The Policy of Border Fencing between the United States and Mexico: Permeability and Shifting Functions

DONNA L. LYBECKER

In the late 1990s those who knew of Cabeza Prieta National Wildlife Refuge (CPNWR) considered it a treasure: an area of pristine desert in southwestern Arizona. Over the following ten years the refuge has sustained some of the most extensive environmental degradation along the U.S.–Mexico border due to increasing numbers of illegal crossers. This damage occurred in part because past actions to curtail illegal crossings did not eliminate the stream of people illegally entering the United States. Instead these policies shifted the location of the crossings from the increasingly impermeable urban regions to the more porous rural segments of the border.

This paper assesses the U.S. federal policies and management practices that affect the permeability of the U.S.–Mexico border. By examining the policies and practices over time and in a variety of regions, the paper identifies the shifting, increasingly impermeable function of the U.S.–Mexico border. The paper begins with a discussion of environmental concerns along the border, using CPNWR as an example. It then explores the functions of the border created by policy and created through implementation, and examines the impact of these functions on the border, including the border environment. The paper concludes with a discussion of possible pathways for future policies and management that move toward a view of the larger picture: providing protection without isolation.

Cabeza Prieta National Wildlife Refuge

CPNWR provides an excellent example of the environmental outcomes of shifting U.S. federal policies and management practices for rural areas

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along the U.S.–Mexico border. The region and associated environmental problems exemplify the challenges that exist all along the border. Federal protection for CPNWR was established in 1939. Today, more than 90 percent of the refuge is officially designated wilderness. Located in southwestern Arizona, CPNWR encompasses 860,000 acres of delicate Sonoran Desert land. The southern boundary of the refuge is fifty-six miles in length and borders on Mexico.

Until the late 1990s the environmental effects of the CPNWR’s location on the border were minimal, consisting of a few walkers illegally entering the United States. According to Roger DiRosa, manager at CPNWR since 2002, the tranquility of the refuge changed about 1998, when the rangers began noticing tire tracks in the virgin desert (interview with author, November 21 and 22, 2005, CPNWR). Coyotes, Mexican smugglers, were trying a new route into the United States—a response to heavy enforcement of the border in the urban areas such as San Diego, California. Over time a few tracks multiplied into dozens of illegal roads. DiRosa notes that today more than two hundred miles of illegal roads crisscross the refuge, heading north to connect with the road network beyond the refuge and in the neighboring Barry M. Goldwater Air Force Range. Furthermore, within the last few years narcotics peddlers have joined the crowd. In 2004, nearly twenty thousand pounds of drugs were seized in or next to CPNWR (Ingley 2005).

The impact of this traffic is clearly evident within the area designated as wilderness. Abandoned vehicles and tons of trash litter the landscape. In addition, to escape the sun, crossers clear out vegetation under trees, killing slow-growing young desert plants. Curt McCasland, a biologist and the assistant manager of CPNWR since 2005, fears destruction of native plant cover, both from the direct clearing of the plants and from the illegal roads that function as canals, changing water flows during storms and bringing in aggressive invasive species (Ingley 2005; McCasland, e-mail to the author, May 30, 2007).

Without a doubt, the majority of ecological damage on the refuge is due to illegal crossings over the border into the United States. The refuge sustains environmental damage that will persist for hundreds of years. The condition of CPNWR in 2006, contrasts starkly with the 1998 landscape.

Unfortunately, CPNWR is not an isolated case. Although particularly evident in a pristine wilderness, damage to the environment can be seen in many rural locations along the U.S.–Mexico border. Repetitive
vehicular and foot traffic, from both those patrolling and those crossing the international border, results in extensive damage to fragile desert ecosystems. Some damage occurs with normal use of these areas; however, the border location of areas such as the CPNWR explains the vast majority of environmental degradation.

