

SUMMARY OF THE IRENA HIGH-LEVEL AFRICA CONSULTATIVE FORUM ON RENEWABLE ENERGY: 8-9 JULY 2011

The International Renewable Energy Agency's (IRENA) High-Level Africa Consultative Forum on Renewable Energy was held on 8-9 July 2011, at the Sheraton Hotel in Abu Dhabi, United Arab Emirates. The meeting was attended by 25 African ministers, 181 government delegates and 45 representatives from African and international organizations, industry and non-governmental organizations.

The objective of the Forum was to discuss and inform IRENA's Work Programme for Africa on specific implementation challenges facing Africa with respect to renewable energy technologies, as well as practical approaches to generate the critical policy and technical information, advice and capacity required to support the extensive deployment of renewable energy in Africa.

Participants discussed issues such as opportunities and challenges for renewable energy for Africa, strategic partnerships and how to further Africa's priorities for sustainable energy in partnership with IRENA, best practices and challenges in promoting renewable energy investment; preparing the ground for accelerating renewable energy deployment in Africa, and opportunities in international fora such as the 2012 United Nations Conference on Sustainable Development (UNCSD or Rio+20) and the 17th meeting of the Conference of the Parties (COP 17) to the United Nations Framework Convention on Climate Change (UNFCCC) in Durban, South Africa in November 2011.

The forum resulted in the Abu Dhabi Communiqué on Renewable Energy for Accelerating Africa's Development.

A BRIEF HISTORY OF IRENA

The statute of the International Renewable Energy Agency (IRENA) was adopted on 26 January 2009, and entered into force on 8 July 2010. IRENA's purpose is to promote the widespread and increased adoption and sustainable use of all forms of renewable energy. One hundred forty-eight countries and the European Union (EU) are signatories of IRENA, with its statute having been ratified by 76 states and the EU.

PREPARATORY CONFERENCE: The Preparatory Conference for the Foundation of IRENA was held from 10-11 April 2008, in Berlin, Germany. Delegates from 60 countries expressed support for the creation of an international agency for renewable energy, and discussed issues such as objectives, activities, organizational structure, and financing for the new agency.

PREPARATORY WORKSHOPS: Two preparatory workshops for IRENA met in Berlin, Germany, on 30 June and 1 July 2008, focusing on IRENA's Work Programme, statutes and finances.

FINAL PREPARATORY CONFERENCE: This meeting took place from 23-24 October 2008, in Madrid, Spain. Delegates concluded discussions on IRENA's statute, resolving issues such as financing, the criteria and procedures for selecting the interim Director-General and the interim headquarters, and the design of the initial phase of IRENA.

FOUNDING CONFERENCE: IRENA's Founding Conference took place on 26 January 2009, in Bonn, Germany, where 75 countries signed the IRENA statute.

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PREPCOM 1: The first Preparatory Commission of IRENA met on 27 January 2009 in Bonn, Germany, following the founding conference. Delegates discussed next steps for IRENA and established committees to oversee the selection of the Interim Director-General and headquarters of the Agency. The Commission also established an administrative committee, chaired by Germany, to facilitate the effectiveness of the Commission's work, including through assisting in organizing regular sessions and contributing to the development of relevant documents.

PREPCOM 2: The second Preparatory Commission of IRENA met from 29-30 June 2009, in Sharm el-Sheikh, Egypt, to decide on the interim headquarters and interim Director-General for IRENA. Abu Dhabi, United Arab Emirates (UAE), was designated as the interim headquarters, and H  l  ne Pelosse (France) was elected interim Director-General. Delegates also decided that Bonn, Germany, would host IRENA's Innovation and Technology Centre, and Vienna, Austria, would host IRENA's liaison office for cooperation with other organizations active in the field of renewable energy. Delegates further addressed issues such as the initial work programme, financial regulations, staff regulations and the budget.

PREPCOM 3: The third Preparatory Commission of IRENA met on 17 January 2010, in Abu Dhabi, UAE. Delegates completed IRENA's 2010 budget and work programme, as well as other measures to make IRENA operational.

PREPCOM 4: The fourth Preparatory Commission of IRENA met from 24-25 October 2010, in Abu Dhabi, UAE. The Commission accepted the resignation of H  l  ne Pelosse as Interim Director-General, and appointed Adnan Amin (Kenya) to the position until the first session of the Assembly.

PREPCOM 5: The fifth Preparatory Commission of IRENA met on 3 April 2011, in Abu Dhabi, UAE. The Commission finalized preparations and transitional measures for IRENA's first Assembly, and proposed Adnan Amin as Director-General elect to the Assembly.

FIRST ASSEMBLY: The first session of the IRENA Assembly was held from 4-5 April 2011, in Abu Dhabi, UAE. The Assembly focused, among others, on the election of the Council; the work programme and budget for 2011; rules of procedure; transitional arrangements; staff and financial matters; and organization of the second session of the Assembly. The Assembly included a High-Level Segment attended by over 50 ministers.

REPORT OF THE MEETING

On Friday morning, 8 July 2011, Katie Fielder, Dubai One TV, welcomed delegates, noting the Forum's goal to turn talk on renewable energy into action.

