

environment systems. Yet both offer a means by which to focus the analysis and practice on particular vulnerabilities in specific temporal and spatial contexts — a much better tool to use in prioritizing people's development and security. The frameworks clearly demonstrate the intricate inter-connectivities of human, social and environmental systems — action on one invariably affects the other. Understanding these relationships and the way they work through the use of frameworks may provide a better knowledge of which policy instruments to use, key entry points in the system that may have the most impact on outcomes and, ultimately, a space for learning and adaptation to help inform policy for the betterment of people's lives and the environment on which they depend.

These frameworks also identify a practical convergence that exists between human security and sustainable development: the linking of 'rights' and 'risks' in practical actions and initiatives. Under the short hand of rights, we mean both formal and informal entitlements and obligations as well as the capabilities and functionings associated with actual freedoms. Under the short hand of risks, we mean both the threats and opportunities that may occur as well as the actual costs and benefits that accrue in current realities or when outcomes materialize. Through inter-connected frameworks of human security and sustainable development, neither rights nor risks are under-emphasized; rather, action must address and include both. Approaches that highlight both 'rights and risks' could bring us one step closer to practical effectiveness on the ground.<sup>13</sup>

These frameworks also highlight the trans-scale linkages and inter-temporal dynamics that link sustainable security and development. While action agendas at the global and local levels do need to be strengthened, they must be done so with other scales clearly in mind. Moreover, initiatives at meso-units such as watersheds/river basins or urban/per-urban systems can address many fundamental risks and opportunities for achieving sustainable security and development. Likewise, linked sustainability transitions rather than a one-sided focus on either the immediate or the very long term are critical. For example, emergency responses to natural and human-induced disasters must be better linked to longer-term prevention and reconstruction efforts, while chronic problems such as the availability of and access to clean water require not only long-term efficiency improvements by immediate re-distribution in assets and access.

### *Multiple champions and coalitions of change*

Multiple champions and coalitions of change are needed to achieve sustainable security and development.<sup>14</sup> There is certainly growing evidence that shows that various stakeholders — such as community-based organizations, non-governmental organizations, social movements, professional scientific and technical associations, private sector firms, religious groups and others that are considered part of civil society — at various levels from the local to the global, are often champions for positive change.<sup>15</sup> This does not mean that all stakeholders necessarily are champions or even contributors to

positive change. Rather, increased support is needed to help build and sustain contextually appropriate and tailored champions and coalitions at meso-spatial levels that will be committed to making change over intermediate time horizons rather than focusing primarily on global and/or local groups with predominantly immediate or very long-term goals.

Second, progress towards achieving sustainable security and development is more likely when historically disenfranchised and disempowered individuals and groups are directly involved as either champions or at least members of coalitions for change. Focusing efforts on providing opportunities and support to these people — such as women, informal workers and vulnerable ethnic groups — as contributors to, and not just targets of, knowledge and action seems both practically successful as well as ethically appropriate.<sup>16</sup>

Third, those champions or coalitions that are most able to contribute towards positive change are either directly based in the most at-risk environments and/or work directly with the most deprived people. These champions or coalitions are most successful when: they play a facilitative role for self-organization by communities; are committed to stay over the medium term — neither parachuting in and out nor becoming stuck for long time horizons; and work in a transparent, participatory and accountable manner.<sup>17</sup>

Fourth, one of the mechanisms by which stakeholders promote sustainable security and development is by motivating, pressuring, supporting and sometimes even joining governmental and inter-governmental allies to formulate and implement change initiatives. Non-state stakeholders are often either champions or critical members of 'coalitions for change' that include members of governmental agencies and public officials in policy networks. The landmines network, the growing coalition focused on small island states, the 'Jubilee' debt relief campaign, the alliance that promoted access to essential medicines at the Doha trade talks, the burgeoning right to information movement, and many others are vivid examples of the potential effectiveness of these 'mixed-actor' coalitions.

