



B4E Summit Bulletin

A Summary of the Fourth Annual Business for Environment Global Summit

Published by the International Institute for Sustainable Development (IISD) in collaboration with the Global Initiatives

ONLINE AT [HTTP://WWW.IISD.CA/YIMB/B4E/B4E4/](http://www.iisd.ca/yimb/B4E/B4E4/)
VOLUME 174, NUMBER 1, MONDAY, 26 APRIL 2010



FOURTH ANNUAL BUSINESS FOR THE ENVIRONMENT GLOBAL SUMMIT: 22-23 APRIL 2010

The fourth Business for the Environment Global Summit (B4E Summit) met from Thursday April 22 to Friday 23 April 2010 in Seoul, Republic of Korea. The meeting was hosted by the United Nations Environment Programme (UNEP), the United Nations Global Compact, World Wide Fund for Nature (WWF), the Korean Ministry of Environment, the Korean Ministry of Knowledge Economy and the Presidential Committee on Green Growth, with over 20 businesses partnering to support the summit. The meeting brought together CEOs and senior executives of multinational corporations, as well as leaders from government, international agencies and NGOs to discuss “Powering growth for the global green economy.” The goal of the meeting was to consider the outcome of the fifteenth Conference of the Parties (COP 15) of the United Nations Framework Convention on Climate Change (UNFCCC) and discuss the role of business in realizing a low carbon future.

The B4E Summit was a paperless meeting in order to reduce its environmental footprint. In addition, a number of speakers presented through interactive video conferencing and pre-recorded video presentations. Approximately 1,000 individuals from 35 countries participated in the meeting, which was slightly lower than expected due to European travel disruptions from a volcanic ash cloud in Iceland. On Thursday and Friday, CEOs and leaders of government, international agencies and NGOs presented their experiences; plenary discussion panels focused on the green economy; and participants broke into smaller group discussions on key issues during parallel sessions and working groups. On Friday afternoon, the working groups reported back to the plenary with strategies to address barriers to a low carbon future; a Mexican representative presented on the outlook for COP 16 in Cancún, Mexico; and representatives from UNEP, the UN Global Compact and the government of the Republic of Korea presented closing remarks on the way forward.

In pre-summit events on Wednesday, the fifth Global Environmental Outlook report, the Climate Competitiveness Index 2010, and the Business & Biodiversity Report were launched. Additional events were held throughout the B4E Summit, including a UN Global Compact Breakfast, UNEP Champions of the Earth Youth Dialogue with CNN, and lunch presentations on “Sustainability: Business visions and market blindspots” and “Sustainable solutions to eradicate poverty.” This report summarizes the summit proceedings.

A BRIEF HISTORY OF BUSINESS FOR THE ENVIRONMENT SUMMIT

Business for the Environment: Business for the Environment is an initiative established by the UN Global Compact and UNEP, which seeks to increase dialogue and business-driven action for the environment. The first B4E Summit met in Singapore in April 2007. Participants discussed the format and goals for the summit, agreeing to meet annually and focus on a specific topic of interest to the business and environment communities. The second B4E Summit took place in Singapore from 22 to 23 April 2008 and focused on “Resource Efficiency and Renewable Energy.” Plenary sessions explored issues including, *inter alia*, responding to climate change through partnerships and actions, and leadership and innovation in resource efficiency. Breakout sessions examined resource efficiency, renewable energies in emerging markets, financing and investing in climate-friendly production, sustainability and construction, and enhancing measurement and reporting on climate change. The third B4E Summit took place in Paris, France from 22 to 23 April 2009 and focused on “The Green Imperative: Leadership, Innovation and Technology.” Delegates engaged in panel discussions and working groups on, *inter alia*, the role of consumers, innovation and technology,

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The *B4E Summit Bulletin* is a publication of the International Institute for Sustainable Development (IISD) <info@iisd.ca>, publishers of the *Earth Negotiations Bulletin* © <enb@iisd.org>. This issue was written and edited by Kate Harris, William McPherson, Ph.D., Chad Monfreda, and Matthew Sommerville, Ph.D. The Editor is Robynne Boyd <robynne@iisd.org>. The Director of IISD Reporting Services is Langston James “Kimo” Goree VI <kimo@iisd.org>. Funding for coverage of this meeting has been provided by the Global Initiatives. IISD can be contacted at 161 Portage Avenue East, 6th Floor, Winnipeg, Manitoba R3B 0Y4, Canada; tel: +1-204-958-7700; fax: +1-204-958-7710. The opinions expressed in the *Bulletin* are those of the authors and do not necessarily reflect the views of IISD. Excerpts from the *Bulletin* may be used in other publications with appropriate academic citation. Electronic versions of the *Bulletin* are sent to e-mail distribution lists (HTML and PDF format) and can be found on the Linkages WWW-server at <http://www.iisd.ca/>. For information on the *Bulletin*, including requests to provide reporting services, contact the Director of IISD Reporting Services at <kimo@iisd.org>, +1-646-536-7556 or 300 East 56th St., 11A, New York, New York 10022, United States of America.



the green transformation of business, sustainable urban development, reducing the impact of extractive industries, and the global water crisis. Delegates agreed on the Green Imperative, which underlines the need for business to take part in more sustainable world leadership, ownership and accountability and calls for engagement at the local and global level on the way to the 2012 Earth Summit (Rio +20).

REPORT OF BUSINESS FOR THE ENVIRONMENT GLOBAL SUMMIT 2010

OPENING OF THE MEETING

On Thursday morning, 22 April 2010, UN Secretary General Ban Ki-Moon opened the fourth Business for Environment Global Summit (B4E Summit) by video link, emphasizing the role of green growth in development. He noted that development ignored the environment over much of the past century, which has contributed to climate change, desertification and biodiversity loss. He called for action on the Millennium Development Goals through the agenda for action adopted in September 2009, which has concrete steps and timelines, including the involvement of corporate responsibility. He noted the challenge of creating a global movement for green growth based on new ideas and the responsible application of economic power.

