Environmental Stress and Human Security in Northern Pakistan

By Richard A. Matthew

Abstract

Environmental and social factors are generating high levels of conflict and insecurity in Northern Pakistan. Several factors make this case an important subject for analysis and discussion: (a) the strategic location of the region; (b) the potential for far-reaching and even global consequences should conflict spill across the borders and into countries such as Afghanistan and India; and (c) the similarities between this case and many others in the world. The article concludes with policy suggestions for both domestic and foreign parties concerned about the situation.

Located in the heart of the planet=s most dramatic confluence of mountain ranges, Pakistan=s North-West Frontier Province (NWFP) faces environmental challenges that are unprecedented in the area=s turbulent history. In light of the growing literature linking environmental change to a variety of security problems, how the people of the NWFP address these challenges may be a matter of regional and even global concern.[1] An intensification of violence and conflict in the NWFP[2] would be particularly alarming given the possibility of spillover effects into any or all of the following regions:

- an Afghanistan to the north and west that is reeling from decades of invasion, war, political extremism, and economic collapse;
- the conflict-prone valleys of Kashmir and Jammu to the east—disputed territories that have soured India-Pakistan relations since 1947;
- the rest of Pakistan to the south, made up of three provinces (Baluchistan, Punjab and Sind), each of which is confronted with serious political and economic problems and plagued by persistent civil unrest.

These three countries in turn lie on the borders of China, Russia, and Iran. Nuclear weapons, population pressures, environmental stresses, economic problems, and group-identity conflicts afflict much of this part of the world. What happens in this geopolitically strategic area is of importance both regionally and worldwide.

The situation in the NWFP is also of direct concern because it presents a problem that is either evident or emerging in many other vulnerable and volatile regions.[3] In many of these cases, a set of interconnected variables—including rapid population growth, repeated economic failures, and weak and ineffective institutions—promote practices that simultaneously damage the environment and cause the steady deterioration of sustainable livelihoods. In consequence, social systems become mired in conditions that are difficult to change and highly conducive to perpetual poverty, infectious disease, and multiple forms of insecurity and violence.

As Pakistan enters the 21st century, its future, especially that of its northern region, looks bleak. Solving the complex challenges it faces will require financial and technical assistance from the North as well as great internal resolve to reform corrupt political processes, bolster the economy, and inch forward carefully-conceived—(but generally ignored)—plans for sustainable development.[4] Success in northern Pakistan could generate a valuable planning and policy

Richard A. Matthew is assistant professor of international and environmental politics in the Schools of Social Ecology and Social Science at the University of California at Irvine (UCI), and director of the Global Environmental Change and Human Security Research Office at UCI. He has published articles on environmental issues, ethics in international affairs, and international organizations. Recent works include an edited volume entitled Contested Ground: Security and Conflict in the New Environmental Politics *(SUNY Press, 1999) and* Dichotomy of Power: Nation versus State in International Relations *(in press).*

model that might be adapted to help address similar problems elsewhere in the world. The social effects of failure, however, could spill across Pakistan=s borders, adding to the already sizable stockpile of regional challenges and tensions.

History and Geopolitics

The most prominent topographical features of the NWFP are the high peaks of the Hindukush and Himalayas that define the northern part of the province. These magnificent mountain ranges give way to the fertile Peshawar Valley, irrigated by the Kabul and Indus Rivers. Still further south, the province terminates in a series of alluvial and semi-arid plains that run on into the provinces of Punjab and Baluchistan.[5]

The 17 million people of the NWFP are generally poor and uneducated (see Table 1), although pockets of great wealth exist and many government officials have advanced degrees, often from European or North American universities. Fifty percent of the region's population is Pashtun; at least another six million Pashtun live across the border in Afghanistan. In the words of the Pashtun political leader Imran Khan, his people "are one of the world's great warrior races" (Khan, 1993, page 3). Martial values shape the culture; most people are well-armed, and violence is an accepted way of restoring honor and resolving disputes (Khan, 1993, pages 1-12, 33-34).

The legacies of a colonial past weigh heavily on this region.[7] The British arrived in the late eighteenth century with hopes of creating a buffer state that would keep Russia out of Afghanistan. Britain's "Great Game" began with the first Afghan War (1838-42) and continued for over a century. When the British discovered that the Pashtun were virtually impossible to defeat in battle, they focused on intensifying existing discord among feuding Pashtun clans. For example, in 1901 the British introduced arbitrary divisions into the region by rewarding some clans with the semi-autonomous Tribal Areas that today run along the border with Afghanistan.

Unable to gain control over the Khyber Pass (a potentially lucrative trade route linking South Asia to the Middle East and Europe), the British turned their attention to cutting down the vast softwood forests of blue pine, fir, and spruce that covered much of the region. They established a forestry service dedicated to logging, and a highly centralized political system propped up by bribery and military force. In the south of the province, they oversaw the construction of sprawling and inefficient irrigation systems, access to which became a vital part of the political economy of bribery that was established to facilitate colonial rule. Deforestation and irrigation became the twin engines of environmental stress (see van Dijk & Hussein, 1994, page 35).[8] Today, soil erosion, waterlogging, and flooding are among the serious problems whose roots can be traced to the economic practices of the colonial era (see van Dijk & Hussein, 1994, pages 34-35; IUCN, 1997, pages 31-37).

