

SUMMARY REPORT

The international community has repeatedly acknowledged the need to address the myriad economic, social and environmental problems faced by the planet and its people. Many of these issues are characterized by international or transboundary components that cannot be resolved without the cooperation of multiple sovereign nations. Over the past thirty years, government leaders have repeatedly come together to address these problems, through specific multilateral treaties, international conferences, and the creation of new organizations and agencies for sustainable development. Agreements now exist for almost every environmental issue, yet few of these agreements have been implemented.¹ In spite of an impressive amount of activity on the international stage, there is little to show for the three decades of negotiations.

The implementation gap between international commitments and positive change on the ground was the focus of the recent World Summit on Sustainable Development (WSSD) held in September 2002 in Johannesburg, South Africa. Though the Summit sought to move away from negotiation toward realization of already existing goals and identification of institutional and financial requirements, this objective proved easier said than done.² The official outcomes of the WSSD were notably lacking in the targets and timetables needed to organize implementation. At the Johannesburg Summit, Type II Partnerships, or public-private partnerships, emerged as an alternative to the Summit's

¹ Pamela Chasek, Editor and co-founder, *Earth Negotiations Bulletin*, interviewed by author, 6 December 2002.

² United Nations General Assembly, "Ten Year review of progress achieved in the implementation of the outcomes of the United Nations Conference on Environment and Development." A/RES/55/199 (New York, N.Y., 5 Feb 2001).

weak intergovernmental commitments.³ Type II Partnerships are not without their critics, yet they do represent a new, results-driven approach to international sustainable development.

With the outcomes of the WSSD still fresh on the agenda, the Woodrow Wilson School's Undergraduate Task Force on Sustainable Development turned to the question of how to successfully implement international sustainable development commitments. Led by Professor Denise Mauzerall, the Task Force brought together eight third year public policy students, as well as one fourth year student acting as a 'commissioner,' for a semester of intense application to the problems of sustainable development. The Task Force sought to explore implementation techniques through specific case studies of sustainable development projects, drawing on these cases to inform both specific and broad policy recommendations. In-depth reports written by members of the Task Force follow this summary and introduction to sustainable development. On May 6, 2003, the task force culminated in a side-event presentation to the WSSD follow-up meeting of the United Nations Commission on Sustainable Development.⁴ Before presenting the Task Force's reports, a greater exploration of the concept of sustainable development is in order. Brief summaries of each of the reports follow the introduction to sustainable development, and are concluded by a set of overarching recommendations agreed to by the members of the Task Force.

Introduction to Sustainable Development

³ Alison Drayton, Policy Adviser, United Nations Development Program, interviewed by the author, 17 December 2002.

⁴ The presentation is available by following the links to "student reports" at <http://www.wws.princeton.edu/~step/step.info/mauzerall.html>.

People around the world aspire to the standards of living broadcast by western media, but the planet simply does not have the resources to support everyone at the levels of consumption enjoyed in the United States and Europe. If China, the world's most populous country, were to follow the development patterns set forth by industrialized nations, our planet would be stretched to capacity. If every Chinese family owned a car and used oil at the rate used in the United States, China would need more oil than the world currently produces. If China's 1.3 billion people began consuming fish at the same rate as the Japanese, China would use the entire world fish catch. If paper use in China grew to the levels consumed in the United States, the demand would exceed current world production.⁵ Clearly something must change. Sustainable development seeks to balance global inequalities, for both the short- and long-term, to meet "the needs of the present without compromising the ability of future generations to meet their own needs."⁶

The three components of sustainable development, economic, social and environmental, are traditionally separated in decision-making, but have ramifications that are inextricably linked.⁷ Neglect of one of the components is, in the long run, detrimental to the others.⁸ Economic considerations dominate short-term decision-making, to the disadvantage of long-term social and environmental well-being, which, in turn, often have long-term economic consequences. For example, in Costa Rica, erosion caused by deforestation threatens the hydroelectric dams that provide the bulk of the

⁵ These projections for consumption in China are from Lester Brown, *Eco-Economy: Building an Economy for the Earth* (New York, N.Y.: W. W. Norton, 2001), pp. 17-18.

⁶ United Nations General Assembly. "Report of the World Commission on Environment and Development," A/RES/42/187. New York, N.Y., 1987.

⁷ Juan Martinez-Alier, "From Political Economy to Political Ecology," in Harris, Wise, Gallagher and Goodwin, eds. *A Survey of Sustainable Development*, p. 29.

