected a level of violence into what had previously been largely benign interactions between Border Patrol agents and undocumented migrants.

September 11, 2001, and Homeland Security

The terrorist attacks on New York and Washington, D.C., of September 11, 2001, produced even more scrutiny of the border between Mexico and the United States. Although most of those involved in the 9/11 attacks had overstayed visas and none had entered illegally across the southern border of the United States, the Mexican border emerged as a critical component in the defense against terrorism. The porosity of the border with Mexico became a focal point of political debates about security in the United States. The argument was that if thousands of undocumented migrants could easily cross the border, so could terrorists.

All of these events and trends have made homeland security issues paramount for all federal agencies, as well as for state and local agencies. When security issues came into conflict with existing practices and policies, security concerns assumed the highest priority. This has become especially clear with respect to border security, where the push to harden the border through construction of fences, barriers, access roads, and other infrastructure components has created tensions and conflict with other agencies, particularly those that manage sensitive lands, and with environmentalists and local communities. To some extent, the preoccupation with border security opposed the trend of growing local and public participation and crossborder cooperation on environmental and related matters in more than twenty years that have followed the 1983 La Paz Agreement.

The Real ID Act of 2005

The Real ID Act of 2005 enhanced federal authority on the border as it enabled the Department of Homeland Security (DHS) to waive legal requirements of environmental and cultural resource impact reviews for construction of border infrastructure. In 2005, the provisions of the act were invoked for construction of the remaining parts of border fence infrastructure in the San Diego area. Under the waiver, construction was able to proceed without consideration of the environmental protection and other provisions of a long list of federal laws. These included the National Environmental Protection Act (NEPA), Endangered Species Act, Coastal Zone Management Act, Clean Water Act, National Historic Preservation Act, Migratory Bird Treaties Act, Clean Air Act, and Administrative Procedures Act. The Secure Fence Act of 2006 and the Secure Border Initiative of 2006 of the Department of Homeland Security (DHS) sharpened the focus on border enforcement and increased deployment of resources.

The increased level of border enforcement that included significant infrastructure and expanded enforcement agencies and personnel was accompanied by conflict in a number of areas. First, tensions emerged between the border security mandate of DHS and the mandate to manage and protect sensitive federal lands by a number of federal land management agencies, including the National Forest Service, the National Park Service, the Bureau of Land Management, the International Boundary and Water Commission, and others. Second, community groups, local and state governments, environmental groups, and academic researchers raised concerns about environmental and

other impacts of increasing border fence construction. Finally, these concerns increasingly became articulated by stakeholders in Mexico.

GNEB's 10th Report

The preceding discussion sketches the background and context for the 10th Report of the Good Neighbor Environmental Board as well as the present controversy surrounding the construction of the border fence. As the Board pointed out in previous annual reports to the President and Congress, a range of serious environmental management and protection problems remain. These challenges include the difficulty of managing water resources in a binational context; water requirements for rapid economic development and urbanization colliding with limited water supplies in the arid climate; the complexity of managing threatened and endangered species in a cross-border region; and addressing air pollution within binational air basins. Now, with heightened security concerns, these already fragile environmental conditions are being subjected to additional pressures from both stepped up security efforts and from the cross-border flows of undocumented migrants and smugglers.

The environmental concerns related to the fence along the border are more than just the impacts related to construction of the physical infrastructure. Instead, the fence is best understood within the complex of activities and physical structures associated with enhanced security at the border. This includes access roads, increased numbers of agents and vehicles, construction of fences and vehicle barriers, patrol roads, stadium lighting, and remote sensing devices (buried sensors, video cameras, and others). Impacts of undocumented crossers are also significant. Undocumented crossers at many areas along the border have created footpaths through formerly undisturbed vegetation in protected areas that not only destroyed valuable habitat and disturbed animal species but also provided new channels for rainwater runoff that accelerated erosion and sedimentation. In areas where smugglers were able to breech fences or where vehicle barriers were not in place, new roads were created by unauthorized vehicles. These too, disturbed habitat and fauna and led to accelerated erosion in many areas. The total area occupied by the footpaths and roads created by illicit activities is surprisingly large.