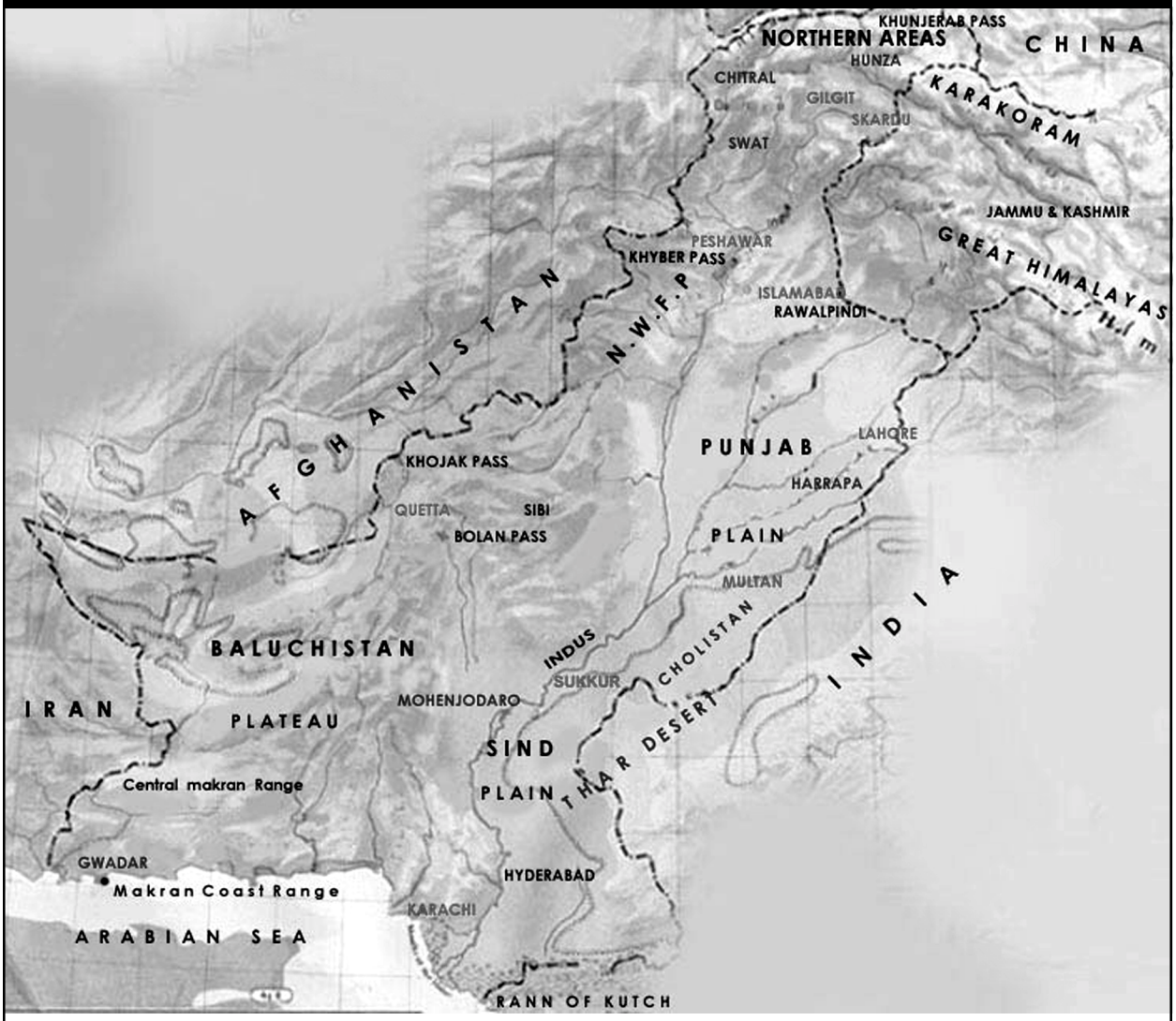
The British allowed the local *jirgas* (or councils of elders) to manage routine affairs and resolve most local conflicts, a decision that ensured the continuation of a high level of clan identity and autonomy. When the British left in 1947, northern Pashtun clans were given the choice of independence or joining the new patchwork state of Pakistan. Those in the valleys of Kashmir and Jammu elected to recover their autonomy—and immediately became the targets of Indian and Pakistani expansion plans. The rest formed the NWFP.

Throughout contemporary Pakistan, local identities remain powerful. Political elites generally rely on support from those rural areas and clans with which they are associated. Ethnic, religious, provincial, and national constructions of identity are rarely harmonized except around a small handful of highly symbolic issues (such as the future of Kashmir and the possession of nuclear weapons to balance India's atomic arsenal). On most matters, competing identities pull Pakistanis in different directions, and the more local forces tend to be dominant.

This sense of being separate and distinctive is especially acute in the NWFP, which is often characterized by Pakistanis as a wild and remote place akin to Corsica or Sicily in Western Europe (see Khan, 1993). It is a sentiment that is reinforced by the province's political system—for, unlike the rest of Pakistan, the colonial governance structures of the NWFP have remained more or less intact. The

Editor's Note: An abridged version of this article first appeared in AVISO 10 (July 2001). AVISO, an informational bulletin on global environmental change and human security, is available on-line at http://www.gechs.org/aviso/index_b.shtml