President of the Republic of Korea, Lee Myung-bak, spoke on the need to take action that merges environmental needs with green economic growth. He stressed the importance of entrepreneurship and a “me-first attitude” to change, whereby countries take strong actions before demanding action from others. He discussed leading Korean initiatives on climate and water issues that demonstrate ways in which environmental investments act as an engine for green growth. On climate, Lee described the Korean investment of 2% of GDP into the green sector and highlighted a target to reduce carbon emissions by 30% from the business as usual emissions by 2020. He also highlighted the creation of the Global Green Growth Institute, which will be launched in Seoul, Republic of Korea, in 2011 to devise solutions for tackling climate change. On water, Lee related the importance of solutions that expand water supply, increase water productivity, and lessen dependence on water resources, highlighting that Korea’s Four River Restoration Project will increase water quality and enhance biodiversity in the country’s major rivers by 2012. Lee noted that, ultimately, change will come from creativity and entrepreneurship within the business sector, and said that the early adopters of environmentally sustainable practices will excel as the green market becomes mainstream. He emphasized the importance of reducing uncertainties in the business sector, underscoring Korea’s green growth law and the importance of such policies in the transition to a green industry.

OPENING STATEMENTS

On Thursday morning, United Nations Environment Programme (UNEP) Executive Director Achim Steiner noted that the world remains in shock from the financial crisis, but that markets are beginning to experience recovery, particularly the green sectors. He reframed the financial crisis as an opportunity to transition away from “business as usual” and toward sustainable economic development. He described how a green economy must be shaped by interactions between governments, the private sector and society, and should be articulated and developed by different countries. He noted

that in the context of climate change, green market policies are crucial to both economic stability and the survival and sustainable development of nations. He argued that a green economy would not constrain development but rather reshape and broaden opportunities for development. He stated that legislation is vital to developing a green economy because the market alone cannot drive change at the required scale and pace.

Georg Kell, UN Global Compact, asserted that a decade ago businesses were preoccupied with maximizing short-term profits, and the environment was an afterthought. He noted that attitudes have changed, with businesses today accepting ethical responsibilities and embracing environmental stewardship. He described how short-term business approaches are not conducive to fostering long-term economic stability, and how economic and ecosystem interdependencies make environmental concerns integral to the future of global business. He outlined three post-Copenhagen challenges: to improve transparency and accountability in business; to develop tools and methods for assessing the environmental and social performance of businesses; and to increase confidence that the market will reward good performance. He called on businesses to take the lead and initiate global transformations toward mainstreaming green approaches.

On Friday morning, James Leape, World Wide Fund for Nature (WWF) International, addressed the meeting by video link and discussed the “huge” opportunities available to companies willing to help build the green economy, given that the green sector is expected to grow into the third largest economic sector globally. He noted that the key to developing this sector is building strong domestic markets, and that Asia is emerging as the leader in the green economy, particularly in China and the Republic of Korea. He suggested that countries must develop: strong efficiency standards for appliances and cars; tariffs to make renewable technologies commercially viable; and infrastructure such as smart grids. Leape urged businesses to consider sustainability in the context of the entire lifecycle of their products, from raw materials through product disposal.

KEYNOTE PRESENTATION

On Thursday morning, Former US Vice President Al Gore gave a presentation using a video conferencing tool. He highlighted that in reducing emissions, businesses are frequently able to increase profitability by eliminating waste and inefficiency. He also expressed concern that many governments are not changing policy rapidly enough and praised the Republic of Korea as a leader in developing green policies. He described the imminent introduction of climate legislation in the US Senate. On the evolution of the climate crisis, Gore underscored the importance of addressing the crisis by arguing that the world population has quadrupled in the last century; scientific and technological revolution has had the unintended side effect of increased levels of carbon dioxide in the atmosphere; and society cannot wait for the worst impacts of climate change to appear before acting.

Gore called for solutions that focus on energy efficiency, renewable energy, smart technologies, forest preservation and soil conservation. He said that business can benefit from developing solutions to the climate crisis, noting that employees and customers prefer organizations with strong values. He closed by underscoring a moral commitment to future generations. Responding to a question on the



Intergovernmental Panel on Climate Change (IPCC), Gore said that only a few mistakes have been made in thousands of pages of IPCC reports, stressing that evidence of climate change is unequivocal.

OPENING ADDRESSES

In Thursday afternoon's opening address, Lee Maanee, Minister for Environment of the Republic of Korea, reviewed the low carbon, green growth vision of the Korean government, whose environmental platform includes, *inter alia*, the Four Rivers Restoration Project, emission reduction targets of 30% below the business as usual level by 2020, and supporting green growth by investing at least 2% of Korea's GNP in green technologies. He discussed the importance of: making emission reduction procedures transparent; improving the carbon trading system; encouraging citizens to use energy efficient goods; and developing greening strategies for energy-intensive industries. He noted that climate change, environmental degradation, and the burden of an increasing world population are challenges, underscoring that "green growth is not an option, but a must."

On Friday morning, Choi Kyunghwan, Minister for Knowledge Economy of the Republic of Korea, noted that despite the contentious outcome of COP 15 in Copenhagen, countries are implementing measures to reach more ambitious emission reduction targets. He outlined three roles for business in this process: generating economic values; creating green jobs; and accepting social responsibility. He noted that businesses have reacted to the global financial crisis by either cancelling or delaying green investments, or by strengthening those investments, and that he supported the latter response. He noted that the path toward a low carbon green economy is full of "trial and error," and highlighted that the Korean government strives to engage business in "state eco-capitalism" in order to grow the green sector.

Wangari Maathai, 2004 Nobel Peace Prize Laureate and Founder of the Greenbelt Movement, gave an introduction to the Friday afternoon plenary by video, highlighting 2010 as the International Year of Biodiversity. She said that businesses, like the human species at large, are ultimately dependent on the web of life and must attend to the protection of biodiversity and ecosystems if they are to continue to serve as engines of growth into the future.