Finally, any agenda for sustainable security and development in the twenty-first century will have learned from accumulated experience that governmental and inter-governmental organizations are not very good independent or sole sources of positive change. The factors that often prevent success by these actors independently include the inability to integrate interconnectivities, being located at and/or being focused on inappropriate scales or time horizons, not having the degree of information and understanding of complexity required (or simplifying complexity for bureaucratic purposes), not being as adaptable or innovative as necessary, lack of political interest in these areas and/or institutional barriers that inhibit action even when political interest exists, being captured by regressive social groups, weak accountability ties to the poor and marginalized, ideological opposition to these frameworks, and so on. These are some of the factors that have also generated 'disasters' around the world (see Ascher, 1999; Scott, 1998).

However, public agencies and officials are still crucial because they have the obligation to promote sustainable security and development of their

societies and have significant, albeit sometimes insufficient, resources and capacities to do so. However, the roles of governments are evolving both as a result of changing contextual conditions and new understandings of what they should do. Most, if not all, governmental organizations and officials cannot achieve sustainable security and development through top-down, technocratic approaches with mechanically formulated and implemented plans, policies, programs and projects. Neither can they do so after having been decimated by extreme versions of downsizing and privatization.

Rather, it seems that successful governmental agencies and authorities create enabling conditions, join and support coalitions for change, and work in a transparent, participatory and accountable manner — especially with respect to the most insecure and deprived. Thus, the most successful governmental agencies and officials use very much the same kinds of strategies that the best non-state groups do (Tendler, 1997). A key lesson seems to be that governmental authorities should not only be told what they should not do; they should be encouraged to be inventive and innovative and then rewarded for their positive achievements. Moreover, rights-based and risks-based administration and policy-making focusing on citizenship rather than on business models of servicing customers will be more effective for achieving sustainable security and sustainable development.<sup>18</sup>

Governmental agencies and officials certainly face dissimilar contextual conditions. Government organizations and authorities in failed or weak states are often incapable of supporting progress towards sustainable security and sustainable development.<sup>19</sup> They either do not have even the minimum resources required and/or are struggling to survive in the midst of conflict-ridden circumstances. In these cases, priority may have to be given to 'state-building and strengthening activities' and not just exclusively or primarily to supporting non-governmental organizations.<sup>20</sup> Such efforts to improve the institutional arrangements, and the organizational and human capacities of the state to provide a more conducive context for governmental and non-governmental groups and individuals to be champions and participate in coalitions, are extremely complex — technically and politically. But there are no easy pathways to sustainable security and development.

### *Interlocking and mutually reinforcing institutional arrangements*

The discussion of state-building and strengthening — and human capacity building of government officials — is part of the broader set of possible action implications for improving governance at various levels from the local to the global. By governance we are somewhat simply referring to the sets of norms, rules, policies, laws and institutional arrangements that constitute organizations, and structure the behavior and relations of people. And just as a stronger emphasis on supporting champions and coalitions of change at meso-spatial scales and medium-term time horizons that highlight both rights and risks in pursuit of sustainable security and development may be useful, similar principles for improving governance might be appropriate.

Institutional arrangements that provide conducive environments for

governmental and non-governmental groups and individuals probably need to be integrative, adaptable, and legitimate (see Kates and Clark, 2001). First, institutions are likely to be more effective the more they integrate various spatial and temporal scales as well as the connectivities between human security and sustainable development. Second, relatively flexible institutions seem to enable people to detect, communicate and utilize new and changing knowledge and information that aim to improve practice. Third, in order to be legitimate, institutions have to be relatively transparent, participatory and accountable to various stakeholders — especially the most insecure, deprived, and disempowered.

Perhaps most importantly, it seems that efforts at improving governance should place a great deal of emphasis on interlocking various sets of institutional arrangements and making them mutually reinforcing. It may not be wholly new governance models that are needed, but strategic interventions at particular times and places. Thus, the multi-stakeholder Global Reporting Initiative focused on developing universally acceptable standards for triple-bottom-line reporting (social, environmental and economic) contributes strategically to making corporate activities more accountable, responsible and sustainable. When stock exchanges, such as the Johannesburg stock exchange, requires listed companies to produce triple-bottom-line 'sustainability reports', a further institutional mechanism is put into place. With the increasing role of 'socially and environmentally responsible investing', the incentives become even greater for corporate citizenship towards sustainable security and development to become a reality.

