REGIONAL PRESENTATION

Francis Bougaïré, Burkina Faso’s Ministry of Agriculture, Hydraulics and Fisheries, opened and moderated the Africa regional presentation. Maria Mutagamba, Uganda’s Minister of State for Water and President of the African Ministerial Conference on Water (AMCOW), stated that the objectives of the presentation are to review recent progress in water management, focus global attention on Africa and mobilize global support. She emphasized that while Africa appreciates aid, trade has more potential to reduce poverty.

Loïc Fauchon, President of the World Water Council (WWC), acknowledged the positive work conducted by African organizations including AMCOW and the African Water Facility, highlighted the importance of technology, and called for the creation of an emergency task force to ensure appropriate aid delivery.

Cristóbal Jaime Jáquez, Co-Chair of the 4th World Water Forum and Director General of the Mexican National Water Commission (CONAGUA), noted that water problems faced by Africa are shared by other regions, in particular those concerning rural water access, and hoped that the 4th Forum would generate support needed to bring water solutions to the continent.

Kordjé Bedourma, Director of the African Water Facility, presented the Africa regional report, noting that 300 million Africans currently lack access to basic water and sanitation. He said the report’s key message is that Africa must build water infrastructure, including large dams, in order to achieve the Millennium Development Goals (MDGs), sustainable development and growth. He also prioritized action on water governance and transboundary water management, and urged the international community to enhance its support to the continent.

José Dioné, UN Economic Commission for Africa, presented an advance copy of the Africa regional report to Mutagamba, highlighting that the processes that countries underwent in contributing to the report should be mainstreamed into national policy-making procedures.

Outman Djame, Minister of Water and Fisheries of Chad, read out the African Ministerial Declaration to the 4th Forum, which calls, inter alia, for improving: development of water resources through infrastructure, environmental protection, transboundary water management, integrated water resources management (IWRM), and early warning systems for natural disasters. The Declaration also emphasizes: increased investments and stakeholder involvement; adequate governance and policy networks; capacity building; eradication of water-borne diseases; and making sanitation a top priority.

Discussing the challenge of urbanization and water resources development in Africa, Anna Tibaijuka, Executive Director, UN-HABITAT, said water is a key indicator of how society manages environment and development, as well as an indicator of social justice and sustainability. She reiterated that without clean water, health and development targets will not be achieved, stressed the need to address urban water issues, and announced the signing of a Memorandum of Understanding with the African Development Bank for the release of approximately US$ 550 million for meeting the MDG water target in Africa.

Jamal Saghir, Director of Energy and Water, World Bank, discussed water infrastructure development in Africa, stressing the links between water and poverty and the extent of the infrastructure challenges ahead. He commended the work of AMCOW and emphasized the need to achieve water security in the region in order to achieve international development goals.

Noting that France has committed to doubling its efforts in water and sanitation, Jean-Christophe Deberre, French Ministry
of Foreign Affairs, discussed the role of external support agencies in water development in Africa. He stressed the need for effective follow-up efforts, collective action, intelligence gathering and mobilization.

Michel Jarraud, World Meteorological Organization, discussed climate change and risk management challenges in Africa. He described the extreme impacts of droughts and floods in Africa and their links to climate change, and stressed the need to recognize, forecast and plan for these extremes and to monitor and gather accurate information to effectively assess, manage and mitigate risk.

During the session, African children delivered a message to the 4th Forum, urging participants to work with them as future leaders of Africa in delivering water to the continent.

**KEYNOTE ADDRESS**

Anna Tibaijuka described a vision of the world where all people can access safe water and basic sanitation. Noting the 3rd World Water Forum’s call for commitments and partnerships, Tibaijuka highlighted that cooperation between UN-HABITAT and the Asian Development Bank since the 3rd Forum has brought US$ 300 million in investments in water and sanitation for the poor in Asia. She expressed her support for the 4th Forum’s focus on local actions, saying that water and sanitation conflicts have to be resolved at the local level.