Environmental damage in rural areas like CPNWR is an unintended consequence of the shifting function of the border. As such, the environmental damage is representative of the changes occurring on the U.S.–Mexico border. In order to offer a broader perspective on the changing functions of the U.S.–Mexico border and the related environmental problems created for areas such as CPNWR, it is helpful to explore the construct of “border” and the functions borders can serve.

The Study of Borders

Traditionally, borders defined territorial lines physically dividing nation-states. They served as a primary method for nation-states to establish and demonstrate power differences between themselves and their neighbors. Over time, and particularly with globalization, the function of borders has shifted. Differences between nation-states have become blurred socially, culturally, and in cases like the European Union, politically and economically. Thus, borders are no longer the separators of countries, delineating self-enclosed spaces that are nation-states. Instead, borders are centers of contact, locations of origin or destinations for the ever-increasing passage of people and goods—both those permitted by and those evading the authorities. Consequently, many nation-states attempt to find a balance between open centers of contact and boundaries to clearly separate them from their neighbors. This task, to achieve semi-permeability allowing in the desirable and keeping out the undesirable, requires attention to the management of international borders and to defining the function of the boundaries.

Functions of Borders

A number of border scholars have attempted to answer questions concerning the functions of boundaries. The list of boundary functions described by Morehouse (1995) provides a spectrum of broad, primary functional categories of borders. This spectrum begins with relatively
porous functions where the border functions as a line of demarcation, and continues through to functions that are more impermeable, where the border functions as a barrier barring transference of people and goods across the border.

The functions, listed in table 1, can be described as follows (Morehouse 1995):

The skin function is the most porous, allowing great transference of people and goods across the border.

The net is less porous, establishing a level of control or jurisdiction within the space defined by the border.

The facilitator function reveals a bit more control of the borders, in that administrative measures manage points of contact along the border.

The gate function restricts the flow of people or goods that have not met specified criteria, such as obtaining a visa or paying a tax.

A border that functions as a filter stands as a defensive barrier against the transportation of specified people and goods across it. This function restricts all crossings of the identified phenomena.

The watch-house border establishes surveillance within (or outside) the border in order to monitor activities.2

Finally, the fulcrum defines the most impermeable border function. The fulcrum function is invoked when parties on either side of the border disagree and modifications of the border are deemed necessary. Once the modifications are made, there is little to no integration.

When applying these functions to a specific case, it is necessary to understand two types of functions: (1) the function as dictated by federal policy, the “function-in-policy,” and (2) the function that ensues in on-the-ground management practices, the “function-in-practice.” The two are often distinct due to politics that support the creation of a policy but fail to supply resources to implement it. If no resources exist to support the policy, the function-in-practice will likely be less well developed, often resulting in a border more porous than intended. In addition, for most borders, despite uniform function-in-policy, the function-in-practice is not consistent across time or across locations. This is the case for the U.S.–Mexico border. An examination of historical
Table 1. Types and permeability of boundary functions

<table>
<thead>
<tr>
<th>Function</th>
<th>Openness of Border</th>
<th>Purpose (Why Invoked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>More Porous</td>
<td>Establishment of a territorially based identity</td>
</tr>
<tr>
<td>Net</td>
<td></td>
<td>Establishment of control or jurisdiction within the defined space</td>
</tr>
<tr>
<td>Facilitator</td>
<td></td>
<td>Management of points of contact through administrative measures</td>
</tr>
<tr>
<td>Gate</td>
<td></td>
<td>Restriction of flows of people or goods that have not met specified criteria</td>
</tr>
<tr>
<td>Filter</td>
<td></td>
<td>Prevention of passage of specified phenomena</td>
</tr>
<tr>
<td>Watch-house</td>
<td></td>
<td>Engagement in surveillance within (or outside) boundaries to monitor activities</td>
</tr>
<tr>
<td>Fulcrum</td>
<td>More Impermeable</td>
<td>Balancing of opposing demands or forces, usually when no other solution can be agreed upon</td>
</tr>
</tbody>
</table>

Source: Morehouse 1995, 56.

conditions and a comparison of urban and rural locations reveal these inconsistencies.