Thus, dramatic governance moves such as a new integrative 'Right to Human Security' or extreme privatization programs are not likely to be the most useful institutional changes. On the other hand, a new 'Right to a Healthy Environment' that increases the efficacy of the existing right to water through greater political, judicial and administrative support for its primacy might put into motion changes in policy and practice that include pro-poor pricing programs and greater taxation and sanctions against water pollution (Johnson *et al.*, 2001). Moreover, strategic investments in public sector capacity for water provision and management might in fact be more successful compared with the problematic record of wholesale water privatization, especially those in contexts of weak regulatory frameworks and governmental oversight (Perry *et al.*, 1997; Hall *et al.*, 2002).

### *Contextually disaggregated goals and indicators*

Much attention is rightfully being placed on the United Nation's Millennium Development Goals (MDGs) and the coalitions and governance arrangements that are being constructed to achieve them. General goals of this type can be powerful motivators of action. From the logic of this paper, the MDGs are really Millennium Security Goals because they concentrate on primarily achieving sustainable security rather than sustainable development. Even the environmental priorities such as 'reducing biodiversity loss' are what we would call environmental security not sustainable development goals. Per-

haps changing the rhetoric from development to security could be useful in highlighting the urgency of achieving these goals. It might also encourage greater work on formulating interconnected sustainable security and sustainable development objectives.

Moreover, the currently specified MDGs do not cover all of the areas that the Millenium Declaration prioritized. In particular, the Millenium Declaration highlighted "peace and security" as well as "human rights" goals, while the MDGs do not. Sustainable security (and development) would be well served by highlighting and integrating these much more substantially in current United Nations and global efforts. Goals such as increasing the protection of women's rights and reducing warfare certainly merit as concerted a focus. These goals are often crucial conditions for achieving many of the other MDGs such as poverty and hunger reduction.

If the current MDGs are more like Millennium Security Goals and even the current set is missing several critical areas, what kinds of sustainable development goals might be needed? Generally, goals that focus more on sustainable increases and improvements in the quality of life rather than reductions of insecurities would be needed. On education, for example, the current focus on enabling all boys and girls to complete primary schooling would be seen as the security goal, whereas creating the opportunities for all young women and men to attend college or university would be a development goal. Or the current security goal of halting the unsustainable exploitation of water resources would be linked to a sustainable development goal of equalizing access to high-quality water resources and reduction in over-consumption by various groups and societies.

The 'pluralistic' thrust of the (sustainable) human security framework helps to correct the potentially problematic 'aggregate' nature of the goals and indicators as they currently are expressed. For example, if the world is to achieve the current MDGs within the target dates, but the distribution of those achievements was such that in numerous contexts little progress or even regression occurred, would the result be satisfactory from a human security perspective? Or if the goals are achieved in one of the areas, while progress in other areas is limited or regression occurs, how would the outcome be judged from a human security perspective? In addition, perhaps some of the goals are more important and urgent in particular parts of the world, and other goals in other parts of the world. Certainly what people perceive as the most important insecurities and deprivations vary across space and time.

Correspondingly, general indicators often (and increasingly so) become mechanisms for measuring failure or success in achieving general goals such as the MDGs. A sizeable portion of the literature and debate is engaged in developing definitions and corresponding indicators of human security, for example. While such general goals and indicators are useful for political and initial accounting purposes, over-emphasizing these can be extremely pernicious. All of our social science and practical experience suggests that indicators, not to mention concepts, do not necessarily travel well across space and time. Moreover, even when these indicators offer a rough sense

of comparative and global patterns and trends, they may not be useful at all for practical efforts and initiatives in particular places at particular times. Thus, what is probably needed is support for the development and mainstreaming of more contextually and temporally appropriate and useful ranges of indicators to match appropriate sets of goals for various scales and time horizons.