Migrant Impacts on the Tohono O'odham

Other activities related to migrant crossings have contributed to the environmental impacts along the border. Migrants usually carry with them a number of plastic bottles with water and backpacks with personal effects, food, and changes of clothing. Most of these are abandoned along the way as water is consumed and blankets are no longer needed. As migrants near points where they are to be picked up by smugglers' vehicles, they abandon all clothing and backpacks except what they are wearing in order to blend into the urban environments of their destination. The total amount of abandoned solid waste is significant. A study on the Tonoho O'odham nation along the Arizona-Sonora border concluded that the 1,500 daily undocumented migrants each left an average of 9 pounds of solid waste, for a total of 13,500 pounds of solid waste that accumulated each day. In addition, many bicycles and vehicles are abandoned along the migrant routes. Tribal policy does not support installation of a fence along their border with Mexico since their traditional lands extend some 130 miles into Mexico and about 1,500 Tohono O'odham live in villages in Mexico. However, the flow of immigrants, smugglers, and law enforcement personnel across their lands have had such a large impact on the natural environment and quality of life of tribal members, that recently tribal authorities have given permission to the Border Patrol to extend a vehicle barrier along parts of their 75-mile boundary with Mexico.

National Forest Impacts

Migrants also have other environmental impacts. In the Cleveland National Forest and in other border protected areas the number of wildfires caused by migrant campfires and carelessly discarded cigarettes has been an ongoing problem. At one time, the Cleveland National Forest had to assign a full time mounted officer to patrol migrant routes and properly extinguish abandoned campfires. Cleveland officials report that increased border enforcement that reduces the number of migrants also reduces the number of wildfires. Officials at the Coronado National Forest in southern Arizona report similar experiences with impacts of migration.

Challenge of Border Security and Environmental Protection

Against this backdrop, the conflicting roles of agencies charged with environmental protection and agencies charged with border security are apparent. The overall challenge that GNEB selected to address in its 10th report was: *how to balance border security activities and environmental quality*. GNEB looked at these issues in two different geographical contexts: (1) the rural areas along the border, the location of most of the protected areas; and (2) the urban crossings at the ports of entry. The present essay, however, will address only the rural border fence aspects of the Board's report.

Undocumented Human Crossings in Rural Stretches

GNEB noted that due to the large impact of undocumented human crossers and patrol activities in rural areas, increased border protection that includes some combination of physical barriers, deployed technology, and more personnel sometimes had an immediate beneficial impact on the environment. For example, the construction of the landing mat fences and the presence of more border patrol agents in the San Diego sector ended foot traffic through breeding sites of endangered bird species in the Tijuana River National Estuarine Research Reserve. Or, in Arizona, more physical barriers and enforcement in the Cabeza Prieta National Wildlife Refuge allowed the endangered long-nosed bats to return to their traditional roosting sites in caves near where the border fencing was installed.

Challenges and Next Steps

The Board identified a series of challenges in protecting the border environment in the face of migrant and smuggler flows and law enforcement infrastructure and activities. For each of these challenges, next steps were identified to address the challenges. These challenges and next steps are listed below.

The list of next steps to address the identified challenges has a number of common themes. Most important is the need for security agencies to be aware of potential environmental impacts and to act in a proactive fashion, both in terms of its own practices and policies and in terms of working with border stakeholders. Key border stakeholders include the land management organizations and agencies that work to conserve natural and cultural re-

Challenges	Next Steps
1. Roads and trails destroy habitat and cause erosion	• Mix technology and infrastructure to reduce enforcement footprint. • DHS needs to identify and protect sensitive areas. • Improve interagency communication. • Create federal office with expertise on security impacts on environment
2. Undocumented migrants and smugglers leave trash and solid waste	• Provide federal government support to tribes, private landowners, rural communities, land management agencies for mitigation.
3. Impenetrable fences may pose problems for wildlife and sensitive areas	• Convene national conference on fencing/barrier technology. • Fully use existing expertise to review border security infrastructure construction for potential environmental impacts.
4. Limited opportunities for collaboration across security and land management agencies	• Establish interagency task force to develop strategies. • Place federal liaison personnel in border states to strengthen cross-agency cooperation.

sources in the border region. Developing better communication with local communities is also important. Another set of suggestions by the Board related to design of fencing and barriers to be constructed along the border. Clearly, the Board notes, one standard design will not work everywhere along the border. In some areas that are important wildlife migration corridors or transborder connected habitats, permeable solutions need to be developed. This will require a mix of innovative infrastructure, barrier technology, and deployment of personnel.

Examples of Cooperation

The GNEB 10th report also identified a number of examples where cooperating security and other agencies were able to both enhance security and protect or improve the environment. The Colorado River invasive salt cedar removal project is a case in point. During 2006, the Borderlands Management Task Force (BMTF) in Yuma, Arizona, launched this project, which includes local, state, federal, and tribal agencies: DHS Border Patrol, U.S. Army Corps of Engineers, BLM, Bureau of Reclamation, the Cocopah Nation, USFWS, the

Yuma Proving Grounds, Arizona Game and Fish, and Yuma County Sheriff's Office. The work consists of removing and thinning the salt cedar to improve access and visibility and also restoring cottonwood-mesquite-willow, which is native vegetation. This improves security, addresses cultural concerns of the Cocopah Nation, and restores natural vegetation to the area.