⁸ Guiseppe Munda, "Environmental Economics, Ecological Economics, and the Concept of Sustainable Development," in Harris, Wise, Gallagher and Goodwin, eds. *A Survey of Sustainable Development*, p. 20.

country's energy. The reforestation needed to save the watershed will cost the government over \$50 million. Deforestation could have been prevented at a cost of \$5 million.⁹ Sustainable development recognizes the connections among economic, social and environmental concerns in its effort to integrate the three components in decision-making processes.

International efforts at sustainable development can be dated to the United Nations Conference on the Human Environment (UNCHE), held in Stockholm in 1972. The conference was the product of a growing incidence and awareness of human-caused transboundary environmental impacts, resulting in the adoption of a set of international commitments to combat the causes of environmental degradation, including poverty and a lack of social and economic development.¹⁰ In 1992, the international community gathered in Rio de Janeiro for another mega-summit on what, in the intervening decades, had come to be known as sustainable development. The United Nations Conference on the Environment and Development (UNCED) was considered by many to be a great victory for sustainable development, drawing hundreds of world leaders, and adopting several important documents and treaties, including the Convention on Biological Diversity, the Framework Convention on Climate Change, Agenda 21, and the Rio Principles. In spite of the substantial progress in awareness and scientific understanding of the issues, and the improvements in global cooperation, few of the goals and commitments established since 1972 have been realized.

The reasons for the implementation gap between international commitments and concrete outcomes can be explained by a number of factors, including conflicting

⁹ Tolba, *Global Environmental Diplomacy*, p. 168.

¹⁰ *Ibid.*, p. 2.

incentives and a lack of cooperation among the actors. Because social and environmental costs are currently excluded from most economic calculations, individual actors and firms have incentives to act in ways that create social and environmental harms. Thus, though industrial pollution has been identified as harmful to both health and the environment, and governments have committed to reducing pollution, polluting behavior continues because the industries do not feel the health or environmental costs. These types of problems are referred to as market externalities or tragedies of the commons, and result in a failure of the market to generate socially optimal behavior. The lack of cooperation among actors can similarly be attributed to a tragedy of the commons situation, in which the behavior of one country does not take into account the consequences for other countries. Common examples of these problems include climate change, ozone depletion and acid rain.

Divisions among developed or Northern and developing or Southern nations, and their differing contributions to environmental degradation, also obstruct sustainable development. The South takes a historical perspective, invoking the polluter pays principle to argue that the North should pay for the damage done during its development.¹¹ Similarly, the South claims a right to development and to enjoy the standard of living that the North takes for granted.¹² The North replies that if Southern development follows the patterns of already-industrialized countries, humans will quickly exceed the carrying capacity of the planet. However, the North is unwilling to discuss its own unsustainable patterns of production and consumption, or question the precedent for

¹¹ *Ibid.*, p. 85.

¹² *Ibid.*, p. 85.

the very development patterns that it does not wish the South to emulate.¹³ Because of this, Southern states accuse the North of eco-imperialism, charging the North with an ecological debt taken in resources from the South.¹⁴ These arguments lead to a breakdown in cooperation, and an inability to move beyond negotiation to implementation.

The World Summit on Sustainable Development served as a follow up to the UNCED in 1992, and sought to identify barriers to implementation and define the means necessary to achieve the goals established over the past thirty years.¹⁵ If nothing else, the WSSD demonstrated the difficulty of adjusting the course of a large bureaucracy evolved for negotiations, and helped reaffirm the notion that large meetings will not, in and of themselves, produce results.¹⁶ Aside from the Type II Partnerships that emerged at the Summit, the WSSD seems not to have produced much progress toward a centralized implementation regime. In his report, “Making Type II Partnerships Effective,” which follows this summary, Thomas Hale explores some of the criticisms and potentials of Type II Partnerships. Common arguments in favor of Type II Partnerships include their flexibility in partners and implementation techniques, as well as their ability to bypass multilateral gridlock. Weaknesses of Type II Partnerships include their overall lack of transparency and accountability, and the fact that they tend to be driven by supply, or what donors are willing to undertake, rather than demand for specific sustainable development activities.

¹³ Calvert and Calvert, *The South, the North and the Environment*, p. 188.

¹⁴ *Ibid.*, p. 188.

¹⁵ United Nations General Assembly, “Ten Year review of progress achieved in the implementation of the outcomes of the United Nations Conference on Environment and Development.”

¹⁶ “After Johannesburg ... Do UN Summits really accomplish much?” *Africa Online*. www.africaonline.com/site/Articles/1,3,49286.jsp. 3 February 2003.

This Task Force explores ways around barriers to implementation, looking at specific projects that have been successful in achieving progress toward sustainable development goals, and drawing recommendations for future projects from these success stories. Rather than addressing the broad and complex issues of sustainable development as a whole, each member of the task force selected a discrete problem as the focus of their report. Taken together, the eight reports only begin to brush the surface of what must be accomplished for a sustainable future. However, the recommendations of the Task Force are derived from real projects, and attempt to remain grounded and concrete in the face of the tendency toward abstraction found in many discussions of sustainable development policy. For the most part, the students concentrated on sustainable development in Africa, in an effort to enhance the continuity among their reports.