The recent attempts to operationalize the current MDGs are in fact partially addressing these issues. The emergent elements of country-based multi-stakeholder consultations, annual country progress reports, a global advocacy campaign, and specific strategies for each MDG are quite in line with the recommendations offered in previous sections of this paper. The key will be to keep the focus not primarily or predominantly at the global aggregate scale, but rather at these disaggregated levels of decision-making, action, and assessment. In order for this to occur, the coalitions promoting the MDGs will have to be broadened and deepened, while institutional arrangements will have to be made transparent, participatory and accountable.

### *Making security and development more human and sustainable*

In conclusion we offer one final thought. To the extent that political advocacy networks and action learning coalitions are built among those concerned with making security and development more human and more sustainable, what is considered impossible today may be possible in a short time, probable in the medium term, and one day natural and unquestioned. The point is that while calls for greater amounts of political will and practical openness on the part of those individuals and organizations that uphold and promote the more traditional fields of state security and economic development is fine, it is only when the sustainable human security and development communities forge common agendas, alter relations of power and practically demonstrate that their goals are achievable will positive change be engendered.

### **Acknowledgements**

The authors would like to thank participants at the 'Human Insecurities' workshop and several anonymous reviewers for their valuable comments on earlier drafts of this paper.

### **Notes**

- 1 While the term national security is often seen as one and the same as state security, we prefer to use the latter because of the now well-known distinction that few if any of the world's states can be considered to constitute a single national/ethnic group.
- 2 It seems that this involves two moves: a globalization of security to individuals all over the world; and from securing a set of objects (states as territorial units) to a set of subjects (individual human beings).
- 3 The Brundtland Commission devoted an entire chapter to 'Peace, Security, Development

- and Environment'. The security approach taken was primarily statist and violent conflict oriented (World Commission on Environment and Development, 1987).
- 4 Brown (1977) offered a very early, if not the initial, call for linking the environment to security issues.
  - 5 See paper presented by Matthew (2000).
  - 6 See Table 4.1, in National Research Council (1999), which integrates assessments of environmental threats.
  - 7 This section partly draws on National Research Council (1999).
  - 8 William Ruckelshaus, a Brundtland Commission member, noted "Sustainability is the nascent doctrine that economic growth and development must take place, and be maintained over time, [but] within the limits set by ecology in the broadest sense" (Ruckelshaus, 1989, p. 166).
  - 9 See Solow (1997) or Solow (1991), reproduced in Stavins (2000).
  - 10 Solow's conceptualization misses the Brundtland focus on both intra-generational as well as inter-generational equity, emphasizes aggregate standards of living to the exclusion of disaggregated distributions in both the quantity and quality of life, and the implicit requirement of improving and not just maintaining the standard of living of future generations relative to the current generation.
  - 11 As Buckles (1999) notes, "experience suggests that although consensus is not always possible, governance that is more inclusive, transparent, and efficient can help groups in conflict accommodate some differences, find common ground, and improve key decisions affecting their livelihoods".
  - 12 Research and Assessment Systems for Sustainability Program (<http://sust.harvard.edu/>).
  - 13 See World Commission on Dams (2000) for a preliminary rights and risks approach to the sustainable management of water and energy resources potentially involving the construction of large dams.
  - 14 See, for example: Kates and Clark (2001) on networks of scientists contributing to the management of global environmental risks; Khagram *et al.* (2002) on transnationally allied non-governmental organizations and social movements driving positive change in the areas of human rights, gender justice, worker issues, and sustainable development; Haufler (1999) on industry self-regulation; and Holiday *et al.* (2002) on corporate responsibility.
  - 15 The creation of more than 200 'Type II' partnerships were considered the most successful outputs of the World Summit on Sustainable Development in Johannesburg.
  - 16 The experiences of Self Employed Women's Association in India and Women in Informal Employment Globalizing and Organizing transnationally are particularly powerful, but certainly not the only, examples of women's groups and networks as champions of change. Evidence of the vast number of issue areas in which such 'peoples movements' are having an effect is abundant. See Batliwala (2002).
  - 17 See the in-depth case studies and analysis in the two volume series by Uphoff *et al.* (1998).
  - 18 For a risks-based approach to public management, see Sparrow (2000).
  - 19 We consciously use the term government or governmental to refer to individual and organizational actors, and the term state to focus on the institutional arrangements within which these governmental actors work.
  - 20 We consciously use the term 'state-building' because 'nation-building' has often been an ideological and programmatic basis for ethnic discrimination, marginalization and even genocide.