IRENA Director-General Adnan Amin lauded Africa for leading IRENA's membership with 48 African signatory-countries and 16 ratifications. Emphasizing "a new way of doing things," he noted that, unlike other international organizations, IRENA is a light and flexible agency, responsive to the needs of its members. He highlighted IRENA's three focal areas on knowledge management, innovation and technology, and policy and capacity building. He stressed renewable energy's potential to reduce greenhouse gas emissions and to address the impacts

of climate change. He stressed that what Africa needs most is enabling policy frameworks that will provide incentives for private sector investment in renewable energy, and called on participants to provide recommendations to this end.

Sultan Al Jaber, United Arab Emirates (UAE) and President of the first session of the IRENA Assembly, emphasized the interlinkages between energy, global security, climate change mitigation and poverty reduction. He stressed his country's commitment to scaling up Africa's energy infrastructure through the US\$350 million Abu Dhabi Development Fund.

Habib Ouane, Vice-Chair, Conference of Energy Ministers of Africa (CEMA) and Minister of Energy and Water, Mali, said the consequences of the 2008 financial crisis are still being felt across Africa. He underscored Africa's underinvestment in infrastructure, particularly on energy, and the need for innovative financing mechanisms. Ouane stressed that rural electrification should be based on renewable energies and highlighted institutional, policy and capacity-building challenges. He said Africa does not want to become a consumer of imported technologies, but adapt them to Africa's own ecosystems and environment. He identified renewable energy as key for Africa's energy security.

Abdullah Farooq, Minister of New and Renewable Energy, India, stressed partnership, knowledge sharing, and cooperation to address the global challenges of development, democracy, and food and energy security. Lamenting that millions still lack access to energy, he highlighted India's initiatives towards decentralizing energy and called on African countries to take advantage of specific programmes offered in India geared towards study and training in renewable energy technologies.

Rajendra Pachauri, Chair of the Intergovernmental Panel on Climate Change (IPCC) welcomed the UAE's commitment to strengthening the renewable energy sector. Presenting findings of the IPCC 4th Assessment Report (AR4), Pachauri highlighted the potential of off-grid decentralized energy infrastructure investments to accelerate access to the 589 million mostly rural Africans without access to clean and reliable energy. He cited the "Lighting a Billion Lives initiative" spearheaded by Indian-based The Energy and Resources Institute (TERI), of which he is the Director-General, as an example of good practice in South-South cooperation.

Kandeh Yumkella, Chair of UN-Energy, and Director-General, United Nations Industrial Development Organization (UNIDO), underscored three global goals, which he referred to as the 30-30-30 goals: (1) universal energy access by 2030; (2) reduce energy intensity by 40% by 2030; and (3) 30% renewables by 2030. He noted a "Friends of Energy" group in New York, led by Denmark and Norway, is working to include those goals on the Rio+20 agenda. He underscored the need for stable predictable policy for Africa, noting that effective assessments cost money. He identified the key question as: how can Africa ride the "green wave" to develop its economies?

OPPORTUNITIES AND CHALLENGES IN RENEWABLE ENERGY FOR AFRICA: THE CASE FOR ACTION

This session was chaired by Bruno Itoua, Minister of Energy and Hydraulics, Republic of Congo.

Dolf Gielen, Director, IRENA Innovation and Technology Centre, presented on scenarios and strategies for Africa, highlighting IRENA's role in providing good information to inform policy making. He stressed that decisions to mainstream renewables must be based on longer-term planning, but that work on renewables should build upon existing initiatives. Analyzing energy projections in Africa, he questioned the continued dominance of biomass as demand for energy rises on the continent, particularly as other renewable energy technologies become more viable. He highlighted some of the challenges in achieving increased production and use of renewable energy, including the need to incentivize the private sector, create a proper market structure for renewables, and convince donors and banks to invest in the sector.

Habib Ouane, Minister of Energy and Water, Mali and Vice-Chair of CEMA stressed that the transition to a clean energy future for Africa requires enhanced collaboration at the subregional and regional level. He called for joint programmes to focus on, among others: research and development (R&D), technical training, and infrastructural development. Ouane also called for innovative financing to achieve sufficient scale and accelerate economically sustainable development on the continent.

Atef Marzouk, African Union (AU) Commission, spoke on the AU's role in facilitating renewable energy programmes at the regional level. He highlighted ongoing projects, including the Africa-EU Energy Partnership (AEEP) and the AU Programme for Infrastructure Development, that seek to accelerate the use of renewable energy and efficiency in Africa.

Odala Matupa, Southern African Development Community (SADC), presented on the institutions and instruments dealing with energy issues in the region. He noted SADC's focus on energy access, security and efficiency. He said that the region was in the process of developing a renewable energy strategy and action plan. He mentioned partnerships with the AU, Finland, the EU, the US, and the UK to promote renewable energy production and use within the community.

