

# ECOLOGICAL AND NONTRADITIONAL SECURITY CHALLENGES IN SOUTH ASIA

By Dennis Pirages, Farooq Sobhan, Stacy D. VanDeveer, and Li Li



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# ECOLOGICAL AND NONTRADITIONAL SECURITY CHALLENGES IN SOUTH ASIA

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South Asia today possesses all the ingredients for a geopolitical nightmare. State failure in any one of the region’s most vulnerable countries could prove potentially devastating for stability on the subcontinent as a whole. Agreement on traditional security concerns is often hampered by the conflicting domestic political and foreign policy priorities of South Asian states. Yet there are emerging nontraditional security issues in South Asia that are of common concern to countries across the region.

The 21st century is wrought with “nontraditional” challenges such as looming food and water resource crises, the often devastating environmental impacts of climate change, and the threat of pandemic diseases that cut across geographical boundaries. All these challenges, as witnessed in recent years, have an immediate human impact, with implications for both domestic and regional stability in the future. Calamities in these areas bear the very real potential to exacerbate the conditions contributing to traditional security threats in the region. Additionally, developing effective mechanisms in the near term for regional cooperation on nontraditional security issues may yield dividends in the long term toward resolving some of South Asia’s long-standing traditional security problems.

In 2009, under the aegis of the John D. and Catherine T. MacArthur Foundation’s Asia Security Initiative, the National Bureau of Asian Research (NBR) launched a three-year initiative to examine opportunities for cooperation on shared nontraditional security concerns as potential building blocks toward developing a viable regional security architecture for South Asia. Applying NBR’s unique “alternative futures model” of scenario analyses, the project invited participation from a diverse group of regional experts, including representatives from Bangladesh, India, Pakistan, Sri Lanka, Nepal, the Maldives, China, and the United States, and partnered with regional institutions for a series of workshops.

The first phase of the project (2009–10) focused on identifying and discussing key trends and challenges South Asia will likely face in the next 10–15 years in the nontraditional areas of food and water security, environmental security and disaster management, and health and human security. NBR commissioned a series of papers from the project team for presentation and discussion at a November 2009 workshop organized in partnership with the Bangladesh Enterprise Institute (BEI) in Dhaka, Bangladesh. A key component of the workshop was a dedicated full-day scenario exercise to examine and tease out the implications of three potential future scenarios for South Asia’s nontraditional security challenges in 2025.

Building on the findings from the first phase of the initiative, in December 2010 NBR partnered with the Regional Centre for Strategic Studies (RCSS) in Colombo, Sri Lanka, for the project’s second-phase (2010–11) workshop, which expanded the discussion from assessing the nontraditional security challenges South Asia faces in the future and their implications for security and stability to exploring potential frameworks of regional cooperation to address those challenges. The workshop discussed the implications of three hypothetical future scenarios commissioned from select members of the project team.

In both workshops, the purpose was not to forecast the future but rather to provide opportunities to rethink, reinvent, and broaden the scope of possibilities under consideration in a collective, mutually reinforcing environment. The purpose of the scenario exercise, as framed

by NBR, is not to predict the future but, rather, to facilitate the analytical process of thinking through, finding solutions to, and assessing the implications of the policy challenges we face today and into the future, through the prism of the future.

The third and final phase (2011–12) of the project will culminate with a November 2011 regional workshop in partnership with the Institute of Peace and Conflict Studies (IPCS) in New Delhi, India. A final briefing will be held for NBR's U.S. policy audience in early 2012 in Washington, D.C.

This NBR Special Report, "Ecological and Nontraditional Security Challenges in South Asia," is the first of a series of reports to be published through the course of 2011 drawing on papers prepared for the project's first phase. The report includes Dennis Pirages' essay, "Ecological Security: A Framework for Analyzing Nontraditional Security Issues," which offers a broad theoretical framework for the project's first-phase effort. Applying this framework, Ambassador Farooq Sobhan's complementary study, "Nontraditional Security Challenges in South Asia," offers a baseline overview of the nontraditional security challenges South Asia faces in areas such as food and water security, health security, environmental security and disaster management, regional and international illegal migration, and regional energy security. Stacy VanDeveer's essay, "Environmental Security and Disaster Management in South Asia: Initial Thoughts on Implications for the United States," and Li Li's essay, "Nontraditional Security and China's Relations with South Asia," offer unique perspectives on the implications of South Asia's emerging nontraditional security environment for two non-South Asian countries with vital interests in the region—China and the United States.

Forthcoming reports in the series will address such issues as nontraditional security threats in Pakistan, human security and disaster management challenges in India, nontraditional security challenges in Nepal, and health security challenges in Sri Lanka and Bangladesh. The series will culminate in a special report dedicated to the futures component of the project, drawing in particular on the essays and discussions emerging from the project's second and third phases.

I would like to recognize and express appreciation to the members of the project team whose work appears in these pages. It has been a true pleasure to work with each of them, and the project has benefited immensely from their expert contributions. I would also like to acknowledge our regional partners in South Asia, whose collaboration with NBR has been invaluable in facilitating a successful workshop series. I would further like to recognize and thank the NBR project team, fellows, and editors, whose efforts have contributed to the success of this initiative, and, in particular, acknowledge the contributions of NBR Senior Associate Roy Kamphausen for his expert leadership and guidance in developing the project's futures exercises, Senior Project Director Tim Cook for his substantive project support, and former NBR fellow Jennifer Oetken for her unflagging dedication and assistance in successfully organizing the first-phase workshop in Dhaka and working with the project authors on the initial drafts for this series of NBR Special Reports. Finally, I would like to thank the John D. and Catherine T. MacArthur Foundation for its generous support of this initiative.

Mahin Karim

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# Ecological Security: A Framework for Analyzing Nontraditional Security Issues

*Dennis Pirages*

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## EXECUTIVE SUMMARY

This essay lays out a new nontraditional security paradigm, specifically with respect to security challenges that South Asia faces due to ecological disruptions.

### MAIN FINDINGS

- Nontraditional security or ecological crises have been responsible for killing and injuring substantially larger numbers of people over time than conventional military threats, and therefore represent a parallel and arguably more important source of insecurity.
- Ecological or nontraditional security depends on maintaining a dynamic equilibrium between humans and nature, humans and other species, and humans and pathogens, as well as among human societies.
- Demographic changes, specifically population growth, are the most destabilizing factors in developing countries. Ecological security problems are created as the capabilities of nature are unable to meet the demands of rapidly growing societies.
- Deepening globalization and increasing urbanization have the potential to severely destabilize the equilibrium between human populations and pathogens. Recent outbreaks of new infectious diseases may foreshadow serious pandemics in the near future.
- Global warming will have a major impact on all four relationships defining ecological security: coastal areas will be at greatest risk due to flooding; warming will permit pests and pathogens, particularly tropical diseases, to move beyond their traditional regions; and the disruption of ecological equilibrium could increase conflict between societies.

### POLICY IMPLICATIONS

- The likely exponential increase in ecological security challenges over the next three decades, both globally and in South Asia, must be met by a heightened ecological security perspective capable of identifying and addressing this broad array of challenges.
- Creating a more ecologically secure world will require adjusting defense expenditures to better reflect the actual security threats of the 21st century, which are increasingly nontraditional rather than conventional military threats.
- The adoption of an ecological security perspective will also involve recognizing that we live in a global system in which increasingly porous borders make cooperation among neighboring countries essential for future well-being.

Nearly four decades have passed since the 1972 UN Conference on the Human Environment in Stockholm, where participants made a serious effort to explore alternative ways of thinking about security. Subsequent conferences in Rio de Janeiro in 1992 and Johannesburg in 2002 laid out a more comprehensive approach to ecologically sustainable development, intended to enhance nonconventional ways of thinking about security. Since the end of the Cold War, much has happened that legitimizes alternative views of the changing nature of threats to human security in an increasingly interdependent and complex world. These last two decades have been punctuated by increasing numbers of terrorist attacks, state failures, deadly epidemics, rapidly fluctuating world energy and food prices, a global economic meltdown, and intense storms and flooding that are very likely early effects of global warming. These and similar events have given impetus to the development of an alternative paradigm in international relations theory and practice that focuses less on conventional military threats and more on nontraditional security challenges.

The traditional realist paradigm that historically has dominated international relations theory and practice portrays security threats almost exclusively in military terms. While not ignoring such traditional concerns, the “ecological security” paradigm, which traces its diplomatic origins to the Stockholm meeting, gives much greater consideration to nontraditional security threats.<sup>1</sup> This new security perspective holds that the primary function of defense policy is the prevention of premature and needless deaths and injuries, as well as the cultivation of human well-being, broadly defined. An assumption inherent in this ecological or nontraditional paradigm is that significant threats to societies are just as likely to come from changes in human relationships with nature as they are from well-armed troops crossing borders.

## Rethinking Security

There can be no question that many parts of the world, South Asia included, remain potentially violent and dangerous places. Given a lengthy historical legacy of military and ethnic conflict, it is not surprising that security in many places is still narrowly defined in realist terms. According to Geoffrey Dabelko and David Dabelko, “at its most fundamental level, the term security has meant the effort to protect a population and territory against organized force while advancing state interests through competitive behavior.”<sup>2</sup> Given the effort that has been associated with this historical quest for wealth and power, limiting security concerns to mostly military matters is understandable, if not completely logical. Defense budgets, for the most part, are still used to purchase tanks and planes and not to fight infectious disease or stem global warming. But while troops massed on borders raise fears of impending destruction and death in some parts of the

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<sup>1</sup> Dennis Pirages and Teresa Manley DeGeest, *Ecological Security: An Evolutionary Perspective on Globalization* (Lanham: Rowman and Littlefield, 2004).

<sup>2</sup> Geoffrey D. Dabelko and David D. Dabelko, “Environmental Security: Issues of Conflict and Redefinition,” *Environmental Change and Security Project Report*, no. 1 (Washington, D.C.: Woodrow Wilson Center, 1995), 3.

world, in other parts concerns over various kinds of environmental threats have been growing.<sup>3</sup> Additionally, in an era of deepening globalization, infectious diseases can now cross borders more easily and are increasingly being recognized as very serious security threats.<sup>4</sup>

The ravages of nature that have been responsible for killing and injuring much larger numbers of people over time than traditional security threats represent a parallel and arguably more important source of insecurity. Within the old realist paradigm, however, deaths from combat have been considered normal and understandable, whereas many of the more deadly manifestations of discontinuity in humanity's relationship with nature—such as plagues, pestilence, floods, and droughts—have been poorly understood and thus often ignored. It is estimated, however, that all the wars of the twentieth century resulted in the deaths of about 111 million combatants and civilians, an average of 1.1 million per year. By comparison, infectious diseases are now responsible for taking the lives of between 14 and 15 million people per year.<sup>5</sup>

However, there now are increasing signs of significant changes even among more conventional security planners, and in many countries training for traditional military missions is slowly giving way to cooperative efforts to prevent terrorism, preserve order in failing states, prevent genocide, and provide relief to disaster victims. In 2008, for example, the United States military unveiled a new security doctrine that declared nation-building missions to be more critical than conventional warfare and defined “fragile states” that breed crime, terrorism, and religious and ethnic strife as the greatest threats to U.S. security.<sup>6</sup>

While certainly not ignoring more conventional military threats to human well-being, the emerging ecological security paradigm focuses more heavily on the broad array of challenges presented by nature. Ecological security grows out of the continually evolving relationships between human societies and an ever-changing physical environment that sustains all forms of life. A central assumption inherent in this new way of thinking about security is that threats to well-being are just as likely to come from nature as they are from other people.<sup>7</sup>

## Maintaining Ecological Security

Human societies are evolving biological populations that have shaped and been shaped by physical environments shared with other societies, interactions with other animal species, and

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<sup>3</sup> Lester Brown, “Redefining National Security,” Worldwatch Institute, Worldwatch Paper, no. 14, October 1977; Dennis Pirages, *Global Ecopolitics: A New Context for International Relations* (North Scituate: Duxbury Press, 1978); Norman Myers, “Environment and Security,” *Foreign Policy*, Spring 1989; Marc Levy, “Time for a Third Wave of Environment and Security Scholarship,” *Environmental Change and Security Project Report*, no. 1 (Washington, D.C.: Woodrow Wilson Center, 1995); Nils Petter Gleditsch, ed., *Conflict and the Environment* (Dordrecht: Kluwer Academic Publishers, 1997); Geoffrey D. Dabelko and P.J. Simmons, “Environment and Security: Core Ideas and U.S. Government Initiatives,” *SAIS Review* 17, no. 1 (Winter/Spring 1997): 127–46; Daniel Deudney and Richard Matthew, *Contested Grounds: Security and Conflict in the New Environmental Politics* (Albany: SUNY Publishers, 1998); Thomas F. Homer-Dixon, *Environment, Scarcity, and Violence* (Princeton: Princeton University Press, 1999); Jon Barnett, *The Meaning of Environmental Security: Ecological Politics and Policy in the New Security Era* (London: Zed Books, 2001); Simon Dalby, *Environmental Security* (Minneapolis: University of Minnesota Press, 2002); and Colin H. Kahl, *States, Scarcity, and Civil Strife in the Developing World* (Princeton: Princeton University Press, 2006).

<sup>4</sup> Andrew T. Price-Smith, *The Health of Nations: Infectious Disease, Environmental Change, and Their Effects on National Security and Development* (Cambridge: MIT Press, 2001); Michael Moodie and William J. Taylor, “Contagion and Conflict: Health as a Global Security Challenge,” Center for Strategic and International Studies (CSIS) and Chemical and Biological Arms Control Institute (CBACI), January 2000; Don Noah and George Fidas, “The Global Infectious Disease Threat,” National Intelligence Council, National Intelligence Estimate, no. 99-17D, January 2000; Jonathan Ban, “Health, Security, and Global Leadership,” CBACI, Health and Security Series Special Report, no. 2, 2001; and David P. Fidler, *SARS, Governance, and the Globalization of Disease* (New York: Palgrave, 2004).

<sup>5</sup> “Millennium of Wars,” *Washington Post*, March 13, 1999, A13.

<sup>6</sup> Ann Scott Tyson, “Army Will Shift Its Doctrine to Nation-Building Missions,” *Washington Post*, October 5, 2008, 8A.

<sup>7</sup> Ben Wisner, Piers Blaikie, Terry Cannon, and Ian Davis, *At Risk: Natural Hazards, People's Vulnerability, and Disasters* (London: Routledge, 1994).

contact with a variety of microorganisms. Discontinuities in this complex web of relationships are often seen from the human perspective as disasters or crises. Relationships among societies and between those societies and components of the ecosystems in which they are embedded are constantly in flux. As one advocate of a new security paradigm has put it, “arguably the most important facet of the recent discussions relating ecology to security is that stability in systems is temporary and that long-term fluctuations are inherent in natural phenomena.”<sup>8</sup>

The relationship between humans and nature can be destabilized by either changes in human behavior or changes in nature. Human populations have grown and declined over time, and the sustaining capabilities of nature similarly have waxed and waned, as have threats from pathogens, other animals, and other societies. Ecological security thus depends on maintaining the dynamic equilibrium of four key relationships: between societies and nature, between societies and other species, between societies and pathogens, and among human societies.

### *Between Societies and Nature*

Equilibrium in the relationship between societies and nature can be nurtured by working cooperatively to match the increasing material demands made by growing societies with the capabilities of the physical environment to sustain them. Thus, ecological security can be enhanced by satisfying the needs for natural resources and environmental services within the physical limits of the territory that societies occupy or through cooperative ventures with neighbors. Conversely, disequilibrium in the relationships between societies and nature is manifest in crises such as resource shortages, water and air pollution, famine and malnutrition, and shortages of critical fuels and minerals.

### *Between Societies and Other Species*

The well-being of human societies has been and, in many parts of the world still is, shaped by interactions with other species. From ancient times to the present, animal predators and pests have represented a direct threat to people and their food supplies. People still share habitats with potentially dangerous animals in many parts of the world, but technological innovations ranging from rifles to insecticides have tipped this balance in favor of humans. It is thus human activities that now threaten “vanishing species” in many parts of the world. Nonetheless, pestilence is still a significant challenge. In an era of deepening globalization, large-scale bio-invasion through the unintended movement of plants and animals across borders is, at the very least, an expensive nuisance. In the summer of 2008, for example, an explosion of the rat population in Bangladesh devoured the rice crop in the southeastern region, ultimately resulting in the need for tens of thousands of people to receive emergency food aid.<sup>9</sup>

### *Between Societies and Pathogens*

By far the most important current and future threat to ecological security is the potential destabilization of the always tenuous relationship between people and pathogens. Humans have evolved throughout history with a host of micro-organisms, most of which have posed no threat. In fact, many of them have been quite beneficial or even essential for human well-being. But a small number of these microorganisms are harmful. Although human immune systems are able

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<sup>8</sup> Dalby, *Environmental Security*, 143.

<sup>9</sup> “Thousands Receive Food Aid after Rats Devastate Crops,” *Wall Street Journal*, July 14, 2008, A10.

to deal with a variety of viruses, bacteria, and other kinds of pathogens, deepening globalization, increasing travel and commerce, industrialization, urbanization, and growing environmental pollution are exposing people to pathogens with which their immune systems have had little previous contact. Over the last three decades, more than 20 previously known diseases have re-emerged or spread geographically and at least 30 previously unknown diseases have been identified. The next few decades could well see an outbreak of rapidly moving epidemics or pandemics brought about by significant changes in human-microbe relationships.

### *Among Human Societies*

Finally, ecological security is also dependent on maintaining equilibrium among societies. This fourth dimension of ecological security shares much in common with traditional definitions of security. But rather than focusing on sovereigns and their motives as causes of conflict and deaths, the focus shifts to the more basic underlying causes of conflict among societies embedded in changing environments. Thus, differential rates of population growth among neighboring societies or rapid population growth in the face of growing resource limitations can generate conflicts among neighbors and result in more traditional kinds of security problems.

## Challenges to Ecological Security

There are several kinds of threats to ecological security. Among the most significant are demographic changes, the spread of infectious disease due to deepening globalization, and global warming.

### *Demographic Changes*

Any significant changes in human populations have the potential to destabilize one or more of the four relationships defining ecological security. Over the last century, rapid population growth clearly has been considered to be the most destabilizing kind of demographic change. But there are also several other types of emerging demographic dislocations that create various kinds of insecurities. The emergence of youth bulges—relatively large numbers of young job-seekers resulting from periods of rapid population growth—can be a source of conflict as they compete for employment opportunities. Large-scale migrations, whether across borders or internal population movements and urbanization, can destabilize all aspects of ecological security. Differential population growth can be a source of conflict within countries or among neighbors. Finally, even declining fertility and associated societal aging are now creating previously unanticipated economic problems in many industrialized countries as they attempt to adjust to the biological, socio-economic, and political challenges of population aging and decline.<sup>10</sup>

Rapid population growth is still, however, the most potent destabilizing factor in developing countries and in South Asia. The world's population is expected to grow at about 1.2% annually over the next fifteen years, resulting in eight billion people sharing the earth by the year 2025. But almost all this population growth will be concentrated in developing countries, potentially causing significant instability. Of the projected world population of 9.4 billion in 2050, only 1.3 billion will live in presently industrialized countries.<sup>11</sup> Such growth will further destabilize human relations

<sup>10</sup> Jack A. Goldstone, "The New Population Bomb," *Foreign Affairs* 89, no. 1 (January/February, 2010): 31–43.

<sup>11</sup> "2008 World Population Data Sheet," Population Reference Bureau, 2008.

with the physical environment in the developing world by putting pressure on water and food supplies. Moreover, future industrial development in India and China, with a projected combined population of 2.9 billion people in 2025, will have a major impact on world fossil fuel markets and create a significant quantity of greenhouse gases, thus accelerating global warming.

Population growth in developing countries will thus continue to create ecological security problems because of large gaps between the demands of rapidly growing societies and the capabilities of nature to meet them. Growing populations are even now being forced to live in marginal areas such as coastal lowlands or land periodically ravaged by drought. These regions undoubtedly will be further damaged as a result of global warming. The amount of fresh water available per person is declining substantially, and one-third of the world's people now live in areas subject to moderate or high water stress. This number will continue to increase because of population growth as well as the need for more fresh water for irrigated agriculture, livestock production, and industrialization and to satisfy the demands of wealthier urban residents.<sup>12</sup> More than 2.6 billion people now lack adequate sanitation and more than 1 billion do not have access to safe water supplies. Widespread contamination of drinking water increases water-associated infectious diseases, which already claim up to 3.2 million lives each year.<sup>13</sup>

Currently, food supplies worldwide are also insufficient to keep up with population growth, and it is estimated that lack of adequate nutrition accounts for nearly 10% of all disease. Of the present world population of 6.7 billion, over 800 million people do not obtain adequate protein and calories.<sup>14</sup> And periodic price increases, such as those accompanying the oil price hikes and related commodity inflation of 2007–8, have driven large numbers of people out of world food markets.

Countries belonging to the South Asian Association for Regional Cooperation (SAARC) are experiencing demographic pressures similar to those affecting other developing areas (see **Table 1**). Population growth rates currently vary from 2.6% per year in Afghanistan to 1.2% in Sri Lanka, and the 2008 SAARC population of 1.55 billion is expected to grow to 1.93 billion by 2025. There also is a substantial youth bulge pent up in almost all SAARC countries. At present, 45% of the population of Afghanistan, 39% of the population of Pakistan, and 34% of the population of Bangladesh are under 15 years of age. Future civil strife is likely to develop unless economic opportunities can be created for these restless and youthful populations expecting to enter the labor force.<sup>15</sup>

Rapid population growth is responsible for other nontraditional security issues in SAARC countries. Although SAARC countries, with the exception of Afghanistan, do have adequate access to improved sources of water, malnutrition remains a serious problem. For example, 30% of the population of Bangladesh, 24% of Pakistan, 22% of Sri Lanka, and 20% of India are now considered to be undernourished. In addition, these countries have restive youth bulges that could become violent in the absence of employment opportunities.

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<sup>12</sup> World Health Organization (WHO), *Ecosystems and Human Well-being: Health Synthesis* (Geneva: WHO Press, 2000), 2.

<sup>13</sup> *Ibid.*, 9.

<sup>14</sup> *Ibid.*, 3.

<sup>15</sup> Richard P. Cincotta, Robert Engelman, and Daniele Anastasion, *The Security Demographic: Population and Civil Conflict after the Cold War* (Washington, D.C.: Population Action International, 2003), 48.

TABLE 1 Demographic change in SAARC countries

|             | Population 2008 (millions) | Population 2025 (millions) | Rate of increase (%) | % below 15 years old | Undernourished (%) | Access to improved water (%) |
|-------------|----------------------------|----------------------------|----------------------|----------------------|--------------------|------------------------------|
| Afghanistan | 32.7                       | 50.3                       | 2.6                  | 45                   | ...                | 22                           |
| Bangladesh  | 147.3                      | 180.1                      | 1.7                  | 34                   | 30                 | 80                           |
| Bhutan      | 0.7                        | 0.9                        | 2.3                  | 32                   | ...                | 81                           |
| India       | 1,149.3                    | 1,407.7                    | 1.6                  | 32                   | 20                 | 89                           |
| Maldives    | 0.3                        | 0.4                        | 1.6                  | 32                   | 10                 | 83                           |
| Nepal       | 27.0                       | 36.5                       | 2.1                  | 37                   | 17                 | 89                           |
| Pakistan    | 172.8                      | 228.9                      | 2.2                  | 39                   | 24                 | 90                           |
| Sri Lanka   | 20.3                       | 23.2                       | 1.2                  | 27                   | 22                 | 82                           |
| World       | 6,705.0                    | 8,000.0                    | 1.2                  | 28                   | 14                 | 86                           |

SOURCE: Population Reference Bureau, 2008.

### *Globalization and Infectious Disease*

While demographic change will continue to create ecological security challenges, there is increasing evidence that deepening globalization and other associated changes in both nature and human settlements are also becoming very significant destabilizing forces. Globalization, for example, is weakening borders and thus exposing people to pathogens from which they have historically been protected by geographic, political, and cultural barriers. Human immune systems, having little experience with these traveling pathogens, are highly susceptible to many of them. Though there always has been some movement of biological organisms between the world's diverse ecosystems, the current surge of people, plants, pests, and pathogens across increasingly porous borders is producing much more frequent interactions among people and microorganisms.

The contemporary era of growing system complexity, increasing travel and commerce, continuing population growth, and widespread industrialization, urbanization, and environmental pollution shares much in common with earlier periods of disease outbreaks and could very well contain the seeds of a new wave of outbreaks or even pandemics.<sup>16</sup> Changes now underway raise three interrelated sets of challenges for the world health community in general, and South Asian states in particular. First, the rapid acceleration of the movement of people, products, pests, and pathogens across borders is increasing the odds of deadly diseases making their way into biologically naïve populations. Second, the pressures of population growth in developing countries often force large numbers of people into previously forested areas where they can be exposed to novel pathogens that have been lurking in the wilderness.<sup>17</sup> Continuing urbanization and deforestation are likely to cause more deadly disease outbreaks in South Asia, as well as in much of the developing world, because of the increasing rapidity with which pathogens can move from the forests through newly populated urban areas. Third, the serious infectious

<sup>16</sup> Laurie Garrett, *The Coming Plague: Newly Emerging Diseases in a World Out of Balance* (New York: Farrar, Straus and Giroux, 1994).

<sup>17</sup> Ann Gibbons, "Where Are 'New' Diseases Born?" *Science* 261, no. 5122 (August 6, 1993).

diseases endemic to Asia and Africa are of increasing global concern because of the swiftness with which they can move to distant parts of the world.

The deepening of globalization has expanded the volume of trade, as well as the numbers of people traveling farther and crossing borders more frequently. But as travel and commerce have accelerated, so has the spread of various animal species and microorganisms. Some of this bio-invasion has taken place in the name of environmental improvement, but much of it has been unintended and will be very costly to contain. There is growing evidence that these large increases in mobility due to greater trade and travel are exposing people to new and more deadly diseases. Many of these new diseases have jumped from forest animals to people living in or near heavily forested areas. Specifically, it is suspected that consuming “bushmeat” is often instrumental in passing diseases from primates to people.<sup>18</sup> There have been four recent outbreaks of new diseases that could well be warning signs of more serious pandemics to come.

*HIV/AIDS.* This ongoing pandemic has been the most destructive of the four disease outbreaks. First identified in 1981, it is suspected that the virus jumped from chimpanzees to humans in Central Africa. It has slowly spread around the world since then, and an estimated 33.2 million people are now living with the virus. About 2.5 million people were newly infected with the virus and about 2.1 million people died of AIDS-related illnesses in 2007. In Asia, nearly 5 million people were living with HIV in 2007, and roughly 500,000 people contracted the disease.<sup>19</sup> In SAARC countries, Bangladesh and Nepal have a relatively small incidence of HIV, whereas Pakistan has a more serious problem, possibly because of limited general knowledge about the dynamics of HIV. India has the largest number of HIV victims, but improved surveillance is beginning to have a positive impact on the pandemic there.

*Severe acute respiratory syndrome (SARS).* This second previously unknown disease apparently jumped from palm civet cats to people in China’s Guangdong Province in late 2002. Although only about 8,500 people became ill from the SARS virus, it offered evidence of how quickly new viruses can move through more porous borders, seriously disrupting travel and commerce. In only a few weeks, the disease reached much of Asia, and within six months it had been reported in 29 countries.<sup>20</sup> SARS had a major impact on trade and travel in Asia, shaving an estimated \$100 billion worth of economic growth from the region before the outbreak was brought under control.

*Avian flu (H5N1).* A widespread contemporary outbreak of avian flu (H5N1) among fowl is now focusing attention on the possibility of a rapidly moving influenza pandemic jumping from birds to people. This outbreak, first noticed in southern China in 1997, could easily represent a very serious nonconventional security challenge. Though still primarily a threat to birds, avian flu has jumped to people and had taken 320 human lives as of April 2011. Disease experts are now concerned that migrating birds could develop and spread a more lethal form of the virus.