Thomas Hale begins the reports with an exploration of Type II Partnerships. Next, Karim Thomas looks at biodiversity conservation in forest ecosystems. Third, Priscilla Delgado explores integrated water resources management. Fourth, Nina Jenkins-Johnston details the importance of community involvement in combating diarrhea in children. Fifth, Michelle Hemmat takes on the problem of preventing the spread of HIV/AIDS in countries with low prevalence. Sixth, Shena Elrington concentrates on reducing indoor air pollution in rural homes. Seventh, Ashley Collins examines the potential for photovoltaic technology in rural Africa. Last, Elyse Kovalsky provides a contrast to the problems of Africa in her study of sustainable development in the United States, which concentrates on reducing CO₂ emissions in the transportation sector. Brief summaries of each of the reports follow.

Report Abstracts

“Managing the Disaggregation of Development: How the Johannesburg “type II” partnerships can be made effective”

A major outcome of the 2002 UN Summit on Sustainable Development was a series of non-negotiated, voluntary development projects involving a range of organizations and institutions. These so-called “type II” partnerships were highly controversial, heralded by some as a powerful new development tool while disparaged by others as unproductive public relations stunts. A review of the partnerships to date reveals a number of flaws, especially regarding breadth of involvement and accountability. However, these can be mitigated via a transparency-based partnerships regime that combines both “hard” (law-based) and “soft” (market- and reputation- based) mechanisms to maximize the partnerships’ development potential. If such a regime were created, type II partnerships could become a useful supplement to state-to-state development commitments.

“Preserving Biodiversity in Forest Ecosystems: Case studies from Asia and Latin America hold lessons for a global response to the challenge of conserving biodiversity”

This paper examines the commitments the international community made in the Convention on Biological Diversity, and contrasts them with the current status of biodiversity conservation efforts, specifically within forest ecosystems. Recognizing both the importance of action to preserve biodiversity, as well as the challenges encountered by both developed and developing countries in doing so, the paper examines three cases studies which each present distinct approaches to sustaining biodiversity. The first case study, from Indonesia, emphasizes the central role that NGOs can play; the second, from a network based in Canada, explores the potential models of interaction between developed and developing countries; and the third, from Costa Rica, offers insights into a type of partnerships which has yet to be fully explored at the international level – the introduction of a profit motive in preserving biodiversity. The paper then concludes with six general recommendations drawn from the experiences of the three case studies, and informed by additional research.

“Some, For All, Forever: Managing water for sustainable development in South Africa”

The World Summit on Sustainable Development addressed the impending threat of water scarcity as one of its five central issues. Demand for fresh water has risen over the last 30 years and continues to rise due to expanded economic development and population growth. However unsustainable withdrawals of water that do not take into account the importance of maintaining natural ecosystems will deplete renewable freshwater resources. For Sub-Saharan African countries the threat of water scarcity is exacerbated by arid climates and widespread poverty. South Africa attempted to proactively deal with these problems by adopting a policy of integrated water resources management (IWRM) in the National Water Act of 1998. This policy attempts to address both the environmental needs and basic needs of the poor in one policy towards water allocation. The main points that can be learned from the South African example are that IWRM should allocate water for environmental needs, basic needs of the poor as well as enforce water use charges on commercial users of water as economic incentives for conservation. Water management should be at the catchment level and encourage broad public participation. Finally, investment should be made in the development of more efficient irrigation as well as intensified agriculture. Information sharing and networking among countries of the region should be encouraged and lead by South Africa with the funding of donor organizations.

“Combating Diarrhea in Children”

Despite the fact that diarrhea is both preventable and treatable, two million children die each year in developing countries from the disease. The majority of cases are caused by unsafe water supply, inadequate sanitation and poor hygiene. Populations in rural areas tend to be disproportionately affected. Studies have indicated that low coverage rates of water and sanitation in rural Africa are largely the product of centralized provision of services by national government monopolies. This supply-driven approach has proven to be highly inefficient and unsustainable. In order for governments to achieve sustainability of these systems, they must adopt a grassroots approach formally known as the demand-responsive approach (DRA). The DRA is for communities to organize themselves to express their preferences, choose services, and take ownership

and responsibility for sustaining, operating and managing their water and sanitation facilities. Using lessons learned from a rural water project in Ghana, which utilized DRA, this policy paper makes recommendations to the West Africa Water Initiative (WAWI), which is a public-private partnership with the aim of providing safe water and sanitation to rural Ghana, Mali and Niger. Recommendations to WAWI include: community involvement, focusing on women, and education on the causes and treatments of diarrhea.