Map 1. Pakistan

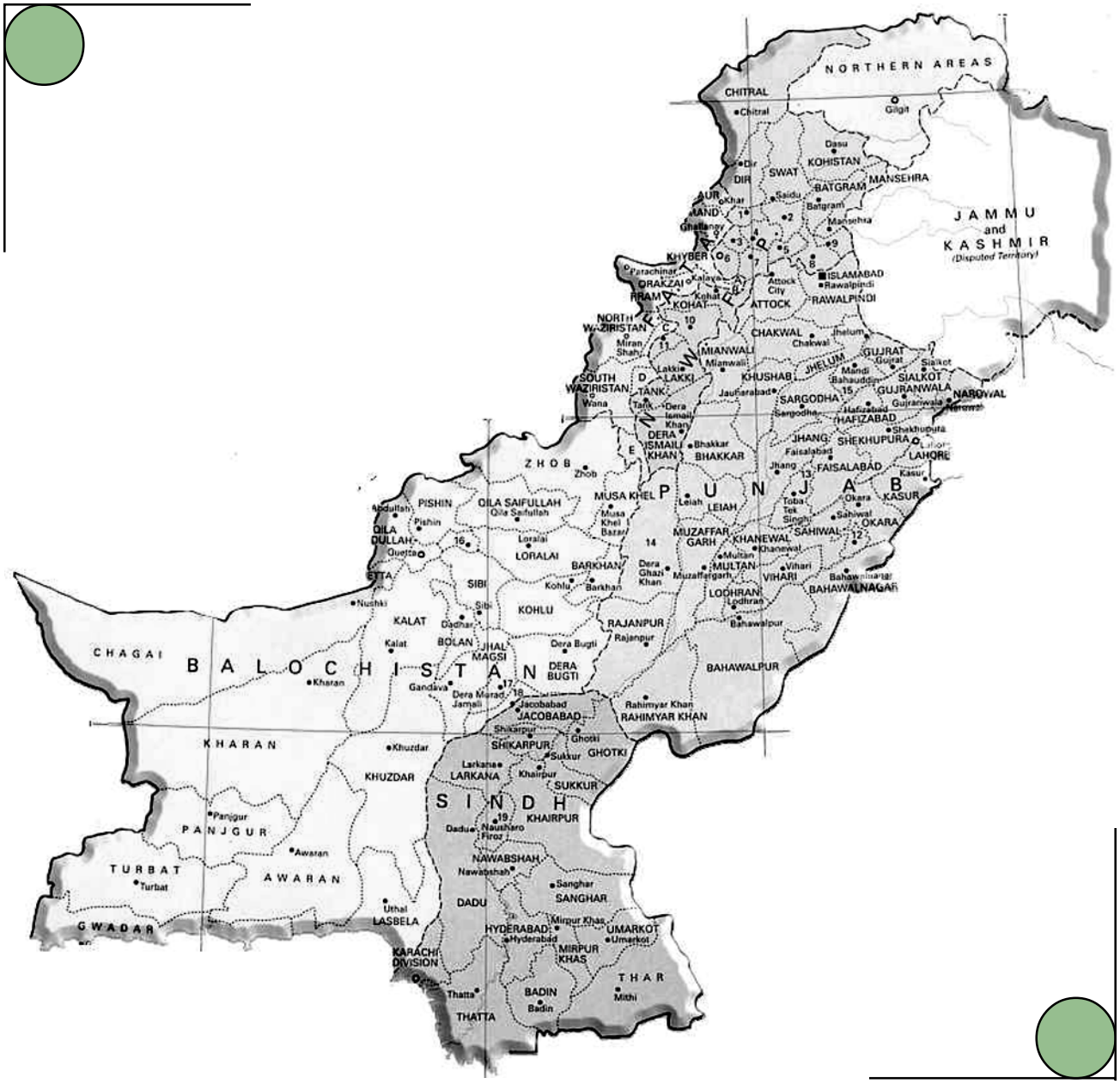


Source: www.vista-tourism.com/map.htm

virtually omnipotent Political Agent (provincial governor) is now selected in Islamabad rather than London, but the office continues to rule through force and bribery while leaving many matters in the hands of local elders. Political corruption is as evident throughout the NWFP today as it was prior to 1947. Civil strife and acute violence are endemic. And despite the efforts of some visionary directors, the forest service has had limited success in making the transition to sustainable forestry practices.[9] The lack of change in this region may in some measure be due to the fact that Pakistan is 60 percent Punjabi. Many Pashtun believe that during the first decades of Pakistan's existence, efforts to build a nation-state were focused largely on the more populous central and southern parts of the country—a process that tended to marginalize them and benefit the Punjab majority.

Recent external pressures have added another layer of difficulty to the challenge of reforming the NWFP's colonial legacy of corruption and exploitation. In particular, following the Soviet invasion of Afghanistan in 1979, the NWFP became the staging ground for the first multinational jihad since the Middle Ages.[10] *Mujahidin* flocked to the capital city, Peshawar, from the Middle East, Africa, and Asia. The U.S. Central Intelligence Agency provided $3 billion to support anti-Soviet forces in the province (Weaver, 2000, page 34). Virtually overnight, 3.5 million Afghan refugees crossed the border into northern Pakistan. Gradually, they were settled into 384 camps—the majority of which were located on marginal lands in the NWFP. The refugees brought weapons, livestock, and small

Map 2. The Provinces of Pakistan



Source: www.pakmart.com/map/map.htm

amounts of gold, but had precious little knowledge of how to manage the fragile resource base on which they would now depend (see Hanson, Matthew, & Aziz, 2000).

Throughout the 1980s, the quantity of small arms in the NWFP grew exponentially as the Afghan war raged on its borders. Drug trafficking became widespread as refugees struggled to survive and holy warriors struggled to fund their resistance to the better armed Russians (Weaver, 2000). The Taliban, educators who ran conservative religious schools for Afghan refugees, became a significant political force—one that in the mid-1990s would gain control over most of Afghanistan.[11] And the natural environment of the NWFP began to deteriorate even more rapidly than before under the added burdens placed on it.

In brief, rapid population growth during a period of instability and conflict overwhelmed political and economic arrangements that were fragile and inefficient from the outset, creating conditions in the NWFP that were favorable to environmentally unsustainable practices. This volatile mix of social and ecological factors now fuels conflict and violence in the province, a situation that raises concerns throughout the region.

An Expanding Crisis

The model presented below is not intended to be a comprehensive account of all of the variables and relationships in the NWFP that may lead towards either conflict and violence, on the one hand, or cooperation and security on the other. Instead, the model (based on information gathered through extensive interviewing and travel throughout this region in 1999) seeks to highlight elements that appear to be most determinative of the region's current vulnerabilities and threats to human security (see Hanson, Matthew, & Aziz, 2000).

At the core of this model are reinforcing

Table 1. Basic Facts about Pakistan and the Northwest Frontier Province (NWFP)

Category	NWFP	Pakistan
Total Area (sq. km.)	74,521	803,940
Population (millions, 1998 est.)	16.5	135.1
Literacy Rate	17%	36.4%
Population Growth (1996 est.)	3.2%	2.8%
Per Capita Income (1996 est., U.S. dollars)	$200	$470
Pop. Living in Poverty (1996 est.)	20%	34%
Unemployment (1996 est.)	N/A	34%
Refugees (millions, 1999 est.)	1.6	2
Forest Cover	6%	5%
Grazing Land	23%	6%
Arable Land	19%	27%

Source: *The New York Times Almanac* (1999); IUCN (1997); IUCN (1998). NB: data are highly inconsistent across various sources

relationships among (a) unsustainable livelihoods, (b) the martial aspects of the culture, and (c) the rate and intensity of violence and insecurity. The province's growth in unsustainable livelihoods is in turn a product of external forces, population pressures, environmental stresses, and weak institutions—variables that tend to be highly interactive. Because the variables that render people vulnerable and create conditions conducive to conflict and violence often reinforce each other, it is difficult for policymakers and analysts to plot a course out of this situation without a high level of political resolve, considerable financial and technical resources, and strong local support for a range of interconnected goals.

To impart a sense of the challenges facing the NWFP, it is important to briefly describe each of the key variables.

External Forces

External forces affect all aspects of the crisis scenario building in the NWFP. These forces include the structural and institutional legacies of the period of British colonialism as well as the wide-ranging effects of the Soviet invasion into neighboring Afghanistan. More immediately, Pakistan's ongoing rivalry with India over Kashmir is especially relevant because the NWFP serves as the staging ground for Pakistani involvement. It is not coincidental that tensions in Kashmir have been greatest since 1989, when the Soviets were expelled from Afghanistan, and many of the *mujahidin* who had fought the Soviets remained in the area.

The current dire situation in Afghanistan is also significant. Many residents of the NWFP—including some 1.6 million refugees—have deep cultural ties to Afghanistan, as well as important commercial links to that country (links that that include drug trafficking and other illegal activities). Anecdotal evidence suggests strong ties between some Pakistani elites and the Taliban government (see, for example, Marsden, 1998, page 128). Early in 2001, the civil war in Afghanistan (between the Taliban and the Northern Alliance) escalated, while drought and cold contributed to widespread famine in the country. The Taliban has also alienated further the world community by destroying two ancient Buddhist

Table 2. Key Dates in Pakistan's History

1940	Lahore Resolution calling for an independent Islamic State
1947	Independence and partitioning of sub-continent
1951	Prime Minister Liaqat Ali Khan assassinated
1956	Proclamation of Republic; first constitution drafted
1958	Military coup
1960	First elected president
1965	India-Pakistan War
1969	Military coup
1971	India-Pakistan War; East Pakistan secedes to become Bangladesh
1973	Constitution adopted
1977	Military coup
1985	Elections
1998	Testing of five nuclear devices
1999	Fighting intensifies in Kashmir and Jammu; military coup
2000	Government launches aggressive anti-corruption campaign

statues. In these volatile conditions, many Afghans have attempted to flee into Pakistan, a flow that both governments have sought to cut off and even reverse, adding frustration and uncertainty to a profoundly desperate situation.

Finally, endemic corruption, the drug trade, and political extremism (as well as allegations that some Pakistani military leaders are training and funding terrorists) are among the factors that have given the region a very negative image in the Western world (Weaver, 2000). In combination with U.S. sanctions against Pakistan for its nuclear weapons testing, these factors have resulted in very little assistance or capital of any kind being available for the NWFP.

Population Growth

Population growth in the province as well as in Pakistan generally has been fueled by the influx of Afghan refugees, cultural preferences, and poverty. As in many developing countries, the growing population tends to be poor and landless; hence, it is compelled to settle in environmentally marginal areas such as urban ghettos or the steep sides of mountains. Not only is it difficult to eke out an existence in such environments, but marginal lands are often contaminated by pollutants and more vulnerable to natural disasters such as flooding. In the capital city of Peshawar, for example, infrastructure for sewage and waste treatment has not kept pace with population growth, and exposure to contaminated water is virtually universal.

The toll on the fragile alpine environment further north also has been enormous. Under unprecedented population pressures, its forests are being decimated to provide fuel and shelter.[12] In consequence, topsoil is easily removed by wind erosion and flooding, reducing agricultural productivity and forcing people to rely heavily on food imports from the south. This degradation is a serious concern in a cash-poor province with about 0.44 hectares of land available per person, only about half of which is productive (that is, available for agriculture, grazing, or forestry).[13] This amount of land is approximately 10 percent of the area needed to support consumption in the most efficient developed countries such as Japan, and about 4 percent of the per capita area currently exploited by residents of the United States (Rees, 2000, page 84). Both population growth and environmental degradation reduce the amount of ecologically productive land available per person, resulting in a dire Malthusian scenario of scarcity. In this light, it is hard to be optimistic about the prospects for developing sustainable livelihoods in the region.

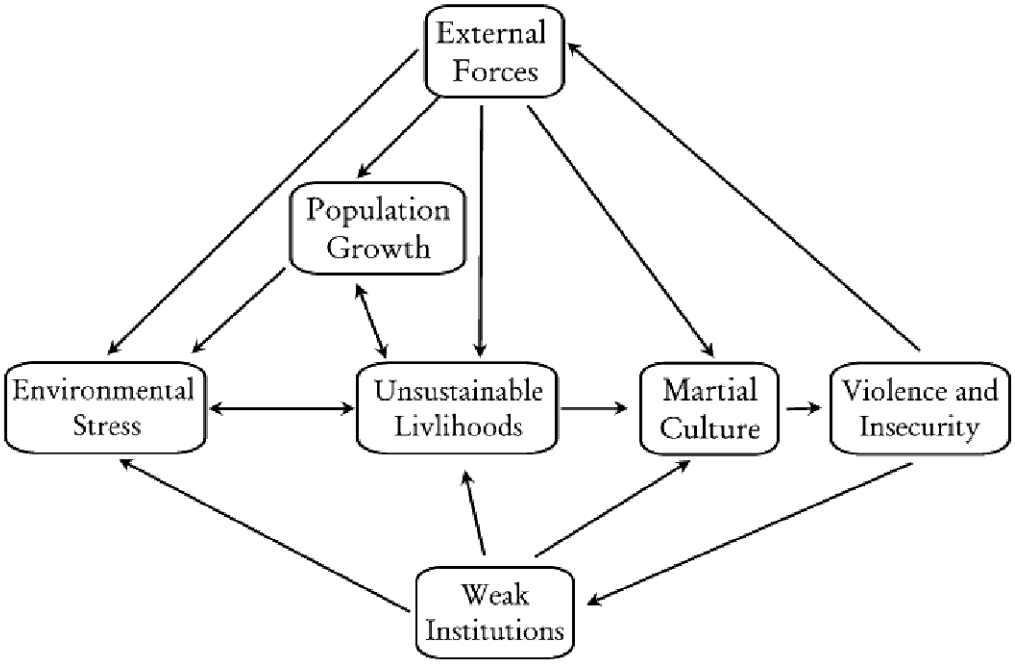
Weak Institutions

Weak institutions exist throughout the province. Those created by the British and sustained through bribery and force have persisted, and those introduced by the Pakistani government since 1947 have been equally inefficient and corrupt. Local institutions such as the *jirga* are not well suited to handling problems of the magnitude faced by the NWFP. Based on over 70 interviews conducted in the province in the summer of 1999, it appears that distrust of the legal system and disillusionment with politicians and civil servants are common sources of anger and frustration in the NWFP.[14] For many people, the only way to resolve pressing conflicts—such as those related to property rights—is to take matters into one's own hands, an approach that often involves high levels of violence. Weak institutions make it extremely difficult to plan and build infrastructure or to create jobs; they also tend to encourage unsustainable practices.

