



THE MILLENNIUM PROJECT: BROADENING PERSPECTIVES ON WATER ISSUES

PRESENTATION AT THE JULY 2005 PLANNING COMMITTEE MEETING

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The objective of this presentation is based on the importance and priority of the issue of water, enumerated by the Millennium Project as one of its 15 Global Challenges for the future of humanity.

I propose analyzing it as a special point of development (as Rosa Alegria did with the topic of women), in connection to the 15 Challenges, in addition to examining water issues in close conjunction with the problem of Environmental Security investigated by the Millennium Project.

Background:

1. As water resources have been included in the Millennium Project's various publications and agendas from its inception, the precedents and sufficiently solid base to elaborate a more specific investigation are already in place. In order to accomplish this, we can form a team of representatives from the nodes who are interested in participating in this research.
2. Considering the information above, in addition to Ambassador John McDonald's proposal at the 2004 Washington, D.C. Planning Committee Meeting—which suggested strengthening our work in the area of water keeping in mind the Declaration of the Decade of Water issued by the United Nations—and Concepcion Olavarrieta's (representing the Mexican node) proposal that the Millennium Project participate in the Fourth International Water Forum (to be held in Mexico in 2006), Jerome Glenn, Concepción Olavarrieta, and I have initiated contact with the Forum's authorities and coordinators in order to propose this participation.

Summary:

The most important principle to water management is the acknowledgment that water is a scarce good whose depletion has a direct impact upon economic efficiency, social equity, and environmental sustainability around the world. Safe and efficient water resources management depends and may only be achieved through an integrated, cross-sector approach.

The question raised at the last Planning Committee Meeting held in Belgium, *“Why is it that the water situation is worse today than ten years ago when UNICEF, FAO, WHO, UNDP, UNESCO, and national agencies like USAID, GTZ, CEDA, and others have been working on it?”* would serve as a starting point.

Despite the wide scope of this question, it doesn't encompass all the facets of the problem. Precisely because the distinct features of water resource management require a multi-disciplinary and multi-institutional approach, we can address this issue through every single one of the 15 Global Challenges. Water is life. It is essential for the well being of mankind, a vital element for economic development, and an imperative factor for the healthy functioning of all the world's ecosystems.

I propose to form a working group that would investigate the issue of water resources and management as a specific theme to be applied to the Millennium Project, taking into account the various studies and solutions for future actions that have been realized by national/international agencies and non-governmental organizations (e.g., the World Water Forum being organized by the World Water Council).

<i>The 15 Global Challenges identified and discussed</i>	<i>Implications for Water Policy and Water Resources Management</i>
1. Sustainable Development	<ul style="list-style-type: none"> —Water as a replenishable but depletable resource —Society's interaction with the water cycle: a conceptual framework for a more holistic approach —Water resources: quality and quantity related management, trends of surface water and groundwater contamination —Contributions that research can make towards obtaining sustainable development —Areas of research development include: <ul style="list-style-type: none"> -examining sustainability from global, regional, and local perspectives -identifying conditions that lead to the sustainability of water resources -developing water resources for various uses
2. Clean Water	<p>Increasing access to domestic water supply and sanitation services and improving water resources management could help developing countries fight poverty and safeguard human health.</p> <p>Water challenges will increase significantly in the coming years. Continuing population growth will lead to greater water consumption, as well as more waste. This may constrain the availability of water for all purposes.</p>
3. Population and Resources	<ul style="list-style-type: none"> —Climate change has increasing impacts on regional water supplies, agricultural productivity, human and ecosystem health, infrastructure, financial flows and economies, and patterns of international migration —An expanding human population could further deplete an already limited global food and water supply, dramatically increasing food prices and potentially triggering internal unrest or the use of food as a weapon —Widespread impacts of climate change could lead to waves of migration, threatening international stability —One study estimates that by 2050, as many as 150 million people may have fled coastlines vulnerable to rising sea levels, storms or floods, or agricultural land too arid to cultivate —Historically, migration to urban areas has stressed limited services and infrastructure, inciting crime or insurgency movements, while migration across borders has frequently led to violent clashes over land and resources
4. Democratization	<ul style="list-style-type: none"> —In seeking to bring coherence and integration to water resources management and at the same time address the issues of equity and sustainability, many governments have embarked upon a process of decentralization of management and regulation —Public participation and stakeholder inclusion are imperative if these efforts at decentralization are to be successful. In the water resources sector the process evolves through the development of various institutional arrangements,