Discussion

The 10th Report of the GNEB raises a number of questions with respect to the border fence and the negative reaction that it has produced in U.S. border communities and in Mexico. Often the negative environmental effects of the border fence are exaggerated or not based on sufficient scientific analysis. At the same time, the positive effects of fence and barrier construction are not often mentioned. Contrary to widely held perceptions, DHS does conduct regular environmental reviews and impact studies, but does not discuss these in community forums that solicit public input. Since many researchers, environmental groups, local officials, and environmentalists are left out of the loop, they assume that the environmental impacts of border security projects are not considered. The failure of DHS to conduct adequate outreach is responsible for a good part of the negative reaction. In the same vein, the failure of U.S. authorities to notify Mexican authorities regarding fence construction produced significant resentment in Mexico among official circles and among environmentalists and community members.

In May of 2007, accounts appeared in the local and national press of DHS plans to construct sections of fence along the lower Rio Grande. This produced a very strong negative reaction among residents and elected leadership in the communities of the Lower Rio Grande Valley. Separated by the river, the floodplain, and levees on both sides of the river, many local officials saw little need for new fencing. At the same time, these communities tend to have close relationships with the communities across the river and do not want to jeopardize those productive relationships by what they considered unnecessary infrastructure. Even members of the border patrol interviewed recently by the author expressed the view that constructing fencing was not necessary in the areas under question.

Despite obvious missteps, since the release of GNEB's 10th Report in March 2007, there seems to be a growing awareness in DHS that the issue of the border fence requires somewhat different approaches in different areas of the border. On June 7, 2007, at the 11th U.S.-Mexico Congressional Border

Issues Conference of the United States-Mexico Chamber of Commerce in Washington, D.C., David V. Aguilar, Chief of the Border Patrol, clearly acknowledged that different combinations of personnel deployment, technology, and infrastructure were required for different sections of the border in order to address environmental concerns. Informal discussions by the author with Border Patrol agents in the field produce a similar analysis of the need to be sensitive to different conditions along the border when installing the fence. The push for "one size fits all" seems to be coming from agency managers and members of Congress who are not familiar with the realities of the border and do not understand regional differences in environment and social and political conditions.

The controversy surrounding the plans for the border fence and the strong reaction in the border region and in Mexico reveals a structural flaw in U.S.-Mexican border environmental relations. Although the spirit of the La Paz Agreement and other binational accords suggests that notification should take place when projects on one side of the border likely will have environmental impacts on the other country, there is no routine process for this communication to take place. And, there is no mechanism set up for analysis and mitigation of transborder environmental impacts. For example, Mexico was not consulted when permits were issued for a large power generating facility in San Diego on Otay Mesa, several miles from the border. The U.S. was not consulted when Mexico permitted two large power generating facilities in Mexicali. All of these facilities contribute large amounts of contaminants to the air basins that impacted people in both countries. The transborder environmental impacts of the project to line the All-American Canal in Imperial Valley were not considered when designing and implementing the project. Finally, the transborder environmental effects of the border fence construction apparently were not considered and were not formally communicated to stakeholders in Mexico. Thus, many border residents and other stakeholders, as well as the government of Mexico, have expressed concern about the border fence project that is underway.

The trilateral Commission on Environmental Cooperation (CEC), in the mid-1990s, began working on a draft for a transboundary environmental impact agreement that would provide a transparent process for the United States and Canada and the United States and Mexico to address issues with likely transborder environmental impacts. The U.S. and Mexican governments engaged in discussions on such an agreement and failed to come to agreement. Thus, both governments must share credit for the ongoing controversies about

transborder impacts of projects in the border region, whether related to the border fence, the lining of the All-American Canal, or permitting the siting of new energy infrastructure in the border zone.

References

Brezosky, L. 2007. Border fence riles Valley Leaders. The Eagle.com (Bryan-College Station, TX) (Associated Press wire story, published May 2, 2007 in The Eagle.com). Available at: http://209.189.226.235/stories/050207/texas_20070502024.php. Consultado: el 25 de octubre de 2007.

GNEB annual reports. Available at: http://www.epa.gov/ocem/gneb/gneb_president_reports.htm.

Mumme, S. 2005. The Real ID Act and the Tijuana Border Fencing: The New Politics of Security and Border Environmental Protection". Paper presented at the Annual Conference of the Association for Borderlands Studies, Phoenix, A.

Wolf, A., A. Spitz, G. Olson, A. Zavodska y M. Algharaibeh. 2003. Characterization of the Solid Waste Stream of the Tohono O'odham Nation. *Journal of Environmental Health* 65(8): 9-15.