Border Functions and the U.S.–Mexico Border

Creation of the first U.S.–Mexico Border Patrol, established in 1904, set the stage for shifts in the function of the U.S.–Mexico border. Despite the existence of the Border Patrol, for decades along much of the border the only barrier was an occasional barbed-wired fence for cattle or a cable delineating the line. This began to change in a few urban locations when
the Immigration Act of 1924 established border stations to formally admit Mexican workers. Even with an official immigration policy setting the function-in-policy as net or facilitator, however, sparse populations in both the United States and Mexico, along with the need for labor in the Southwestern United States led to minimal concern about limiting who and what could cross the border. Furthermore, many familial and community connections spanned the border. Thus, borderlanders regularly traveled between the two countries. The casual attitude concerning Mexicans crossing the border led to a situation where for many years the border's function-in-practice most closely operated as a skin or net.

In subsequent years, cyclical shifts in resources and in U.S.–Mexican relations at the federal level introduced shifts in the function-in-practice of the border. These shifts focused on urban centers where cycles of greater and lesser demand for labor influenced management of the border. For example, during the Great Depression, the border functioned in practice as a facilitator or gate. During the Depression, when the job crisis affected all U.S. workers, Border Patrol agents turned back Mexicans seeking work in the United States. The border once again functioned in practice as a skin or net during World War II. The U.S. government encouraged Mexicans to fill labor shortages in the United States. Throughout these years, the border existed as a place for crossing, but was not a location of sustained focus for many citizens or politicians.

In the mid-1990s the U.S.–Mexico border began to experience sustained change due to increasing levels of globalization. Globalization heightened economic, political, and social interaction between the United States and Mexico, influencing both policies and practices along the border. In particular, at this time the passage of two policies shifted both the function-in-policy and the function-in-practice of the border. In January 1994 the North American Free Trade Agreement (NAFTA) went into effect. This agreement created closer economic, political, and environmental ties among the three member countries, Canada, the United States, and Mexico. Shortly after the passage of NAFTA came an increase in industry and population along the border. This increase generated an influx in people and goods crossing, both legally and illegally, from Mexico into the United States, and resulted in greater stress on the surrounding environment.

As a result of the increased activity along the border, the region in 1995–96 experienced a bolstering of the U.S. Border Patrol and the installation of sensors and miles of stronger fencing in heavily populated
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border areas such as San Diego, California, and El Paso, Texas. Operation Hold-the-Line in Texas, Operation Gatekeeper in San Diego, and Operation Safeguard in Arizona targeted regions where the majority of undocumented people crossed. These efforts attempted to deter crossers from entering the United States via unregulated pathways and to encourage them to enter through designated points of entry. Although these policies focused on urban regions rather than pristine or rural areas, they still created environmental effects through the construction of roads and barriers and increasing numbers of patrols monitoring the border.

Together the policies creating NAFTA and Operation Hold-the-Line, Operation Gatekeeper, and Operation Safeguard changed U.S.-Mexico border policy from minimal enforcement to stricter management. This legislation, along with the Immigration Control and Reform Act (1986) and the U.S. Department of Agriculture Animal and Plant Health Inspection Service (APHIS) regulations, had by 1997 restricted the flow of people and goods entering the United States. Thus, the function-in-policy most closely resembled a gate.

In addition to policy changes, this era also brought increased fiscal resources to the region. These resources, designated to support the policies, financed the construction of fences and the installation of other monitoring devices. Together these actions shifted the border’s function-in-practice by more closely monitoring the comings and goings of border crossers. The function-in-practice of the border most closely resembled a gate.

That said, the change to a gate function-in-practice existed only for areas receiving additional resources. Most financial resources targeted specific regions along the border—mainly urban centers where the majority of crossings occurred. Thus, little to no change occurred in the function-in-practice for most of the rural areas along the border. For the rural areas, the border function-in-practice continued to operate as a skin or a net.