Addressing the key challenge of urbanization for achieving the MDGs, Tibaijuka emphasized urbanization as a core public issue in gross neglect, noted the targets are not being met, and said that UN-HABITAT and the World Bank are working together to put slums on the world agenda. She also noted that the water supply and sanitation crisis has to be viewed as a crisis of governance, and urged: sound policies and political will; national and international leadership for change; and country-level poverty reduction strategies to reflect the MDG targets on water, sanitation and human settlements.

Tibaijuka lamented that Africa is not on track to meet the MDGs and, noting that donor funding for water and sanitation is declining, and called for implementation of policies to assist developing countries. She addressed the need for “quick impact” initiatives, such as the Lake Victoria Region Water and Sanitation Initiative, and highlighted the challenge of developing monitoring mechanisms that reflect the voices of poor communities.

**LAUNCH OF THE “WATER AND SANITATION IN THE WORLD’S CITIES” REPORT** In presenting the report “Achieving Global Goals in Small Urban Centers: Water and Sanitation in the World’s Cities,” Tibaijuka drew attention to the importance of addressing water and sanitation needs in rapidly growing small urban settlements to achieve the MDGs. Noting that a quarter of the world’s population lives in these centers and that clean piped water and adequate sanitation are often too costly for small local communities, she highlighted two sustainable solutions for reducing the cost of water delivery: condominal water supply systems, as applied in Durban, South Africa, La Paz, Bolivia, and Buenos Aires, Argentina; and community taps like those used Mandaue City, the Philippines. She also mentioned the Orangi Pilot Project in Pakistan and the community-designed and managed toilet blocks in Tirupur, India, as models of low-cost improved sanitation.

**THEMATIC SESSIONS**

**WATER RIGHTS: Three thematic sessions addressed the issue of water rights.**

**Human right to water:** The session, chaired by Emilio Alvarez Icaza Longoria, Mexico City’s Human Rights Commission, explored the theme of the human right to water using rural and urban case studies from Mexico.

Lorena Viniegra Velázquez, Ra’yo deje (“New Water”), presented on Ra’yo deje’s programme of extra-curricular educational and awareness-raising activities which help children in rural communities to explore the right to life. She argued that children have the capacity to drive change because they are eager to enact what they learn.

Héctor Rosas, Casa y Ciudad, described an urban neighborhood project that seeks to facilitate the right to housing and water, and entails the conservation of water through rooftop rainwater collection for subsequent diversion into infiltration wells and ultimately into groundwater systems.

Alejandra Serrano Pávón, Mexican Center for Environmental Rights, stressed the need to recognize the human right to water not only in laws but also in actions. She said local authorities need to consider social and environmental issues along with technical and budgetary ones, and emphasized the importance of finding local and practical solutions to water-related problems and raising public awareness.

Georgina Sandoval, Casa y Ciudad, noted that urban and rural experiences in trying to ensure the human right to water share commonalities. She lamented the lack of opportunities for civil society to engage in a dialogue regarding a human right to water.

**Securing the right to water: From the local to the global, civil society perspectives:** Maude Barlow, The Council of Canadians, highlighted the “mighty contest” for access to water between development banks, transnational corporations, some governments and global civil society. She called for a binding UN treaty guaranteeing every citizen on Earth the right to water.

Stephen Shrybman, Sack Goldblatt Mitchell LLP, stressed the importance of the International Covenant on Economic and Social Rights as a mechanism requiring governments to implement the right to sufficient and clean water.

Arvind Kejriwal, Right to Water Campaign, shared the experience of water privatization in New Delhi, India, highlighting the use of the Right to Information Act, which he said mobilized civil society to pressure the Government to relinquish a World Bank water project.

Danielle Mitterrand, France Libertés, emphasized that all human beings should have free access to 40 litres of water daily. She noted some convergence in discourses between civil society and some major institutions at the 4th Forum, including on recognizing the right to water for all and shortcomings of public-private partnerships.
María Cruz de Paz, Mazahua, highlighted the Mexican indigenous Mazahua movement, which campaigns for an integrated sustainable water plan in Mexico.