LEADERSHIP PERSPECTIVES

Throughout the meeting, leaders from government and the private sector shared their insights on international climate policy and opportunities for business innovation. On Thursday morning, Bharrat Jagdeo, President of Guyana, challenged the international community to make the binding agreements necessary to address climate change. He stressed that in the absence of binding international standards and obligations, risk-averse businesses lack the incentive to make the first move. Jagdeo described how Guyana has worked within the Copenhagen Accord to establish a price for its forests in order to enable its people to prosper without contributing to deforestation. He noted the Accord is the "only game in town." Yet, he lamented the failure of the Accord to produce the verification system and financial transfer mechanisms needed to establish a functioning market in forest offsets. Looking forward to COP 16 in Mexico, Jagdeo noted that the failure of Copenhagen was an issue of process rather

than content, cautioning that a future binding agreement will be unlikely unless international negotiations return to a consideration of process.

Nam Yong, LG Electronics, discussed opportunities available to businesses that possess environmental vision. He stated that individuals worldwide need to fundamentally change how they think and act, and that while governments and the non-profit sector are crucial to this transformation, businesses can drive change outside of political and social processes. Nam reviewed LG's corporate initiatives to improve carbon efficiency and energy management in both residential and commercial applications, and described how such initiatives yield benefits for shareholders, consumers and the environment. He noted that businesses need to research and develop energy and carbon efficient technologies not only for social responsibility, but also for their "enormous" commercial potential. He encouraged businesses to cooperate on realizing the transformation to an energy efficient lifestyle.

On Thursday afternoon, Mohamad Nasheed, President of the Maldives, discussed the roots of the climate crisis in the growth of the world economy, which has resulted in increased environmental impacts from rising standards of living. He noted that the Maldives suffers from environmental problems, including overfishing, brown cloud pollution and rising sea levels. Nasheed called for action through innovation and the power of the market, and highlighted the importance of putting a price on carbon to ensure effective emission reductions. He underscored the Maldives' commitment to becoming carbon neutral by 2020 through the rapid development of renewable energies such as wind and solar, and said, "The Maldives will act as a laboratory for the world."

Sohn Kyung-shik, Korea Chamber of Commerce and Industry, made the case that climate change and other global environmental problems can only be solved by reconciling environmental protection and economic growth. He said that while a new paradigm of green growth has been slow to arrive, the business community is developing technologies and markets conducive to a clean environment and economic prosperity. Sohn cited recent efforts in the Republic of Korea, including a low carbon strategy adopted in 2008 and a green growth law enacted in 2009. Globally, Sohn predicted an increase in investments in renewable energy and smart grids of \$1 trillion and \$4 trillion respectively. He highlighted aggressive investments in a number of sectors, including energy efficiency, green management, biofuels, and photovoltaic technologies. Sohn said these trends demonstrate that business can pursue long-term environmental goals and help to create a new framework for a global green economy.

On Friday afternoon, through video conferencing, Richard Branson, Virgin Group, advocated business-driven actions toward a global green economy. He urged business leaders to think in new ways, work with new partners, and put environmental matters at the core of what they do. He argued that the business community is obliged to help redistribute wealth for the collective good, since running a company "is an ethical, but above all a human responsibility." Branson also argued for channeling business sector resources into combating climate change and improving natural resource management. In response to questions, he stated that the only way to "take on" coal and oil companies is to create profitable alternatives, and he urged businesses to help tackle the climate crisis by investing some of their profits into green technologies.



Pang Gang, Yili Group China, reported on the environmentally friendly contributions of his company to the development of the dairy industry in China. In cooperation with his strategic partner, SIG Combibloc, he said Yili Group has developed packaging for dairy products from sustainably managed wood. Through energy efficiency, Yili Group has reduced CO₂ emissions by 68,000 tons and has engaged in organic dairy production. He announced that his company will be a “green sponsor” of the Shanghai Expo this year.

PRESENTATION

INSPIRED BY NATURE: THE BUSINESSES OF THE FUTURE: On Friday morning, Gunter Pauli, Zero Emissions Research Institute, presented a paradigm of business innovation based on principles of a green economy from nature. He used examples from nature such as: the use of vortexes and cavitation for water purification, research on silk and spider webs for polymers, and combining functions such as wind generators within power pylons. Pauli asserted that natural processes are often more efficient than artificial ones, and innovation in business can emulate these processes through careful research. He noted that physical processes are highly predictable, and business planning depends on predictability. Pauli described a project of reforesting the savannah in Colombia for sustainable biofuels and carbon sequestration, based on the use of natural processes.

DISCUSSION PANELS

A number of panels met in plenary during the meeting to discuss key themes related to developing a low carbon future, as well as opportunities for business to contribute to sustainable solutions.

POWERING GROWTH FOR THE GLOBAL GREEN ECONOMY: In Thursday morning’s discussion panel, Achim Steiner, UNEP, called for discussion on the difficulties of making successful transitions to green growth once businesses agree on this goal. Adrián Fernández Bremauntz, National Institute of Ecology, Mexico, noted the challenge of coordinating government ministries and highlighted the need to work with the legislative branch to make structural changes that level the field in order to deliver at the scope, scale and pace required to realize green growth. He noted progress in identifying profitable opportunities for mitigation.

Angelina Galiteva, World Council for Renewable Energy, highlighted the capital-intensive nature of the utility sector and the need for alliances across sectors. She noted the role of government to set policies that create standards and goals. Ashok Khosla, International Union for the Conservation of Nature (IUCN), said embedded vested interests, a comfort with business as usual, and perverse subsidies are acting as barriers to change. He noted the importance of demographics and recognizing rights to education, health, employment and food. Georg Kell, UN Global Compact, said that non-financial issues are beginning to be considered within some financial performance balance sheets, but noted the continued business focus on short-term horizons and the challenge of valuing environmental issues. He said that a global transformation is challenging because government is typically focused on national level issues, while many businesses act at the global level.

