

The debate over the connection between population and social welfare is centuries old. Analyses of population gr





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disregard a substantial portion of global civil strife. All true, but Cincotta et al.'s principal finding is too strong to ignore: among 25 countries with rapid urban growth and a large youth bulge in the 1990s, 40 percent developed new conflicts during that decade, compared to only 14 percent of the 57 countries without those factors (page 73). This powerful association suggests that even if other factors play a role in causing civil conflict, they must be strongly associated with the status of the country's demographic transition.

By focusing on the position of countries along the demographic transition, rather than simply on population size, growth rate, or density, Cincotta et al. have made a major contribution to the debate on population and conflict. Their evidence—simple, but stark and stunning—demonstrates the power of the demographic transition to explain a country's vulnerability to civil violence.

As a bonus, *The Security Demographic* includes a valuable chapter on the progress of the HIV/AIDS pandemic and its likely effects on population. Unfortunately, there is not enough data from the 1990s to test the impact of AIDS on conflict (although HIV infection rates are high, mortality has only skyrocketed in the last few years), so this section is somewhat speculative. However, the authors conclude that countries with the highest rates of AIDS will likely experience more conflict, due to the loss of skilled professionals, workers, and military men in the prime of life.

This monograph is remarkably clear and easy to follow, rich in illustrative maps and graphs ideal for teaching or policy briefings. Each section concludes with a summary of key findings and policy prescriptions. It should be widely read and circulated among policymakers, as well as students studying political instability.

The authors' policy prescriptions will be familiar to those who work in the health arena, as they echo prevailing wisdom: improve education, especially for women, and increase access to reproductive health services. The report's evidence, however, gives these old recommendations new strength. The authors do not simply offer prescriptions to halt population growth (as if growth itself were a bogeyman); rather, they recommend helping countries transition to smaller families that can invest more resources in each child. This state appears to offer the greatest stability and least conflict—the “security demographic” of the title.

The Security Demographic brings us good news: as the world moves toward the end of its demographic transition, the rate of civil conflict should decline. That goal seems eminently desirable and worthy of vigorous promotion from the highest levels of government to the smallest villages.

Notes

1. For pioneering work, see Moller (1968) and Choucri (1974, 1984). More recent and detailed analyses were undertaken by Goldstone (1991, 1999) and Homer-Dixon and his collaborators (1998). The connection has also been the subject of many policy papers and briefings cited by Cincotta et al.

2. This is the “new” thinking in development economics; see Collier et al. (2003) and Acemoglu, Robinson, and Johnson (2001).

3. Visit the Uppsala Conflict Data Program at http://www.pcr.uu.se/research/UCDP/UCDP_toplevel.htm

References

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about the size of Wisconsin, with a per capita GDP of \$1,600 (Population Reference Bureau, 2003), which is unlikely to improve substantially over the projection period.

By 2025, a stunning 50 percent of Africa's population will live in cities, challenging the common wisdom that urbanization is synonymous with industrialization. While urban growth itself should not be a cause for alarm, the high rate of growth, driven by natural increases in the apparent absence of economic growth, is both a "cause and symptom of the

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lations. For example, agricultural land is often

ship is completely out of character with the rest of the book.

The wide-ranging discussion of energy security in Chapter 4 covers the history of oil production, contemporary energy geopolitics, and supply and demand in energy markets. Pirages and DeGeest sensibly and logically promote renewable energy as the key to achieving energy security. However, except for greenhouse gas emissions, the problems discussed in this chapter are not clearly ecological. The authors state, for example, that “the long-term ecological security problem for the United States, and eventually the rest of the world, is one of an imbalance between future demand for and reserves of petroleum” (page 85). Even though this claim falls under the ambit of the first of the book’s “four balances,” it does not correspond to any recognized definition of ecological security. But this is a small quibble; energy scarcity is undoubtedly a security problem—even if not ecological—and this chapter cogently outlines its dimensions.

“The Political Economy of Feast and Famine” is also only loosely related to ecological security. Had Pirages and DeGeest argued that overpopulation and environmental degradation cause famine and malnutrition, these problems might fit the definition of ecological problems. Instead, they recognize that poverty, migration, HIV/AIDS, armed conflict, trade, and investment also play critical roles in food insecurity. Indeed, the section titled “Africa: A Malthusian Tragedy” owes little to Malthus; rather than simply grounding Africa’s food problems in overpopulation, the authors acknowledge that political economy processes structure food supply. While entirely correct, this conflicts with Chapter 1, which accepts the notion of “carrying capacity” as a driver of “Malthusian dramas” like famine (page 22).