Santiago Arconada Rodríguez, Venezuela’s Ministry of Environment, stated that water is a birthright and argued that if water commercialization continues, the 21st Century will be plagued by armed conflict.

Joan Brown, Franciscan Sister, said water has a profound spiritual significance and is essential for justice and peace. She noted that the sacredness of water is jeopardized by its commercialization, contamination and unfair distribution, and that people should assume the role of caretakers.

Julián Perez, El-Alto, described fierce public opposition in Bolivia against the privatization of the water sector, which people felt failed to deliver on its promises. Noting that reinvestment of the substantial private profits could have helped avert the water crisis, he said his government lacks the political will to enable the retraction of concessions.

Frank Mantis, Canadian Union of Public Employees, highlighted his organization’s national lobbying efforts and global justice initiatives to fight privatization.

Richard Bricks Mokolo, Orange Farm Water Crisis Committee, narrated a South African town’s struggle against the privatization of water through prepaid water meters.

Roberto Cruz, The Council of Canadians, argued that those calling for a right to water represent not a threat, as some politicians believe, but a different voice that deserves to be heard.

Wenonah Hauter, Food and Water Watch, favored a progressive tax system over user fees whereby the poor also have to pay. She called for a UN treaty to protect the right to water both for people and for nature.

In the ensuing discussion, a private operators’ representative supported the right to water, expressed respect for the viewpoints presented and asked for the opportunity to highlight the contribution of privatization to achieving the MDGs. His statement was not made in full as the session was brought to a close.

**Right to water: What does it mean and how to implement it**: Session Chair Bertrand Charrier, Green Cross International, called for stronger political will to realize access to water for all. Addressing challenges surrounding the right to water, he said it sometimes conflicts with sustainable natural resources management.

Loïc Fauchon, WWC President, presented the WWC report “The right to water: what does it mean and how to implement it?” noting that it identifies necessary conditions for guaranteeing the right to water and calling for an expanded dialogue.

Henri Smets, French Water Academy, highlighted the UN General Assembly Resolution in which States recognized the rights to food and clean water. He stressed the need to identify the rights and responsibilities of public authorities and users, and to share the costs of water supply and sanitation. Advocating solidarity taxes, he said governments have a choice to subsidize water for the poorest.

Paul Van Hofwegen, WWC, highlighted findings from the WWC report, including that national governments are responsible for enabling the right to water through legislation and real multi-year action plans with budget allocation, and that protection of water resources must be included in implementation of the right to water.

Houria Tazi Sadeq, Maghreb-Mashreq Alliance for Water (ALMAE), noted that the right to water is: widely recognized in international law; makes the executive branch accountable at local, national and international levels; and could help with conflict resolution and human migration.

Jabu Sindane, Director of South Africa’s Department of Water Affairs and Forestry, said his government provides free basic water to the poorest, which is financed from federal grants and municipal taxes. As challenges, he identified the actual availability of water, non-payment by those who can afford to pay, and lack of capacity at local level.

Adriana Blanco, Uruguay’s Ministry of Environment, said her country provides basic water services to those who need them, which were implemented through strong commitment of the State and contributions of society at large.

Noting that a right to water was adopted in the Belgian Constitution, Philippe Boursy, Walloon Water Society, highlighted outcomes of its implementation in three regions, including its role in moderating price increases and ensuring a more just redistribution.

Anna Tsvetkova, Mama-86, described how civil society, through a grassroots initiative, helped draft water supply legislation, noting it facilitated the development of clear mechanisms that solve water problems at the local level.

Majida Zahraouim, ALMAE, described a study that examined water quality’s impact on health in a Moroccan shantytown and stressed that health is an important aspect of sustainable development.