Mahama Kappiah, Director, Economic Community of West African States (ECOWAS) Regional Centre for Renewable Energy and Energy Efficiency, said the objective of his organization is to create favorable conditions and enabling environments for renewable energies and energy efficiency markets in the ECOWAS region. He highlighted ongoing policy initiatives on renewable energy and energy efficiency, with support from the EU Partnership Dialogue Facility, the African Caribbean Pacific-EU Development Cooperation and the US Agency for International Development (USAID). He said that renewables are not always more expensive than conventional energy sources.

Youba Sokona, UN Economic Commission for Africa (UNECA) and Coordinator, African Climate Policy Centre (ACPC), highlighted UNECA's work on policy advice, capacity building and coordination of UN-Energy Africa. He underscored ACPC's role in providing policy analysis and technical support. Sokona said policy research should have a finite timeline in order to be relevant and inform existing institutions. He stressed the need for institutional innovation.

Meseret Teklemariam, UN Environment Programme (UNEP), spoke on UNEP's work on renewable energy, underlining the importance of partnerships with other UN agencies, governments, non-governmental organizations and communities to realize faster up-take of renewable energy on the ground. She highlighted a UNEP-Global Environment Facility (GEF) partnership, under the Green Economy Initiative, to promote geothermal energy in Eastern Africa.

Léopold Fatran, Minister of Energy and Water, Central African Republic, highlighted the work of the Economic Community of Central African States in promoting and developing energy sources in the region. He spoke on the Inga project, which aims to provide hydroelectric power to the whole region, and has the potential to provide electricity to the whole continent. He called for financial and technical assistance to develop hydropower in the region.

STRATEGIC PARTNERSHIPS FOR RENEWABLE ENERGY IN AFRICA

Chairing this session, Mohamed Mahamud, Assistant Minister for Energy, Kenya, lamented that although Africa is well endowed with both renewable and non-renewable energy sources, millions still face energy poverty and lack of access to energy. Mahamud called for policy dialogues bringing together all stakeholders to help accelerate the use of renewables on the ground.

IPCC Chair Rajendra Pachauri noted the importance of the strategic dimension in dealing with the energy challenges facing Africa, underscoring economies of scale, research and development. He highlighted a scenario contained in IPCC's AR4 that predicts renewables accounting for 77% of the world's energy by 2050, and stressed that this would only be possible if the right policy frameworks are established now. He called on Africa, through South-South cooperation, to come up with a strategic framework for renewable energy, and ways to integrate this framework with conventional energy sources.

Fred Moavenzadeh, President, Masdar Institute of Science and Technology (MIST), UAE, commended the UAE's leadership in finding practical solutions to the energy crisis, highlighting the 20 IRENA scholarships available at MIST. He noted the Institute's contribution in three key areas: the development of disruptive technologies to bring down costs and enhance access; attracting capital to renewables markets; and leveraging opportunities at the policy level to incentivize local participation, education, knowledge sharing and capacity development.

Li Junfeng, Deputy-Director, Energy Research Institute, China, highlighted China's achievements in creating an enabling environment for commercialization of renewable energy technologies. Noting that financing is not an insurmountable barrier, he called for political will at the international level to move beyond action plans and into action.

Zitouni Ould-Dada, Department of Energy and Climate Change, UK, highlighted that transitioning to a low carbon economy requires a sound empirical basis to support decision making. He said the newly-established Capital Markets Climate Initiative seeks to map low-carbon financing and undertake pilot studies to learn from, and scale up, good practices.

During the subsequent question and answer session, the discussion focused on: investing strategies; how to expand partnerships within the region; the need for bottom-up approaches; implementation; capacity to receive technology and implement it locally; the extent to which issues of basic energy access in Africa are specific to local conditions or similar to other regions in the world; the need for specific ideas about cooperation; the role of subsidies; the need for commercial demand if the private sector is to be involved; distributed generation and distributed demand; the establishment of subregional centers for excellence in Africa; harmonization of tariffs; involving investors in international meetings on renewables; and the role of IRENA in helping governments set the necessary conditions to attract investment and remove barriers to renewable energies.

BEST PRACTICES AND CHALLENGES IN PROMOTING RENEWABLE ENERGY INVESTMENT

Session Chair Louis Seck, President-Designate of the second session of IRENA's Assembly and Minister of Renewable Energy, Senegal, said that the paradox of Africa is that it is well endowed with energy resources, but it is far behind in harnessing them. He highlighted regional and subregional initiatives to promote renewables, including the ECOWAS initiative to set up solar stations in all its member states, but said that lessons also need to be learned from unsuccessful renewable energy projects.

Kirsty Hamilton, Royal Institute for International Affairs (Chatham House), UK, spoke on current trends in private financing and highlighted policy reforms that could help attract more investment. She underscored a growing share for developing countries and noted that solar energy is approaching grid parity for peak demand. She said Africa has the largest energy vulnerability due to over-reliance on fossil fuels, and stressed that energy policy is critical in attracting private finance and broadening the energy mix in the region.

Stephen Karekezi, Director, African Energy Policy Research Network (AFREPREN), highlighted the success of Mauritius in bagasse cogeneration from the sugar industry and underscored the need to replicate this success in mainland Africa and extend it to different agricultural sectors including, but not limited to, the tea sector. He underlined benefits of cogeneration including that banks are more willing to invest in cogeneration initiatives proposed by existing successful business.