Discussion focused on incentives and markets in business planning that can support green growth. Renewable energy and poverty were identified by discussants as incentive

areas that need more business interest. Innovations such as wireless communication and distributed energy were identified as solutions to address these environmental issues. Panelists identified investment opportunities for business in environmental services, biodiversity and green development, highlighting options based on reduced emissions from deforestation and forest degradation (REDD) mechanism. In response to audience questions, speakers discussed the need for long-term strategic analysis by business, particularly with regard to the fluidity of carbon markets, new technologies and the need for universal standards through international agreements. On the next round of climate change negotiations, discussants said that UNFCCC benchmarks would help provide investment planning for business, but that a legally-binding agreement may not be feasible.

GREEN BUSINESS: A NEW GROWTH ENGINE FOR THE PLANET: On Thursday afternoon, Jochen Zeitz, Puma AG, emphasized the role of the consumer in choosing sustainable products, and noted that companies have a responsibility to educate the consumer by translating their green messages into understandable terms. Rolf Stangl, SIG Combibloc, described how its carton-based beverage packaging is made from certified wood and reduces climate impacts by avoiding refrigeration. Charlie Brown, Office Depot International, described how recycling and supply chain management can make production and distribution sustainable. Joseph Meilinger, Siemens Korea, advocated new solutions for climate change through research and development, such as Siemens turbines for solar thermal plants, new pollution control machines, and improved efficiencies of conventional machines. Mohammed El-Ashry, Renewable Energy Network 21, described how renewable energy has grown faster than other energy sources, and noted that world demand in 2050 will double, particularly in developing countries.

During the ensuing discussion, Zeitz highlighted that innovation requires the courage to surrender certainty and that companies should use the goal of sustainability to drive innovation. Brown stressed that innovative ideas do not need to be large scale or high-tech. El-Ashry noted the need to spend more money on research and development to develop affordable clean energy. On the most critical action that could open the door to sustainability, Brown said there is a need for increased transparency to differentiate between organizations that have sustainability at the core of their business from those that pay lip-service. Zeitz and Stangl called for collaboration on standards among companies, NGOs and government.

LEADING THE WORLD TOWARDS A LOW CARBON FUTURE: On Thursday afternoon, CNN’s Anne Coren hosted a televised edition of Earth’s Frontiers. Changhua Wu, The Climate Group, said it is possible for China to reduce its reliance on fossil fuels, highlighting China’s efficiency and renewable efforts. Mohamed Nasheed, President of the Maldives, called for finding solutions immediately and underscored the need for a binding agreement on climate change to move forward. He stressed reducing carbon emissions does not mean halting development.

Jochen Zeitz, Puma AG, underscored that business will be part of the solution to climate change and reviewed Puma’s efforts to offset their carbon footprint. Filmmaker James Cameron argued that we are at a milestone in Earth’s history and that energy is at the crux of the decisions that need to be made. He said clean coal is, at present, an oxymoron. Cameron



suggested that wealth should be defined as a world with a vigorous natural environment where lifestyle choices do not impinge on others.

Panel members discussed the pros and cons of renewable energies and the problems associated with incorporating startup costs of renewables into energy prices. They analyzed the possibility of incorporating negative externalities into balance sheets through mechanisms such as carbon taxes and offsets, but noted that these costs would be passed on to consumers. They discussed various technologies for alternative energies and problems of their adoption in legacy systems. Panel members debated whether governments, the business community, or consumers were responsible for transitioning to a green economy. Most panelists argued in favor of government accountability, noting that without directives, leadership from government and clear economic advantages, businesses lack the incentive to take initiative. Panelists also discussed climate skeptics, the roles and responsibilities of developed versus developing nations, and the power of individuals to make a difference.

GREEN ENTREPRENEURSHIP AND INNOVATION IN EMERGING COUNTRIES: On Friday morning, Chido Govero, Orphans Train Orphans, recounted her struggle growing up as an orphan in rural Zimbabwe, where she learned self-reliance by cultivating mushrooms using local agricultural waste. She related how these lessons are now being shared with women and children across the world to reduce waste, create jobs, ensure food security and eliminate abuse. Edward Ayensu, Council for Scientific and Industrial Research, Ghana, asserted that effective governance and the rule of law in Africa are needed to turn the “sleeping continent” to “gold” by creating the conditions for businesses to operate. Stefan Henningsson, WWF-Sweden, noted the potential for innovations to be shared between countries, citing a recent WWF study that identified 12 existing strategies already in place in some countries that, if scaled up, could reduce global carbon emissions by 600 million tons.

Neil Hawkins, Dow Chemical, indicated that learning and cultural exchange are at least as important for generating innovation with local business partners as conventional strategies like capital investment and joint ventures. Eric Leger, Schneider Electric, underscored the need to develop new entrepreneurs to encourage future growth. Changhua Wu, The Climate Group, stressed the need for mainstreaming solutions and noted efforts to scale up innovation at the required pace. She called on Fortune 500 companies to act as leaders and encouraged innovation by small entrepreneurs. Responding to questions on the role of certification, Hawkins differentiated between voluntary and regulated certifications, and Leger noted the difficulty of developing consistency across certifications.

THE ROLE OF BUSINESS IN PROTECTING BIODIVERSITY AND CONSERVING NATURE: On Friday afternoon, Nick Nuttall, UNEP, highlighted the costs to the global economy of losing ecosystems and questioned why more businesses don't focus on solutions that have been proven by natural systems. Ashok Khosla, IUCN, suggested separating discussion of the impacts of biodiversity on business from the business impacts on biodiversity. He said that many of the impacts on biodiversity are not apparent on a quarterly basis. He underscored the economic value of pollinators. He

noted that many information technology companies that do not initially appear to have an impact on the environment, like Google, often have a hidden footprint.