Ashfaq Khalfan, Center on Housing Rights and Evictions, said “right to water” has been adequately defined by the UN Commission for Economic, Social and Cultural Rights, and called for focus on implementation. Noting that several UN instruments obligate developed countries to assist the poorest, he said States in violation of these instruments can be taken to court.

Eszter Somogyi, Hungarian Metropolitan Research Institute, said payment for services has to be based on actual consumption. She presented a case study of a lawsuit against a private company that was won by a consumer protection agency, noting its relevance to the affordability of services.

**PUBLIC POLICIES FOR WATER AND SANITATION SERVICES**: Chair Jesús Campos López, CONAGUA, opened the session. Blanca Alicia Mendoza Vera, CONAGUA, elaborated on the devolution of rights and responsibilities to Mexican water and sanitation operators through a financing scheme based on federal loans. Noting that this has resulted in improvements in water quality, operator efficiency and leakage control, she highlighted local action and participation of authorities ranging from the local to the federal level.

Lombardo Guajardo, Director of Operator Agencies of Monterrey, said Mexico’s new financing scheme is a successful example of decentralization. Noting the advantages of such a scheme to his organization and to the quality of water services, he said the financing scheme, combined with increased commercial efficiency, has enabled water operations to be truly profitable.
Eduardo Ibañez Mariño, CONAGUA, addressed the modernization of the work of Mexican water and sanitation operators. He said that although an unharmonized legislative framework hampers modernization, the situation is improving, including through private sector involvement under clear and transparent rules to ensure that the public benefits.

Daniel Chacón Anaya, Ecological Transboundary Cooperation Commission (COCEF), and Jorge Garcés, North American Development Bank (NADBANK), presented on the activities of COCEF, an initiative aimed at promoting development along the US-Mexican border. Chacón Anaya explained that the initiative’s mandate includes addressing water pollution, wastewater treatment and recycling, and highlighted public participation in COCEF projects in both Mexico and the US. Noting that public sector budgets only cover 30 percent of water and sanitation needs in the area, Garcés outlined NADBANK’s investments in the sector.

Helmut Jung, Austrian Development Agency, said Austrian development cooperation regarding water and sanitation aims at local and regional involvement, capacity building and awareness raising, while focusing on cross-sectoral themes, such as gender equity and environmental sustainability. He described a case study from Mozambique on improving local governance.

Addressing strengthening local actors, Ilya Cardoza, Nicaraguan Network of Water and Sanitation (RASNIC), said RASNIC promotes cooperation between national and international partners to coordinate policies and strategies on the ground. She said modernization focuses on institutional restructuring, defining the roles of different actors and developing regulations for operator services.

Juan Pablo Schifini, Inter-American Association for Sanitary and Environmental Engineering, discussed the decentralization of Argentina’s water services. Noting disadvantages of unplanned and unregulated private sector involvement, he said sector modernization in his country is progressing.

Franz Rojas Ortuste, German Technical Cooperation (GTZ), addressed Latin-American experiences with water policies. Noting that the water sector’s institutional frameworks in the region are sometimes incoherent, he called for capacity building and the promotion of a “water culture.”

**DELIVERING ON THE MDGs IN THREE YEARS: A MODEL-SETTING REGIONAL INITIATIVE:** Anna Tibaijuka, UN-HABITAT and Chair of the session, introduced the Lake Victoria Region Water and Sanitation Initiative, a partnership formed in 2004 between the governments of Kenya, Tanzania and Uganda and UN-HABITAT to deliver water and sanitation services to secondary urban centers around Lake Victoria. She noted that the Initiative was designed to show that MDGs can be met with modest investments and often through improvements to existing infrastructure.

Graham Alabaster, UN-HABITAT, provided an overview of the Initiative. He described the challenges in developing a regional programme that has to fit into three different national structures and that effectively engages stakeholders and builds on existing capacity in each one.

William Tsimwa Muhairwe, National Water and Sewerage Corporation (NWSC), presented on NWSC’s experiences in sustaining new investments in water and sanitation for small towns through capacity building in Uganda. He explained that NWSC uses cross-subsidies and the application of affordable consumption tariffs to ensure financial sustainability of water and sanitation services.