Sergio Alcocer, Under-Secretary, Ministry of Energy and Technology, Mexico, described Mexico's experiences in funding renewables. He underscored the need for a legal framework and strong financial models as a basis for investment. Highlighting schemes to promote renewables, he noted the importance of, among others, government incentives to promote R&D, private sector financing of public works, and net-metering for residential areas.

Carlo Van Wageningen, Chairman, Lake Turkana Wind Power Ltd., Kenya, underscored the challenges faced by private investors in the renewable energy sector. He presented on his company's wind farm project, the largest in Africa. Noting that while the project site offers some of the best wind conditions in the world, it is very remote and presents formidable challenges, such as the need to build hundreds of kilometers of transmission lines and upgrading existing roads to bring in heavy equipment,

which are part of the business plan. While commending the support provided by the Kenyan government to independent power producers, Van Wageningen noted legal constraints faced by entrepreneurs in most African countries to raise capital, and called on international financial institutions to ease credit ratings in order to increase investor confidence.

Christine Eibs Singer, CEO, E+Co, US, highlighted the complexity of dealing with small and medium enterprises and bringing energy to the poor in rural areas. She described subsidies as both a blessing, when received in a transparent predictable way, and a curse, when arbitrarily stopped. She said R&D is not needed to service the poor today with renewable energy, but, instead, what is needed is innovation on ways for the poor to pay.

Steve Sawyer, Secretary-General, Global Wind Energy Council, stressed that, contrary to popular belief, renewables are neither expensive, nor is renewable energy production negligible on the global scale. He stressed the importance of national-level policy frameworks on renewable energy that: guarantee access to the national grid; are clear, simple, transparent and provide a "one-stop-shop"; have a clear payment system that lowers the producer's risk factor; and proactively engage the public and local communities. He noted that traditional boundaries between the transport, heating and cooling, and power sectors are being redrawn and, in the future, these sectors will need to be addressed more holistically.

Following the presentations, the question and answer session focused on: whether market approaches can be used for rural electrification without subsidies; how to shift existing cash transactions from poor people paying for dirty expensive energy into clean renewable energy; the advantages of using waste biomass from the agroindustry; how to respond to investors' demands for practical information, such as elements of power-purchase agreements, terms of land-use agreements, or feed-in systems; the infrastructure demands of windpower; and elaborating a wind atlas for Africa.

CARRYING FORWARD AFRICA'S PRIORITIES FOR SUSTAINABLE ENERGY IN PARTNERSHIP WITH IRENA

This session was chaired by Elizabeth Dipuo Peters, Minister of Energy, South Africa.

Frank Wouters, Masdar Power, UAE, highlighted the dynamic nature of renewables markets. He said that a key challenge for developing countries is how to adapt the existing energy infrastructure to make the most of this dynamic environment. Wouters underscored the crucial roles of an enabling policy and careful subsidy management to avoid distorting markets.

Christine Eibs Singer, CEO, E+Co, US, presented on enterprise development for the clean energy sector, drawing experiences from her organization that has invested in 94 successful businesses in Africa, which in turn provide clean energy to over three million people. She stressed the need for training clean energy entrepreneurs on how to put together viable, bankable, and investment-attractive business plans, and called for the establishment of a "pipeline of investment opportunities" that would build the capacity of these entrepreneurs to better service the market.

Karsten Sach, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Germany, said his country's

commitment to renewable energies is driven by the goal of securing energy access and creating value. He stressed that measures to support renewable energy need to address the whole supply chain. Sach described Germany's recycling of EU Emission Trading Scheme allowances to transform the energy sector, and noted bilateral and multilateral cooperation initiatives, including the AEEP and the Clean Energy Ministerial Working Group on Solar and Wind Energy, led by Denmark, Germany and Spain. Sach underscored the importance of capacity building and "training trainers."

Jason Schaffler, Renewable Energy & Energy Efficiency Partnership (REEEP), highlighted knowledge-sharing initiatives to enhance the uptake of renewable energies in Africa. He said that REEEP provides a number of capacity-development services, including a comprehensive country-based online database, dissemination of success stories and facilitation of international renewable energy networks.

Sekou Touré, GEF, presented on the experience and relevance of the GEF in financing elements of renewable energy, mentioning the GEF's overarching support for capacity-building activities and technology transfer. He highlighted lessons learned on financing energy, underscoring, among others, the need to establish public-private partnerships, the importance of a legal and institutional environment to stimulate investment, and incentives for investors.

During the subsequent question and answer session, the discussion focused on: what governments can do to create markets for renewables and support rural electrification; GEF conditionalities; AU renewable energy initiatives; how to access support from the AEEP; what Africa needs to do so as not to miss the third industrial revolution brought by renewable energy sources; the need to adapt standards developed in industrialized countries to local conditions; how to make modern cook-stove programmes sustainable; the need to for a clear understanding of existing financial institutions interested in renewable energy; the growing interest of industry ministers in renewable energy; the changing definition of baseload power and how the comparison of baseload to renewables is no longer applicable; and the need for appropriate local regulations and legislation.