Environmental Stress

Environmental stress in the NWFP is widespread and severe. Polluted water and air in Peshawar, water shortages in much of the south, unsustainable forestry in the north, and land scarcity everywhere are among the environmental problems plaguing the region.[15] External pressures, population growth, and weak institutions simultaneously enable destructive practices while also making it very difficult to implement effective conservation management. This state of affairs particularly frustrates local authorities and environmental specialists who have invested considerable time and effort in developing the *Sarhad Provincial Conservation Strategy* for the NWFP (IUCN, 1996). Based on *Agenda 21* guidelines, this strategy is a well-informed, highly sophisticated, and widely ignored blueprint for sustainable development in the province. It focuses on the importance of developing a holistic approach that involves extensive community participation to improve governance structures, alleviate poverty, and improve education in order to make possible long-term sustainable development. The *Sarhad Provincial Conservation Strategy* places special emphasis both on addressing the challenges evident in urban environments and in promoting natural resource management. According to the authors of the report, higher levels of participation, better environmental legislation, and

Figure 1. Model of Environmental Stress and Human Security in the NWFP



greater governance capacity stand out as urgent objectives for the province.

Unsustainable Livelihoods

Unsustainable livelihoods are the most obvious result of the interactions of the variables described above. Although official figures are not available, direct observation and field interviews suggest that large numbers of men are unemployed throughout the region (Hanson, Matthew, & Aziz, 2000). Some seek casual labor in distant cities such as Karachi; others venture abroad to work in Middle Eastern oil fields. Still others engage in illegal activities such as smuggling and drug trafficking. Many are compelled to draw down scarce resources for fuel and irrigation at unsustainable rates. Poverty encourages large families: they appear to be a rational strategy for minimizing economic risk by allowing families to maximize the household's economic diversity by sending members to work abroad or in cities in case local means of support fail. Nonetheless, unemployment and uncertainty prompt some men to gravitate towards the blame-casting critiques and promises of political extremists. And everywhere one sees growing signs of resentment towards the refugees, who are constantly accused of working illegally and stealing.[16]

Martial Culture

Martial culture is not a necessary variable for linking environmental stress to violence and insecurity, but it is a prominent feature of the NWFP. If the conditions described above were removed, the level of violence in the region would be kept in check by time-honored cultural restraint mechanisms (well-described in Khan, 1993, pages 15-46). But in the current context of uncertainty and stress, such cultural constraints are far less effective. Cities and villages in the province can and do erupt into mobs of angry, armed men. Calls to liberate Kashmir and Jammu reach receptive ears.[17] Even Pakistan's nuclear tests rally great support, perhaps for the message of defiance they send across Pakistan's borders.

Violence and Insecurity

Violence and insecurity have long been features of the NWFP, but these features are now exaggerated by the negative forces outlined in this analysis. Given the volatile geopolitics of the region, this crisis is not a condition that can be ignored without great risk. Today's NWFP is trapped in a system of reinforcing negative relationships. A failure in one area is quickly transmitted to others. The conditions for a large-scale disaster are in place.

Hot Spots in the NWFP

There are several hot spots in the NWFP, each of which has the potential to erupt into violence, sink further into poverty, push inhabitants into illegal or unsustainable livelihoods, or force people to migrate.

Urban Centers

Approximately 1.3 million people (including some 500,000 Afghan refugees) live in the NWFP's capital city of Peshawar. Once known as the "city of flowers," Peshawar's infrastructure has been overwhelmed by an annual population growth rate of 4.6 percent. Raw sewage (only one-third of which is treated), industrial waste, fertilizers, and pesticides pour daily into Peshawar's fresh water system. Approximately 40 percent of deaths in the city are linked to water quality problems. Air pollution is also severe because of toxic vehicle and kiln emissions (brick kilns typically burn car tires). In addition, some 60 percent of solid waste in Peshawar is not sent to landfills but accumulates in alleys and abandoned fields. Since 1979, Peshawar has served as a staging ground for the *mujahidin* as well as the hub of the Golden Crescent drug trade and a bustling center for smuggled goods. High unemployment and growing resentment over the continuing presence of Afghan refugees add to the general instability of the city.[18]

Agricultural Areas

Many central and northern districts and villages of the NWFP have relied on old growth forests to provide essential ecological services such as flood control as well as commodities like fuel and building materials. Today, extensive logging is causing hardship as well as widespread and often violent conflict over property rights; according to unofficial government sources, as much as 90 percent of NWFP forest rights are in dispute. Ineffective conflict resolution mechanisms, a sluggish economy, and ideological extremism further incite the large, young, and often unemployed citizenry to diffuse and often criminal violence.

To the south, tensions are growing around water scarcity and social injustice. Water allocation in Bannu, for example, is based on a system of entitlements established by the British in 1905, and relies on a collapsing irrigation works that is choked with sediment. The Daran Reservoir has also shrunk by 60 percent since its completion in 1962 because of siltation, and the system of canals that divert water from the region's principal rivers (the Kurram, the Kabul, and the Gambila) is plagued by sediment and must be dredged frequently. The end result is that a small number of families—granted unlimited rights to water by the British—use this customary entitlement as the basis for continuing to monopolize large quantities of water (as well as to control most of the farmland), while an increasingly restless majority experiences chronic water shortages. The costs of building more just and efficient water distribution systems have so far been deemed exorbitant by local authorities, although plans to build a new dam on the Kurram River are under review.

Throughout the agricultural regions of the NWFP, population growth and environmental stress (together with social conditions perceived as unfair, corrupt, and inflexible) are the ingredients of potentially violent crisis.

Population growth, environmental degradation, land tenure, and poverty are clearly interrelated in the NWFP and constitute a multi-faceted policy challenge.

Border Region / Tribal Area

The 800-mile border between the NWFP and Afghanistan has historically been an explosive place, and the legacies of British imperialism and the Afghan-Soviet War continue to haunt this region. As elsewhere in the NWFP, the British set up inefficient irrigation systems and large-scale timber harvesting operations that have resulted in salinization, waterlogging, soil erosion, and flooding. In the wake of the Soviet invasion, millions of landmines on the Afghan side of the border, political uncertainty, civil war, and a chaotic Afghan economy are factors preventing refugees from returning. To survive, these refugees cultivate poppy, produce heroin, and smuggle a wide range of goods. Meanwhile, untreated sewage and industrial wastes dumped into the Kabul River from many sites (especially the cities of Kabul and Peshawar) take a further toll on the environment. The Kabul River has levels of biochemical oxygen demand (BOD), chemical oxygen demand (COD), coliform, nitrites,

nitrates, sulphates, and sulphides that all pose serious health risks. Again, in an unstable social context, rapid population growth and environmental degradation are creating high levels of human insecurity.