Patrick Ombogo, Lake Victoria South Water Service Board, described how the creation of Kenya’s 2002 Water Act enabled a policy shift, leading to improved water and sanitation services in Kenya. He noted as challenges the continuation of staff and attitudes from old institutions and the acceptance of the need to pay for water and sanitation services.

Dauda Karumuna, Tanzania’s Bukoba Town Council, presented on engaging communities in water and sanitation. He described the process by which stakeholders in three communities were engaged in: identifying needs, selecting domestic water points and appropriate technologies, and establishing use, operation and maintenance regulations, and management committees.

In the ensuing panel discussion, Juliet Kiguli, Makerere University, highlighted the Initiative’s inclusion of women and children. Peter Mangiti, Kenya’s Ministry of Water and Irrigation, noted that to sustain community and political support, reform is required. Dominic Kavutse, Uganda’s Directorate of Water Development, emphasized the importance of the Initiative to rural development and slowing urbanization. Tibaijuka emphasized the environmental component of the project.

At the close of the session, John Mutua Katuku, Kenya’s Minister for Water and Irrigation, read the Communiqué of the East African Ministers to the Initiative.

**THE PUBLIC-PRIVATE CONTROVERSY IN WATER AND SANITATION: LESSONS IN THE LIGHT OF THE MDGs’ REQUIREMENTS:** Cornelia Nauen, European Commission (EC), reviewed lessons learned from EC-supported IWRM development and implementation projects worldwide, examining how they promote sustainable development in water management. She said there is a lack of awareness of the political nature of resources allocation, which is an obstacle to engagement, communication and positive impacts.

José Esteban Castro, PRINWASS, presented findings from the PRINWASS research programme on barriers and conditions for private investment in water supply and sanitation, reporting that case studies show that: in most cases private funds were a small percentage of investment; privatization required public funding; and the private sector was not more efficient than the public sector. He drew attention to chronic weaknesses in the regulatory ability of states vis-à-vis the private sector, leading to difficulties in follow-up and to non-compliance, and underscored that water scarcity is an institutional and political problem.

Maria Luisa Torregrosa, Latin American Faculty of Social Sciences (FLACSO), pointed to structural socio-economic and demographic problems as underlying challenges to provide access to water. She said disparities in the urban infrastructure made it difficult to redirect the necessary investment for building basic infrastructure, and that falling
incomes and a decrease in living standards since the 1980s and 1990s have resulted in the poor having little or no capacity to cover basic services.

Calling water an “uncooperative commodity,” Erik Swyngedouw, University of Oxford, noted that private sector participation in the water sector is not new, and stated that policy makers have not learned the lessons from the past. Urging thinking “outside the water box,” he said the “radical political nature of water” and the limits of market mechanisms must be recognized.

Carlos Crespo Flores, Mayor University of San Simón, discussed Bolivian water disputes arising from the privatization of water services in that country, describing the social and political conditions and water policy history in Bolivia. He noted problems regarding lack of transparency in decision making and operations, unfair bidding practices, a lack of interest in expanding services to the poor, and inequitable, profit-oriented policies.

Vereador Carlos Todeschini, Municipal Council of Porto Alegre, Brazil, described the city’s experiences negotiating a concession for water services to private companies as part of a project to improve infrastructure in the city. He said governments must not submit to special interests, particularly in the face of powerful private companies.

Antonio Miranda, Brazilian Association of Municipal Water and Sanitation Public Operators, discussed public debates over how the City of Recife, Brazil, should manage water services. Noting a municipal decision not to privatize, he described loan negotiations with the World Bank resulting in excluding a loan agreement clause on privatization. He urged cooperation among operators, improved financing and stronger public sector performance.

In the ensuing discussion, participants addressed: both positive and negative experiences with private sector involvement; the difference between water treatment and water extraction and supply and the implications of private sector involvement in these; and the distortion resulting from offering subsidies to the private sector instead of to the poor.