PREPARING THE GROUND FOR ACCELERATING RENEWABLE ENERGY DEPLOYMENT IN AFRICA

The session was chaired by Ogunlade Davidson, Minister of Energy and Water Resources, Sierra Leone, who challenged African leaders to move away from a "lack of" mentality and start to harness the continent's considerable capacities. He stressed that current estimates of Africa's energy needs are too low and need to be tripled if the continent is to become globally competitive. Noting that developed countries are continually learning and innovating he called on African leaders to be prepared to experiment and fail in order to move forward.

Elizabeth Dipuo Peters, Minister of Energy, South Africa, stressed that in order for renewable energy deployment to be accelerated, governments need to put in place policy frameworks that provide certainty to local and regional power pools and international investment. She called for a mapping of energy resources, followed by the development of integrated resource plans (IRPs) that focus on available energy resources and emphasize localization, including the use local skills and

labor. She underscored that any IRP must take into account the affordability of clean energy to the end-user. She called for an interface between the energy, trade and environment sectors, to reduce duplication of efforts and increase investment in green growth.

Stephen Karekezi, AFREPREN, described lessons learned in renewable energy deployment in East Africa and Malawi, including the need for governments to invest in detailed renewable resource assessments, establish feed-in tariffs in order to kick-start investment, and encourage low-risk small-scale investments, creating competition between industry players in green energy development. He encouraged the simultaneous development of agroindustry and green energy projects, giving the example of hydro-energy projects being developed in tea-growing areas.

Serge Lepeltier, Ambassador for Climate Change, France, said the Paris-Nairobi Climate Initiative aims to provide a dynamic stimulus to meet the goal of providing universal access to energy in Africa by 2030. He described the Initiative's three core areas of work as governance, capacity building for sustainability, and financing.

Gauri Singh, Director of Knowledge Management Innovation and Technology, IRENA, presented on IRENA's readiness mapping initiative, which assesses the capacity of national institutional frameworks to implement clean energy projects. She said the methodology is designed to help countries explore a set of alternative pathways in their transition to a clean energy future. Singh highlighted a range of additional support measures provided by IRENA, including undertaking pilot projects, sharing the lessons learned and facilitating international partnerships.

Deepak Gupta, Secretary, Ministry of New and Renewable Energy, India, suggested the development of power grid roadmaps for every African country. He highlighted options for rural electrification including the use of gasification systems fuelled by rice husks and coconut fiber. He described projects that India and partner-governments in Africa are working on, including biogas projects in Uganda and Mozambique, and cogeneration in Tanzania. Gupta proposed setting up working groups to identify key action areas, and the development and monitoring of timelines to perform the identified actions.

Youba Sokona, Coordinator, ACPC, said Africa has the opportunity to build an energy system based on renewables. He underscored the importance of separating "energy needs," a development term, from "energy demand," an economic term. Sokona stressed the specific needs of rural areas in Africa and agricultural systems, including those for electrification and motorization. He called for a holistic approach that takes into consideration the entire energy chain, from supply and generation, to end-use.

Carmen Becerril, President, Acciona Energy, Spain, noted her company owns over 8000 megawatts of renewables in more than 12 countries, and identified the main prerequisites for renewables deployment as: clear rules regarding grid connection, a stable regulatory framework, and concrete national targets. She said because renewable energy is capital intensive, projects must be bankable, which means technological and regulatory risks must be addressed. She said businesses take care of technology

risks, while governments are responsible for reducing regulatory risk. She identified feed-in tariffs and removal of bureaucratic barriers as the two key elements for successful deployment of renewables.

Abubakar Umar, Director, Energy Commission of Nigeria, said that African countries need concerted and well-connected policies to attract and sustain local and international investment in the energy sector. He called on IRENA to help countries develop, among others: a centralized database on renewable energy resources and their development projections; sound policy and regulatory frameworks; practical incentives for investors and consumers; and targeted skills.

Vincent Kitio, Chief, Urban Energy Section, UN HABITAT, emphasized the need for renewable energy technologies in cities, highlighting the potential of solar water heaters and LED lighting in residential areas, and biogas in public institutions. He highlighted the need to strengthen the capacities of local authorities in capturing gas from landfills, and the importance of promoting energy-efficient building technologies. He called for a strong financial mechanism to bolster the uptake of renewable energy technologies.

In the subsequent question and answer session, the discussion focused on: the need to balance a cautious approach without missing the opportunity provided by renewables; the role of regional centers in capacity building; differentiating between technician-level and engineer-level training; how to replicate successful electrification cases in Africa; the need for realistic electrification programmes; the need for international renewable energy protocols akin to those of nuclear power; and the role of IRENA in identifying capacity and technology resources.

DIALOGUE ON OPPORTUNITIES FOR EFFECTIVE IMPLEMENTATION OF IRENA'S WORK PROGRAMME FOR AFRICA

Adnan Amin noted that participants had articulated a clear agenda for a functional partnership between African countries and IRENA.