Jonathan Kaledin, The Nature Conservancy, said we have the intelligence to come up with solutions for environmental problems facing humans, but noted that many of these solutions don't adequately consider the threats facing biodiversity. He highlighted scientists' lack of knowledge of biological systems. Ravi Sharma, Convention on Biological Diversity, underscored success on the amount of land under protected areas, but acknowledged challenges in effective management. He said the role of business in protecting biodiversity has only recently been acknowledged, noting the application of biodiversity offsets and sustainable use of biodiversity.

On carbon markets and payments for ecosystem services, Kaledin said tax incentives in the US create the framework for forest protection, but there are institutional and national level barriers to scaling-up best practices in many countries. On the challenge of working with smallholders, panelists suggested bundling efforts at the community level and highlighted work under the UNFCCC's Clean Development Mechanism. They discussed the lack of an IPCC-like organization for biodiversity and the growing influence of multi-national corporations on the environment. They suggested that business and NGO partnerships are becoming more common.

PARALLEL SESSIONS

On Thursday afternoon, participants broke into six parallel sessions to discuss specific topics of interest.

BREAKTHROUGH CONSUMER CHANGE: IN SEARCH OF A GREEN TIPPING POINT: Chris Deri, Edelman, asserted that a “green consumer” does not exist, but that consumers instead make choices based on a variety of values, which brands can influence. Greg Koch, Coca-Cola, described the manner in which companies, such as his, can be competitive on sustainability issues by responding to changing consumer values. Sung-woo Seok, Korea Environment Industry Institute, said that Asian governments tend to establish rules to generate green markets, while in Europe market transformations are more decentralized. He highlighted the role of government procurement in this process. Stefan Henningsson, WWF-Sweden, described the different components of carbon footprints, mainly transport, shelter and manufactured products. He noted a shift from products to less carbon intensive services, such as obtaining media on the internet instead of books and disks. Discussion touched on the different rates of change for technology, business and education, and the role of brands in influencing consumer choice.

THE IMPACT OF CLIMATE CHANGE ON FOOD SUSTAINABILITY: Tony Simons, World Agroforestry Centre, underscored the connections between business, environment, agriculture and people. He emphasized the need to assist the most vulnerable individuals in society. Robert Berendes, Syngenta International, highlighted the need for political will and a global approach to dealing with climate change and food security. He said agricultural technology is mature, but partnerships could improve its application on the ground. Cynthia Jones, World Food Programme, said that over a billion individuals worldwide are malnourished, stressing the need for concerted actions. Louis Perroy, Ecorescurities,



suggested that carbon projects can contribute to adaptation and that forestry, agriculture and energy are three of the primary approaches to generating carbon credits.

Discussions focused on agricultural mitigation, the extent to which concerns are based on production or distribution of food, and the impact of free trade on food security. Simons summarized the session by stressing that mitigation and adaptation efforts need to be linked, support for alliances should be generated and trade and environmental conventions should be harmonized.

SUSTAINABLE TOURISM: PARTNERSHIPS

DRIVING CHANGE: Kwabena Akyeampong, Ministry of Tourism, Ghana, called for long-term solutions to scale up existing visitors' experiences, highlighting ecotourism initiatives and green building in Ghana. Willy Boulter, International Air Transport Association, noted the goals of the airline industry to improve fuel efficiency and halve the industry's carbon emissions by 2050 from 2005 levels. He highlighted a strategy that relies on technology, improved operations and improved structures within a sustainable economic framework.

Cho Sung-woock, Green Tourism Korea, underscored Korean efforts to reduce printed materials, improve biodiversity and inform tourists of their carbon footprint. Arab Hoballah, UNEP Division of Technology Industry and Economics (DTIE), said governments have to provide incentives and regulations to make sustainable tourism solutions work. He highlighted UNEP's Taskforce on Sustainable Tourism, which will present its Global Partnership Initiative to the UN Committee on Sustainable Development. Eric Lee, Intercontinental Hotels Group, noted that the travel industry represents 9% of global GDP and that energy represents the 2nd largest cost of hotel operation.

In the ensuing discussion, panelists stressed the important role of governments in promoting sustainable tourism, highlighted water use as a major issue in tourism, and presented initiatives to inform tourists of their ecological impact.

CLIMATE POSITIVE SOLUTIONS TO DELIVER

TRANSFORMATIVE CHANGE: Georg Kell, UN Global Compact, asked the panelists which technologies and market opportunities provide the greatest potential for transformative change. Sundeep Khisty, EDS/HP Asia Pacific, said that the electronics industry's greatest contribution will come from intelligent systems to monitor and reduce energy use, while providing the basis for a future emissions pricing scheme. Bradley Gambill, LG Electronics, described the potential for smart electronics to reduce consumer energy use and the ability of modular design to increase product lifetime. Ito Yuri, Hitachi, explained that no single company can supply the needed innovation, which must come from cross-industry competition. All panelists cited changing client and consumer expectations as enabling new opportunities for increasing energy efficiency. They also stated that gains in energy efficiency will come from advances in both manufacturing and product use. Panelists agreed that bottom-up innovation must replace the traditional model of technology transfer, explaining that technologies designed for developed countries overlook the unique challenges and market opportunities of emerging markets.

SUSTAINABLE PROCUREMENT AND EXPANDING THE GREEN SUPPLY CHAIN: Jonathan Wright, Accenture, noted the need to empower consumers to make informed choices. Thomas Linton, LG Electronics, highlighted LG's US\$40 billion in procurement annually and stressed the need to establish guidance from the top. Linton mentioned the importance of auditing across an extended supply chain and using common standards and manufacturing processes among companies.

Aron Cramer, Business for Social Responsibility, said technology enables consumer choice and behavior and that companies cannot reduce emissions without engaging consumers in how they use products. Gary Veale, KPMG, noted the challenge consumers face by having a multitude of labels. He highlighted that 80% of the environmental impact of a product is locked in at the design phase. Terry Yosie, World Environment Center, noted that senior executives can integrate sustainability into the "corporate DNA" by framing it as a business objective.

