

POLICY RECOMMENDATIONS BY THE SCIENTIFIC AND TECHNOLOGICAL COMMUNITY

CSD-12 concluded that much better harnessing of science and technology will be an indispensable condition for meeting the Millennium Development Goals and implementing the recommendations in the Johannesburg Plan of Implementation (JPOI) related to water, sanitation and human settlements. Investments in science and technology continue to be inadequate, especially in developing countries where funding for research and development is often less than 0.5 percent of annual GDP. Investments in the natural, social, engineering and health science domains geared towards sustainable development are among the highest yielding investments that a nation can make.

The S&T community is committed to implementing necessary changes in the conduct of science and technology and to developing strong partnerships with other stakeholders in sustainable development. These changes include: making scientific research more policy relevant, integrating the environmental, social and economic pillars, following broad-based participatory approaches in defining a research agenda, and addressing a variety of geographic scales from local to global. Based on the CSD-12 results, the Scientific and Technological Community, covering all science and technology domains, recommends the following:

Strengthening capacity to monitor freshwater and to develop integrated indicator sets

- Given the widespread lack of reliable and easily accessible data on water resources, all countries to review and, in most cases, strengthen water related national data collection/ long-term monitoring networks, including data on water quality, needs, demands and supplies, and real-time data for flood and drought forecasting;
- Strengthen the freshwater related components of existing global environmental observing systems and make these systems fully operational, including through enhanced support to the Integrated Global Observing Strategy and the newly launched Global Earth Observation System of Systems;
- Undertake national and regional participatory integrated assessments on water, sanitation and human settlements issues;
- Review, develop further and apply respective integrated indicator sets for measuring trends of key indicators, and progress on goals and targets.

Building enhanced national and regional S&T capacity, with particular attention to developing countries. To achieve this goal the following is needed:

- All countries to review and, in most cases, to increase significantly investments in research and development (R &D), including human and institutional S&T capacity building in the natural, social, engineering and health science domains, geared towards solving water, sanitation and human settlements problems;
- There is a major need to bridge the North – South gap in scientific and technological capacity; developed countries and international organizations should support respective measures in those developing countries that lack this capacity;
- Encourage reorientation of existing specialised training and retraining curricula to ensure skilled professionals, highly knowledgeable on how to advance towards sustainable development goals in the areas of water, sanitation and human settlements; provide enhanced support to such improved training facilities everywhere but in particular in developing countries;

- Ensure high-priority attention to water, sanitation, and human settlements across formal and informal education in general at all levels, including in activities of the UN Decade of Education for Sustainable Development;
- Pay particular attention to education and training for women;
- Review, develop further and apply more appropriate technologies (as outlined in document E/CN.17/2004/10.Add.3), with particular attention to developing countries and low-cost technologies. Enhanced North – South and South – South transfer of technologies should be supported.

Improving scientific knowledge and knowledge sharing

- All countries to increase support to interdisciplinary, policy-relevant research involving the natural, social, engineering and health science domains, focused on sustainability issues related to water, sanitation and human settlements, with particular attention to research addressing the local context, and the interlinked socio-economic and bio-physical systems;
- Enhance relevant international scientific cooperation activities, including support for established interdisciplinary programmes in this field, e.g. through the newly launched Global Water System Project; identify “hot spot” regions that are particularly vulnerable;
- Develop improved knowledge for adaptive management strategies and water governance regimes that reduce the vulnerability and increase the adaptive capacity of water systems at different scales;
- Support activities and facilities aimed specifically at improved knowledge sharing e.g. through strengthening scientific and technological clearing house functions, with particular attention to the needs of developing countries;
- Support efforts by the engineering community to enhance knowledge and local adaptation of clean and, whenever appropriate, traditional technologies. In many instances, traditional, culturally adapted, low-cost technologies offer viable solutions;
- Support a strong and sound science and technology base for a ten-year framework of programmes for sustainable consumption and production, as called for in the JPOI, and with due attention to water, sanitation and human settlements.

Making scientists, engineers, educators and decision-makers better partners in addressing sustainable development issues related to water, sanitation and human settlements

- The S&T community is committed to developing strong partnerships with other stakeholders concerned. Partnerships are required at local, national, regional and global levels with governments, the private sector, and all other major groups of civil society. Governments should support such partnerships and in general a better interaction of scientists, engineers and educators with decision makers and civil society groups;
- Expand and strengthen innovative scientific and technological advisory instruments and processes at local, national, regional and global levels, including a screening of the scientific validity and robustness of different policy options;

- Enhance specifically linkages between scientists, engineers and farmers to improve water management in agriculture, in particular by using an ecosystems approach;
- Encourage the private sector to contribute to integrated water resource management by analysing how their own activities impact on water throughout the life cycle of their products and processes, and to share their knowledge widely in the scientific and technological community, as well as with decision makers at all levels;
- Support partnerships to blend traditional and scientific knowledge related to water, sanitation and human settlements, in collaboration with the Indigenous People, Farmers, and Business & Industry Major Groups;
- Support activities aimed at improved science education and communication for sustainable development and at accelerating the process of moving from knowledge and technology generation to their practical applications.

All of these issues have been extensively addressed in the CSD-12 Dialogue Paper by the Scientific and Technological Community (UN document E/CN.17/2004/10.Add.3) entitled “Harnessing Science and Technology for Sustainable Development: Water, Sanitation and Human Settlements” which is available on the CSD website in the six UN conference languages.