Sultan Al Jaber said at this meeting IRENA had gained a better understanding of African concerns and priorities. He posed two questions to ministers: (1) what is the most urgent action needed to ensure that renewable energy needs for Africa are met; and (2) how to best include these issues on the international agenda, particularly Rio+20 and UNFCCC's COP 17 in Durban.

On urgent action for Africa, many participants highlighted the need for resource mapping, capacity building and training. UNIDO noted the need for data on actual resources and not "assumed ones." Sierra Leone and Senegal called for the upgrading of previous resource mapping efforts, taking into account climate change and technological advances. Nigeria asked whether the mapping activities would build on existing resource maps, or initiate a new resource mapping process. Guinea Bissau underscored the technological needs for resource mapping. Sudan said resource mapping is not a priority for all African countries, underscoring the adaptation of technology to local situations. He also called for a regional renewable energy plan. Senegal and Kenya stressed the development of relevant policy frameworks both at the national and the regional level. The AU Commission called for regional resource mapping and assessment. Gabon requested IRENA to provide financial and

technical assistance for the development of a resource-mapping database. Namibia called for IRENA's assistance in resource mapping based on individual renewable resources.

Adnan Amin highlighted that IRENA has been asked to carry out global resource mapping by the Clean Energy Ministerial. He noted that resource mapping requires partnering with governments to access meteorological as well as local data. He stressed the importance of policy frameworks to stimulate investment in renewable energy. The Central African Republic said IRENA could lean on the five power pools in Africa as some already have resource-mapping databases. He said IRENA should assess, together with regional economic communities and regional banks, the financial implications of renewable resource mapping. South Africa asked how to access the Abu Dhabi Fund for Development to finance development of renewable energy in Africa and capacity-building initiatives. Kenya, with Sudan, highlighted the need to establish national energy priorities, in order for countries and subregions to capitalize on their comparative advantages. He underscored the need for an institutional framework.

Mali stressed that human resource capacity will be needed to implement renewable energy technologies on the ground. Ghana underscored that IRENA has a role to play in national and regional policy formulation, particularly in defining acceptable terminologies for use in legislation. Cameroon underscored integration of clean energy technology plans into poverty alleviation efforts. Noting grid fragmentation in Africa, Djibouti proposed that renewable energy be developed alongside the infrastructural maintenance of existing grids. ECOWAS said the biggest obstacle to implementing renewable energy technologies is lack of political will. Tanzania suggested that IRENA bridge the gap between technology producers and technology users.

On the international agenda, Senegal said IRENA could use COP 17 and Rio+20 as venues to display its priority programme, to allow other institutions to know about IRENA's plan, and facilitate resource mobilization and partnerships. South Africa said energy should be the platform for action at COP 17. UN-Energy said it had requested a thematic day for energy at Rio+20. Sierra Leone said these meetings should be used to obtain information on what the public investments are on renewable energies, what are the ongoing "big" projects, and what are the investment projects looking for funding. Noting the proliferation of forums, Sudan said IRENA should be the coordinator for renewable energy.

Kenya said IRENA should lead regionally and globally on renewable energy and, with Uganda, that it should become an advocate for Africa. Côte d'Ivoire said IRENA should promote the use of hydro power and agricultural waste. Niger said it would be useful for IRENA to participate in subregional technical meetings.

Adnan Amin thanked ministers for expressing very specific and concrete needs. He underscored the need to: not duplicate what has already been done but instead build on that; develop technical, human and institutional capacity; and establish appropriate policy frameworks. He said if we are able to understand what is happening with renewable energies in Africa, "we'll be amazed."

CLOSING SESSION

Ogunlade Davidson, Minister of Energy and Water Resources, Sierra Leone, introduced the draft Abu Dhabi Communiqué on Renewable Energy for Accelerating Africa's Development. Benin proposed language on the type of training programmes to be developed and, supported by the Republic of Congo, called for the establishment of a special renewable energy fund based at the African Development Bank. Adnan Amin noted that this would require involvement of more stakeholders, suggesting that the communiqué refer to "development of specific funding modalities." Senegal said that support should focus on building endogenous capacity to produce renewable energy equipment. Tanzania said the communiqué should reflect that IRENA's actions are based on actions agreed by African governments.

Mali, with Benin, the Republic of Congo, Sierra Leone, Cameroon, Guinea Bissau and others, and opposed by Kenya, Senegal, Rwanda, Côte d'Ivoire and France, proposed to turn the "Communiqué" into a "Declaration," to reflect the commitment expressed by participants and the high-level nature of the forum.

The forum agreed to an amended communiqué and Adnan Amin closed the meeting at 5:39 pm.

Abu Dhabi Communiqué on Renewable Energy for Accelerating Africa's Development: In the communiqué, the African ministers recognize the significant potential of renewable energy to accelerate African low-carbon development and address climate change mitigation and adaptation. The ministers note the need to: assess existing conditions and needs, and build regional cooperation to address those needs and opportunities; strengthen national, regional and continental policy frameworks to stimulate investment in, and ensure sustainable deployment of, renewable energy; and support R&D and innovation within the continent and through South-South cooperation.