“AIDS Prevention in Countries with Low Prevalence: Extending lessons from Senegal to Niger”

This paper provides recommendations for preventing the spread of HIV/AIDS in Niger, a West African country that currently experiences a low incidence of the epidemic. It also analyzes HIV/AIDS programs in Senegal, another West African country whose government acted immediately and continuously to maintain one of the lowest rates of infection in sub-Saharan Africa. Since Niger and Senegal have many similar characteristics affecting the manner in which HIV/AIDS is spread, many of the lessons learned from activities in Senegal can be extended to Niger. Recommendations include: pursue a multi-sector approach involving government, NGOs and community groups; increase surveillance of epidemic; educate population through schools and media campaigns; target high risk groups; ensure safe blood supply and access to condoms; provide protection, treatment and care of people living with HIV/AIDS and STDs.

“Reducing Indoor Air Pollution in Africa: A review of two successful intervention programs and recommendations for future intervention efforts”

Approximately one half of the world’s population and up to 90% of rural households in developing countries rely on unprocessed biomass fuels in the form of wood, dung, and crop residue for cooking, lighting, and heating. These fuels are typically burnt indoors in open fires in poorly functioning stoves. The smoke emitted from these stoves contains high levels of particulate matter, including carbon monoxide and soot that adversely affect health. Collecting biofuels, such as wood, degrades the environment, promotes habitat destruction and triggers erosion. This paper seeks to

demonstrate the ways in which the mass adoption of improved biomass stoves can counteract the negative effects of biofuel collection and traditional stove usage within many developing countries. Recommendations draw from lessons learned from two case studies include community participation and quality control mechanisms.

“The Development of Photovoltaic Markets in Rural Africa”

Africa is the least electrified region of the world, with up to 98% of the population without electricity. The inhabitants of rural areas in Africa are very dispersed and lack the necessary infrastructure to allow them to connect to urban electricity grids. High levels of solar insolation also make Africa a highly viable location for the implementation of photovoltaic (PV) technology programs. Drawing from three case studies of PV technology in Africa, this paper concludes that overcoming market barriers is central to successful PV development in rural Africa. Five main categories of barriers block development: technical, governmental, financial, institutional and consumer confidence. Type II Partnerships hold the greatest potential for overcoming these barriers and facilitating PV projects.

“Sustainable Development in the United States: Reducing CO₂ emissions in the transportation sector”

The Final Report of the WSSD, signed by the U.S. at Johannesburg, included the provision that “[a]ll countries should promote sustainable consumption and production patterns, with the developed countries taking the lead.” This policy paper focuses on the U.S. passenger transportation sector as a starting point for a transition to more sustainable consumption patterns. Acknowledging the various approaches available for reducing emissions, the paper focuses on the specific goals of increasing vehicle efficiency and reducing total vehicle miles traveled, and discusses a short- and long-term strategy for each. Recommendations for increasing vehicle efficiency include both the immediate strengthening of current CAFÉ standards and long-term investment in hydrogen fuel cell technology, infrastructure and marketing. Strategies for reducing vehicle miles traveled include establishing transportation prices that accurately reflect social costs through a

reduction in indirect subsidies, combined with a long-term commitment to invest in viable alternatives to personal vehicle use.

Conclusions

The variety and specificity of the individual reports of the Task Force do not lend themselves to comprehensive recommendations or conclusions beyond the specific policy recommendations of each report. However, a few common themes can be identified. Fundamental to sustainable development is the integration of economic, social and environmental concerns, which has served as a foundation to each of the reports. The Task Force also emphasizes the fact that sustainable development, and all of the issues that fall under its broad rubric, must become a greater priority in the international system, and receive more funding and support from governments, international organizations and the private sector. Without increased financial and institutional support from both donor and recipient countries, many of the international goals cannot be implemented. Though sustainable development must become a priority for top-down decision-making, community involvement and capacity building are equally essential to the success of individual initiatives. Progress will not occur on the ground without the involvement and cooperation of local people. Increasing awareness at all levels, through education and the media is important for increasing the sustainability of both individual and societal choices. Just as top-down and bottom-up approaches must be integrated, so too must short- and long-term concerns. Though sustainable development emphasizes the need for long-term decision-making, short-term and intermediate actions can help mitigate the harms that must be addressed in the long-term. By planning for the long-term, social and environmental costs can be better integrated into economic issues. Finally, the projects

studied by the Task Force members indicate that Type II Partnerships can provide a relevant means for implementing sustainable development commitments, but only if they incorporate these other broad recommendations for successful implementation.

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