*Swine flu (H1N1).* Finally, even while cooperative surveillance efforts were focusing on tracking avian flu, a new strain of influenza A (H1N1) apparently emerged in Mexico in 2008 and was officially identified there in April 2009. This virus, dubbed “swine flu,” moved rapidly in the Southern Hemisphere, and the World Health Organization declared it to be a pandemic in June 2009. It is difficult to quantify the number of cases of the virus because it resembles regular influenza. But it is estimated that as of August 2009 there were between 180,000 and 250,000

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<sup>18</sup> Nathan Wolfe, “Preventing the Next Pandemic,” *Scientific American*, April 2009.

<sup>19</sup> Joint United Nations Program on HIV/AIDS (UNAIDS), *2008 Report on the Global AIDS Epidemic* (Geneva: UNAIDS, 2008).

<sup>20</sup> See, for example, Fidler, *SARS, Governance, and Globalization*.

confirmed cases, resulting in 2,500 deaths. Swine flu is of deep concern because it passes easily from person to person. It is also a relative of the Spanish flu of 1918, which was responsible for between 20 and 100 million deaths; the Asian flu of 1956–58, which killed nearly 2 million people; and the Hong Kong flu of 1968–69, which took more than 1 million lives. This form of influenza also has tapered off, and the WHO declared the pandemic over in August 2010. But it is feared that swine flu could return in a more virulent form.

*Pandemic scenarios.* An attempt has been made to explore the potential losses that would result from a future influenza pandemic. Warwick McKibbin and Alexandra Sidorenko have developed four scenarios in which the severity of a hypothetical influenza pandemic ranges from “mild” to “ultra.”<sup>21</sup> Their mild scenario would result in the loss of 1.4 million lives and cost the global economy \$330 billion of output, slightly less than 1% of world product. The ultra pandemic, however, would take 142 million lives and cause an economic loss of \$4.4 trillion, 12.6% of world product. A pandemic similar to the Spanish flu of 1918–19 would be classified as “severe” and would wipe out 71 million people, about 1.1% of the world’s population. Under this scenario, China would be struck with 14.2 million deaths, India 12.1 million, and the rest of the developing world 10 million. By contrast, there would be a total of only 5.3 million deaths in Europe, Japan, and the United States combined. In addition, India’s GDP would decline by 4.9%, China’s GDP by 4.8%, and the rest of the developing world’s GDP by 6.3%.<sup>22</sup> The probability of a severe pandemic developing is increasing over time as a result of globalization and urbanization.

In spite of significant advances in medical technology in recent years, the threat posed by infectious diseases is still substantial. These four recent disease outbreaks are warnings that the tenuous relationship between people and pathogens may become an even greater security threat. Of the nearly 60 million people who die annually, nearly one-quarter already die from preventable communicable diseases, the largest portion of these deaths taking place in the world’s poorest countries. Lower-respiratory infections take about 4.2 million lives annually, and diarrhea follows closely behind, accounting for 2.2 million deaths. HIV/AIDS now is estimated to be responsible for 2.0 million deaths, and tuberculosis and malaria combine to kill another 2.4 million people. There are major differences among countries regarding causes of death. In high-income countries, nine out of the ten leading causes of death are noncommunicable diseases, whereas in low-income countries the dominant causes of death are infectious and parasitic diseases and perinatal conditions.<sup>23</sup>

### *Global Warming*

The rapid pace of industrialization in South Asia is significantly increasing dependence on imported petroleum in the region. At present, Bhutan, Maldives, Nepal, and Afghanistan are almost totally dependent on imported petroleum, while Bangladesh, India, and Pakistan are highly dependent on it. Sri Lanka imports about half the petroleum it consumes. Taken together, imports of diesel fuels alone cost SAARC countries more than \$14 billion per year. Given the substantial growth of the world and regional economies over the last decade, there has been little spare capacity in a tightening world oil market. Continued reliance on imported oil by SAARC

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<sup>21</sup> See Warwick J. McKibbin and Alexandra A. Sidorenko, “Global Macroeconomic Consequences of Pandemic Influenza,” Lowy Institute for International Policy, 2006.

<sup>22</sup> Ibid.

<sup>23</sup> WHO, *Global Burden of Disease 2004* (Geneva: WHO Press, 2008), 11–12.

countries will create significant internal economic dislocations and disequilibria as the world oil market eventually approaches peak oil. The development of “soft path” energy alternatives (such as solar, geothermal, and wind) should be a high priority in building an ecologically secure and sustainable future.<sup>24</sup>

Reducing fossil fuel consumption in order to minimize production of greenhouse gases is perhaps more important. China, India, and other developing countries are significantly expanding greenhouse gas emissions as industrialization continues to accelerate. SAARC countries are already experiencing environmental dislocations that could be harbingers of global warming. In northern India, for example, the groundwater essential for irrigation is being depleted at a rate that is no longer sustainable.<sup>25</sup> Global warming has the potential to exacerbate water problems that already limit agricultural production in the region. Evidence of the onset of warming on a global scale is now unequivocal. Eleven of the twelve years between 1995 and 2006 rank among the warmest years on record in terms of surface temperatures. Over the last century global surface temperatures have risen by 0.74 degrees centigrade. Due to thermal expansion and related factors, sea levels around the world have been rising at about 3.1 millimeters per year.<sup>26</sup>

Global warming and the associated rise in sea levels will have a significant impact on future ecological security in South Asia. Precipitation patterns, for example, are likely to change dramatically. Crop yields are expected to rise in East and Southeast Asia, but will likely decrease significantly in South Asia. Coastal islands might simply disappear as a result of strong coastal storms, and millions of people could become environmental refugees.<sup>27</sup> Coastal areas will be at greatest risk due to flooding from the sea. And waterborne diseases will likely proliferate due to projected changes in the hydrological cycles resulting from warming-related ecosystem changes.<sup>28</sup>

Thus, global warming will have a major impact on all four dynamic relationships defining ecological security. Warming will transform ecosystems, thereby upsetting the equilibrium between societies and nature. Warming will permit pathogens, particularly tropical diseases, to move beyond their traditional regions. Relations with other species will also be affected, given the significant impact climate change will have on the world’s flora and fauna. Finally, it is possible that all of this will increase tensions among societies and lead to conflict.

## Enhancing Ecological Security

Building a more secure world can best be accomplished by using an ecological security framework to make critical policy decisions. This means recognizing that we really do live in a global system in which increasingly porous borders make cooperation among neighboring countries essential for future well-being. It should also be clear that the security of the whole system is dependent on maintaining the vitality of its various parts. The likelihood of future pandemics, for example, means that neighboring countries optimally would agree to greater transparency and cooperative efforts to identify and remedy the environmental problems now being created by rapid population growth, industrialization, and global warming.

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<sup>24</sup> Tim Forsyth, *International Investment and Climate Change: Energy Technologies for Developing Countries* (London: Earthscan, 1999).

<sup>25</sup> Richard A. Kerr, “Northern India’s Groundwater Is Going, Going, Going...” *Science* 325, no. 5942 (August 14, 2009): 798.

<sup>26</sup> Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Synthesis Report* (Geneva: IPCC, 2007).

<sup>27</sup> Shin-Wha Lee, *Environment Matters: Conflicts, Refugees, and International Relations* (Seoul: World Human Development Institute Press, 2001).

<sup>28</sup> IPCC, *Climate Change 2007*, 50, 85–90.

Challenges to ecological security will proliferate over the next three decades, both globally and in SAARC countries. The delicate equilibrium between societies and the sustaining capabilities of the physical environment will be challenged by population growth; the spread of industrialization in India, Bangladesh, China, Indonesia, and other large countries; and increasing global warming. The movement of new diseases from animals to humans as a result of deforestation will disturb the equilibrium between people and pathogens. And infectious diseases will spread much more rapidly due to international travel and accelerating urbanization. The serious question that remains is whether this exponential increase in security challenges will be matched by the development of an ecological security perspective that can identify and address the broad array of challenges to our collective well-being and revise defense priorities and expenditures accordingly.

Creating a more ecologically secure world, therefore, requires a paradigm shift in how security issues are identified and addressed. It means adjusting defense expenditures to better reflect the security threats of the 21st century, which are increasingly the nonconventional threats to security that have been ignored within the realist paradigm. Creating such a world means dealing with the impacts of rapid population growth, including the restive youth bulges that exist in many developing countries. It also means addressing the environmental dislocation resulting from rapid industrialization, and anticipating the impacts of global warming on all aspects of ecological security. Most important of all, however, such a paradigm shift means preparing to deal with deadly pandemics, perhaps the most serious challenge to our future collective well-being.

# Nontraditional Security Challenges in South Asia

*Farooq Sobhan*

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## EXECUTIVE SUMMARY

This essay provides an overview of the key nontraditional security (NTS) issues facing South Asia and examines ongoing and potential initiatives to mitigate future NTS challenges.

### MAIN FINDINGS

- Excessive military spending in South Asia has been one of the reasons for restricting expenditure on human security and NTS issues. During 1998–2008, defense budgets increased by 41%.
- In South Asia, food costs constitute the average household's largest expenditure. If food prices continue to rise without a matching increase in incomes of people at the bottom of the economic ladder, it is estimated that approximately 100 million people could be pushed back into poverty.
- Over the past 25 years, natural disasters and environmental degradation have killed nearly half a million people in South Asia and inflicted colossal damages estimated at \$59 billion.
- The lack of long-term energy planning by South Asian countries has caused human suffering and significantly hindered the entire region's economic growth prospects.
- While there is growing recognition that both traditional and nontraditional security challenges require regional integration and regional solutions, a number of studies in South Asia have found that the main obstacles to such cooperation in countering NTS threats remain mistrust and the absence of political will.

### POLICY IMPLICATIONS

- South Asian governments have not yet fully realized that military measures and domestic policies alone cannot overcome NTS challenges; rather, many of these challenges must be faced collectively and through regional cooperation.
- A framework for managing regional disasters needs to be designed. The framework should include a comprehensive strategy and action plan, cover institutional mechanisms, provide tools for mitigation measures, and facilitate a legal framework and policy directions.
- Special attention should be paid to strengthening networking among research institutions in the region working on NTS issues and encouraging them to provide inputs, ideas, and strategies for joint action. It is equally important that this network of research institutions closely monitors and evaluates regional and subregional projects.

Since the end of the Cold War, nontraditional security (NTS) issues have become an integral part of the international security discourse. NTS issues involve a complex relationship between traditional security issues and the economic strength of a state. This relationship is increasingly discussed in both domestic and international policy and research agendas of governments, NGOs, academia, and the media. States are now gradually looking beyond traditional security, which has largely been defined in geopolitical and geostrategic terms and confined to the relationships among nation-states and their military strategies.

The last two decades have witnessed growth in a wide range of domestic and international NTS threats, such as environmental disasters, ecological degeneration, air and water pollution, contagious diseases, drugs and small arms trafficking, cross-border movement and internal displacement, financial shocks, cybercrime, terrorism and organized crime, and religious, ideological, and ethnic extremism. On top of these issues, ongoing internal conflicts significantly influence NTS concerns at the regional level in South Asia. Porous borders in the region pose a serious security threat by fuelling not only territorial, ethnic, and communal conflicts but also conflicts arising out of scarce natural resources, in particular, water. This inevitably brings greater distress to the people who have suffered the most from such conflicts. For example, internal conflict situations often generate military responses from states. Therefore, traditional security threats at times become aggravated by NTS threats.

In the case of developing regions, such as South Asia, NTS issues have yet to gain the full attention of governments. The constant competition between India and Pakistan for power and political influence poses severe challenges for national, regional, and global security and stability. South Asian governments do not have the policy structure and infrastructural capacity necessary to tackle existing NTS threats, let alone the ability to cope with the constantly evolving and emerging NTS issues. The inability of government agencies to deal with these issues adequately partly stems from a lack of both human and financial resources. Given these limitations, governments find it very difficult to recognize and address NTS threats due to the complexity of the problems, the absence of institutional capacity, and the lack of regional mechanisms to deal with NTS problems that in many cases cover South Asia as a whole or a significant portion of the region. Nevertheless, it is encouraging to note that the governments in the region have in recent years begun to allocate more financial, natural, and human resources to dealing with NTS threats.

This essay provides an overview of the key NTS issues that require collective action from South Asian states. The first section identifies the linkages between traditional security threats and human security needs in the region and highlights the ongoing dilemma of balancing military security expenditure with the resources required to meet the NTS agenda. The second section illustrates five major NTS challenges in South Asia that warrant immediate attention from all the stakeholders involved in security and development activities. In the third section, the essay demonstrates the progress that has been made in tackling NTS issues in Asia through cooperative initiatives. The essay concludes by arguing that such closer ties and stronger regional cooperation are necessary to address NTS threats. Specifically, cross-border cooperation in water, the environment, health, energy, and terrorism is of critical importance and must be expedited immediately.

## Linkages between Traditional Security and Nontraditional Security in South Asia

The concept of NTS is today recognized in South Asia as having a profound influence on the security perspectives of every country in the region. The South Asian region includes Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka. The latest available statistics, published by the Asian Development Bank, indicate that the region has about 23% of the world's population and 15% of the world's arable land, but receives less than 1% of global foreign investment and tourism revenues, only 2% of global GDP, and 1.2% of world trade. Furthermore, South Asia is still home to about 410 million of the 720 million poor living in the Asia-Pacific region despite the rapid economic growth in India and, to a lesser extent, other countries. Of the 1.4 billion people in South Asia, 42% or 488 million live on less than a dollar a day.<sup>1</sup> In addition, key indicators suggest that social development still remains relatively low when compared to other Asian regions.<sup>2</sup>

Compounding the formidable economic and social challenges facing South Asia are numerous traditional and nontraditional security threats. Yet while South Asian countries confront both military and human security dilemmas, national budgets tend to favor military spending. South Asia's ratio of military expenditure as a percentage of GDP is one of the highest in the world. According to a 2009 report by the Stockholm International Peace Research Institute (SIPRI), emphasis on defense budgets resulted in a 41% increase in military spending in the region—from \$21.9 billion in 1999 to \$30.9 billion in 2008.<sup>3</sup> This rate of increase is the highest in the world and comparable with that of North Africa. Defense spending by South Asian countries was 6.5% of regional GDP in 2006, with India spending 2.5% of its GDP on defense; Pakistan, 3%; Bangladesh, 1.2%; and Sri Lanka, 2.6%.<sup>4</sup> If South Asian countries continue to spend excessively on military security, as most presently do, this will inevitably undermine their capacity to support programs that address issues relating to human security and NTS programs. This is one of the principal reasons why the level of poverty continues to remain so high in South Asia.