The ministers agree to launch a concerted effort to promote intensified utilization of Africa's renewable energy resources, considering the need to: ensure that IRENA's policy for Africa responds to Africa's priority concerns; ensure a well-integrated IRENA programme for Africa; cooperate closely with the AU, CEMA, regional economic communities, national governments and all other partners; and develop a concrete and practical approach to support the knowledge, technology, capacity and policy needs of African countries.

The ministers state that "Renewable Energy Readiness" mapping is a crucial first collaborative step to provide a rapid, objective assessment of the status of renewable energy opportunities, and identify pathways to address gaps, and urge governments and others to participate in the mapping process.

They state that they will further continue to engage with IRENA, as the key inter-governmental forum on renewable energy, focusing in particular on, among others: improving policy frameworks; brokering services in capacity building, including for entrepreneurs in renewable energy; cooperation on technology and innovation; and supporting communication campaigns to promote uptake of renewable energy.

The ministers urge IRENA, in its messages to the international community at COP 17, Rio+20 and other major events, to emphasize, among others: the communiqué; renewable energy in the context of the green economy; assessment of market-distorting subsidies that inhibit the deployment of renewable

energy; employment implications of renewable energy; the need for increased international support to Africa while ensuring adequate provision of domestic resources; and using the 2012 International Year of Sustainable Energy Access for All to carry forward Africa's renewable energy strategies.

UPCOMING MEETINGS

Pre-COP 17 African Energy Ministers Conference:

Hosted by the Government of South Africa and endorsed by the African Union, this conference seeks to provide input into the COP 17 discussions. The meeting will also work towards the development of a Sustainable Energy Access Road Map, a Joint Communiqué, mitigation, adaptation, strengthening regional interconnectivity, scaling up renewables, energy efficiency, and outlining financing possibilities for sustainable options for increasing clean energy access in Africa. **dates:** 15-16 September 2011 **location:** Johannesburg, South Africa **contact:** Elizabeth Marabwa **phone:** +27-12-444-4017 **email:** Elizabeth.Marabwa@energy.gov.za

AU Regional Geothermal Working Group Meeting:

Organized by the African Union, this meeting will address geothermal energy. **dates:** 19-23 September 2011 **location:** Kampala, Uganda **contact:** Atef Marzouk **phone:** +251-11-466-5081 **fax:** +251-11-466-5081 **email:** marzouka@africa-union.org

Quantifying and Managing Land Use Impacts of

Bioenergy: Jointly organized by IEA Bioenergy and the Brazilian Bioethanol Science and Technology Laboratory, this workshop will look at methods for quantifying direct and indirect land-use change, recognizing further land-use impacts of bioenergy such as in greenhouse gas accounting and renewables programmes, and how to minimize the land-use impacts of bioenergy. **dates:** 19-21 September 2011 **location:** Campinas, Brazil **contact:** Martin Junginger **email:** h.m.junginger@uu.nl **www:** <http://www.bioenergytrade.org/upcomingactivities/qm-land-use-impacts-of-bioenergy.html>

UN Private Sector Forum: Access to Energy For All:

This high-level forum organized by the UN Global Compact, UN-Energy and other UN Agencies, funds and programmes will focus on Sustainable Energy for All. The forum will bring together heads of state attending the UN General Assembly and over 300 CEOs of the leading companies in the sector. **date:** 20 September 2011 **location:** New York, US **contact:** Meng Liu, UN Global Compact **email:** lium@un.org **phone:** +1-917-367-3648 **www:** http://www.unglobalcompact.org/NewsAndEvents/event_calendar/index.html#sep

UNFCCC Resumed Sessions of AWG-KP 16 and AWG-LCA 14: The third part of the 16th session of the *Ad Hoc* Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP 16) and the third part of the 14th session of the *Ad Hoc* Working Group on Long-term Cooperative Action under the Convention (AWG-LCA 14) will take place at the Centro de Convenciones ATLAPA in Panama. **dates:** 1-7 October 2011 **location:** Panama City, Panama **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** <http://www.unfccc.int>

UNCSD Regional Preparatory Meeting for Africa: The UN Economic Commission for Africa and partners will convene

an African regional preparatory meeting for the UNCSO. **dates:** 10-14 October 2011 **location:** Addis Ababa, Ethiopia **contact:** UNCSO Secretariat **email:** uncsd2012@un.org **www:** <http://www.uncsd2012.org/rio20/index.php?menu=26>

UNCSO Regional Preparatory Meeting in the Arab Region: The UN Economic and Social Commission for Western Asia and partners will convene an Arab regional meeting in preparation for the UNCSO. **dates:** 16-17 October 2011 **location:** Cairo, Egypt **contact:** UNCSO Secretariat **email:** uncsd2012@un.org **www:** <http://www.uncsd2012.org/rio20/index.php?menu=26>