In “Globalization and Biosecurity,” Pirages revisits some of his earlier work on the balance between human populations and pathogenic micro-organisms, and discusses the competition between human beings and other animal species—both novel and genuinely ecological problems. The strongest and most convincing chapter in the book, it explains not only the



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Chapter 7 examines the interactions between technological change and security. Like Ulrich Beck’s 1999 work *Risk Society: A Modern Theory*, Pirages and DeGeest imply that it is more difficult to manage risk when there are global dangers, such as nuclear and biological weapons, and when personal and social welfare depends on complex interlocking technological structures like computer networks and telecommunications systems. This chapter links technology’s advances and its ever-widening influence to increased pollution and resource consumption, reflecting the book’s eco-evolutionary perspective.

Finally, *Ecologically Secure Development* offers conclusions and solutions. “Ecologically Secure Development” focuses not on solutions, as the title implies, but on the constraints limiting them. Even so, it provides a good overview of the power of free market processes to prevent sustainable development and support insecurity and inequality. The authors recommend a “fundamental change in definitions of progress and the good life” (page 204), and boldly suggest that “some actual sacrifices by the countries of the Global North” are necessary (page 201).

The last chapter outlines governance changes that would facilitate this transformation, arguing that “distributive justice must become a global public good” (page 218), and that political globalization—“an active process of building governance beyond the state”—is an important step towards ecological security

begins with an overview of the elements of the contemporary human predicament, including inadequate fresh water, collapsing world fisheries, loss of biodiversity, increased pollution, the specter of communicable disease, and, more recently, climate change. The authors identify the principal forces battering the global environment: population growth, overconsumption, and dangerous technologies. But then they venture into new territory, turning from the environmental to the political, posing philosophical questions for domestic and international environmental agendas. Since wealth and power are closely connected, and both are linked to overconsumption, the Ehrlichs advocate opening a dialogue on limiting the accumulation of personal wealth and establishing the rights and responsibilities of property owners in a more densely populated world.

Following its impressive and well-reasoned overview of the links between environmental and socio-political problems, concludes with a menu of recommended policy reforms. While all are laudable—and most make sense—many require the wealthy and powerful to permit destruction of the hierarchy upon which their power and privilege depends. In an ideal world, people would be more environmentally aware; global population would fall rapidly to the recommended two billion; power and privilege would be widely shared; and technology would be harnessed to reduce pollution and resource depletion. But the book leaves unanswered the most important question: how do we get there from here?

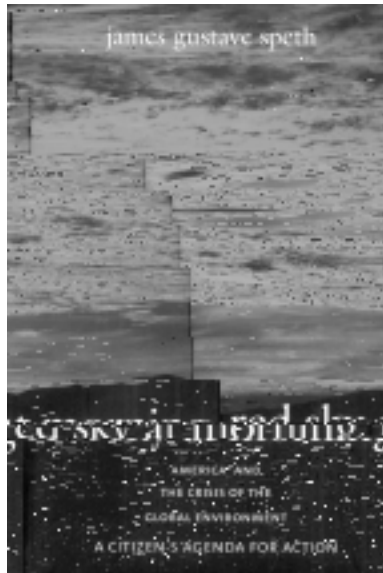
The book's recommendations beg three questions. First, what are the limits to non-growth? Over the last three decades, Paul and Anne Ehrlich have performed an invaluable service by calling attention to the dangers of rapid population growth and surges in resource consumption. Their solution requires that global population rapidly decline until it levels off around two billion. But just as there are limits to population and consumption growth, rapid decline has its own perils. Whether we like it or not, economic growth is tightly woven into the fabric of capitalist societies. A significant drop



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in population and consumption could have an alarming impact, including a plummeting stock market, a rise in corporate bankruptcies, dwindling tax revenues, reduced social services, less funding for research and development, and—much closer to home for some of us—eroding foundation and university endowments. Not a pleasant future for those caught in the transition to a world one-third of its current size.