## References

- Adams, William Mark (1990) *Green Development: Environment and Sustainability in the Third World*, Routledge, London, New York.
- Agarwal, Anil and Narain, Sunita (1997) *Dying Wisdom: The Rise, Fall and Potential of India's Traditional Water Harvesting Systems*, Centre for Science and Environment, New Delhi.

---

### *Sustainable Security and Development*

---

- Appleton, Brian and Chatterjee, Ashok (2001) 'Innovative Strategies for Water and Sanitation for the Poor: Access and Affordability', thematic background paper, *International Conference on Freshwater*, Bonn.
- Ascher, William (1999) *Why Governments Waste Natural Resources: Policy Failures in Developing Countries*, Johns Hopkins University Press, Baltimore, MD.
- Batliwala, Srilatha (2002) 'Grassroots Movements as Global Actors: Implications for Global Civil Society', paper presented at *Workshop on Transnational Dynamics*, December, Harvard University, Cambridge.
- Bloomfield, Lincoln P. (1991) 'International Security: The New Agenda', for a project on *Rethinking International Governance*, Harold E. Stassen Center for World Peace, the Hubert H. Humphrey Institute of Public Affairs and the University of Minnesota, Minnesota.
- Brown, Lester (1977) 'Redefining Security', *Worldwatch Paper*, Vol. 14, Worldwatch Institute, Washington, DC.
- Buckles, Daniel (Ed.) (1999) *Cultivating Peace: Conflict and Collaboration in Natural Resource Management*, a joint publication of the International Development Research Center and the World Bank, International Development Research Center, Ottawa.
- Butts, Kent (1994) 'Why the Military is Good for the Environment', in Jyrki Kakonen (Ed.), *Green Security or Militarized Environment*, Aldershot, Brookfield, Dartmouth Publishing Co.
- Chambers, Robert R. (1992) *Political Theory and Societal Ethics*, Buffalo, N.Y., Prometheus Books.
- Choucri, Nazli (1993) *Global Accord*, The MIT Press, Cambridge, MA.
- Clark, William C. and Munn, R.E. (Eds) (1986) *Sustainable Development of the Biosphere*, Cambridge University Press, Cambridge.
- Clark, William C., et al. (2002) *Science and Technology for Sustainable Development: Consensus Report of the Mexico City Synthesis Workshop*, 20–23 May, Initiative on Science and Technology for Sustainability, Cambridge, MA [[http://sustsci.harvard.edu/ists/synthesis02/output/ists\\_mexico\\_consensus.pdf](http://sustsci.harvard.edu/ists/synthesis02/output/ists_mexico_consensus.pdf)].
- Daly, H. (1990) 'Toward Some Operational Principles of Sustainable Development', *Ecological Economics*, 2(1), pp. 1–6.
- Deudney, Daniel (1990) 'The Case Against Linking Environmental Degradation and National Security', *Millennium*, 19, pp. 461–467.
- Dryzek, John (1997) *The Politics of the Earth*, Oxford University Press, London.
- European Commission Directorate General for External Relations (1999) *Environmental Security: Just Another Green Fashion*, The European Communities, Luxembourg.
- Gillies, A.M. (1993) *Economic Prosperity in the 21st Century: The Win-Win benefits of Managing Our Economy in Harmony with the Environment*, International Institute for Sustainable Development, Winnipeg.
- Gleditsch, Nils Petter (1998) 'Armed Conflict and the Environment: A Critique of the Literature', *Journal of Peace Research*, 35(3).
- Gleick, Peter H. (1989) *Climatic Change and International Security: A Changing Global Perspective*, remarks at the United States Department of State, 11 May, Foreign Service Institute, Arlington, VA.
- Gleick, Peter H. (1993) 'Water and Conflict: Fresh Water Resources and International Security', *International Security*, 18.
- Hall, David, Bayliss, Kate and Lobina, Emanuele (2002) *Water Privatization in Africa*, June, University of Greenwich, Public Services International Research Unit, Greenwich.
- Hampson, Fen Osler, Daudelin, J., Hay, John B., Reid, H. and Martin, T. (2002) *Madness in the Multitude*, Oxford University Press, Ontario.
- Hauffer, Virginia (1999) *A Public Role for the Private Sector: Industry Self-Regulation in a Global Economy*, Carnegie Endowment for International Peace, Washington, DC.
- Heinrich Boll Foundation (2002) *The Jo'burg Memo, Fairness in a Fragile World*, Memorandum for the World Summit on Sustainable Development, July, Berlin Heinrich Boll Foundation.
- Holiday, Charles O. Jr., Schmidheiny, Stephan and Watts, Philip (2002) *Walking the Talk: The Business Case for Sustainable Development*, Greenleaf Publishing, Sheffield.