On the use of information technology for reporting and compliance, Veale noted that many companies have limited resources for environmental reporting. He described the need to ensure that reporting on legislative requirements feed into a wider sustainability framework. Cramer called for interoperability of technology and Linton said the product "genome" will likely become an integral piece of tracking components of products to their source.

On how multinational clients can partner with suppliers to achieve positive change, Cramer highlighted that big brands can help through financial assistance, while Linton called for sharing basic information among firms.

BUILDING THE NEXT GENERATION SMART

GRID: John McCall MacBain, European Climate Foundation, requested that panelists address a number of issues, including definitions for smart versus super grids and the limitations involved in developing each. Brad Gammons, IBM, noted that grids are already becoming smarter, such that electric transmissions systems are more automated, efficient, and responsive to demand. He defined super grids as requiring stable power transmission over vast distances. Ryan Hledik, The Brattle Group, identified price signal communication to customers as key to the development of smart grids. Chris King, eMeter, differentiated between the perspectives of the consumer, policymaker, and utility supplier on smart grids. He identified the need for a taskforce to clearly define a smart grid for regulatory purposes. Yong Pil-Lee, Korean Ministry of Knowledge Economy, noted that smart grids differ from traditional power networks in terms of energy centralization and consumer participation.

In the ensuing discussion, participants debated a number of issues, including: the savings potential of managing energy demands through smart grids; the global bottleneck in regulatory leadership and policies for smart grids; and the value of pilot projects in demonstrating technologies and building political consensus.

WORKING GROUP SESSIONS

On Friday morning, participants broke into small working groups for presentations and discussions on key issues. Each group worked through strategies to overcome current barriers to the adoption of low carbon and sustainable practices. In the afternoon, the chair of each working group reported results to the plenary.

BUSINESS INNOVATION: GBS Bindra, Logica, opened discussion by highlighting that recessions are often followed by periods of innovation. Scott Bolick, SAP, noted that risk management, resource productivity, brand values and a shift from product to services orientation are key drivers towards sustainable business. He underscored the challenge of justifying investment in sustainability when competing with other firms over prices and performance. While sustainability is a strategic move, he said it is frequently not embedded in practice, highlighting the need for collaboration on data exchange, standards and innovation.

Robert Hill, University of Sydney, stressed that business opportunities are created by public regulations and policy measures. He said government could provide funds to overcome the challenges of working on long-term investment horizons. On the biggest driver to green growth, Hill highlighted the importance of carbon prices. Ram Nidumolu, InnovaStrat, described the evolution of sustainable approaches whereby a company moves from compliance with rules to improving efficiency and reduction of cost, towards new business models and platforms. Responding to questions, he said that customers have not necessarily shown a willingness to pay a premium for sustainable products. On the role of leaders, he said companies need visionary CEOs.

Panelists described specific positive examples by Walmart, Nike and Marks & Spencer, the role of government leadership and the importance of consumer engagement and education. They also discussed the feasibility of carbon footprint product labeling.

Report to the plenary: Ranjit Barthakur, Tata Consultancy Services, reported that progressive policy requires public-private partnerships that empower consumers and lead to sustainable innovation. He indicated that a major barrier to innovation lies in moving ideas from the boardroom to the shop floor, which requires linking innovation to the bottom of the pyramid through performance indicators.

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AND THE GREEN

REVOLUTION: Ranjit Barthakur, Tata Consultancy Services, introduced the session by highlighting the importance of ICT in reducing emissions. He said that though only 2% of total CO₂ emissions come from ICT, companies can improve the infrastructure efficiency of various industries through, *inter alia*, communications and energy management. He recommended that companies and governments use ICT to achieve the next green revolution through a regulatory framework for eco-sustainability in water management, air quality and carbon accounting.

Engelina Jaspers, HP, described how HP applies its collective weight to reduce emissions through its operations, supply chain and work force. She promoted teleconferencing as a means of reducing emissions from travel. Irene Chan, Nokia Siemens Networks, advocated greening ICT by helping customers reduce mobile industry energy consumption with improved equipment. She mentioned the contributions of ICT to developing and implementing smart grids. Carrie Freeman, Intel, noted that ICT products have achieved efficiencies many times higher than in other industries, such as the automobile industry.

Rohan Richards, Ericsson, discussed measurement of consumption patterns and analysis of carbon intensity of products by using ICT technologies. He suggested deploying

mobile broadband and applying ICT to “smart cities” for reduction of energy use. Randy Giles, Bell Labs Seoul, introduced “greentouch.org,” a consortium for understanding the ICT carbon footprint and reducing it. Discussion focused on the role of the Internet for managing environmental problems through collection and dissemination of data, and the management of energy systems.

Report to the plenary: Barthakur laid out a multi-pronged strategy for both improving the sustainability of information technology and leveraging information technology to improve the environmental performance of other sectors. The group’s strategy targeted smart ICT and urban living, regulation and government, compliance management, and product innovation.

SUSTAINABLE URBAN DEVELOPMENT: LOW CARBON SMART CITIES: Arab Hoballah, UNEP DTIE, argued that cities are the right level at which to target carbon reductions, but expressed concern that many cities lack effective governance, development programmes do not consider consumption, and intergovernmental organizations are not designed to enhance inter-city learning. He suggested mechanisms that could improve city planning, such as multi-stakeholder management, market instruments, and public-private partnerships. Lei Hongpeng, WWF-China, conveyed the importance of taking a strategic approach to building low carbon cities that establishes baselines, scenarios, targets, action plans, and processes for implementation and verification. He explained how strategies are needed to identify the “infrastructure lifecycle” of cities in order to address the shifting challenges and opportunities they face over the course of their development.

Wilfried Wienholt, Siemens, faulted the tendency of city planners to pursue particular low carbon programmes and technologies before prioritizing their decisions based on an evaluation of the overall picture. He argued that public-private partnerships offer a means for city managers and companies to share their complementary expertise, and enable cooperation between authorities for the city to act as a single unit. Changhua Wu, The Climate Group, identified the next 10 years as the most critical decade for China’s path to a low carbon future. She emphasized the importance of creating a network of city leaders who are comfortable sharing and learning together, citing one project that draws together 50 Chinese cities and another bringing the experience of eight developed countries’ cities to China. Chang Jin-Woo, Hanbul Energy Management, pointed towards energy and waste management as especially important areas for improving resource-use efficiency.