Furthermore, far from mitigating security threats, the substantial diversion of resources has helped make South Asia one of the major flashpoints in the world, with domestic compulsions and threat perceptions further aggravating the arms race between India and Pakistan. India, which ranked tenth among the top spenders on defense, increased its defense expenditure from \$8 billion in 1990 to \$30 billion in 2008. Pakistan's defense expenditure similarly rose from \$2.6 billion in 1990 to \$3 billion in 2008. These increases took place despite both countries facing military sanctions imposed after their nuclear tests in 1998. Threat perceptions in South Asia are also influenced by the perception, both within the region and internationally, of the lack of adequate safeguard measures to prevent nuclear weapons from falling into the hands of terrorists, or even an accidental use of nuclear weapons or a false alarm provoking a nuclear conflict between India and Pakistan.<sup>5</sup>

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<sup>1</sup> World Bank, *World Development Report 2009: Reshaping Global Geography* (Washington, D.C.: World Bank, 2008).

<sup>2</sup> Asian Development Bank (ADB), "South Asia 2006–2008," Regional Cooperation Strategy and Program, 2006, <http://www.adb.org/Documents/CSPs/South-Asia/2006/CSP-SA-2006.pdf>.

<sup>3</sup> Stockholm International Peace Research Institute (SIPRI), *SIPRI Yearbook 2009: Armaments, Disarmament, and International Security* (New York: Oxford University Press, 2009).

<sup>4</sup> Compiled from various sources; for a more detailed exposition, see ADB, *Asian Development Outlook 2007: Growth and Change* (Manila: ADB, 2007); and World Bank, *World Development Report 2009*.

<sup>5</sup> Imtiaz Alam, "South Asian Security Dilemmas," *South Asian Journal*, no. 3 (January–March 2004), [http://www.southasianmedia.net/Magazine/Journal/editorialsecurity\\_dilemmas.htm](http://www.southasianmedia.net/Magazine/Journal/editorialsecurity_dilemmas.htm).

## Major Nontraditional Security Challenges in South Asia

South Asia is plagued, perhaps more than ever before, by multiple security threats. In many cases, traditional security threats have been aggravated by NTS threats, though it is only in recent years that policymakers have begun to perceive NTS as an exclusive point of concern and become aware of the NTS challenges facing their countries and the region. Regional governments have yet to fully realize that NTS threats and challenges cannot be overcome by military measures and domestic responses alone but must be faced collectively through regional cooperation. This section discusses five key NTS challenges that are critically important to South Asia and warrant priority attention.

### *Food and Water Security*

Substantial increases in food prices are forcing governments and development agencies in South Asia to reassess the policies for agriculture, food security, and international trade that they have pursued over the past three decades. In South Asia, food costs constitute the major portion of the average household's spending. If food prices continue to rise without a matching increase in salaries and incomes of people at the bottom of the economic ladder, it is estimated that approximately 100 million people could be pushed back into poverty, generating a host of political, social, economic, and environmental challenges.<sup>6</sup> In response to this growing crisis, many regional countries have already tried to implement policy measures to tackle the problem of increasing food prices. Countries such as Bangladesh, India, and Bhutan have made increasing their food reserves a priority. Additional measures include reducing taxes on food grains, imposing export restrictions, adopting price control measures, and offering consumer subsidies. Unfortunately, some of these measures, instead of improving the situation, have exacerbated the crisis and further increased food prices. A well-coordinated approach is clearly required to tackle the problem of food security at both the national and regional levels.

At the fifteenth summit of the South Asian Association for Regional Cooperation (SAARC), held in Colombo in August 2008, the summit declaration called for an "Extraordinary Meeting of the Agriculture Ministers of the Member States" in view of the "emerging global situation of reduced food availability and worldwide rise in food prices."<sup>7</sup> The heads of state emphasized the need for drafting the SAARC Agriculture Perspective 2020. The summit declaration also highlighted the importance of identifying and implementing common short- to medium-term regional strategies and collaborative projects. These projects would aim to increase food production and investment in agriculture research and agro-based industries; prevention of soil degradation; development and sharing of agricultural technologies; sharing of best practices in procurement and distribution; and management of risks related to climate change and disease.<sup>8</sup> In addition, the heads of state directed that the SAARC Food Bank be urgently operationalized. The summit declaration stressed the need to mobilize resources and find mechanisms to deal with emerging challenges relating to food security in order to capitalize on available opportunities and address risks.

Along with the issues related to food, access to safe water and sharing of water resources between the countries in South Asia have become matters of critical importance. In many South

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<sup>6</sup> For closer analysis, see Farooq Sobhan, "Bangladesh: 2007" (paper presented at the Third International Conference on South Asia, Institute of South Asian Studies, National University of Singapore, October 2007).

<sup>7</sup> "Colombo Statement on Food Security," South Asian Association for Regional Cooperation (SAARC), August 2008.

<sup>8</sup> Please see "Colombo Statement on Food Security" for the complete list of goals.

Asian cities, water services are inadequate and do not meet minimum standards for drinking. Nearly 63% of the region's population has no access to sanitation facilities, while 11% of the population does not have access to safe drinking water. An ADB report observes that most water suppliers focus on creating new infrastructure rather than on improving existing systems. Along with a lack of proper monitoring, these water suppliers do not incorporate regular evaluation of operational efficiency, quality, service level, or consumer satisfaction into their routine operations. As a result, the expansion of water supply or creation of new infrastructure proves less helpful in facilitating safe water. Additionally, although providing continuously available water should be one of the primary objectives of any water management system, "intermittent water supplies are the norm rather than the exception" and create problems that undermine urban water security, "such as water contamination and wastage at all stages, unreliable metering, and possibly burst pipes due to the development of hydraulic water hammers."<sup>9</sup>

B.C. Upreti notes that "the Himalayan region is highly sensitive to seismic threats and has witnessed some of the world's most devastating earthquakes." In addition, India, Bangladesh, Sri Lanka, Maldives, and Pakistan confront a range of environmental challenges, including "cyclones, tidal waves, sea storms, [and] coastal area pollution."<sup>10</sup> Bangladesh, for example, is currently facing problems such as arsenic poisoning and salt water incursion on fresh water resources. Most South Asian countries are also plagued by water pollution and declining water quality and groundwater levels. The pollution caused by widespread construction and infrastructure projects is not confined to individual countries but affects the entire region.

The politics of water distribution is another dimension of water security in South Asia. As Upreti notes, issues relating to unilateral usage and withdrawal of river water have emerged as critical concerns in the region, especially for Bangladesh. The sharing of water has caused political tension and disputes between Bangladesh, India, Pakistan, and Nepal, with colossal economic consequences for the region.<sup>11</sup> Floods originating in India have frequently had a more devastating impact on Bangladesh than on India. The situations between Nepal and India and India and Pakistan are similar. Environmental hazards such as soil erosion, desertification, sedimentation, earthquakes, coastal area pollution, and deforestation are not only threats to biodiversity but also have multiplier effects. Such problems are thus not confined to any single country but invariably have an impact on neighboring countries.

### *Health Security*

Warnings about the threat of the next global pandemic, reflected in the World Economic Forum's 2006 report on global risks, have increasingly gained traction in policy circles.<sup>12</sup> Consequently, the lexicon of health security is becoming more prominent in the global agenda. Adding to this threat is the re-emergence of new strains of older diseases such as tuberculosis (TB) and cholera that are increasingly resistant to medical treatment.

As reported by Syed Rifaat Hussain, the proliferation of AIDS, is the "fourth ranking cause of death in the world" and has the potential to "destroy social and economic development and break

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<sup>9</sup> "Achieving Urban Water Security for South Asia (A Report Financed by the Investment Climate Facilitation Fund under the Regional Cooperation and Integration Financing Partnership Facility)," ADB, 2009, <http://www.adb.org/Documents/TARs/REG/42453-REG-TAR.pdf>.

<sup>10</sup> B.C. Upreti, "Environmental Security in South Asia: Dimensions, Issues, and Problems" (paper presented at a regional workshop on security in South Asia, Institute of Foreign Affairs, Kathmandu, Nepal, September 5-6, 2004), <http://www.ifa.org.np/pdf/prc/bcupreti.pdf>.

<sup>11</sup> Ibid.

<sup>12</sup> World Economic Forum, "Global Risks 2006" Report, 2006, [https://members.weforum.org/pdf/CSI/Global\\_Risk\\_Report.pdf](https://members.weforum.org/pdf/CSI/Global_Risk_Report.pdf).

down social and governance structures.” Furthermore, “the impact of the epidemic aggravates the vulnerabilities of the weakest groups in society, including women, children and the poor.” According to Hussain, the first case of HIV/AIDS in South Asia was detected in the mid-1980s, and since then more than five million people in the region have been infected with HIV/AIDS. Approximately 5.1 million people in India, 74,000 people in Pakistan and 61,000 people in Nepal have been infected, making South Asia “home to the second highest number of people living with HIV/AIDS, around 13 percent of the world total.” Hussain also points out that HIV/AIDS and the upsurge of other sexually transmitted diseases pose a particularly grave danger to Indian society, which accommodates 97% of South Asia’s HIV/AIDS infected population. The U.S. National Intelligence Council estimates that India’s HIV/AIDS patients will increase “from 5.1 million to 20 million by 2010.”<sup>13</sup> Since India shares a porous border with its neighbors, cross-border movement of infected patients poses severe threats to Bangladesh, Bhutan, Nepal, Pakistan, and Sri Lanka.

Furthermore, the Consortium of Non-Traditional Security Studies in Asia (NTS-Asia) argues that “the unprecedented scale of movement of people and goods, along with other ‘disease multipliers’ such as the misuse or over-use of antibiotics, rapid urbanization in ‘mega-cities’ with poor sanitation and weak health care infrastructures, exacerbates the possibility of a global pandemic and threatens to overwhelm the health care capacities of many of Asia’s states”<sup>14</sup> NTS-Asia adds that responding to such a challenge requires collective action among states, otherwise it will remain difficult for single states, given the conflict of interests among relevant actors. The countries in the region should work together to attain a consensus and mobilize collective action for combating infectious diseases.

### *Environmental Security and Disaster Management*

Hussain reports that “South Asia is among the world’s most vulnerable regions to both natural and man-made disasters....Over the last 25 years, disasters have killed nearly half a million people in South Asia” and “inflicted colossal financial damages worth US \$59 [billion].”<sup>15</sup> The *South Asian Disaster Report 2005* warned that the “region has become a neighborhood of disasters.”<sup>16</sup> The *South Asia Disaster Report 2008* states that “South Asia recorded 128 natural disaster events between 2006 and 2008. Ninety-three percent of these were of hydro-meteorological origin. Eighty-six incidences of flooding were reported, with nearly 8000 lives lost. India had by far the highest number of disaster events, but flooding in Bangladesh claimed the most lives.”<sup>17</sup>

According to Hussain, the October 2005 earthquake in the northern region of Pakistan killed at least 73,000 people, severely injured or disabled another 70,000, and left 2.8 million homeless. He adds:

The rehabilitation cost of the 2004 Tsunami disaster for India, Sri Lanka and Maldives is estimated to be US \$3 billion. The overall cost associated with the October 2005 earthquake is estimated at approximately US \$5.2 billion. Although some of the South Asian countries have begun to implement strategies

<sup>13</sup> Syed Rifaat Hussain, “Non-Traditional Security (NTS) Challenges in South Asia,” Consortium of Non-Traditional Security Studies in Asia, 2008, 2–3, <http://www.rsis-ntsasia.org/resources/publications/policy-briefs/inaugural-meeting/rcss.doc>.

<sup>14</sup> “Non-Traditional Security Challenges in Asia: What Role for Multilateralism?” S. Rajaratnam School of International Studies (RSIS), March 5, 2007, 3, [http://www.rsis.edu.sg/publications/conference\\_reports/NTS-IPA%20report\\_050307.pdf](http://www.rsis.edu.sg/publications/conference_reports/NTS-IPA%20report_050307.pdf).

<sup>15</sup> Hussain, “Non-Traditional Security (NTS) Challenges in South Asia,” 1.

<sup>16</sup> Amjad Bhatti, ed., *Tackling the Tides and Tremors: South Asia Disaster Report 2005* (Bourton on Dunsmore: Practical Action, 2005).

<sup>17</sup> See Tharuka Dissanaik, *South Asia Disaster Report: Special Copenhagen Issue* (Bourton on Dunsmore: Practical Action, 2009), 4, [http://practicalaction.org/docs/region\\_south\\_asia/south-asia-disaster-report-copenhagen.pdf](http://practicalaction.org/docs/region_south_asia/south-asia-disaster-report-copenhagen.pdf).

for disaster mitigation or risk reduction, “there still is need for an all round paradigm shift to proactive measures in the approach to disaster mitigation.”<sup>18</sup>

The importance of environmental security is not confined to man-made and natural disasters but also is reflected in issues of environmental degradation and sustainability. As Hussain suggests, South Asia as a region is characterized by extremely high environmental stress resulting from floods, scarcity of water, high urban population density, energy shortages, deforestation, and air pollution.<sup>19</sup> He proceeds to argue that “environmental degradation, resource depletion and natural disasters have direct implications” for national and regional security, along with the possibility of posing threats to the global economy.<sup>20</sup> All the states in South Asia, however, largely ignore environmental sustainability in development policymaking and during the implementation of projects. An assessment of the costs of environmental damage does not yet inform development and social policies.

The 2004 tsunami in South and Southeast Asia, as well as the recent earthquake and tsunami in Japan, underscores Hussain’s claim that environmental disasters have become a global issue and pose a threat to collective security. Most South Asian states have already adopted policies according to their needs and their capacities; however, in terms of technological advancement these countries are lagging behind. Some states in the region have adopted a serious view of reducing disaster risk. Bangladesh, India, and Maldives, for example, have assigned this responsibility to important frontline ministries.<sup>21</sup> Collaborative initiatives involving India, Bangladesh, Nepal, Pakistan, and Sri Lanka, such as a project on “Livelihood Options for Disaster Risk Reduction in South Asia” by the Foundation of the Intermediate Technology Development, have been undertaken with financial support from multilateral institutions.<sup>22</sup> But a regional disaster management framework including a comprehensive strategy and action plan still must be designed. The framework should cover institutional mechanisms, provide tools for mitigation measures, and facilitate legal framework and policy directions.

### *Regional and International Illegal Migration*

Regional migration has risen to the top of the security agenda in South Asia due in part to concerns that migration flows provide favorable conditions for terrorism, organized crime, and economic losses. Concerns relating to migration are not entirely unfounded, given the impact of migration patterns on national security interests and interstate political relations. Overall, migration management has become a critical issue in South Asia.

Regional migration in South Asia is generally caused by human rights violations, economic deprivation and poverty, ethnic and communal conflicts, and civil or internal wars. A study commissioned by the Refugee and Migratory Movements Research Unit (RMMRU) suggests that “migrants tend to fill niche labor markets often shunned by local populations.” The study further

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<sup>18</sup> Hussain, “Non-Traditional Security (NTS) Challenges in South Asia,” 1.

<sup>19</sup> Ibid., 4.

<sup>20</sup> Ibid.

<sup>21</sup> In Bangladesh, this responsibility is assigned to the Ministry of Local Government, Rural Development and Co-operatives, Ministry of Water Resources, Ministry of Food and Disaster Management, and Ministry of Environment and Forests; in India, to the Ministry of Agriculture, Ministry of Consumer Affairs, Food and Public Distribution, Ministry of the Environment and Forests, Ministry of Health and Family Welfare, and Ministry of Water Resources; and in the Maldives, to the Ministry of Home Affairs, of Housing and Environment and Ministry of Fisheries, Agriculture and Marine Resources.

<sup>22</sup> For more information on this initiative, see the Practical Action South Asia website, [http://practicalaction.org/livelihood\\_options](http://practicalaction.org/livelihood_options).

concludes that migrants “contribute to the host economy by reducing costs of production as well as becoming a lively entrepreneurial sector.” RMMRU also found that

government, security and public agencies...believed that migrants posed a threat to national security. As a consequence, there have been attempts to indigenize the labor force, arrest and deport foreign laborers, erect border fences and create bureaucratic processes that have forced even legal migrants to become illegal because of the cumbersome restrictions imposed on migrants.<sup>23</sup>

Migration is frequently linked with other security challenges, such as armed violence, drugs, human trafficking, and proliferation of organized crime, and in electioneering, ethnic struggles, and political rivalries. But some aspects of these issues are related. For example, as Kamala Sarup has argued, human trafficking has become a critical issue across South Asia due to porous borders and geographical proximity.<sup>24</sup> Women and girls are trafficked to India, Pakistan, and Middle Eastern countries, with India, as Hussain reports, emerging as a major source, transit corridor, and host country for trafficked populations owing to its size and central location.<sup>25</sup> According to Ranjana Kumari, the danger of HIV/AIDS among the trafficked women, in addition to prostitution, sex slavery, and other forms of sexual exploitation, “is making the women more vulnerable. [An] increase in information and communication tools enhancing access to media promoting sex and pornography through telephone, internet, television, newspapers, and magazines is creating a demand for sex trade.”<sup>26</sup>

Hussain notes that, “despite the ratification of the SAARC Convention on Trafficking in persons by all member states, the growing trend in human trafficking persists.”<sup>27</sup> Indeed, one criticism of the SAARC Convention is that it emphasizes the human rights abuses associated with trafficking but undermines the causes of human trafficking. Therefore, to supplement the Convention, a comprehensive regional action plan needs to be developed with the proper institutional mechanisms and financial resources to combat trafficking and more effectively manage other forms of migration. It should be noted that migration not only affects the host country but also adversely affects the migrants themselves.

### *Regional Energy Security*

Access to efficient and clean energy has become a critical issue for the functioning of economies. Not only are South Asian economies growing rapidly, but the demand for energy is also growing at an unprecedented rate. The uneven distribution of energy supplies among South Asian countries has generated significant vulnerabilities for their economies. Threats to energy security in South Asia are predominantly caused by lack of political will among several energy-producing countries to share resources with neighboring countries, as well as by the lack of regional cooperation in distributing energy. This threat has further worsened due to the manipulation of energy supplies, inadequate supply and generation infrastructure, and accidents and natural disasters. Apart from regional issues, rising costs of fossil fuels (specifically, oil

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<sup>23</sup> “Non-Traditional Security (NTS) Challenges in Asia,” 4, citing Tasneem Siddiqui, “Securitization of Migration: The South Asian Case” (paper presented at IPA-NTS Asia meeting on “Non-Traditional Security Challenges in Asia: What Role for Multilateralism?” New York, March 5, 2007), 2-3.

<sup>24</sup> Kamala Sarup, quoted in Hussain, “Non-Traditional Security (NTS) Challenges in South Asia.”

<sup>25</sup> Hussain, “Non-Traditional Security (NTS) Challenges in South Asia.”

<sup>26</sup> Ranjana Kumari, as quoted in Hussain, “Non-Traditional Security (NTS) Challenges in South Asia,” 4.

<sup>27</sup> Hussain, “Non-Traditional Security (NTS) Challenges in South Asia,” 3.

and gas) and environmental hazards caused by coal-generated power plants will be a source of energy insecurity in the foreseeable future.

In most South Asian countries, poor planning in the energy sector has caused considerable human suffering and significantly hindered the entire region's economic growth prospects. For example, in Bangladesh, much of the population does not have access to adequate electricity for even bare minimum consumption in household activities. In fact, the crisis of energy supplies is now threatening to reverse Bangladesh's economic growth in the near future, if measures are not taken immediately to increase the supply of power.<sup>28</sup> To optimize the region's economic potential, each South Asian state needs to explore the possibilities for regional energy cooperation and design long-term plans to secure domestic requirements, taking into consideration the many opportunities for regional energy cooperation. Although every South Asian country is developing national strategies to increase energy security, there is a growing realization that this issue must be addressed in a regional context. Such an approach would facilitate a more comprehensive, cost-effective, and sustainable set of solutions to confront the challenges of energy security.

A 2005 USAID report provides the following assessment of the dependence of South Asian countries on energy imports:

South Asian countries are highly dependent on imported crude oil and petroleum products. The imports range from 25% of commercial energy consumption in the case of Bhutan to 100% in the case of Maldives. The recent volatility and sharp increase in world oil prices has placed an unexpected and enormous burden on foreign exchange reserves, to the detriment of national economies. While countries like Sri Lanka and Maldives, which lack indigenous fossil fuel sources, are especially hard hit, even countries like India, Pakistan, and Bangladesh now meet less of their demand with indigenous fuel sources and face mounting energy import bills.<sup>29</sup>

The lone exception is Bhutan, which due to the growth of the hydropower sector is today much better placed than the other countries in the region. The USAID report further argues that “to meet the growing aspirations of the people and economies of South Asia,” states in the region “are under immense social and political pressure to secure reliable, sustainable, and reasonably priced energy supplies to meet the ever-increasing demand for commercial energy.”<sup>30</sup> Energy security has thus emerged as an undeniable challenge for economic and social development in South Asia.

## Overcoming Nontraditional Security Challenges through Regional Cooperation in South Asia

South Asia presents unique opportunities for regional cooperation on NTS issues. Geographical proximity, topography, shared history, similar economic prospects, common cultural heritage, and ethnic ties unify the people of the region. Unfortunately, effective regional cooperation has long been subject to political mistrust, bureaucratic barriers, and economic exploitation. Until recently, among South Asian states there were ambivalent feelings toward regional cooperation

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<sup>28</sup> Mamun Rashid, “Energy Security for Bangladesh,” *Daily Star*, April 27, 2008, <http://www.thedailystar.net/story.php?nid=33872>.

<sup>29</sup> T.L. Sankar et al., “Regional Energy Security for South Asia,” USAID South Asian Initiative for Energy (SARI/Energy), 2005, ES-2, [http://www.sari-energy.org/ProjectReports/RegionalEnergySecurity\\_RegionalReport\\_Complete.pdf](http://www.sari-energy.org/ProjectReports/RegionalEnergySecurity_RegionalReport_Complete.pdf).

<sup>30</sup> *Ibid.*

on NTS challenges at the policymaking and bureaucratic levels. A study on regional integration, undertaken by the Bangladesh Enterprise Institute, identifies a paradigm shift that occurred in the past two years or so. India, in particular, has realized that its “go it alone” policy, combined with only engaging its neighbors bilaterally, was not serving its interests. Rather, India’s conventional or traditional security threats, as well as NTS threats, have increased.<sup>31</sup>

There is growing recognition at the highest policymaking level and within civil society that rapidly increasing traditional and nontraditional security challenges require regional integration and regional solutions, not just closer regional ties.<sup>32</sup> However, a number of studies of South Asia have found that politics remain the main obstacle to regional cooperation in countering NTS threats. Imtiaz Alam has proposed that the political leaders of South Asia should show courage, maturity, flexibility, and statesmanship to resolve interstate and intrastate conflicts and work toward overcoming the political barriers to regional cooperation.<sup>33</sup> The leadership in the region should also look beyond traditional notions of security and focus on an integrated and cooperative approach to both the traditional and nontraditional security challenges facing South Asia.

To overcome the existing NTS issues, South Asian countries must coordinate their policies with other countries in the region. Harmonization of policies is crucial for developing regional frameworks on key NTS issues. It is worth noting that unilateral action can have an adverse impact on the regional security architecture and create a conflict of interest. The NTS situation in South Asia presents a great opportunity to design and implement a regional security strategy that fully supports the evolving national security plans of regional states. As Alam suggests, various stakeholders in civil society, the private sector, academia, and the media should be actively engaged in removing barriers to cooperation. In particular, long-standing political disputes should either be resolved or agreements negotiated to isolate these disputes from intruding on the overall relationship between countries in the region.

To foster regional cooperation, it is important to strengthen SAARC, the first regional cooperative initiative in South Asia. The progress of economic cooperation under SAARC was, until recently, slower than expected, in part reflecting the diversity of interests in the region and the tensions between some SAARC member states. Regrettably, the SAARC process has been held hostage by the continuing animosity in bilateral relations between India and Pakistan, which tends to marginalize every other aspect of intraregional activity.<sup>34</sup> SAARC has been subject to political mistrust, differences in attitude and interests of member countries, and discord on various international issues. The secretariat is weak because the secretary general is prevented from adopting any initiatives without the prior approval of all eight member states.

Despite its failures, SAARC still presents a major opportunity for South Asian countries to work together on numerous challenges in the region. There is a need to change the political and bureaucratic mindset in order to strengthen SAARC and, in so doing, accelerate economic growth. The collective effort of all the member countries is required to implement the SAARC

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<sup>31</sup> Farooq Sobhan, Shahab Enam Khan, and Parvez Abbasi, “Sub-regional Integration in South Asia,” Bangladesh Enterprise Institute, South Asia Regional Integration Program, Report, 2009.

<sup>32</sup> Ibid.

<sup>33</sup> Imtiaz Alam, “Blueprint for Regional Cooperation” (forward written for the South Asian Free Media Association Regional Conference on “Regional Cooperation in South Asia,” Dhaka, August 21–22, 2004), [http://www.southasianmedia.net/conference/Regional\\_Cooperation/foreword.htm](http://www.southasianmedia.net/conference/Regional_Cooperation/foreword.htm).

<sup>34</sup> Shahab Enam Khan, “Engaging South Asia: Finding Common Ground for a Dynamic Regional Cooperation in the Twenty First Century,” *Journal of International Relations* 2, no. 2 (2009), 2–26.

Social Charter and make tangible progress in tackling the region's many common problems, the foremost among them being poverty.

Apart from strengthening SAARC, it is essential to develop the political will to reverse the course of confrontation. South Asian countries should engage in regular dialogues with civil society, NGOs, the private sector, and the media to promote and foster a shared vision and a commitment to peaceful and cooperative coexistence. These dialogues should focus on designing a framework for joint action both at an intergovernmental level and through various civil society initiatives, thereby developing a common strategy to face NTS threats and challenges. A building-block approach should be developed: subregional projects should be identified and implemented, and the concept of public-private partnerships should be promoted at the regional and subregional levels. Furthermore, the SAARC intergovernmental process should reach out to civil society, the media, and the private sector.

It is vitally important that the many existing regional institutions, which predominantly function as intergovernmental bodies, are restructured as public-private undertakings involving both state and nonstate actors from across the region. Special attention should also be paid to strengthening the networking among research institutions working on NTS issues by encouraging them to provide inputs, ideas, and strategies for joint action. It is equally important that this network of research institutions rigorously monitors and evaluates regional and subregional projects. South Asia must develop a capacity for research on NTS that is sustainable over the long term, thereby ensuring that both regional and subregional cooperation on NTS is given the highest priority.

## Concluding Remarks

Regional cooperation is certainly one of the most important ways to meet the NTS challenges facing South Asia and thus promote sustainable growth in the region. Policy reforms and harmonization; expanding markets for goods, services, and energy trade; and reciprocal arrangements for better allocation and utilization of existing resources should be pursued to facilitate cooperation. South Asian countries should also work to facilitate the establishment of a regional energy grid, promote joint projects for better utilization of natural resources, and reduce negative regional externalities and conflict. In addition, countries should constantly explore project-based cooperative initiatives, such as potential gas pipeline projects, regional energy grid projects, and counterterrorism initiatives. Such multilateral approaches to resolving NTS issues can become an important way of advancing overall security in South Asia.

Likewise, cross-border cooperation on water, the environment, and energy is of critical importance and must be expedited immediately. Nonetheless, cooperation in the areas of water and energy is strikingly difficult to achieve due to existing sensitivities and complexities. Knowledge-based cooperation, information-sharing, and capacity-building can lay the foundation for building confidence among countries. Similar initiatives could be taken in the areas of communicable diseases, human trafficking, terrorism, and organized crime. To make these initiatives functional, South Asian governments should adopt several complementary operational approaches. They should formulate, design, and implement frameworks for cooperation on each NTS issue; mobilize support for project- and program-based cooperation from multilateral agencies; strengthen regional cooperation and institutional mechanisms to address NTS issues; and strengthen coordination mechanisms with all the countries on specific issues.