Refugee Camps

The approximately 200 refugee camps located throughout the NWFP must also be considered hot spots. The psychological stresses of living in such miserable and inhumane conditions for two decades make these heavily-armed camps a source of great concern. As many as 1.6 million individuals in the province continue to live as refugees, many of them born and raised in the camps. With little or no formal education and few livelihood options, they constitute a tremendous challenge to the future stability of the region. Accurate information is difficult to obtain, but it is widely believed (both in the region and in the international community) that some inhabitants of the refugee camps are involved in the conflict in Kashmir, have links to the Taliban government in Afghanistan, and engage in illegal activities such as drug trafficking (Weaver, 2000). Moreover, tensions are growing between refugees and local Pakistanis who have accused the visitors of taking over the transportation sector, working illegally, and committing property and other crimes. Officially, the governments of Pakistan and Afghanistan would like the refugees to be repatriated. But this has not been an easy policy to implement, especially given the economic and other hardships in Afghanistan. In short, the refugees are part of the network of stresses plaguing the region, one that will have to be managed carefully until resettlement becomes viable. The prospects for violence within the camps, emanating from the camps, or aimed at the camps are considerable and probably increasing.

Scenarios for the Future

How might the forms of human insecurity discussed above play out in the NWFP in the years ahead? At least four scenarios are plausible.

Implosion

If traditional livelihoods and social systems erode and alternatives do not develop rapidly enough to alleviate growing fear and anger, the province's citizens might revolt against authorities. Violence in one part of the province might trigger violence elsewhere, leading to a general collapse of the economy.

Projection

Conversely, local fears and anxieties might be channeled into violence directed against the Afghan refugees or against India in Kashmir and Jammu. The conflict in either case could rapidly spiral into a major catastrophe. Although the leaders of Pakistan and India have agreed to meet with the objective of resolving the dispute peacefully, the negotiations have been slow to take shape, and, to date, there is little basis for optimism.

Intervention

The outside world might decide to escalate its level of involvement in the province by combating the area's drug trade or other criminal activities. Intervention could be indirect (as has already happened on a smaller scale in the case of drug trafficking, when Pakistan's national government was pressured to apply force itself). However, intervention could also be direct.

Adaptation

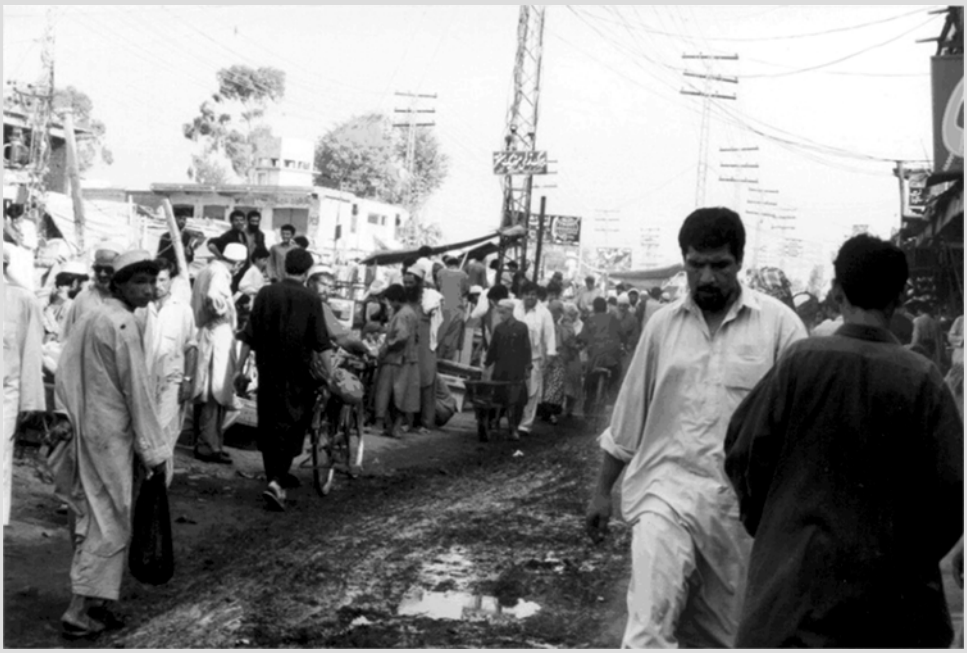
Innovative, committed, and forward-looking groups in the NWFP might succeed in efforts to: (a) improve resource management; (b) promote sustainable development; (c) build educational and other infrastructure; (d) establish effective conflict-resolution mechanisms; and (e) address such thorny issues as property rights, refugees, illegal livelihoods, and Kashmir. Various groups including the International Union for the Conservation of Nature (IUCN), the Aga Khan Foundation, and the Sustainable Development Policy Institute (SDPI) are already experimenting with reforestation and alternative energy sources such as mini-hydroelectric plants. They are setting up cooperatives to develop the fruit and nut industry, encourage tourism, and empower women. And they are encouraging dialogue and cooperation among religious elites, elders, landowners, refugees, and government officials. Peaceful change cannot be ruled out as a scenario of the future.

Conclusions and Recomendations

What steps might promote conditions conducive to adaptation and stability rather than violence and conflict? While there are rarely simple solutions to complex problems, several actions can be suggested as priorities.

Brick kilns burning old car tires add to the high concentration of particulates in the air.

Refugee Camp



Photos by Richard Matthew

For External Parties

Avoid stereotypes and negative images of the region. They have little analytical value when they are stripped of historical context, and they are entirely misleading when they are used to characterize an entire population. For instance, simplistic, uncritical accounts of Marxism guided much analysis during the Cold War, generating conclusions about threats and alliances that in retrospect were mistaken or exaggerated. These poor analyses led to serious distortions of the political dynamics of places such as Chile under Salvador Allende and Nicaragua under the Sandinistas. They also led to costly policies that all too often supplied arms to squads of corrupt elites that, although espousing strong anti-communist views, were in fact committed to little more than personal aggrandizement at any cost.