**SAFE DRINKING WATER FOR ALL:** Ricardo Torres, Pan American Health Organization (PAHO), provided a conceptual overview of Water Safety Plans (WSPs), noting their benefits, including: access to safe drinking water, low cost, and development of self-esteem and teamwork. He also addressed constraints to WSPs, including a lack of trained personnel and water management agencies’ reservations in making new assessments.

Richard Davis, Center for Disease Control and Prevention (CDC), discussed the implementation of WSPs, noting the partnership between PAHO, CDC and the US Environmental Protection Agency. He described the WSP Demonstration Project in Spanish Town, Jamaica, which aims to demonstrate how WSPs can be applied to all types of communities.

Dennis Martenson, American Society of Civil Engineers, said engineers can provide technical support in IWRM, stream flow measurement, development and management, hydraulic modeling and environmental protection and restoration, and said the engineering community can help develop sound water management.

Noting that Mexico is lagging behind in the provision of drinking water and sanitation in rural areas, Damián Robledo Gómez, North American Alliance for Civil Engineering, described the benefits of clean water for local, regional and national development and poverty alleviation.

Miguel Angel Alatorre Mendieta, National Autonomous University of Mexico (UNAM), proposed a solution for cleaning up Mexican lagoons through the installation of water treatment plants upstream to be powered by tidal energy.

**PUBLIC STATE POLICY IMPACT ON DRINKING WATER SERVICE DELIVERY SUPPLY AND SANITATION FOR URBAN USE:** Salomón Abedrop López, President of Mexico’s National Association of Water and Sanitation Companies (ANEAS), opened the session.

Arturo Pedraza Martinez, Watergy Mexico, presented on state public policy on drinking water and sewerage. He noted that 11 million people do not have access to drinking water and 23 million are lacking sewerage systems in Mexico, while only 31 percent of wastewater is being treated and an equal percentage of water is lost before reaching the user due to infrastructure deficiencies. Noting that energy costs represent a heavy burden for water and sanitation systems, he proposed a joint administration for water and energy. Pedraza Martinez also urged public policy to focus on and invest in water systems efficiency rather than building new infrastructure, which is less profitable and often triggers environmental and social problems.

Rolando Springall Galindo, President of the Water System Council of Veracruz, described how the Veracruz Water System Board manages drinking water and sanitation in this Mexican state. He said that the Board has the legal authority; brings together state and municipal authorities; calculates the tariffs for water and sanitation services; operates a hydrological information system; and undertakes awareness raising and training projects.

Andrés Ruiz Morcillo, Director General, Commission for Drinking Water and Sewerage of Quintana Roo, elaborated on public water policies in Mexico. He said while legislative frameworks are in place, legal provisions need to be standardized and better aligned with sustainable development objectives. He highlighted the problem of compliance, and noted several disconnects between policy and practice, including: no mandatory requirement to ensure water efficiency in the agriculture sector; insufficient enforcement of the “polluter pays” principle; lack of concrete measures to apply the concept of all users paying for water; and uncertainties regarding the cross-subsidization of rural and urban water users.

Mauricio Gonzalez, NADBANK, focused on water-related public policies in municipalities along the US-Mexican border. He identified a number of policy interventions to address current challenges, including: state cooperation schemes to even out
the conditions across municipalities; separating political and administrative functions within municipalities to avoid conflicts of interest; harmonizing municipal practices; extending municipal authorities’ service terms to ensure continuity; addressing escalating costs through financial self-sufficiency and inter-municipal coordination to achieve economy of scale; and strengthening institutional and human capacities.

Ricardo Sandoval Minero, Water State Commission of Guanajuato, urged better analysis of water management systems in Mexico. He said water availability should not be used beyond its renewable potential.

Enrique Dau Flores, Director General, Water State Commission of Jalisco, said the Mexican central government authority over water issues should be transferred to state entities, which are closer to the local population and more efficient at solving water problems.