Lack of adequate funding, institutional and technical capacities, and human resources may hold back implementation of collaborative initiatives. However, enterprising efforts by individual South Asian states and successful collaboration on NTS issues will enhance trust and confidence and strengthen political support for regional cooperation by sensitizing policymakers, stakeholders, and the public to its benefits. The strategies and framework of actions presented here should help to mobilize equitable resources and build partnerships with different development partners. Therefore, NTS issues should not be viewed simply as catch-phrases. This essay has discussed the issues, trends, and way forward. Now is the time for communities and societies to act.



# Environmental Security and Disaster Management in South Asia: Initial Thoughts on Implications for the United States

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## EXECUTIVE SUMMARY

This essay examines the implications for the United States of South Asia's current and future nontraditional security (NTS) concerns related to environmental security and disaster management.

### MAIN FINDINGS

- NTS challenges are most likely to become priority issues for U.S. policymakers when they are perceived to threaten regional stability or the U.S. power position in South Asia.
- It is unlikely that NTS issues in the region will become a U.S. priority, unless they multiply or enhance existing threats or social cleavages.
- U.S. policies and social practices have externalized (that is, globalized) much of the costs of U.S. fossil fuel use and material consumption onto the developing world, where climate change will have a substantial impact without local populations receiving many of the short- and long-term benefits associated with economic growth in OECD countries.
- All evidence suggests that by 2025 South Asia will play host to a larger human population with greater economic inequality that will struggle to survive and prosper amid changing global, regional, and local climates and weather patterns.

### POLICY IMPLICATIONS

- As the ramifications of climate change accumulate and accelerate, policymakers in affected states will have greater incentive to link their needs to U.S. policy priorities in order to gain leverage with the U.S.
- If the effects of climate change are blamed on the U.S., domestic political actors in the region are likely to exploit popular anger. This has the potential to make international cooperation with U.S. policymakers more difficult or to increase hostility toward U.S. interests in the region more broadly.
- Long-standing disaster threats will likely either persist or worsen, even as growing populations and economies seek greater public-sector capacity to manage environmental security and disaster risks.
- Regional institutions can enhance, but not replace, state and private-sector capacity. Therefore, U.S. engagement in regional institution-building should focus on enhancing the capacities of both the public and private sectors to meet challenges such as infectious diseases, migration, and climatic disasters.

The growing debate and scholarly literature on environment and security relationships and the implications of these for U.S. national security and foreign policy warrant application to the South Asian region.<sup>1</sup> This essay is organized into two sections. The first introduces a framework for understanding the implications for the United States of nontraditional security (NTS) in South Asia, specifically of environmental security and disaster management. The second section then assesses policymakers' concerns about these issues and draws implications for the future, with a view toward 2025.

## Implications of Environmental Security in South Asia for the United States

### *The United States as a Status Quo Power with Global Interests*

The existing U.S. global power position, including U.S. security and economic interests in South Asia, tends to yield a preference for regional stability and the maintenance of the United States' prominence in the region. In other words, NTS challenges are most likely to be seen as priority issues for U.S. policymakers when they are perceived to threaten regional stability or the U.S. power position. As Dennis Pirages observes, this general expectation and the framework that flows from it stem from the traditional realist thinking that often dominates U.S. foreign and security policymaking in South Asia.<sup>2</sup> Such a view yields a small number of situations or categories of greatest concern to policymakers:

*Threats of international conflict.* U.S. security analysts, such as those affiliated with the National Intelligence Council (NIC) and associated intelligence bodies, as well as analysts within military academies and academic institutions, have focused analysis most often on NTS issues with the highest potential for inciting international military conflicts, border incursions, and nonviolent interstate conflicts that could impede U.S. policy goals. For example, concerns about international water management institutions between India and its neighbors are often mentioned.<sup>3</sup>

*Threats to state stability and social order.* State failures to manage large-scale humanitarian disasters have the potential to undermine state legitimacy, enhance social cleavages, and engender greater social conflict. Extensive U.S. government research conducted since the 1990s demonstrates that failed states have rarely served to advance U.S. security or economic interests, often leading instead to increased security threats to U.S. interests and increased demands on national security and foreign policy institutions.<sup>4</sup>

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<sup>1</sup> For reviews of this extensive literature and its associated debates, see Ken Conca and Geoffrey D. Dabelko, eds., *Environmental Peacemaking* (Baltimore: Johns Hopkins University Press, 2002); Richard Matthew, "Man, the State and Nature: Rethinking Environmental Security," in *Handbook of Global Environmental Politics*, ed. Peter Dauvergne (Northampton: Edward Elgar, 2005); and Indra de Soya, "Filthy Rich, Not Dirt Poor! How Nature Nurtures Civil Violence," in Dauvergne, *Handbook of Global Environmental Politics*. For an extensive bibliography of such literature and a host of related resources, see the Environmental Change and Security Project (ECSP) at the Woodrow Wilson International Center for Scholars, [http://www.wilsoncenter.org/index.cfm?fuseaction=topics.home&topic\\_id=1413](http://www.wilsoncenter.org/index.cfm?fuseaction=topics.home&topic_id=1413).

<sup>2</sup> Dennis Pirages, "Ecological Security: A Framework for Analyzing Non-traditional Security Issues" (paper prepared for discussion workshop co-sponsored by the National Bureau of Asian Research and the Bangladesh Enterprise Institute on "Non-Traditional Security Challenges in South Asia: 2025," Dhaka, Bangladesh, November 21–22, 2009).

<sup>3</sup> Ashok Swain, "Environmental Cooperation in South Asia," in Conca and Dablko, *Environmental Peacemaking*; T.V. Paul, "India," in *Climate Change and National Security: A Country-Level Analysis*, ed. Daniel Moran (Washington, D.C.: Georgetown University Press, 2011); Daniel Markey, "Pakistan," in Moran, *Climate Change*; and Ali Riaz, "Bangladesh," in Moran, *Climate Change*.

<sup>4</sup> For a recent example of ongoing research on weak and failing states, see Benjamin R. Cole and Monty G. Marshall, "Global Report on Conflict, Governance and State Fragility 2009," Center for Systemic Peace, December 2009, <http://www.systemicpeace.org/Global%20Report%202009.pdf>.

*Increased hostility to key U.S. military and economic facilities and interests.* NTS challenges will receive greater policy attention in Washington when they are perceived to affect existing or planned U.S. military facilities and infrastructure or centers of U.S. economic interests and investments.

*Concerns about threat multiplication.* Given the extensive list of concerns and challenges for U.S. policymakers—for example, in Afghanistan and Pakistan—it remains unlikely that NTS issues on their own will become priorities in the near or medium term. The one possible exception to this rule is any trend or development that could multiply or enhance existing threats or social cleavages in the region. For example, declines in agricultural productivity, reductions in freshwater availability, or an increase in drought and storm frequency or intensity would have implications for U.S. security and economic interests, especially when such developments have an impact on the three points above (international conflict risk, state stability and order, and hostility to the United States).

### *Risks of Climate Geopolitics and Climate Populism*

By now it is well known that the United States has historically been the single-largest national contributor to climate change. U.S. economic growth, environmental policies, and lifestyles have contributed substantially to global climate change and its many negative implications. The country also has a long history of uncooperative behavior on climate-change mitigation at the international level and a poor domestic record of curbing its annual emissions growth. Additionally, the United States has not, to date, been forthcoming with financial support for international climate-change adaptation.

These facts yield the inescapable conclusion that U.S. policies and social practices have externalized (that is, globalized) much of the costs of U.S. fossil fuel use and material consumption by passing these costs onto the developing world. Developing countries thus accrue a substantial percentage of the costs of climate change without receiving many of the short-and long-term benefits associated with economic growth in countries belonging to the Organisation for Economic Co-operation and Development (OECD). This situation increases the risk that the United States can and will be blamed for causing the accelerating list of environmental changes as well as for the related social and economic costs associated with global climate change.<sup>5</sup> From a policymaking perspective, this situation raises at least two forms of political risk.

*Issue-linkage demands.* As the ramifications of climate change accumulate and accelerate, policymakers in affected states may increasingly link their needs for mitigation and adaptation assistance—and their desire for side payments of various kinds—to U.S. policy priorities in order to gain leverage with the United States. Such strategies may be purely tactical, with some actors connecting issues that ostensibly have little causal or thematic connections, or countries may seek to reframe and redefine issues by shaping a cluster of issues in ways that are perceived to be interrelated.<sup>6</sup>

Thus, even if U.S. security policy in South Asia remains focused on antiterrorism efforts and regional stability for some time (and economic policy remains focused on liberalized trade), increased negative impacts of climate change may result in a greater willingness on the part of regional actors to link environmental and human security issues—as well as assistance for disaster management and preparedness—to issues of greater concern to U.S. policymakers. Like other

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<sup>5</sup> Chad M. Briggs and Stacy D. VanDeveer, “The European Union,” in Moran, *Climate Change*.

<sup>6</sup> Ernst Haas, “Why Collaborate? Issue-Linkage and International Regimes,” *World Politics* 32, no. 3 (April 1980): 357–405.

developing countries, South Asian states have long sought to link their development needs and goals to issues more central to U.S. economic and security policy. As the impacts of climate change become both more apparent and more influential in the region, one might expect these issues to become more amenable to issue-linkage strategies. Thus, regional leaders may seek to link climate change to issues of greater strategic importance to U.S. policymakers. EU foreign assistance programs and foreign policy—such as on Russian WTO membership and Moscow’s ratification of the Kyoto Protocol—illustrate that some actors are already making such linkages.

*Domestic (anti-American) climate-change populism.* If climate-change ramifications accelerate and are largely blamed on the United States, domestic political actors in South Asia (both in democratic and nondemocratic countries) will likely see increased incentives to foment and act on anger at the United States. Such movements have the potential to make international cooperation with U.S. policymakers more difficult or increase hostility to U.S. interests in the region more broadly. For example, during the George W. Bush administration, U.S. opposition policies on the Kyoto Protocol, the Landmine Ban Convention, and the International Criminal Court made regular appearances in domestic electioneering in many European countries and across the developing world, in democracies as diverse as South Korea, Costa Rica, and South Africa. Likewise, in 2010 a statement attributed to Osama bin Laden received extensive international coverage when it used Washington’s failure to curb greenhouse gas emissions and cooperate with other countries on climate change as an illustration of the damage done by the United States.

## Potential for U.S. Engagement on NTS in South Asia: Looking toward 2025

Looking into the future is always worrying for a status quo power, but possessing military and economic strength tends to yield the baseline policy goal of maintaining one’s power position. All evidence suggests that in 2025 South Asia, like the rest of the globe, will play host to a larger human population, with greater economic inequality that will struggle to survive and prosper amid changing global, regional, and local climates and weather patterns. Long-standing disaster threats such as earthquakes, tsunamis, floods, and droughts are likely either to persist or worsen, even as growing populations and economies seek greater public-sector capacity to manage environmental security and disaster risks. If such capacities remain highly asymmetrical in the region (or inequities worsen), states may be tempted to fortify their borders against problems on the other side.

For U.S. policymakers, ongoing global environmental change holds a growing risk that the United States will be blamed for the negative or catastrophic impacts of climate change and be seen as an increasingly wealthy society that remains indifferent to the harm its actions cause. If South Asian political and economic leaders leverage some of the dynamics outlined above, greater U.S. attention could be focused on helping to build regional institutions and domestic state capacities. For example, U.S. financial resources could enhance the effectiveness of the South Asian Association for Regional Cooperation (SAARC) by combining internationally accepted poverty alleviation goals—such as those endorsed by the UN Summit on the Millennium Development Goals—with climate change mitigation and adaptation needs. For example, U.S. assistance and SAARC cooperation might attempt to drive investment toward renewable and lower-carbon energy development and toward the infrastructure needed to transport, trade, and utilize such power.

Such “win-win” U.S.-supported regional initiatives offer illustrative opportunities, but many more exist. The United States should work to bring South Asian governments together around plans to improve regional energy infrastructure, particularly for lower-carbon energy sources such as hydropower and solar energy production. If Washington were to play a more constructive role in building global greenhouse-gas mitigation institutions that facilitate clean-energy investment and provide funding for adaptation costs and forest protection, this might afford the United States opportunities to play a constructive role in the region while also creating opportunities for U.S. private-sector investments in South Asia.

Regional institutions can enhance, but not replace, domestic public- and private-sector capacity. Analysis of the long history of development assistance demonstrates that international institutions—both global and regional—can help to build and improve public-sector governance capacities.<sup>7</sup> They cannot, however, substitute for dysfunctional state and local institutions. U.S. engagement in regional institution-building thus should focus in large part on enhancing capacities in the public and private sectors of regional states to meet challenges such as infectious diseases, migration, and weather-related disasters, as well as increasing earthquake and tsunami preparedness.

As Pirages argues, realist perspectives on international relations generally offer few paths toward more ecologically sustainable politics and societies.<sup>8</sup> However, this does not mean that either U.S. or South Asian leaders are likely to abandon such thinking easily or soon, or that they are not clever enough to use it to their advantage. If U.S. policymakers maintain a generally realist focus on security concerns in the region, with some accompanying liberal internationalist goals designed to promote growing free markets and cross-border investment, South Asian leaders are increasingly likely to identify incentives to link issues of long-standing or growing importance to their countries to those of greatest importance to U.S. policymakers and private-sector leaders. Herein lie opportunities to build shared interests and institutions. In other words, U.S. policymakers are unlikely to launch initiatives to address climate-change mitigation and adaptation needs in the region, or to dramatically improve regional state capacity on their own. However, they are more likely to become better partners on these issues and increase their support for regional capacity-building if environmental and human security issues are clearly linked to ongoing U.S. security and economic interests in South Asia.