These circumstances created a situation in which policies dictating who and what could cross the border proved moderately porous, while management practices implementing these policies operated in different ways at various points along the border. Table 2 shows the function of the U.S.-Mexico border as determined by policy and as put into practice in both urban and rural regions.

The changing function-in-practice in the urban areas of the border forced a shift in undocumented immigration, drug trafficking, and other
illegal activities from the urban areas to more remote areas along the border. At this time in most rural areas little to no management restricted the exchange of people and goods crossing the border. The resulting shifts in the locations of crossers defined a major source of environmental degradation in some of the most nearly pristine regions in the United States, such as CPNWR.

### Border Functions and the U.S.–Mexico Border Post September 11, 2001

A second substantial shift in the functions of the U.S.–Mexico border occurred following the terrorist attacks of September 11, 2001, when border security and protection became a primary concern for U.S. policymakers. Legislation enacted after 2001 generated additional regulations for crossing the border. These changes created a more impermeable border.

Among a variety of policies, the Emergency Supplemental Appropriation Act for Defense, the Global War on Terror, and Tsunami Relief, 2005, commonly known as the REAL ID Act, highlights the change to a more impermeable border. The act granted the Secretary of Homeland Security the authority to waive all legal requirements that would deter expeditious construction of security measures such as barriers and roads along the border. In September 2005 Secretary of Homeland Security Michael Chertoff used his new authority to waive application of the

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Table 2. Functions of the U.S.–Mexico Border in 1997

<table>
<thead>
<tr>
<th>Function-in-Policy</th>
<th>Openness of Border</th>
<th>Urban Function-Practice</th>
<th>Rural Function-Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>More Porous</td>
<td>Skin</td>
<td>Skin</td>
</tr>
<tr>
<td>Net</td>
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<td>Net</td>
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<tr>
<td>Facilitator</td>
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<td>Facilitator</td>
<td>Facilitator</td>
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<tr>
<td>Gate</td>
<td></td>
<td>Gate</td>
<td>Gate</td>
</tr>
<tr>
<td>Filter</td>
<td></td>
<td>Filter</td>
<td>Filter</td>
</tr>
<tr>
<td>Watch house</td>
<td>More Impermeable</td>
<td>Watch house</td>
<td>Watch house</td>
</tr>
<tr>
<td>Fulcrum</td>
<td></td>
<td>Fulcrum</td>
<td>Fulcrum</td>
</tr>
</tbody>
</table>
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Endangered Species Act, the National Environmental Policy Act, and the National Historic Preservation Act, among others, to permit the extension of triple fencing through the Tijuana River National Estuarine Research Reserve, located near the U.S.–Mexico border in coastal southern San Diego County. This legislation in effect shifted the function of the border from a semipermeable situation where the United States and Mexico maintained connections (a gate function-in-policy), to greater impermeability, a filter function-in-policy.

By early 2006 numerous urban regions of the border in the United States had double, and in some places triple, fencing. Furthermore, road and wall construction, patrols by off-road vehicles and low-flying helicopters, and lighting projects also worked to secure the border. Moreover, the National Guard’s Operation Jumpstart began on July 1, 2006. This operation placed additional National Guard troops along the U.S.–Mexico border to help U.S. Customs and Border Patrol agents with logistics and observation activities.

In the fall of 2006, the 109th Congress passed, and President George W. Bush signed, the Secure Fence Act of 2006. This bill authorizes and partially funds the “possible” construction of seven hundred miles of fencing and barriers along the U.S.–Mexico border. The seven hundred miles of fencing are to be located mainly in rural areas of California and Arizona, connecting border barriers that currently exist in urban locations.