Noting the different local characteristics of water problems in each Mexican state, Eduardo Mestre, Latin American Network, said solutions to these problems cannot follow a single pattern, system or law. He said the investment recovery of water rates in many developing countries is being achieved by means of subsidies and that Mexico must better learn how to subsidize. He favored either a public or private system as long as it can provide quality services for everyone and called for further debate on interactions among governments, the private sector, and users.

SERVICE DELIVERY AND LOCAL EMPOWERMENT: TURNAROUND OF PUBLIC UTILITIES: Muhairwe presented on the history of the Uganda’s National Water and Sewerage Corporation, highlighting the importance of a committed Board of Directors with clear objectives, government and donor commitment, and autonomy through decentralization. Noting that the public sector can deliver adequate performance if well managed, he underscored the importance of flexibility to ensure innovation and financial sustainability.

Marlon Lara, Honduras’ Minister for the Social Investment Fund, spoke about his experience, as former Mayor of the City of Puerto Cortés, conceding water services and creating a mixed-capital company as part of municipal reform. He underscored the importance of public participation and awareness raising in decentralization.

Osward Chanda, Zambia’s National Water Supply and Sanitation Council, spoke about regulating commercial utilities and addressing needs of the poor. He highlighted the difference between regulating water resources and water supply and sanitation, and emphasized the importance of: transparency to regulate system providers; making performance figures public; autonomy; and lean business structures.

Sandoval Minero presented on the linking role of states in enabling local operating capabilities at the municipal level in Mexico. Noting that water is a responsibility shared among authorities, he recommended a coordination-oriented approach instead of regulatory bodies, and said that investing in institutional strengthening is crucial.

In the discussion, participants spoke about: performance rewards and penalties; public participation in management decisions; addressing children and youth; the public ethos among public servants; and the public’s willingness to pay.

DESALINATION OF SEAWATER IN THE MIDDLE EAST: Stating that freshwater resources are scarce while both population and per capita water consumption rates are increasing, Session Chair Ali Al-Tokhais, Deputy Minister for Water Affairs of Saudi Arabia, said desalination of water is a solution for meeting future freshwater demands.

Fehied Al-Shareef, Saline Water Conversion Corporation (SWCC), described the growing global demand for freshwater and need to rely on desalination services to meet these demands. He outlined SWCC’s work in expanding desalination activities and the potential for future growth, noting that development of this technology must be cost-effective and environmentally friendly.

Abdul Maghrabi, SWCC, explained the technical processes of desalination, comparing the capacity and other aspects of different types of desalination plants.

Sergio Alcocer, UNAM, presented a research project on seawater desalination through renewable energy. He highlighted several initiatives in Mexico, including harnessing the energy of hot seawater vents on the coast of Baja California, solar radiation in the north, and tidal currents in the Yucatan Peninsula.

Noting that there are currently 17,000 desalination units around the world, Leon Awerbuch, Chairman of the International Desalination Association, observed that desalination is no longer a research idea, but has a rapidly growing global market. He stressed that desalination is the only hope to create additional freshwater resources in the face of water crises and conflicts, and that the industry is striving towards making desalinized water available to the global community at an affordable price.

Khalefa Al-Fraiij, Kuwait’s Ministry of Energy, Electricity and Water, outlined the history of desalination in his country, highlighting its first water desalination plant inaugurated in 1953.

Muhammed Al-Ghamdi, SWCC, described desalination in Saudi Arabia focusing on the SWCC’s history, operations and research activities. He said SWCC’s invested more than US $16 billion in the construction of its plants, which produce and export both water and energy.

In the ensuing discussion, participants discussed the use of renewable energy, and considering desalination as an activity under the UN Framework Convention on Climate Change Clean Development Mechanism. Responding to a question whether nuclear energy could be used in desalination, Awerbuch said it would be difficult to convince the public to buy desalinized “nuclear water.” Participants also discussed the environmental impacts such as emissions, excessive salinity, and seawater pollution.