Report to the plenary: Hoballah reviewed the session’s objective of exploring the extent to which cities can be exemplars of sustainability, noting that urban areas consume disproportionate resources. He summarized discussions on how the technology needed for a low carbon economy exists, but said widespread access to these technologies is lacking.

FINANCE AND INVESTMENT: Mohamed El-Ashry, Renewable Energy Network for the 21st Century, noted that the bulk of climate investment over the coming decades will come from the private sector, but that public finance will be necessary to catalyze private investment. He stressed that most foreign investment is focused on a select few countries. Richard Manley, Goldman Sachs, highlighted the involvement of over 700 managers in the carbon disclosure project and 6000 companies participating in the UN Global Compact. He underscored that there is a reward for early movers, but



that the penalty for not participating is not yet significant. Takejiro Sueyoshi, UNEP Finance Initiative, stressed that the practice of business can be influenced through governments changing rules or changes in financial investment. Seiji Kawazoe, Sumitomo Trust and Banking Co., noted the importance of customer education and developing competitive sustainable and responsible investment products. Young Jae Ryu, Sustinvest Research and Consulting, argued that financial institutions do not adequately consider externalities. On the challenges of short-term horizon investments, he suggested that pension funds with long-term liabilities could lead the way for investments that consider climate change.

Subsequent discussions defined the building blocks of finance and investment as: reporting of environmental, social and governance indicators; consideration of investment horizons; and influencing funding decisions for green growth. Participants considered carbon markets and how regulation of corporate social responsibility can be portrayed as an opportunity rather than a burden. They highlighted the importance of communication within companies, along the supply chain and with clients.

Report to the plenary: El-Ashry highlighted barriers to low carbon investments, including short-term investment horizons, the absence of penalties for inaction by local institutions and the disproportionate flow of international finance to a few developing countries.

ENERGY: SPEEDING UP THE GLOBAL TRANSITION TO RENEWABLE ENERGY: Stefan Gsänger, World Wind Energy Association, said the key drivers of wind energy investment are: the desire for a secure domestic energy supply; environmental sustainability; and the affordability and low risk of investment. He noted the goal of securing 15-20% of global energy from wind by 2020. He highlighted the need to involve local people as investors, and said local involvement can help address concerns over turbine placement. Thomas Jostman, Evonik Industries, described the importance of energy storage in small cells. He underscored that batteries have been used for over a century and stressed the advantages of lithium-ion batteries.

John McCall MacBain, European Climate Foundation, discussed approaches to reach an 80% reduction in carbon footprint by 2050. He highlighted a proposed European super grid that would allow renewable energy to be transported across long distances. He called on governments, businesses and consumers to work in partnership to realize such goals. In the ensuing discussion, participants highlighted the importance of public trust in technology, the need to share best practices between governments and the need for NGOs to improve their communication skills.

Report to the plenary: Angelina Galiteva, World Council for Renewable Energy, summarized recommendations from the session, reviewing three key drivers of renewable energy: government, including levels ranging from local to national; industry, including research and development and investment incentives; and civil society and media, including effective communication and educational strategies.

WATER INNOVATION AND PARTNERSHIPS: In his opening remarks, Gavin Power, UN Global Compact, noted five critical trends and imperatives related to water: new multi-stakeholder partnerships; innovation and technology; emphasis on watershed; responsible engagement in water public policy; and transparency and disclosure. Jonathan Kaledin, The Nature

Conservancy, stated that the responsible use of water depends on environmental sustainability, economic sustainability and social equity.

Greg Koch, Coca-Cola, noted that a business is only as sustainable, profitable, and viable as the community it serves, meaning community access to clean water is a matter of vested economic and social interest. Morisawa Michiyo, Carbon Disclosure Project, noted that water and energy issues are interlinked. Adam Muellerweiss, Dow Chemical, stressed the importance of partnerships between businesses, governments, and local communities to enhance water stewardship. Manian Ramesh, Nalco, highlighted the correlation between economic impact and environmental sustainability, stressing the savings potential of efficient water usage.

In the ensuing discussion, panelists fielded questions about water services pricing, water versus carbon footprinting and the opportunity cost of water services. In discussion groups, participants focused on exploring how partnerships and technology relate to water stewardship.

Report to the plenary: Power reviewed session recommendations for a new corporate water management paradigm, focusing on sustainability in economic, social, environmental, and institutional terms. He emphasized the need for multi-stakeholder partnerships and new innovations and technologies.

OUTLOOK TO COP 16

On Friday afternoon, Adrián Fernández Bremauntz, National Institute of Ecology, Mexico, described Mexico's commitment to facilitate a successful outcome to COP 16 in Cancún, Mexico. He underscored the challenge of channeling the political understandings from the Copenhagen Accord into the UNFCCC negotiations and highlighted the goal of openness and transparency to build trust in the lead-up to COP 16. He said it is common practice to establish small groups to help develop concise proposals to bring to a larger group. He suggested a focus on ambitious but realistic outcomes from the meeting, perhaps consisting of COP decisions on mature topics, such as adaptation, technology and REDD. He noted the need to facilitate the implementation of fast-start financing and the establishment of a mandate to continue negotiations that will lead to a legally binding agreement.

THE WAY FORWARD

In the closing plenary on Friday afternoon, Georg Kell, UN Global Compact, reminded participants that partnership and collaboration are necessary for green business strategies and that conferences such as the B4E Summit are opportunities to develop such alliances. Arab Hoballah, UNEP DTIE, noted that this is the fourth B4E Summit and that the meeting generated considerable media interest. He noted an expectation of further development of the B4E model with future meetings in China or India. Maanee Lee, Minister of the Environment, Republic of Korea, described three recent events that have demonstrated the development of a green economy in Korea: a green consumption forum, a campaign by women for green production, and a green sports programme involving soccer teams and local communities. He reminded listeners of President Lee's call for a new green economy that will be promoted by business leaders. He said that the conference produced fruitful discussions of business solutions for environmental problems, which can be profitable as well as contribute to corporate social responsibilities. The meeting was closed at 5:27pm.



UPCOMING MEETINGS

ASIAN DEVELOPMENT BANK ANNUAL MEETING:

The 43rd Annual Meeting of the Board of Governors of the Asian Development Bank will take place from 3-4 May 2010 in Tashkent, Uzbekistan. An additional seminar will be held on 2 March on Implementing the Copenhagen Climate Change Agreement in Asia and the Pacific. For more information, contact: Jill Drilon, Meeting Coordinator: tel: +632-632-5999; fax: +632-636-2483; e-mail: annualmeeting@adb.org; internet: <http://www.adb.org/AnnualMeeting/2010>

CERES CONFERENCE 2010: This meeting will take place from 5-6 May 2010 in Boston, US. It will explore sustainable solutions across a range of business models, products and services, and address the integration of sustainable solutions into business strategies for long-term shareholder value. For more information contact: Ceres; tel: +1-617-247-0700; fax: +1-617-267-5400; e-mail: info@ceres.org; internet: <http://www.ceres.org/conference>

FORESTRY, BIOMASS & SUSTAINABILITY: This conference will take place from 13-14 May 2010 in London, UK. It will provide an up-to-date analysis of the latest developments in policy, economics and financing of biomass and forestry projects, and help identify new investment opportunities and risks in these rapidly growing markets. For more information contact: Environmental Finance; tel: +44-20-7251-9151; fax: +44-20-7251-9161; e-mail: conferences@environmental-finance.com; internet: <http://www.environmental-finance.com/events/view/5>

27TH INTERNATIONAL ASSOCIATION OF SCIENCE PARKS (IASP 2010) DAEDEOK CONFERENCE:

IASP 2010 Daedeok will take place from 23-26 May 2010 in Daejeon, Republic of Korea. It will bring together experts from government, Science and Technology Parks (STP), academia and business to discuss and debate the significance of the globally emerging developmental model of "Green Growth" for STPs. For more information contact: IASP 2010 Daedeok Conference Secretariat; tel: +82-42-865-8854; fax: +82-42-865-8849; e-mail: lucyjj@ddi.or.kr; internet: <http://www.iasp2010ddi.com/eng/index.php>

UN GLOBAL LEADERS SUMMIT 2010: Chaired by UN Secretary-General Ban Ki-moon, the UN Global Compact Leaders Summit 2010 will take place from 24-25 June 2010 at the UN Headquarters in New York, US. The summit will provide the platform for organizations to convene, collaborate and commit to building a new era of sustainability, where environmental, social and governance issues are deeply integrated into business based on both material and ethical rationales. For more information contact: Leaders Summit Secretariat; tel: +32-27-40-2222; fax: +32-27-43-1584; e-mail: LS2010@mci-group.com; internet: <http://www.leaderssummit2010.org>

G-20 SUMMIT: The June G-20 Summit will take place from 26-27 June 2010 in Toronto, Canada. Under the theme of "Recovery and New Beginnings," the summit will focus on recovery from the global economic and financial crisis and the implementation of commitments from previous G-20 summits, while laying the foundation for sustainable and balanced growth. For more information, contact the Summit organizers: tel: +1-877-420-2261; e-mail: G202010@international.gc.ca; internet: <http://g20.gc.ca/toronto-summit>

SIXTH AUSTRALIA-NEW ZEALAND CLIMATE CHANGE & BUSINESS CONFERENCE:

The conference will meet from 10-12 August 2010 in Sydney, Australia. It will examine the international framework, how those policies are likely to evolve and how they could impact Australian and New Zealand businesses. For more information contact: Fiona Driver; tel: +64-9-480-2565; fax: +64-9-480-2564; e-mail: f.driver@climateandbusiness.com; internet: <http://www.climateandbusiness.com/index.cfm>

THE WORLD CONGRESS ON ZERO EMISSIONS INITIATIVES:

This meeting will take place from 13-17 September 2010 in Honolulu, Hawaii. It will include the launching of "The Blue Economy." For more information contact: Mark McGuffie; tel: +1-808-521-3611; e-mail: info@enterprisehonolulu.com; internet: <http://www.zeroemissionshawaii.org>

DELHI INTERNATIONAL RENEWABLE ENERGY CONFERENCE:

This event will take place from 27-29 October 2010 in New Delhi, India. It will be the fourth global ministerial level conference on renewable energy, and will consist of a ministerial meeting, business-to-business and business-to-government meetings, side events and a trade show and exhibition. For more information contact: Rajneesh Khattar; tel: +91-11-4279-5054; fax: +91-11-4279-5098/99; e-mail: rajneeshk@eigroup.in; internet: <http://www.direc2010.gov.in>

G-20 SUMMIT: The November G-20 Summit will take place from 11-13 November 2010 in Seoul, Republic of Korea. For more information contact: Presidential Committee for G-20 Summit; e-mail: G20KOR@korea.kr; internet: <http://www.g20.org/index.aspx>

BUSINESS FOR THE ENVIRONMENT: The fifth annual Global Summit will take place 22-23 April 2011: location to be determined, possibly China or India. For more information contact: Michelle Ko; tel: +65-6534-8683; fax: +65-6534-8690; e-mail: michelle.ko@globalinitiatives.com; internet: <http://www.globalinitiatives.com>

GLOSSARY

B4E	Business for the Environment
COP	Conference of the Parties
DTIE	UNEP Division of Technology, Industry and Economics
ICT	Information and Communication Technologies
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for the Conservation of Nature
REDD	Reduced Emissions from Deforestation and Forest Degradation
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wide Fund for Nature