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<sup>7</sup> Stacy D. VanDeveer and Ambuj Sagar, “Capacity Building for the Environment: North and South,” in *Global Challenges: Furthering the Multilateral Process for Sustainable Development*, ed. Angela Churie Kallhauge, Gunnar Sjöstedt, and Elisabeth Corell (London: Greenleaf, 2005): 259–73; Ambuj Sagar and Stacy D. VanDeveer, “Capacity Development for the Environment: Broadening the Focus,” *Global Environmental Politics* 5, no. 3, (August 2005): 14–22; and JoAnn Carmin and Stacy D. VanDeveer, eds., *EU Enlargement and the Environment: Institutional Change and Environmental Policy in Central and Eastern Europe* (London: Routledge, 2005).

<sup>8</sup> Pirages, “Ecological Security.”

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# Nontraditional Security and China's Relations with South Asia

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## EXECUTIVE SUMMARY

This essay examines the implications of emerging nontraditional security challenges for China's relations with South Asia.

### MAIN FINDINGS

- China and South Asia face many of the same nontraditional security challenges, such as limited arable land for large populations, protracted poverty, limited access to energy resources, and environmental threats.
- Several of South Asia's nontraditional security concerns negatively affect China and its relations with the subcontinent. Poor human security, in terms of poverty and terrorism, jeopardizes Chinese business and investment in the region.
- Regional cooperation on nontraditional security issues is also limited by low levels of cross-cultural linkages. Poor sanitation and health care in South Asia discourage cultural exchanges, such as Chinese tourism and foreign study.
- Water security is an extremely sensitive regional issue because both China and South Asian countries face increasing water shortages due to urbanization, industrialization, and climate change.

### POLICY IMPLICATIONS

- Traditional and nontraditional disputes between China and South Asia can only be solved through cooperation. The two sides could use lessons learned from previous cooperative efforts on nontraditional threats to strengthen their collaboration and take preventive steps to ensure peace and prosperity in the region.
- Bilateral cooperation has occurred in agriculture, poverty reduction, health and disaster management, and energy and climate change. However, the two sides should also explore solutions at a multilateral level, such as the China-SAARC cooperative mechanism.
- Cooperative measures are crucial for addressing several sensitive issues, particularly terrorism, growing food and energy demands, and water security. These nontraditional security challenges have the potential to exacerbate existing disputes in the region, especially between China and India.

China's relations with South Asia have been dominated by traditional security issues. China and India's unresolved border dispute and the unending India-Pakistan confrontation have limited the academic exploration of nontraditional security trends in South Asia and their implications for China. In the past decade, China and India have agreed that development is a priority to achieve their respective national strategic goals. The two countries have also reached a consensus that maintaining good political relations is the best security guarantee and the key to their simultaneous emergence as global powers. To a certain extent, this consensus reflects a change in perception by both sides on the nature of security. Unfortunately, however, the conservative forces that only focus on military security are still strong in each country, especially India. As a result, the future of China-India relations is often deliberated in the context of power competition, while China's relations with Pakistan and the smaller South Asian countries continue to be observed through the narrow prism of regional balance of power.

In an era of globalization, nontraditional security is no less relevant than traditional security. Neglecting nontraditional threats may exacerbate existing mutual distrust triggered by traditional security challenges. This essay attempts to draw attention to the impacts of nontraditional security challenges on China's relations with the subcontinent. The first section identifies China's and South Asia's common concerns over nontraditional security and their joint efforts to address these issues. The second section examines the nontraditional challenges currently facing China's relations with the region. The third section explores the potential trajectories of these challenges.

## Common Interests and Cooperation between China and South Asia in Dealing with Nontraditional Security Threats

China and South Asia face similar nontraditional security threats. These challenges include managing limited arable land to feed the largest populations in the world, eradicating poverty and upgrading living standards, coping with environmental problems, and reducing growing dependence on imported oil.

According to the United Nation's Food and Agriculture Organization (FAO), China's per capita arable land is only 80.3 hectares per thousand people, while South Asia's is 129.5 hectares per thousand people. Both are far below the world average of 223.5 hectares.<sup>1</sup> This means that China and the South Asian countries are using one-fifth of the world's arable land to sustain two-fifths of the world population.

Due to the rapid economic growth of the past decades, both China and South Asia have made significant achievements in poverty reduction. However, 15.9% of China's population and 40.3% of South Asia's population still live in extreme poverty (defined as living on less than \$1.25 per day). The number of people living in poverty in both regions—803.3 million—is almost three times the size of the U.S. population.<sup>2</sup> Although China is the third-largest economy in the world, it ranks only 125th in terms of per capita gross national income (GNI), which at \$3,650 is far below the

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<sup>1</sup> "FAOSTAT," Food and Agriculture Organization of the United Nations, database, <http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor>.

<sup>2</sup> World Bank, *Global Economic Prospects 2009: Commodities at the Crossroads* (Washington, D.C.: World Bank, 2009), [http://siteresources.worldbank.org/INTGEP2009/Resources/10363\\_WebPDF-w47.pdf](http://siteresources.worldbank.org/INTGEP2009/Resources/10363_WebPDF-w47.pdf).

world average of \$8,732. The situation in South Asia is even worse, with a per capita GNI of only \$1,107, just a little bit above the low-income line of \$509.<sup>3</sup>

With a higher per capita GNI, China is better able to address its human and health security issues than South Asia is; however, China's and South Asia's tasks are equally arduous in terms of meeting people's demands for a better standard of living and narrowing the gap between the rich and the poor. As development remains the top priority for both China and South Asian countries, they are caught in the dilemma of balancing economic growth and addressing global climate change. On the one hand, as developing countries, these states "and the poorest people who live in them, are the most vulnerable to climate change."<sup>4</sup> On the other hand, these countries must protect their "right of development" by resisting pressure from more developed countries to undertake legally binding obligations to reduce emissions that go "beyond their socio-economic capacity."<sup>5</sup>

Fast economic growth has also generated a high level of Chinese and Indian dependence on imported oil. At present, China and India are respectively the second- and fifth-largest consumers of oil in the world. While for years India has been dependent on imports for more than 70% of its oil, in 2009 China imported 52% of the oil the country consumed.<sup>6</sup> The globally recognized threshold for an energy security alert is 50%. Given that both countries' oil demand will continue to grow and that domestic oil production will likely decline, energy security will remain a great challenge for China and India in the years to come.

China's and South Asia's common concerns provide a great opportunity for cooperation, which in some instances has already given rise to a unified voice in multilateral forums. First, China and South Asia have a good record in agricultural cooperation. China, for example, has launched joint breeding programs with Pakistan, Nepal, and Bangladesh. Under these programs, China attempts to help these countries "achieve maximum productivity of hybrid rice" through transferring germplasm technology and training experts.<sup>7</sup> China has also agreed to provide Pakistan with drip-irrigation technology.<sup>8</sup> Additionally, in 2006, China and India committed to exchanging agricultural experts, sharing irrigation technology, and promoting joint research on germplasm and breeding material.<sup>9</sup>

In terms of environmental security, China and South Asia are members of the G-77 plus China, and have insisted that the Kyoto Protocol should be the foundation of international negotiations on climate change. In October 2009, China and India signed an agreement on combating climate change. They also agreed to work closely with each other on scientific assessment of the impacts of climate change, capacity-building, joint R&D activities, and energy conservation and efficiency.<sup>10</sup>

<sup>3</sup> "Gross National Income per Capita 2009, Atlas Method and PPP" World Development Indicators, World Bank, April 14, 2011, <http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf>.

<sup>4</sup> "Climate Change and CDM," UN Development Programme, <http://www.unep.org/energy/climate.htm>.

<sup>5</sup> Yunwei Fu and Xinyu Guo, "Developing Nation's Development Right Deserves," *Xinhua*, December 28, 2009, [http://news.xinhuanet.com/english/2009-12/28/content\\_12712513.htm](http://news.xinhuanet.com/english/2009-12/28/content_12712513.htm).

<sup>6</sup> Xiao Wan, "China Depending More on Imported Oil," *China Daily*, January 20, 2010, [http://www.chinadaily.com.cn/china/2010-01/20/content\\_9346446.htm](http://www.chinadaily.com.cn/china/2010-01/20/content_9346446.htm).

<sup>7</sup> "Pak-China Cooperation," March 9, 2009, Embassy of the People's Republic of China in the Islamic Republic of Pakistan, <http://pk.chineseembassy.org/eng/2bgx/t541235.htm>.

<sup>8</sup> *Ibid.*

<sup>9</sup> "Indo-China Cooperation in Agriculture," Indian Council of Agricultural Research, Press Release, November 21, 2006, <http://www.icar.org.in/node/122>.

<sup>10</sup> "Agreement on Cooperation on Addressing Climate Change between the Government of the Republic of India and the Government of the People's Republic of China," available from Ministry of Environment and Forests, Government of India, October 21, 2009, <http://moef.nic.in/downloads/public-information/India-China%20Agreement%20on%20Climate%20Change.pdf>.

According to the Indian minister of external affairs, S.M. Krishna, India and China worked closely and effectively together at Copenhagen in December 2009 to safeguard the interests of developing countries. They have since decided to continue their cooperation in the post-Copenhagen era.<sup>11</sup>

While many were predicting that a strategic rivalry in access to energy resources would emerge between China and India, the two countries signed five memoranda on energy cooperation in 2006. These included plans for joint bidding on oil assets in developing countries, which were successfully carried out in Sudan and Syria.<sup>12</sup> The countries signed the memoranda after Chinese and Indian companies fiercely competed for energy assets in Angola, Kazakhstan, and Ecuador.<sup>13</sup> According to Mani Shankar Aiyar, the then Indian petroleum and natural gas minister, India and China agreed to work together because they “recognize that unbridled rivalry between them only results in the seller of the assets being benefited irrespective of which of the two countries wins the bid.”<sup>14</sup>

Moreover, on numerous occasions China and South Asia have cooperated on disaster management. China not only has provided disaster relief for countries in South Asia but also has received assistance from South Asian countries. For example, Beijing pledged \$22.6 million in aid following the Indian Ocean tsunami that struck fourteen countries (including some in South Asia) in December 2004.<sup>15</sup> China also gave earthquake-hit Pakistan humanitarian relief worth \$26.7 million in October 2005.<sup>16</sup> In 2007, China offered emergency aid worth \$1 million to cyclone-struck Bangladesh and subsequently donated more than \$2 million to Bangladesh through the UN World Food Programme between 2008 and 2009.<sup>17</sup> Conversely, after the Wenchuan earthquake in 2008, Pakistan sent a 28-member medical team to the affected areas, and India provided \$5 million worth of relief supplies to China.<sup>18</sup>

Finally, China and South Asia have also enjoyed a cooperative relationship in terms of health security, with Beijing signing medical and health cooperation agreements with Pakistan and India, respectively. In 2008, China and India began cooperating on traditional medicine, and in 2005, when India was severely hit by the Japanese encephalitis virus, China was the only country that could provide good, inexpensive vaccines both in large quantities and on short notice.<sup>19</sup> In recent years, Beijing has helped countries such as Nepal, Afghanistan, Sri Lanka, and Pakistan build hospitals to improve local access to medical treatment. In addition, in 2009, China provided

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<sup>11</sup> “China, India Protect Interests of Developing Nations at Copenhagen Summit: Indian FM,” Xinhua, December 25, 2009, [http://news.xinhuanet.com/english/2009-12/25/content\\_12701319.htm](http://news.xinhuanet.com/english/2009-12/25/content_12701319.htm).

<sup>12</sup> In December 2005, China National Petroleum Corporation (CNPC) and India’s Oil and Natural Gas Corporation (ONGC), the two largest oil companies in their respective countries, won a joint bid to buy Petro-Canada’s 37% stake in Syrian oilfields for \$573 million.

<sup>13</sup> For details, see Tanima Dutta, “China and India: Geo-political Tension and Rage for Oil,” Stanford University, June 6, 2006, 10–11, <http://pangea.stanford.edu/~jshragge/OilWar/Rage.html>.

<sup>14</sup> “China, India Sign Energy Agreement,” *China Daily*, January 13, 2006, [http://www.chinadaily.com.cn/english/doc/2006-01/13/content\\_511871.htm](http://www.chinadaily.com.cn/english/doc/2006-01/13/content_511871.htm).

<sup>15</sup> “Aid Work Bolsters Responsible Image,” Xinhua, January 19, 2006, [http://news.xinhuanet.com/english/2006-01/19/content\\_4071843.htm](http://news.xinhuanet.com/english/2006-01/19/content_4071843.htm).

<sup>16</sup> Ibid.

<sup>17</sup> See “China Will Give Bangladesh Million US Dollars Emergency Aid,” *Huanqiu*, November 19, 2007, <http://world.huanqiu.com/news/2007-11/25358.html>; and “Bangladesh: Legendary Gymnast Distributes China’s Food Aid,” World Food Programme, News Release, December 18, 2009, <http://www.wfp.org/stories/bangladesh-legendary-gymnast-distributes-chinas-food-aid>.

<sup>18</sup> “First Indian Plane with Relief Supplies Reaches China,” *Thaindian News*, May 17, 2008, [http://www.thaindian.com/newsportal/uncategorized/first-indian-plane-with-relief-supplies-reaches-china\\_10049806.html](http://www.thaindian.com/newsportal/uncategorized/first-indian-plane-with-relief-supplies-reaches-china_10049806.html).

<sup>19</sup> “India May Import Chinese Encephalitis Vaccine,” Rediff News, November 17, 2005, <http://insports.rediff.com/news/2005/nov/17vaccine.htm>.

emergency aid worth millions of dollars for people displaced in Pakistan and Sri Lanka by internal conflict and terrorism.<sup>20</sup>

## Implications for China of Nontraditional Security Challenges in South Asia

Among the nontraditional security challenges facing South Asia, human, health, and water security issues negatively affect China and its relations with the subcontinent. As far as human security is concerned, poverty in South Asia has caused problems for Chinese businesses in South Asia. Due to poverty and lagging development, the labor force in many South Asian countries suffers from poor health conditions and less professional training. To ensure profit and timely fulfillment of contracts, some Chinese companies (especially in the private sector) would like to use more Chinese technicians and skilled laborers in their South Asian projects. The local governments want to ensure local employment and have implemented some restrictions on the entry of Chinese workers. For example, India's revision of its visa policy in 2009 has forced nearly 25,000 Chinese workers to leave the country. Consequently, there have been setbacks in projects such as road construction, power generation, and communication conducted by Chinese companies.<sup>21</sup> Even in Pakistan, an "all-weather friend" of China, some local people attribute their unemployment to the growing Chinese presence. The resentment is viewed as a motive for the attack on Chinese engineers by the Balochistan Liberation Army in 2006.<sup>22</sup> Such events have increased the cost of projects, and the prospect of reduced profits and greater financial losses will discourage further investment by Chinese companies in South Asian states.