	<p>associated with current democratic governments</p> <ul style="list-style-type: none"> —Traditional governance and customary law, however, continue to play an important role for community issues, land allocation, conflict resolution, etc. —How can public participation be encouraged and solicited in developing nations or areas that are beyond the reach of certain international regulations?
5. Long-term Perspectives in Policymaking	<ul style="list-style-type: none"> —Much scientific uncertainty surrounds water resources management —How can background information be organized and disseminated to decision-makers and planners who want to better understand the water resources situation?
6. Information and Communications Technologies	<ul style="list-style-type: none"> -Effective integrated water resources management needs a sound information base. The inadequacy of the information and data on water resources and on water demand and supply is a clear indication of weaknesses in data gathering and information generation. -In the current technological world, one can already envisage Internet users accessing directly, by means of a friendly GIS-web based interface, metadata describing the available climate or hydrometric data, identifying what they wish to obtain and downloading these data in the most suitable formats -Hydroinformatics uses simulation modeling and information and communication technology to help in solving problems of hydraulics, hydrology and environmental engineering for better management of civil engineering systems. Main application areas are flood and river basin management, urban and coastal systems-
7. Rich and Poor Gap	<ul style="list-style-type: none"> —“Water poverty” undermines efforts at mitigating world poverty, as storms, droughts, disease, and other natural stressors directly threaten people's homes and livelihoods. Not only could this impede development, but it might also increase national and regional instability and intensify income disparities between the rich and poor —How can we identify and legislate new regional, global, and international legal and human rights issues associated with the function of water as a basic resource necessary for human survival?
8. Health	<ul style="list-style-type: none"> —Water as invaluable for basic sanitation, hygiene, and health services —Control of water levels and boundaries as essential for human migration, stability, and survival —Identify approaches for assessing health and environmental risks
9. Capacity to Decide	<ul style="list-style-type: none"> —As water scarcity increases and access to potable water decreases in the future, water will become an important factor in national and international decisions regarding policy, law, and foreign relations —Access to water operates on local, regional, national, and global levels —How can we establish clear channels of communication between local and global institutions in order to ensure safe and effective decision-making regarding water within various institutions?
10. Conflict and News Security strategies	<ul style="list-style-type: none"> —Measure equity in water resource disputes. —Specific threats to human welfare and global security include: heightened tension over the use of shared water bodies and an increase in the likelihood of violent conflict over water resources —Hydropolitics. How can conflict over water resources be avoided or mediated in the future?
11. Status of women	<ul style="list-style-type: none"> —In many developing nations, where women constitute the primary household workforce, water plays a crucial role in assuring community survival —How can women and other primary household workers be assisted in obtaining invaluable water resources that ensure not just their own, but their families' survival?

12. Transnational Crime	<p>—Countries that share international basins should intensify information exchange and support joint research on non-traditional security issues and should work towards achieving increased economic integration and cooperation, enhancing tourism, and combating transnational crime</p> <p>—Strategies for responding to potential attacks on large city populations and vulnerable and high-priority targets, such as transportation infrastructure, power networks, financial and computer systems, and food/water supplies are a must</p>
13. Energy	<p>—World energy demand, especially for electricity, will increase greatly during this 21st century, not only because of demographic pressures, but also because of improved living standards, urban and industrial growth, and rising expectations</p> <p>-Hydropower is the most important and widely used renewable source of energy.</p> <p>-Approximately two-thirds of the economically feasible potential remains to be developed. Untapped hydro resources are still abundant in Latin America, Central Africa, India and China.</p>
14. Science & Technology	<p>—Decision support systems for sustainable management of water resources must actively link the fields of science and engineering</p> <p>—It is imperative for the challenge of sustainable development that engineers and scientists are seen and act as partners</p> <p>—How can engineering solutions to immediate problems be made compatible with long-term ecological concerns?</p> <p>Historically, agricultural technology has allowed manipulating the quantity and quality of water supplies to increase productivity. Today, new technology, and a better understanding of natural processes can help to protect water while maintaining productivity.</p>
15. Global Ethics	<p>—Recover the real meaning of sustainability</p> <p>—How can we eliminate corruption and create international ethical standards for monitoring and drawing upon water resources?</p>

As with any scenario-based undertaking, questions arise about how a vision of the future may be crafted and, subsequently, how it may best be used to inform a decision-making process, distinguishing between natural events and human actions to consider some strengths and weaknesses.

Issues pertaining to water resources conditions and their effects upon the world's population are of strong interest to many individuals and organizations that are actively involved in discussions about the future, as are the implications of these matters for the subsequent availability of food, energy, and other resources.

Specifically, this particular scenario is also a significant one for ongoing debates about the role of environmental factors, particularly water, in matters of national security.

Regional sensitivities and vulnerabilities:

- Assess the strengths, achievements, and opportunities for water resource management in each region
- Outline regional response options

Development imperatives:

- Household water-security and food security
- Water quality and human health
- Intra-national and international conflict resolution
- Water and development

Visions of the future revisited:

- Scientists and natural resource managers can utilize economic, hydraulic, and ecological factors in order to create a model that will assist with management decisions
- We can obtain an accurate understanding of natural resources and technology, and combine this with a thorough knowledge of law, institutions, economics, and individual communities

Funding Strategies

I have researched and compared the composition and methodology of some of the largest international programs and directives connected to water, with which we could cooperate, including:

- World Water Council
- Global Water Partnership
- International Water Resources Association
- UNESCO
- IDB - Inter-American Development Bank
- World Bank
- WMO - World Meteorological Organization
- FAO - Food and Agriculture Organization of the United Nations
- UNU – United Nations University
- GEF - Global Environment Facility
- ECLAC - Economic Commission for Latin America and the Caribbean

There are funds available to finance this endeavor, as certain projects of this nature are already underway. I propose that in order to obtain funding, the working group establish the necessary contacts with the aforementioned organizations, so that they may incorporate the Millennium Project's products and reports into their work.

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