The situation in the former Soviet Union may shed some light on the possible consequences of non-growth. Population and consumption began a significant decline soon after the fall of communism, and the Russian people have paid a heavy price during the transition. The population is now declining at 0.7 percent annually; if this trend continues, today's population of 145 million will shrink to 119 million by 2050 (Population Reference Bureau, 2003). The years since the fall of the wall have been marked by high unemployment, a dramatic surge in disease, increased alcoholism and drug use, and a significant drop in life expectancy (Feshbach, 2003). Fortunately, some of the misery has been alleviated by economic aid from the United States and European Union. But if this decline occurred on a global scale, there would be no outside sources of support and the consequences would be much harsher. Despite



mental legislation. In 1980, Speth released CEQ's *The Sky at Night*, a seminal work that brought global warming to the public consciousness, part of an apparently rising tide of environmental awareness and action. In hindsight, however, its publication at the end of the Carter administration was the high-water mark of the American environmental era.

In the 1960s and 1970s, as Speth relates, new environmental laws targeted the low-hanging fruit. Since then, there have been a few startling successes, such as the Montreal Protocol, but on most critical issues like biodiversity and climate change, we have been treading water—or worse. Speth reminds us that nearly all of the environmental problems now facing the world have been known for a quarter century. He laments that “little has been done.... If I were a young person being handed this problem by indulgent predecessors, I would be angry” (page 5).

Principles and Solutions

In the second half of his book, Speth provides a convincing depiction of 10 drivers of environmental destruction (population, affluence, technology, poverty, market failure, policy and political failure, economic growth, the economic system, our culture and values, and globalization). This thorough but daunting list encom-

passes almost the entire human endeavor. However, although Speth spends several pages describing the environmental challenges of continuing global population growth, he curiously omits any mention of U.S. growth, which, at more than three million people per year, surpasses all but China and India (and trumps both of these giants in terms of environmental impact).

To confront these various threats, Speth says, “The principal way to a sustainable world is to apply major resources of time and money to the promotion of eight broad, linked transitions that seek to define and redirect growth” (page 152), such as transitioning to environmentally benign technologies, environmentally honest prices, sustainable consumption, a stable or smaller world population, and a world free of mass poverty.

These utopian ideas are attractive, but the language and suggested means may appeal more to policy wonks than revolutionaries. Freedom from mass poverty, environmentally benign technologies, and environmentally honest prices, for example, can only be actualized (if at all) by big government, large NGOs, top-down policies, and well-connected cognoscenti. These are the same forces that Speth criticizes for failing to get the job done over the last several decades. So when he suggests that citizen activists contribute to hundreds of environmental organizations (listed—but frustratingly unranked—in the book’s final section), it is both overwhelming and a little anticlimactic. If that approach has not worked for the last 30 years, why will it work in the future?

Grand Old Men

Environmental Action (2004) called Speth “one of the grand old men of greenery.” Therein lies his great wisdom and genuine appeal, but also the root of the environmental movement’s most serious problem: it has aged, growing from its strident, bold, and energetic youth into a more conservative, cautious, and sometimes resigned middle age. In the 1970s, the scruffy, chaotic, shoestring atmosphere of the World Wildlife

Fund, NRDC, and other enviros fostered scrap-piness, improvisation, and risk taking. Today, if you stroll into the offices of many environmental NGOs, you will encounter marble and glass lobbies, well-coiffed receptionists, and soft ele-

For the last 15 years, scholars have contested the definition, key explanatory variables, and methodological approaches of environmental security, spanning the distance from traditional interstate security to the broader concept of human security. These fundamental debates have become heated at times; for example, in ECSP's 2003 report, Thomas Homer-Dixon locked horns with Nancy Peluso and Michael Watts over the nature of violent conflict: should theorists privilege environmental scarcity as an explanatory factor, as Homer-Dixon asserts, or should they begin with the political economy of resource access and control, as Peluso and Watts argue?

Into this theoretical thicket Adil Najam and his colleagues have injected *E*

Avowedly empirical, the book is not preoccupied with untangling theory: it seeks “neither to posit a new conceptual framework...nor to put any of the existing frameworks to the test of empirical evidence emerging from South Asia” (page 245). Instead, it focuses on developing a “better policy sense...of how the twin challenges of environ-

The book's analyses of environment and security linkages are livelier. The Bangladesh chapter by A. Atiq Rahman, Zahid H. Chowdhury, and Ahsan U. Ahmed establishes four categories of linkages: national sovereignty, livelihoods, health, and ecology. The Pakistan chapter uses a model of direct effects (those based on institutional gaps and failures) and indirect effects (those that operate through poverty). Both of these models are useful organizing tools and yield greater insights than the survey sections. However, given the book's empirical mandate, these models are not fully developed, and the diversity of approaches prevents cross-country comparisons. While Najam praises this analytical eclecticism for producing a broader range of findings, the chapters' empirical material might have benefited from more theoretical cogency.