The poor condition of human security in the region, particularly with respect to terrorism and religious extremism, has also indirectly affected China's security. Terrorism, in particular, is an important security concern for China. To a certain extent, poverty or poor human security is a root cause of religious extremism and facilitates its expansion. For example, if the state is unable to meet the poor's basic requirements for survival, people may find relief in charity bodies run by religious extremists. As long as human security is not fundamentally improved, religious extremism may haunt South Asia in coming years.

The instability in Afghanistan and Pakistan caused by religious extremists such as al Qaeda and the Taliban has further complicated China's relations with South Asia. There are reports that some Chinese separatists (e.g., the East Turkestan Islamic Movement) have found asylum in the Afghanistan-Pakistan tribal areas and are working closely with al Qaeda and local terrorist groups. China has a significant stake in helping these countries to fight terrorism. At the same time, working too closely with governments could make China a target of local Islamic radicals, which do not yet view China as an enemy. In recent years, Chinese engineers have been attacked and kidnapped in Afghanistan and Pakistan. Moreover, the deteriorating situation is preventing

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<sup>20</sup> "Chinese President Meets Pakistani Leader on Bilateral Ties," Xinhua, June 15, 2009, [http://news.xinhuanet.com/english/2009-06/15/content\\_11546344.htm](http://news.xinhuanet.com/english/2009-06/15/content_11546344.htm); and "China Calls for Stability, Progress in Sri Lanka," Xinhua, May 19, 2009, [http://news.xinhuanet.com/english/2009-05/19/content\\_11402204.htm](http://news.xinhuanet.com/english/2009-05/19/content_11402204.htm).

<sup>21</sup> Wu Jiao, "India's Visa Revise Drives Laborers Out," *China Daily*, November 3, 2009, [http://www.chinadaily.com.cn/china/2009-11/03/content\\_8902471.htm](http://www.chinadaily.com.cn/china/2009-11/03/content_8902471.htm); and "Road Construction by Chinese Firm Blocked Due to New Visa Policy," Asian News International, December 18, 2009, <http://news.oneindia.in/2009/12/18/roadconstruction-by-chinese-firm-blocked-due-to-new.html>.

<sup>22</sup> Arvind Gupta, "The Situation in Balochistan," Institute for Defence Studies and Analyses (IDSA), IDSA Comment, October 5, 2009, [http://www.idsa.in/idsastrategiccomments/TheSituationinBalochistan\\_AGupta\\_051009](http://www.idsa.in/idsastrategiccomments/TheSituationinBalochistan_AGupta_051009).

Chinese businesses from investing in these countries, despite South Asian governments pushing China for more direct investment.

In comparison to China's links with other parts of the world, the cultural contact between China and South Asia remains at a low level. The three-decade Sino-Indian rivalry, India's "Monroe Doctrine," the small size of the Chinese community in the region, sustained terrorist attacks, and health insecurity are all contributing reasons for limited cultural exchanges. Although China's booming travel market has significantly increased the number of Chinese tourists visiting South Asia over the last decade, the share is still negligible. In 2010, tourism from China to India and the Maldives reached only 100,000 and 120,000 visits, respectively, while outbound tourists from China totaled 57 million.<sup>23</sup> Poor sanitation, active pandemics, and insufficient health care are the major concerns for Chinese tourists regarding the countries in the region with the exception of the Maldives. The same concerns also contribute significantly to Chinese parents' reluctance to send their children to India, which has many world-class universities charging much less for tuition than universities in both China and Western countries. At present, there are only 1,200 Chinese students studying in India, whereas Chinese students in Australia exceeded 100,000 in 2008, and U.S. universities enrolled 98,510 new Chinese students in the same year.<sup>24</sup> As long as the health situation in South Asia does not improve significantly, social and educational exchanges will remain at low levels, ultimately limiting the potential for greater cooperation between China and South Asia.

Finally, water security is a nontraditional security issue that poses a challenge for China's relationships with South Asian states. Many rivers in South Asia originate in China's Tibet. For example, the Brahmaputra River is called the Yarlung Tsangpo River upstream in China. Due to severe water scarcity in China, Chinese bloggers on the Internet have discussed building dams to divert water from the Yarlung Tsangpo River to the hinterland of China. This speculation has caused great concern in India and Bangladesh, through which the river flows downstream. On a number of occasions, the Indian government has taken up this issue with the Chinese government, including at a meeting between India's prime minister Manmohan Singh and China's premier Wen Jiabao during the East Asia Summit in Thailand in October 2009.

## Future Trends

According to the above analysis, South Asia's nontraditional security threats have only recently begun to affect China's relations with the region. However, as China becomes more involved in South Asia, future nontraditional security trends may challenge Beijing in a number of ways.

First, health security will continue to significantly constrain social and cultural exchanges between China and South Asia in spite of their medical and health cooperation. If the health situation in South Asia deteriorates further, growing trade and travel between China and South Asia may expose the Chinese people to more infectious diseases. Some Chinese visiting South

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<sup>23</sup> "High Price, Lack of Hygiene Hinder Chinese Tourists to India," China Economic Net, February 25, 2011, [http://en.ce.cn/Industries/tourism/201102/25/t20110225\\_22246561.shtml](http://en.ce.cn/Industries/tourism/201102/25/t20110225_22246561.shtml); "China Becomes Maldives' Largest Source of Tourists," People's Daily Online, May 12, 2011, <http://english.people.com.cn/90001/90776/90882/7378362.html>; and "China's Outbound Travelers Rise," January 19, 2011, <http://english.cri.cn/6566/2011/01/19/902s616342.htm>.

<sup>24</sup> "Chinese Students Write New 'Journey to the West,'" Xinhua, April 7, 2009, <http://english.peopledaily.com.cn/90001/90781/90879/6631365.html>; "Number of Chinese Students Studying in Australia Exceeds 100,000," People's Daily Online, October 24, 2008, <http://english.peopledaily.com.cn/90001/90776/90883/6520928.html>; and Tamar Lewin, "China Is Sending More Students to U.S.," *New York Times*, November 16, 2009, <http://www.nytimes.com/2009/11/16/education/16international-.html>.

Asia have been attacked by diseases that are inactive at home, such as cholera and dengue fever. If there is an outbreak of a new infectious disease, China may take actions to restrict the entry of people from the region, which might result in diplomatic discord (such as in the case of Mexico and the H1N1 flu).<sup>25</sup>

Second, if the human security scenario worsens, the region will grow increasingly unstable. Such instability not only will threaten the security of Chinese citizens and investments in South Asia but also will challenge China's territorial security due to the possible spillover of terrorism or insurgency to Xinjiang and Tibet, China's two autonomous regions bordering South Asia and suffering from separatism. Conversely, if human security improves greatly, China may face greater competition from the region's labor force, although threats to national security would be mitigated. It is predicted that in 2030 India will "remain a very young country" in the world, with half its population under the age of 28.<sup>26</sup> The working-age population in other parts of South Asia is also expected to grow continuously in coming years. Due to the rising cost and aging of China's labor force, China may be replaced by South Asia as the world's manufacturing hub.

Third, while China and South Asia will continue their agricultural cooperation, rapid population growth in the region may challenge China's food security. With yields hinging critically on the annual success of monsoons, South Asian countries depend heavily on food imports.<sup>27</sup> With the region expecting to grow to 2,050 million people by 2030, from 1,478 million in 2005,<sup>28</sup> demand for staple foods will rise significantly, especially if South Asia can sustain rapid economic growth. Owing to decades of effort, China has solved its food problem and developed the capacity to meet national food demand. However, China's food security based on self-sufficiency is tenuous and agriculture remains the Chinese government's priority. In the event that China must import grains and crops due to unexpected natural disasters, it will face a much more competitive world market.

Fourth, if South Asian countries can sustain their rapid pace of growth, China's energy security will certainly be challenged by hikes in oil prices. However, the fact that China is the world's second-largest energy consumer and India is the future fourth-largest may not lead to more competition between them. On the contrary, it may stimulate more cooperation on technological innovation for alternative energy. During his visit to China in January 2008, Prime Minister Singh called for Sino-Indian joint development of "clean and energy efficient technologies through collaborative research and development."<sup>29</sup>

Finally, water security will remain a sensitive issue in China's relations with the region. China has water shortages, with per capita availability of natural fresh water being only a quarter of the world average. This water crisis has likely been triggered by population increase as well as

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<sup>25</sup> In May 2009, due to the H1N1 outbreak in Mexico, China imposed tough measures on Mexico such as quarantining dozens of Mexicans, cutting flights to Mexico, and barring pork imports. The measures were angrily denounced in Mexico, despite the fact that China offered Mexico \$5 million worth of anti-H1N1 aid. See "Mexico, China in Swine Flu Row," *BBC*, May 3, 2009, <http://news.bbc.co.uk/2/hi/asia-pacific/8031672.stm>.

<sup>26</sup> Robert O. Blake Jr., "India and the United States: A Strategic Economic Partnership for the 21st Century" (remarks at the University of Pennsylvania, Philadelphia, April 22, 2011), <http://www.state.gov/p/sca/rls/rmks/2011/161727.htm>.

<sup>27</sup> Surabhi Mittal and Deepti Sethi, "Food Security in South Asia: Issues and Opportunities," Indian Council for Research on International Economic Relations, Working Paper, no. 240, September 2009, <http://www.icrier.org/pdf/WorkingPaper240.pdf>.

<sup>28</sup> "Future of India and South Asia: From Here to 2030," Free World Academy, webpage, <http://www.freeworldacademy.com/globalleader/india.htm>.

<sup>29</sup> "India and China Must Develop Viable Strategies for Energy Security," Asian News International, January 15, 2008, <http://www.topnews.in/india-china-must-develop-viable-strategies-energy-security-213626>.

by growing industrialization and urbanization.<sup>30</sup> Although China has repeatedly assured India that it does not plan to divert water from the Yarlung Tsangpo River, debates over diverting some of the rich water resources in Tibet to the hinterland will continue in China. Some conservative strategists in India are already using the rumors of dam-building to sell their “China threat” rhetoric.<sup>31</sup> After China and India’s border dispute, water security may be the most sensitive issue affecting bilateral relations.

## Conclusion

Common concerns over nontraditional security threats have contributed to cooperation between China and South Asia on agriculture and poverty reduction, health and disaster management, and energy and climate change. At the same time, as China and South Asia engage with each other more, nontraditional security trends in the subcontinent have posed challenges to China’s security and affected its relations with the region. Traditional human security threats such as terrorism represent a serious challenge to China’s interests in South Asia. Yet nontraditional human and health security may play a bigger role in limiting cultural exchanges. Rising food and energy demand due to the region’s rapidly growing population and economy will likely complicate China’s food and energy security environment. Similarly, without further cooperative measures, water security may exacerbate traditional disputes, especially between China and India.

Given China’s close proximity to South Asia, both traditional and nontraditional disputes can only be solved through cooperation. China and South Asia could learn lessons from previous cooperative efforts on nontraditional threats to strengthen collaboration and take more preventive steps to ensure peace and prosperity. Apart from bilateral cooperation, China and South Asia should also explore regional solutions at a multilateral level, such as the China-SAARC cooperative mechanism.

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<sup>30</sup> Li Jing, “Water Shortage Threatens China,” *China Daily*, February 9, 2009, [http://www.chinadaily.com.cn/bizchina/2009-02/09/content\\_7455718.htm](http://www.chinadaily.com.cn/bizchina/2009-02/09/content_7455718.htm).

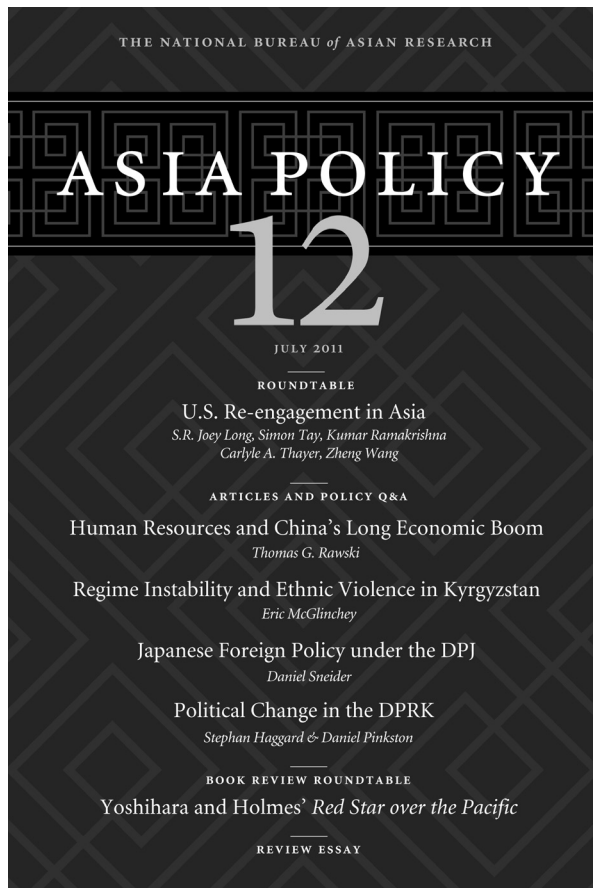
<sup>31</sup> “China Denies Building Dam on Brahmaputra; NRSA’s Evidence Suggests Otherwise,” *Dance with Shadows*, web log, November 7, 2009, <http://www.dancewithshadows.com/politics/china-denies-building-dam-on-brahmaputra-nrsa-evidence-suggests-otherwise/>.



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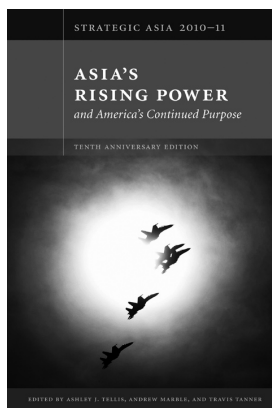
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