Supporters of the Secure Fence Act of 2006 suggest a likely slowing in the stream of crossers in these areas and thus a lessening of environmental degradation due to crossers. (Degradation due to patrolling the border and from construction of barriers will still occur.) Critics of the bill suggest that crossers likely will avoid the newly fenced areas in Arizona, instead continuing the pattern of shifting popular crossing locations. They predict, in this case, that crossers will move into New Mexico and Texas and, rather than a lessening of environmental degradation, we will see an expansion of environmental disruption into new areas. In support of this bill, Congress approved a down payment of $1.2 billion for the Department of Homeland Security’s efforts for border security and protection. Since the passage of these initiatives, apprehensions along the entire U.S.–Mexico border have declined by 27 percent (Bowers 2007).

The post-2001 policies and accompanying construction again shifted the functions of the U.S.–Mexico border. In this case, the policies focused
on both urban and rural regions and combined changes in policy with changes in infrastructure and practice. Thus, post-2001 the U.S.–Mexico border experienced a shift in both urban and rural areas, and in both function-in-policy and function-in-practice.

For both the urban and rural areas, the function-in-policy is a filter, with procedures in place to prevent the passage of certain people and goods. The function-in-practice for urban areas shifted toward greater impermeability, falling somewhere between a filter and a watch house. In the urban areas, infrastructure funnels people and goods through crossing stations in order to physically prevent passage into the United States of specified individuals and goods. In addition, many of these locations reinforce the border with surveillance from a variety of sources to further monitor activities.

The function-in-practice for rural areas also reveals a move toward expanded impermeability. Traditionally, in the rural regions, supervision and management of what and who crossed the border existed only at border crossing stations, not along the expansive areas between the stations. Thus, along rural areas, the border function-in-practice operated as a facilitator. This, however, appears to be changing as the rural areas receive additional border security and enforcement resources. The construction of barriers in these areas shifts the function-in-practice of the border from a relatively porous facilitator to a more impermeable gate or filter. Table 3 shows the functions of the U.S.–Mexico border as it stood in 2006, recognizing the impending change in the rural areas’ function-in-practice.

Overall, the effects of recent policies have created an increasingly impermeable border. Management practices in both urban and rural areas follow this trend, although within the urban areas the border’s impermeability has progressed more quickly than in rural areas.

**Results of a More Impermeable Border**

Where have these changes left us today? What can the environment along the U.S.–Mexico border reveal to us about the shift toward a more impermeable border?

Many urban areas along the border evidence a mix of positive and negative effects of increasing impermeability. In the San Diego region, for example, the number of Border Patrol apprehensions dropped by 95
Table 3. Functions of the U.S.–Mexico Border in 2006

<table>
<thead>
<tr>
<th>Function-in-Policy</th>
<th>Openness of Border</th>
<th>Urban Function-Practice</th>
<th>Rural Function-Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>More Porous</td>
<td>Skin</td>
<td>Skin</td>
</tr>
<tr>
<td>Net</td>
<td>More Porous</td>
<td>Net</td>
<td>Net</td>
</tr>
<tr>
<td>Facilitator</td>
<td>More Porous</td>
<td>Facilitator</td>
<td>Facilitator</td>
</tr>
<tr>
<td>Gate</td>
<td></td>
<td>Gate</td>
<td>Gate</td>
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<tr>
<td>Filter</td>
<td>More Porous</td>
<td>Filter</td>
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<tr>
<td>Watch house</td>
<td>More Porous</td>
<td>Watch house</td>
<td>Watch house</td>
</tr>
<tr>
<td>Fulcrum</td>
<td>More Porous</td>
<td>Fulcrum</td>
<td>Fulcrum</td>
</tr>
</tbody>
</table>

Percent, from 100,000 a year in the mid-1990s to 5,000 a year in 2005 (National Public Radio 2006). The drop in apprehensions reflects the decreased numbers of attempted illegal crossings in this area (Núñez-Neto and Viña 2006). Reduction in the number of illegal crossers attempting to travel cross-country has reduced environmental degradation in that fewer unauthorized paths and roads are created, fewer native plants are destroyed by clearing or burning, and fewer invasive species are introduced.