The case studies shed the burden of comprehensiveness in search of explanatory depth. For example, Rahman et al. recount the remarkable story of a misguided and mismanaged dam on Bangladesh's Karnaphuli River that pushed an indigenous community out of their forest refuge, leading to a quarter century of armed conflict that ultimately threatened Bangladesh's political stability. Similarly, Sarath W. Kotagama's case-rich chapter on Sri Lanka describes a community displaced by a national park, illustrating the occasionally antagonistic relationship between the environment and human security.

Ajaya Dixit and Dipak Gyawali's chapter on Nepal is worthy of separate comment; it eschews the survey approach in favor of a human security argument centered on multiple "securities in conflict," which are tied to perceptions of risk and mechanisms for coping with it. The authors convincingly recommend using institutional pluralism to negotiate these disparate notions of security.

The remaining three chapters discuss natural resources—energy, land, and water—in the context of environment and development. In their tightly structured discourse on energy and security, Najam and Kumudu Gunasekera outline "energy paths" over time and organize them

by efficiency, energy dependence, and environmental security. The graphs illustrating the chapter capture, at a glance, patterns across South Asia.

Khalid Saeed's chapter on land use projects food and land-related trends for 14 countries using a system dynamics model. Even though the model's structure is presented diagrammatically, it is hard to understand. Moreover, even though more recent data are available, the inputs date from 1987. It is hard to believe the author's claim that an additional decade of data would not affect the results. Perhaps most problematically, Saeed does not delve any deeper than country-level data, which is particularly egregious in a human security framework. For example, an analysis of different consumer classes' access to food under conditions of stress would have added to his argument.

Ramaswamy R. Iyer's chapter on water begins intriguingly by warning that applying a security framework to environmental problems could be dangerous. Instead of improving security, he fears, the interaction may damage environmental discourse. In his discussion of flood management, water quality, and water sharing, Iyer limits his use of "security" to interstate relationships. However, when he addresses cooperation, he adopts a wider view, issuing an impassioned and convincing plea to escape the intellectual straitjacket of supply-side thinking that has dominated water management in South Asia for the past decades.

By steering clear of theoretical debates, the volume loses some of its power to convince the reader, as illustrated by two examples drawn from the editor's "five key lessons." First, Najam makes a strong case that these essays demonstrate the value of locating environment and security within the rubric of sustainable development. However, without exploring the literature on security, how can the reader understand why we should retain the language of security, as opposed to subsuming the entire discussion in sustainable development? Second, Najam critiques the mainstream security discourse for over-emphasizing resource abundance at the



Environment, Development and Human Security reproaches the theoretical genuflecting that has characterized recent environmental security literature. Instead, the volume asks, what is relevant to South Asia's on-the-ground practitioners?

The emergence, re-emergence, and proliferation of infectious diseases in the modern era have given rise to a growing body of literature examining the effects of contagion upon nations. The earliest pioneers, historians such as William McNeil and Alfred Crosby, argued that human history has been significantly influenced by biological parameters, including the effects of pathogenic micro-organisms. These bio-historians were later joined by political scientists like Dennis Pirages, Robert Ostergard, Stefan Elbe, David Fidler, Mark Zacher, and Yanzhong Huang, and by intelligence analysts such as David Gordon and Don Noah. Collectively, their works form the basis for the growing field of health security. Microbiologist Jennifer Brower and political scientist Peter Chalk throw their hats into the ring with

Public Health and National Security: A timely look at the United States' public health policy and its effects on national security.

Despite the wealth of research to draw upon, Brower and Chalk strangely ignore prior literature in the field. They claim, rather grandiosely, that theirs is the first book to comprehensively link disease to national security. By failing to give credit where it is due, they undermine sections of the book that are derivative of other work—notably, David Gordon's reports on behalf of the National Intelligence Council (Gordon, 2000).

The book is conceptually muddled. At first, the authors proclaim that they intend to adopt a human security focus on the individual. However, the rest of the book analyzes the effects of disease upon

The authors assert that HIV-induced declines will reduce South Africa's influence in the region, and thereby exacerbate conflict. However, given that Botswana, Zimbabwe, Zambia, and Swaziland all have relatively higher HIV prevalence rates than South Africa, the latter's power may actually increase relative to its neighbors. Regardless, South Africa's capacity to mount effective peacekeeping operations will certainly decline.