- Homer-Dixon, Thomas (1995) 'Strategies for Studying Causation in Complex Ecological Political Systems', occasional paper for the *Project on Environment, Population and Security*, June, American Association for the Advancement of Science and the University of Toronto Washington, DC [<http://www.library.utoronto.ca/pes/eps/method/methods1.htm>].
- Homer-Dixon, Thomas (1999) *Environment, Scarcity and Violence*, Princeton University Press, Princeton, NJ.
- International Committee of the Red Cross (1999) *Forum: War and Water*, International Committee of the Red Cross, Geneva.
- Jancar, Barbara (1993) 'The Environmental Attractor in the Former USSR: Ecology and Regional Change', in Ronnie D. Lipschutz and Ken Conca (Eds.), *The State and Social Power in Global Environmental Politics*, Columbia University Press, New York City.
- Johnson, Nels, Revenge, Carmen and Edwards, Jaime (2001) 'Managing Water for People and Nature', *Science*, 292, pp. 1071-1072.
- Kasperson, Jeanne X., Kasperson, Roger E. and Turner, B.L., II (Eds) (1999) *Regions at Risk: Comparisons of Threatened Environments*, UN University Press, Tokyo.
- Kates, R.W. and Clark, William C. (2001) *Sustainability Science*, Research Programs, John F. Kennedy School of Government, Harvard University, Cambridge, MA.
- Khagram, Sanjeev, Riker, James V. and Sikkink, Kathryn (Eds.) (2002) *Restructuring World Politics: Transnational Movements, Networks and Norms*, University of Minnesota Press, Minneapolis, MN.
- King, Gary and Murray, Christopher (2002) 'Rethinking Human Security', *Political Science Quarterly*, 116.
- Krishna, Anirudh, Uphoff, Norman and Esman, Milton J. (1997) *Reasons for Hope*, Kumarian Press, West Hartford, CT.
- Lewis, Flora (1989) 'Environment is Security', *New York Times*, 24 May, p. A31.
- Matthew, Richard A. (2000) 'The Environment as a National Security Issue', *Journal of Policy History*, 12(1), pp. 101-122.
- Matthew, Richard A. (2000) 'The Relationship between Environment and Security', paper presented at the *Earth Forum*, 4 October, Amman, Jordan.
- Mathews, Jessica Tuchman (1989) 'Redefining Security', *Foreign Affairs*, 68(2).
- Moser, Caroline and Norton, Andy (2001) 'To Claim Our Rights: Livelihood Security, Human Rights and Sustainable Development', draft concept paper prepared for the *Workshop on Human Rights, Assets and Livelihood Security, and Sustainable Development*, June, Overseas Development Institute, London, pp. 1-71.
- Murcott, S. (1995) 'Sustainable Systems: Definitions, Principles, Criteria and Indicators', paper prepared for a *IIASA (International Institute for Applied Systems Analysis) Workshop on Sustainable Development: Criteria and Indicators*, 25 July.
- National Research Council (1999) *Our Common Journey: A Transition Toward Sustainability*, National Academy Press, Washington, DC.
- O'Riordan, T. (1988) 'The Politics of Sustainability', in R.K. Turner (Ed.), *Sustainable Environmental Management: Principles and Practice*, Westview, Boulder, CO, pp. 29-50.
- Pares, Roland (2001) 'Human Security: Paradigm Shift or Hot Air?', *International Security*, 26.
- Percival, Valerie and Homer-Dixon, Thomas (1995) 'Environmental Scarcity and Violent Conflict: The Case of Rwanda', paper for the *Project on Environment, Population and Security*, American Association for the Advancement of Science and the University of Toronto, Washington, DC.
- Perry, C.J., Rock Michael, and Seckler, D. (1997) *Water as an Economic Good: A Solution or Problem?*, International Irrigation and Management Institute, Colombo, Sri Lanka.
- President's Council on Sustainable Development (1996) *Sustainable America: A New Consensus for Prosperity, Opportunity and a Healthy Environment for the Future*, US Government Printing Office, Washington, DC.
- Redclift, Michael (1987) *Sustainable Development: Exploring the Contradictions*, Methuen, London.
- Ruckelshaus, William D. (1989) 'Toward a Sustainable World', *Scientific American* 261(3) (reprinted in *Managing Planet Earth: Readings from Scientific American Magazine*, W.H. Freeman, New York, 1990).

---

### *Sustainable Security and Development*

---

- Scott, James C. (1998) *Seeing Like a State: How Certain Schemes to Improve the Human Condition have Failed*, Yale University Press, New Haven, CT.
- Sen, Amartya (2000) *Development As Freedom*, Knopf, New York.
- Sen, Amartya (2002) *Human Security and Development: Examining Some Policy Implications*.
- Solow, Robert (1997) 'An Almost Practical Step Towards Sustainability', lecture given on the occasion of the *Fortieth Anniversary of Resources for the Future*, Resources for the Future, Washington, DC (originally published 1992).
- Solow, Robert (1991) 'Sustainability: An Economist's Perspective', paper presented as the *Eighteenth J. Seward Johnson Lecture*, 14 June, Marine Policy Center, Woods Hole Oceanographic Institution, Woods Hole, MA (reprinted in Stavins, Robert N. (Ed.) (2000), *Economics for the Environment*, W.W. Norton & Company, New York).
- Sparrow, Malcolm K. (2000) *The Regulatory Craft: Controlling Risks, Solving Problems and Managing Compliance*, Brookings Institution Press, Washington, DC.
- Speth, James Gustave (1989) 'Dedicate the '90s to the Environment: International Commitment Could Be Our Gift to The New Century', *Los Angeles Times*, 16 February, part II, p. 11.
- Tendler, Judith (1997) *Good Government in the Tropics*, Johns Hopkins University Press, Baltimore, MD.
- Ullman, Richard (1983) 'Redefining Security', *International Security*, 8(1), pp. 129-153.
- United Nations Development Program (1994) *Human Development Report 1994*, United Nations, New York.
- Uphoff, Norman, Esmar, Milton J. and Krishna, Anirudh (1998) *Reasons for Success*, Kumarian Press, West Hartford, CT.
- Wilbanks, T.J. (1994) '"Sustainable Development" in Geographic Perspective', *Annals of the Association of American Geographers*, 84, pp. 541-556.
- Wolf, Aaron T. and Hammer, Jesse H. (2000) 'Trends in Transboundary Water Disputes and Dispute Resolution', in Miriam R. Lowi and Brian R. Shaw (Eds), *Environment and Security*, St Martin's Press, New York.
- Woodrow Wilson Center (2000) *Environmental Change and Security Project Report*, Issue 6, The Woodrow Wilson Center, Summer, Washington, DC.
- World Commission on Dams (2000) *Dams and Development*, Earthscan, London, Sterling, VA.
- World Commission on Environment and Development (1987) *Our Common Future*, Oxford University Press, Oxford.
- World Resources Institute (1992) *World Resources 1992-93: A Guide to the Global Environment*, a joint publication by the World Resources Institute, the United Nations Environment Program, the United Nations Development Program, and the World Bank, Oxford University Press, New York.
- Worldwatch Institute (2002) *State of the World 2002*, W. W. Norton & Company, New York.