However, substantial environmental damage also accompanied the construction of barriers that limit the number of crossers. Environmental disruption due to the construction of physical barriers in urban areas such as San Diego includes interference with wildlife migration and habitat expansion. The barriers stop not only people, but also wildlife such as migratory species from crossing the border. In addition to the barrier itself, the infrastructure associated with construction of barriers creates problems. For example, high-voltage lighting along the border poses problems for bats; and roads created to maintain the barrier present additional obstructions for wildlife (Minard 2006).

In less populated areas, minimal benefits arose from the increasing impermeability. In the town of Nogales, Arizona, for example, construction of a three-mile-long fence did little to stop illegal crossing. People who wanted to cross either scaled the fence or simply walked around the barrier. A shift in the location of crossers, and thus in the areas exposed...
to environmental damage, was the main result of the Nogales fence. On the other hand, just as the barrier redirected passage for humans, wildlife too found similar paths around it. Thus, environmental degradation spread to new areas, but migration and habitat expansion were not prevented. A similar situation occurred in Organ Pipe Cactus National Monument. Construction of vehicle barriers along the segment of the U.S.–Mexico border that doubles as the national monument’s southern border resulted in few to no vehicles entering the national monument. But the construction resulted in increasing levels of vehicle traffic through the lands on either side of the barriers, including CPNWR.

Finally, many rural regions now take the brunt of crossers. In the rural region near Yuma, Arizona, apprehensions of illegal crossers rose 591 percent between 1992 and 2004. This surge reflects the enormous increase in the number of people attempting to cross the border in this region (Nuñez-Neto and Viña 2006). In these areas environmental degradation caused by crossers is on the rise: unauthorized paths and roads, destruction of native plants, and introduction of native species are reaching critical levels. Additionally, increasing Border Patrol activity within these regions adds to the environmental disruptions.

Discussion and Conclusions

A majority of people in the United States acknowledge that current measures to secure the southern border are not working; illegal crossers are still entering the United States. However, deciding what changes need to be made is difficult. A 2006 Cable News Network poll found that most Americans “prefer the idea of more Border Patrol agents to a 700-mile fence” (CNN 2006), however a 2007 Fox News/Opinion Dynamics poll indicated that 51 percent of U.S. residents surveyed favor a proposal to build security fencing between the United States and Mexico.

The comprehensive solution to the problems of illegal crossing and the consequent environmental degradation along the U.S.–Mexico border involves a resolution of issues such as socioeconomic differences between the United States and Mexico and the desire for cheap labor in the United States. These issues are complicated and controversial; they will not be quickly resolved. In the meantime, what do we know and how can we work toward a more secure yet still environmentally friendly border between the United States and Mexico?
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The examination of functions of the U.S.–Mexico border reveals two trends. First, the current course of creating an increasingly impermeable border is not working. The fences and patrols do not prevent the illegal entrance of either people or goods into the United States and they cause environmental degradation to the border region. Second, a border with varying degrees of permeability and impermeability does not solve problems, it simply relocates them. The current, spotty permeable-impermeable border does little more than shift the locations of crossers, creating environmental degradation in formerly pristine areas along the border.

The need for security and protection along the U.S.–Mexico border exists, but so does the need to avoid isolation. Creating obstructions between wildlife and migratory regions or additional habitat does not lead to healthy wildlife populations. Likewise, creating obstructions between the United States and our Mexican neighbors will not likely lead to healthy relations. Security and protection are concerns, but so is the prospect of a southern border with no wildlife-friendly crossing structures, no contiguous easement-protected open space corridors, no effective habitat mitigation or consideration for federally listed species, and no open areas for two cultures to mingle without extensive federal regulations (Conaughton 2005; Montgomery 2005; Vacariu 2005; Minard 2006). A more effective solution relies on finding ways for the border to function as a gate or filter—providing protection through restricting the flow of people or goods that have not met specified criteria for entry, while still allowing for passage of desirable entities, including people that meet given criteria, and wildlife. Doing so would minimize negative economic, political, and environmental consequences.