Chapter 4 warns that the United States is increasingly vulnerable to the ravages of emerging infections, resistant strains of disease, and bioterrorism. However, U.S. capacity for dealing with these problems is higher than that of most other nations on the planet, so U.S. vulnerability must be put into proper context. Nations with lower levels of capacity (e.g., Haiti, Rwanda, and Bangladesh) are far more vulnerable to destabilization from epidemic infection. Nonetheless, the authors provide an enlightening discussion of the negative economic and psycho-social impact of bioterror during the 2001 anthrax attacks, and they highlight the inadequacies of the United States' current public health care infrastructure.

In Chapter 5, Brower and Chalk issue another warning: the United States' greatest vulnerability lies at the state level. Individual states are responsible for monitoring and responding to disease outbreaks, coordinating their data and responses through the federal Centers for Disease Control, but states' capacity to diagnose patterns of illness and respond to outbreaks varies widely. Indeed, there is no comprehensive national laboratory system for surveillance.

The book's exhaustive treatment of federal programs and initiatives designed to respond to major health emergencies does turn up some highlights, such as the efforts of the U.S. Department of Defense to develop global pathogen surveillance systems. The U.S. government is developing novel capabilities to respond to bioterrorist attacks or naturally occurring large-scale outbreaks. New legislation, such as the Model Emergency Health Powers Act, gives state officials vastly expanded powers during a major health emergency.

Notwithstanding these efforts, systemic vulnerabilities undermine the United States' ability to respond effectively to mass contagion. Specifically, Brower and Chalk cite inadequate national surveillance mechanisms, fiscal neglect, lack of personnel, diminishing capacity to produce vaccines and therapeutic agents, and a lack of coordination. The authors also discuss persistent problems in communication between the federal, state, and local health bureaucracies that effectively hinder response, as demonstrated during the 2001 anthrax attacks.

Further, the authors note that U.S. health care aid to developing countries across the globe is insufficient. The developing world is the breeding ground for many new pathogens that could be quickly transported to the United States via tourism or trade. Therefore, investing in global public health should be a greater priority for federal legislators and bureaucracies. In the concluding chapter, the authors recommend streamlining domestic pathogen surveillance and response systems, creating an effective public health reserve response system, establishing analytical capacity within U.S. intelligence structures, and integrating disease into national security calculations.

Despite its minor problems, the book is

an excellent resource for anyone interested in



Does population growth pose a threat to the survival of the human race, or will man's ingenuity always outsmart nature and our finite resources? Should we heed the warnings that we are exceeding earth's carrying capacity, like those in William Catton's 1980 book

Earth's Carrying Capacity; or instead listen to those, like Donald G. McNeil (2004), who say that Malthus' dire predictions have been discredited by reality? Jeffrey McKee's new book,

Earth's Limits: How Population Growth is Destroying the World's Ecosystems, invites the reader to follow the trail of evidence, from the prehistoric era to the present, that reveals the impact of population on priceless ecosystems. Based on this evidence, McKee finds that population growth must be curbed by "responsible reproduction" or we risk losing nature's ability to support human life.

Is nature "sparing" or must we "spare" nature? Both, argues McKee, outlining his three theses: first, nature's resources are finite, limited

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the conditions and threats humanity faces at the start of the 21st century. While the intent is admirable, the report's recommendations are general exhortations, rather than specific actions for governments or organizations to perform. Nor do they directly address many of the principal roots of today's human insecurity: continuing population growth, massive rural-to-urban migration, degradation of the natural resource base, and the increasing gap between the world's rich and poor.

The commission's proposals to develop appropriate institutions and provide financial resources do not provide much assurance that its recommendations will be carried out successfully. It does not propose that an existing or new international body implement its work. Rather, it recommends establishing a vague core group of involved states, international organizations, and civil society, including the 13-government Human Security

Network, the Canadian Consortium of Human Security, and other national, regional, and global alliances. To raise funds, it encourages broadening the donor base of the UN Trust Fund for Human Security and the bilateral Grassroots Human Security Grants, both established by the Japanese government—not a reassuring long-term international funding source for this ambitious program.

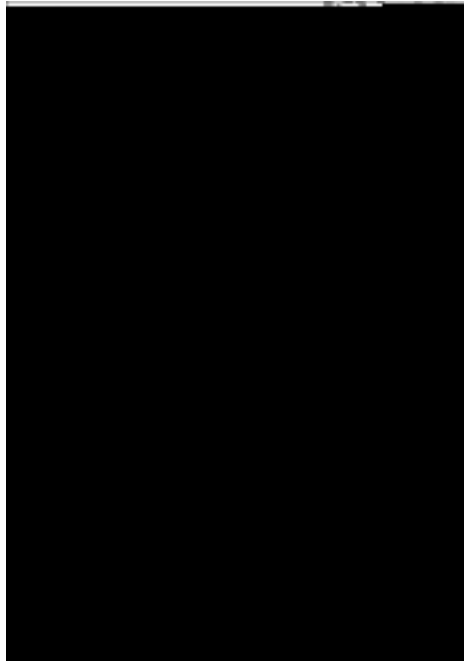
Overall, the commission's embrace of the human security concept and effort to re-characterize it are laudable. By seeking to adapt our ideas about security to our rapidly changing and globalizing world, it has delineated a worthy, more encompassing, and certainly more individual (albeit Western) dimension to augment the traditional concept. But whether its vision and recommendations can be successfully implemented—whether its reach exceeds mankind's grasp—is still an open question.

I was thrilled when I received the set of more than 20 publications produced by UNESCO's "From Potential Conflict to Cooperation Potential" (PCCP) project.¹

impede sustainable solutions to water management problems, including socio-economic political disturbances; poverty and socio-economic underdevelopment; insufficient information; and inequities in water allocation, knowledge, and military force. The water sector is plagued by weak institutions, which often lack democracy, political will, trained human capacity, and sufficient financial support.

Although some of these obstacles, such as poor governance and changing social values, are widely recognized, Cosgrove argues that developing adequate responses will require further thought and debate. The fifth chapter, "Trends: Emerging Issues and Opportunities for Cooperation," includes Aaron T. Wolf's observations that the shift to less traditional sources of water (e.g., deep fossil aquifers, wastewater reclamation, and interbasin transfers) and the increase in internally-driven conflicts might require developing new responses to transboundary water conflict. Cosgrove considers increased public participation to be one of the most important emerging trends; Chapter 6 collects examples drawn from Green Cross International's experiences to illustrate how NGOs foster cooperation and help reach sustainable solutions to water management problems.

When can obstacles to cooperation lead to conflict? "Indicators of Potential for Cooperation" builds on *Indicators of Potential for Cooperation* (Wolf, Yoffe, & Giardano, 2003), which finds no evidence that the parameters typically named as indicators of conflict (e.g., water scarcity, high population density, low per capita GDP) actually lead to violence. Instead, Wolf et al. identify a combination of factors that together establish a greater chance of hostility: "The likelihood and intensity of dispute rises as the rate of change within a basin exceeds the institutional capacity to absorb that change" (page 10). They find two situations that significantly increase the risk of a water dispute: (1) the sudden "internationalization" of a basin, or its division between nations, such as followed the dissolution of empires like the Soviet Union, and (2)



"unilateral basin development in the absence of a cooperative transboundary institution," which produces rapid physical change without adequate institutional capacity (page 11). Using these indicators, Wolf and his co-authors identify 17 international basins with the potential to develop disputes in the next 5 to 10 years, basing their assumptions on news reports, water-related treaties, and literature research. While this approach can locate basins in trouble, a more detailed on-site analysis could determine the actual risk of conflict and the most effective way to foster cooperation in a specific basin.

Pal Tamas's volume, *Water Wars: The Battle for the World's Rivers* (2003) stresses the relationship between intrastate water tensions and interstate conflicts, and emphasizes the importance of developing conflict resolution capabilities and making incremental advances in cooperation. Reviewing existing approaches to predicting conflict, like Clingendael's Conflict and Policy Assessment Framework³ and the Forum on Early Warning and Early Response (FEWER),⁴ Tamas proposes compiling water conflict indicators. His proposal, although not fully described, identifies some

important components of water-related peace and conflict assessments.

The final three chapters of the report provide a rather unorganized collection of lessons learned and recommendations. While they include some important points—for example, implementing transboundary cooperation requires coherent national water policies—the chapters awkwardly jump from one issue to the next, making for a difficult read. They do, however, reiterate the collection's main point: institutions are critical.

The conflict resolution and water cooperation framework (RCWIC) is a

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