Contemporary political forces such as Islam (which has a long, varied, and complex history) need to be carefully assessed in their proper historical contexts. And contemporary labels such as "failed state," "quasi-state," and "rogue state"—terms that contain both tremendous symbolic power and implicit charges of incompetence and corruption—need to be reconsidered and avoided when possible. Thickly-detailed accounts of unfamiliar regions that are based on human intelligence and first-hand experience will rarely support simplistic claims about causality or

threat. Such accounts will tend to make policy formulation a more challenging undertaking, but they may also lead to policies that work for all sides.

Appreciate the problems inherent in tackling a single issue. A holistic approach is increasingly the only approach that seems likely to provide adequate leverage on some of the more daunting issues of developing countries. For example, population growth, environmental degradation, land tenure, and poverty are clearly interrelated in the NWFP and constitute a multi-faceted policy challenge. While small-scale initiatives focused on one facet or another may yield some positive results, substantial progress will require that all aspects of the challenge be addressed. The real and potential impacts of any policy should be assessed across all variables likely to be affected. This of course is what the World Bank (2000) and other multilateral development and lending institutions now are arguing, based on fifty years of project design and implementation experience in diverse settings.

For example, family planning programs may achieve very little when implemented under conditions of dire poverty such as those found now in the NWFP. Restrictions on what women are able to do means that there are powerful incentives to have as many sons as possible as a strategy for gaining social status and reducing economic risk. In turn, poverty alleviation programs are of limited success if they avoid the politically and culturally sensitive issue of clarifying and protecting property rights. But sorting out property rights in the region must be done with some sensitivity to ecological realities and the requirements of sustainability. The NWFP is not only natural-resource poor, but the forest cover it relies on for so many services is in grave danger. Unfortunately, coordination among various policy initiatives is not often evident among the governmental and non-governmental groups working in the province.

Resume some forms of development assistance to the region. The $3 billion poured into the region by the United States in the 1980s was a great boon to the local economy and may have been of critical importance to the defeat of the Soviet Union in Afghanistan. But these funds did little to promote long-term development. Indeed, the purchase of vast quantities of arms may have made the province's long-term development more difficult than it would otherwise have been, as the weapons have remained in the province and are freely and cheaply available.

Today, U.S. aid has been cut off to punish Pakistan for its nuclear weapons testing program. Residents of the NWFP fail to understand why their country has fallen completely out of favor with the United States in light of their valiant, decade-long involvement in the Soviet-Afghanistan War—which they feel made a small but real and costly contribution to winning the Cold War. They also feel that India's prior development and testing of nuclear weapons created a threat to which Pakistan had to respond (see WWICS, 1999).

The province greatly needs a larger social and industrial infrastructure and more resources to manage environmental change and strengthen the economy. Aid targeted at addressing some of the region's most pressing problems—especially water and air quality in Peshawar, sustainable forestry in the north, and basic education and infrastructure throughout the region—could have immediate, positive results that would also lay the groundwork for economic development and regional stability in the years ahead.

For Internal Parties

Fight corruption and inefficiency in the political system by strengthening federal and local institutions while reducing the mandates of provincial institutions that have failed. One way of describing the political problems in the NWFP is to say that strong local institutions have been diluted and displaced by weak provincial and federal institutions. The question of how to distribute resources and authority within a state has challenged many countries. Even in the most successful cases (such as the United States and Canada), the distributions are constantly renegotiated as needs change. Pakistan has very little that unifies its four provinces symbolically, structurally, or institutionally. Given the magnitude of its current problems, it may not have the luxury of working its way towards strong federal and provincial institutions through decades of trial and error. At this point in the country's history, at least some foundational institutions—such as courts—must gain legitimacy in the eyes of all sectors of the society. Indeed, a fair system of laws interpreted and enforced by reliable police forces and courts could be of great value in promoting a healthy, united future. Clarifying and improving civil-military relations, improving tax collection, and providing basic public goods and services such as clean water, education, and health care are also obvious areas where great gains could be made

that would pull together the provinces and add substance to the existing sense of shared fate and purpose.

Focus on the restoration and sustainable use of basic environmental goods and services. The NWFP is one of those places where improvements in social system performance may be contingent on implementing aggressive environmental programs. The province's economy is largely natural-resource based, and its water and forests are vital resources that are under particular attack. By protecting these resources and weaving them into sustainable economic practices, NWFP authorities would also be increasing the potential for developing new economic sectors (such as eco-tourism, fruit trees, and onion cultivation) that can draw in foreign exchange. If they allow these resources to collapse, however, it may deprive the province both of its foundation and its future.

Foster sustainable livelihoods by searching for a solution to the highly-divisive issue of contested and unclear property rights. Throughout the world, unfair or insecure land tenure is a challenge to sustainable livelihoods, conservation management, and environmental stewardship. The situation in the NWFP appears to be especially dire—there may be neither enough land to support the population nor enough funds to compensate for scarcities through strategic imports. Steps must be taken on both fronts if sustainable livelihoods are to become a reality for the province. But virtually every potentially positive step forward—from family planning to the cultivation of fruit trees—requires a clarification of property rights to create better stakes in the system and higher levels of security for the populace.

Promote regional stability. Tensions among Pakistan, India, and Afghanistan are serious and show few signs of decreasing in the near future. One out of every five people on the planet lives in these three countries. They border a Russia that has capsized and is sinking fast, and a China that seems poised between ascending to superpower status and fragmenting into several parts (see Goldstone, 1999). The entire region may be a dry forest that a misplaced match could set ablaze. Kashmir and Afghanistan are possible ignition points. And even if a region-wide catastrophe does not develop,

The road to the NWFP is highly vulnerable due to erosion and deforestation. (Photo by Richard Matthew).

simmering tensions make it difficult to move many important policy sectors forward, especially those that would benefit from transnational cooperation. In either case, the promotion of regional stability would be wise. Pakistan has ties to both Afghanistan and India that could allow it to play a vital regional role as peace-builder.[20] The United States or another objective and powerful third-party should facilitate a framework for such a dialogue.

Endnotes

[1] See Homer-Dixon & Blitt (1998); Homer-Dixon (1999); Deudney & Matthew (1999); Lowi & Shaw (1999); and Diehl & Gleditsch (2001). For an interesting alternative view developed in South Asia, see Nauman (1996).

[2] For discussion of environment and security in the region, see Myers (1993), pages 101-121.

[3] For similar cases, see Homer-Dixon & Blitt (1998).

[4] These plans are presented in great detail in the *Sarhad Conservation Strategy* prepared during the 1990s by a variety of Pakistani organizations in association with the International Union for the Conservation of Nature. See IUCN (1997).

[5] For further detail, see IUCN (1998) and van Dijk & Hussein (1994).

[6] Members of the current Taliban government in Afghanistan are Pashtun.

[7] For a valuable account of this period written by a Pakistani intellectual, see Mirza (1999).

[8] In some parts of the province, overgrazing is also a problem. This practice may be especially acute in some of the marginal areas in which refugee camps were established.

[9] According to van Dijk and Hussein, the province's forest cover is about equally distributed between the Hazara and Malakand Divisions of the NWFP, and in Hazara, it is declining at the rate of between 1.4 and 8 percent annually. This rate would mean that the forest cover could disappear within ten to fifty years (1994, page 35). Van Dijk and Hussein identify the breakdown of customary ownership systems as among the major causes of the rapid rate of deforestation. Throughout the 1990s, the government implemented a ban on logging in an effort to reduce the amount of flooding in the region. Field observation suggests that the ban had a minor impact on deforestation rates. An aggressive reforestation program has added forest cover, but it is not clear that this will survive and flourish. See Hanson, Matthew, & Aziz (2000).

[10] For an excellent discussion, see Weaver (2000).

[11] For a useful account of the Taliban, see Marsden (1998).

[12] According to a report prepared by the IUCN, fuel wood consumption in northern Pakistan is ten times higher than elsewhere in the country. In the forty years from 1952 to 1992, forest cover in Hazara Division declined by 52 percent. Unfortunately, this is an area in which trees grow slowly but burn quickly (IUCN, 1998, page 11).

[13] Author's calculations, based on various sources.

[14] For information on field work, see Hanson, Matthew, & Aziz (2000).

[15] Information drawn from van Dijk & Hussein (1994); IUCN (1998); and Hanson, Matthew, & Aziz (2000).

[16] Articles in the major newspaper, *The Frontier Post*, often link refugees to crime even in the absence of evidence.

[17] About 60,000 people have been killed in Kashmir and Jammu since 1989.

[18] Data from Hanson, Matthew & Aziz, (2000).

[19] For a thoughtful analysis of the complex links between Pakistan and India, see Mirza (1999).

References

Deudney, Daniel & Matthew, Richard A. (Eds.) (1999). *Contested grounds: Security and conflict in the new environmental politics*. Albany, NY: State University of New York Press.

Diehl, Paul & Gleditsch, Nils Petter. (2001). *Environmental conflict*. Boulder, CO: Westview Press.

Goldstone, Jack A. (1999). "Imminent political conflicts arising from China's population crisis." In Deudney, Daniel & Matthew, Richard A. (Eds.), *Contested grounds: Security and conflict in the new environmental politics* (pages 247-266). Albany, NY: State University of New York Press.

Hanson, Art; Matthew, Richard A.; & Aziz, Khalid. (2000). *In the balance: Environment and security in the NWFP*. Project No. 714/17709. Ottawa, Canada: Canadian International Development Agency.

Homer-Dixon, Thomas. (1999). *Environment, scarcity, and violence*. Princeton: Princeton University Press.

Homer-Dixon, Thomas & Blitt, Jessica. (Eds.) (1998). *Ecoviolence: Links among environment, population and security*. Lanham, MD: Rowman and Littlefield,

Institute of Policy Studies. (1997). *Kashmir brief: Introduction of the Kashmir issue and its different*

dimensions. Islamabad, Pakistan: Institute of Policy Studies.

IUCN-The World Conservation Union. (1998). *Environmental profile of Pakistan.* Gland, Switzerland: Department for International Development, IUCN.

IUCN-The World Conservation Union and the Government of the NWFP. (1997). *Sarhad provincial conservation strategy: An overview.* Peshawar, Pakistan: IUCN.

Khan, Imran. (1993). *Warrior race: A journey through the land of the tribal Pathans*. New York: Random House.

Lowi, Miriam R. & Shaw, Brian R. (Eds.) (1999). *Environment and security: Discourses and practices.* London: Macmillan Press.

Marsden, Peter. (1998). *The Taliban: War, religion and the new order in Afghanistan*. Karachi: Oxford University Press.

Mirza, Humayun. (1999). *From Plassey to Pakistan: The family history of Iskander Mirza, the first president of Pakistan*. Lanham, MD: The University Press of America.

Myers, Norman. (1993). *Ultimate security: The environmental basis of political stability*. New York: W. W. Norton.

Naqvi, Nauman (Ed.) (1996). *Rethinking security, rethinking development*. Islamabad: Sustainable Development Policy Institute, Islamabad, Pakistan.

Rees, William E. (2000). "Revisiting carrying capacity: Area-based indicator of sustainability." In Audrey Chapman, Rodney L. Petersen, and Barbara Smith-Moran (Eds.), *Consumption, population, and sustainability: Perspectives from science and religion* (pages 71-95). Washington, DC: Island Press.

Singer, Clifford E.; Saksena, Jyokita; & Thakar, Milind. (1999). "Feasible deals with India and Pakistan after the nuclear tests." In *Monthly Current Affairs Digest* 58, 18-39.

Sisson, Richard. (1990). *War and secession: Pakistan, India and the creation of Bangladesh*. Berkeley: University of California Press.

United Nations. (1997). *Pakistan and the UN's global agenda*. Islamabad: United Nations.

ICG Report: "HIV/AIDS as a Security Issue"

Over 36 million people have been infected with HIV since the virus's onset. In sub-Saharan Africa, experts believe that AIDS will eventually kill one in four adults. Infection rates in other regions are also rising at steep rates. At the pandemic level, HIV/AIDS can destroy not only individuals, families, and communities, but also economic and political institutions as well as military and police forces. For a growing number of nations, AIDS is not just a public health crisis, but also a multilevel threat to security.

The International Crisis Group (ICG), a private, multinational organization committed to strengthening the capacity of the international community to anticipate, understand, and act to prevent and contain conflict, has published a report entitled "HIV/AIDS as a Security Issue." The report details AIDS as an issue of personal, economic, communal, national, and international security; it then outlines recommended responses by the international donor community, the United Nations, affected countries, and the private sector.

"HIV/AIDS as a Security Issue" is available on-line at www.crisisweb.org/projects/showreport.cfm?reportid=321. To learn more about ICG, visit its Web site at www.crisisweb.org.