Two groups of U.S. federal officials presented proposals. These groups took environmental considerations into account when formulating their suggestions, and thus have a “larger picture” perspective of the border functions. The first proposal comes from the U.S. Fish and Wildlife officials and the U.S. Border Patrol. These groups suggested the development of two-foot high-vehicle barriers. This suggestion recognized that eliminating the passage of vehicles that carry drugs, weapons, or persons would likely deter the illegal immigration that causes some of the most severe damage to the country and to the environment. The U.S. Fish and Wildlife and U.S. Border Patrol officials suggested this proposal would both minimize the amounts of illegal goods that could be transported into the United States and improve environmental conditions by, among
other things, stopping the creation of illegal roads, while still allowing wildlife to pass above and below the barrier.

While this suggestion presents certain benefits, there are always drawbacks that come with the construction of any barrier between the United States and Mexico. The construction of a barrier both isolates the two countries and creates environmental degradation. Additionally, this suggestion does not address the problems related to varying levels of permeability and impermeability; ensuring consistent impermeability demands uninterrupted vehicle barriers along the entire length of the border, a costly undertaking.

A second proposal comes from the Department of Homeland Security, which suggested the development of a “virtual fence” composed of lower-impact technologies such as sensors, satellite imagery, and cameras focused on the border. Theoretically, the virtual fence would stop or slow illegal crossers by setting off alarms to alert the Border Patrol when a person or vehicle crosses the border in an unauthorized region. At the same time, it would maintain an open border, allowing for wildlife migration. In addition, the portability of the technology lends itself to a possible solution to the issue of spotty permeability versus impermeability along the border. Much as speed traps along roads in the United States do, the prospect of encountering the portable monitoring technology purportedly would discourage people from crossing the border in unauthorized locations. Although this proposal does not address questions of open interaction among people of the two nation-states, it does suggest that a reduction in the number of illegal crossers would reduce environmental damage in areas popular for crossing.

Despite these apparent benefits of the virtual fence, concerns surrounding the idea abound. Critics note virtual fencing is a relatively new concept and remains untested over such an expanse. In addition, virtual fencing relies on technology that is expensive and must function within the demanding desert environment of the U.S.–Mexico border. These facts lead critics to question the costs and benefits of the idea. Thus, until the virtual fence undergoes extensive testing (currently underway), the possibility of much advancement of the virtual fence is limited.

Clearly neither of these options is perfect. However, further examination of the possibilities they present can move the discussion forward in a manner that would reestablish a place for issues beyond security, including openness and environmental concerns. This is a better option for the border environment than continuing down the current path of
greater isolation. Although isolation can provide a level of protection, the drawbacks, including minimizing cultural interactions and ongoing environmental degradation, often outweigh the benefits. As U.S. officials look toward future policies and management practices along the U.S.–Mexico border, they need to examine possibilities that value more than just security, possibilities that protect but do not isolate.

Notes

1. Actions taken at the state and local levels by citizens and nongovernmental actors are also important and add a critical element to the reality on the U.S.–Mexico border. However, addressing these elements is beyond the scope of this paper.

2. Morehouse (1995) refers to this function as “panopticon.”

3. There was some concern about limiting Asians and eastern Europeans coming into the United States through Mexico and a desire to tax Mexicans coming into the United States, but the efforts taken to meet these goals were minimal.

4. As a part of the passage of NAFTA, two side agreements focused on labor and on the environment. The North American Agreement for Environmental Cooperation (NAAEC) is the environmental side agreement.

5. Operation Hold-the-Line was enacted in 1993, Operation Gatekeeper in 1994, and Operation Safeguard in 1995; however, additional border strengthening continued through 1996.

6. Many view urban regions as less environmentally sensitive; however, urban regions do contain open spaces such as the Tijuana Estuary in the San Diego region. The limited open spaces that do exist in urban regions are highly valuable to wildlife.

Bibliography