First Climate Change and Development for Africa Conference: Organized by UNECA's African Climate Policy Centre, the aim of the conference is to establish a forum for dialogue, enhance awareness raising, mobilize effective commitment and actions through bringing together policy makers, academicians and practicing stakeholders with the aim of effectively mainstreaming climate change concerns into development policies, strategies, programmes and practices in Africa. **dates:** 17-19 October **location:** Addis Ababa, Ethiopia **contact:** UNECA **phone:** +251-11-551-7200 **fax:** +251-11-551-0350 **email:** acpc@uneca.org

Third Meeting of the Group of Experts on Global Energy Efficiency: The Group of Experts will continue work on the Global Strategy for Energy Efficiency Market Formation. **dates:** 17-18 October 2011 **location:** Geneva, Switzerland **contact:** Viktor Badaker, Project Manager GEE21 **phone:** +41-22-917-2443 **email:** viktor.badaker@unece.org **www:** http://www.unece.org/energy/welcome/Calendar_Meeting.html

African Economic Conference 2011: The UN Economic Commission for Africa, the African Development Bank and the UN Development Programme are organizing the sixth African Economic Conference, on the theme "Green Economy and Structural Transformation in Africa." The main objective is to reflect on the best approaches to attain the Millennium Development Goals, achieve the objectives of the New Partnership for Africa's Development and accelerate Africa's sustainable development. The meeting will make recommendations that may inform Africa's position at the UNCSO. **dates:** 26-28 October 2011 **location:** Addis Ababa, Ethiopia **contact:** Ndubisi Nwokoma **phone:** +251-11-544-5459 **email:** NNwokoma@uneca.org **www:** <http://www.uneca.org/AEC/2011/AEC2011Call-forPapers.pdf>

Second Session of the IRENA Council: The second session of the IRENA Council is tentatively set to take place in November 2011. **dates:** 14-15 November 2011 **location:** Abu Dhabi, UAE **contact:** Adnan Amin, Executive Director **phone:** +971-2-4179001 **email:** secretariat@irena.org **www:** <http://www.irena.org>

Second IEF-OFID Symposium on Energy Poverty: Hosted by the Government of Venezuela, this event will focus on the multifaceted issue of "Global Initiatives and Regional Cooperation to Eradicate Energy Poverty." **dates:** 15-16 November 2011 **location:** Caracas, Venezuela **contact:** Carole Connor, IEF Secretariat **phone:** +966-1-481-0022 ext. 305 **fax:** +966-1-481-0055 ext. 305 **email:** carole.connor@ief.org **www:** <http://www.ief.org>

Bonn 2011 Conference: The theme for Conference, organized by Germany's Federal Development Ministry and Federal Environment Ministry is "The water, energy and food security nexus – water resources in the green economy," with the objective of contributing to the run-up to Rio+20. **dates:** 16-18 November 2011 **location:** Bonn, Germany **contact:** Imke Thiem, Head of Secretariat **phone:** +49-6196-79-1547 **email:** bonn.conference2011@giz.de **www:** <http://www.water-energy-food.org/en/home.html>

UNFCCC COP 17 and COP/MOP 7: The 17th session of the UNFCCC Conference of the Parties (COP 17) and the seventh session of the Meeting of the Parties to the Kyoto Protocol (COP/MOP 7) will take place in Durban, South Africa. **dates:** 28 November-9 December 2011 **location:** Durban, South Africa **contact:** UNFCCC Secretariat **phone:** +49-228-815-1000 **fax:** +49-228-815-1999 **email:** secretariat@unfccc.int **www:** <http://unfccc.int/>

Second Intersessional Meeting for UNCSO: The second intersessional meeting for the UNCSO will be convened in late 2011 to prepare for the June 2012 UNCSO. **dates:** 15-16 December 2011 **location:** UN Headquarters, New York **contact:** UNCSO Secretariat **email:** uncsd2012@un.org **www:** <http://www.uncsd2012.org/rio20/index.php?menu=25>

Second Session of the IRENA Assembly: The second IRENA Assembly is scheduled to take place in January 2012. **dates:** 14-15 January 2012 **location:** Abu Dhabi, UAE **contact:** Adnan Amin, Executive Director **phone:** +971-2-4179001 **email:** secretariat@irena.org **www:** <http://www.irena.org>

WFES-5: The fifth World Future Energy Summit (WFES-5) will promote innovation and investment opportunities surrounding alternative energy, clean technology and environment. **dates:** 16-19 January 2012 **location:** Abu Dhabi, UAE **contact:** Ara Fernezian, WFES Director **phone:** +971-2-4446113 **fax:** +971-2-444-3768 **email:** ara.fernezian@reedexpo.ae **www:** <http://www.worldfutureenergysummit.com>

GLOSSARY

ACPC	African Climate Policy Center
AEEP	Africa-EU Energy Partnership
AFREPREN	African Energy Policy Research Network
AR4	IPCC's Fourth Assessment Report
AU	African Union
CEMA	Conference of Energy Ministers of Africa
COP	Conference of the Parties
ECOWAS	Economic Community of West African States
GEF	Global Environment Facility
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
R&D	Research and Development
Rio+20	United Nations Conference on Sustainable Development (or UNCSO)
UNECA	UN Economic Commission for Africa
UNFCCC	UN Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization