



### INTERNATIONAL CONFERENCE ON GREEN INDUSTRY IN ASIA BULLETIN THURSDAY, 10 SEPTEMBER 2009

In the morning, delegates to the the International Conference on Green Industry in Asia met to discuss the state of industrial resource efficiency and new opportunities in Asia. In the afternoon, delegates met in two parallel sessions to discuss issues related to resource efficiency and cleaner production.

#### TECHNICAL SESSIONS

##### THE STATE OF INDUSTRIAL RESOURCE

**EFFICIENCY IN ASIA:** This session was moderated by Elisea Gozun, former Secretary, Department of Environment and Natural Resources, the Philippines.

Shuzo Nishioka, Senior Research Advisor, Institute of Global Environmental Strategies, delivered the keynote statement on resource efficiency for green growth. He noted that by 2050 reductions of greenhouse gas emissions from countries that are not part of the Organization for Economic Cooperation and Development (OECD) would account for 65% of the world's total reductions, of which, he said, 59% would come from demand-side activities. He said that demand-side activities would decrease energy supply requirements, and suggested that Japan has the technical potential to reduce its emissions by 70% by 2050. He said that, in Japan, using intensive product analysis and design, integrated with full-accounting lifecycle analysis, companies aimed to improve their efficiency by a factor of 10. He explained that opportunities for clean and efficient development pathways exist in China, and said that "tremendous" efficiency gains could be achieved through efficient transport network planning, particularly if China followed the transport and land-planning systems used by the most efficient cities in the world. He stressed the importance of "tightening" material supply chains between countries, and said government has an important role in reducing energy demand, as well as embedding resource efficiency into society. Noting that Japan's experience could be shared across Asia, he urged regional collaboration on developing more efficient technologies. He stressed there was no time to delay the transition to a low-carbon society, as the world's absorptive capacity for carbon dioxide would decrease over time.

Hunter Lovins, Founder, Natural Capitalism, emphasized that the world's economy exists to serve the needs of society and not society existing to serve the interests of business. She provided numerous examples of how companies and agencies around the world are using "bio-mimicry" and closing the loop on resource flows to reduce resource consumption while simultaneously enhancing profitability. She cautioned that Asia has a brief window of opportunity in which to act, redirecting their growth to more sustainable paths, and becoming leaders in the new wave of development, which others will follow. She recommended moving from gross domestic product (GDP) metrics to measure prosperity, suggesting instead, "well-being" metrics such as those used in Bhutan. In the manufacturing sector, she noted how companies should re-engineer products to allow for the reuse and recycling of components. On the business case for sustainability, she described the integrated

bottom line that enhances financial performance, labor productivity, innovation, and branding while reducing costs, risks and distrust. She underlined that recovering from the economic crisis to follow the same path would again lead to failure, and that by shifting, instead, to sustainable, low-carbon pathways Asia's prosperity would be ensured.

In the discussions, participants focused on identifying the key messages to provide encouragement for business managers to change their strategies. Participants also identified the need to: ensure practical alliances in fighting climate change; move towards sustainable mobility; and share technologies to change the system of production. In her summary, moderator Gozun said that business as usual (BAU) is no longer an option. "In fact," she said "BAU will mean you are out of business, not just for business, but for the entire planet."

##### THE WAY FORWARD: NEW OPPORTUNITIES IN

**ASIA:** Paul Hohnen moderated this session. Lei Shi, Tsinghua University, provided an overview of China's Circular Economy Promotion Law, which aims to increase material efficiency and ensure a low-carbon economy. He said the Law, which came into effect on 1 January 2009, deals with general principles, basic management, reduction, reuse and recycling, and incentive measures. He stressed that the Law focuses on reducing, reusing and recycling activities conducted during the production, circulation and consumption processes, particularly in the mining, agricultural, manufacturing, construction, waste, services, and food sectors. He noted that the Law also includes a policy integration framework, which he said is extremely broad and has wide ranging potential to direct and shape China's sustainable development pathway.

Kazunobu Onogawa, Director, UN Centre for Regional Development (UNCRD), presented on the 3R (reduce, reuse and recycle) initiative with a focus on waste management. He said that poor waste management is a common but serious problem throughout the world, including health and environment problems, shortage of landfill sites, and the contribution to climate change. As an example of the benefits of the 3R process, he said that for every ton of paper recycled, 17 trees and 21 000l of water are saved and land fill area is reduced by 2.3 cubic metres. He said UNCRD focuses on the needs of recipient countries, particularly at the local government level, as well as assisting in the development of national 3R strategies. He underscored the need for a holistic approach involving various stakeholders, combining upstream and downstream activities with mutual benefits for all parties concerned. He reminded delegates that the UN Commission on Sustainable Development's two-year cycle for the period 2010-2011 will address issues related to waste management and the 10 year framework of programmes on sustainable consumption and production.

Stefan Giljum, Head of Research Group in Sustainable Resource Use, Sustainable Europe Research Institute, presented global and Asian trends in improving resource efficiency for sustainable growth. He said that although energy intensity per unit of GDP has steadily improved over the last 30 years, the relative growth of resource utilization has continued to rise. He noted that drastic decoupling of resource use from economic growth is needed and that additional environmental policies are needed to counter the rebound-effect. He noted that Asia's

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consumption already exceeds its bio-capacity, and consumption changes are also needed as Asia uses about twice the resources to produce one unit of GDP as opposed to Europe.

In the discussion, participants addressed economic policies to stimulate resource efficiency and sustainable growth.

#### RESOURCE EFFICIENCY AND CLEANER

**PRODUCTION: Reducing the Resource Intensity of Industrial Processes:** This session was moderated by Dmitri Piskounov, Managing Director, Programme Development and Technical Cooperation Division, UNIDO.

In the keynote statement Chettiyappan Visvanathan, Professor, Asian Institute of Technology, noted that where industry has reached the limit to resource efficiency improvements, there needs to be a re-assessment of the properties of raw materials. He said it was necessary to develop combinations of interventions and policies to create a “vaccine” to prevent dirty production practices. He noted that climate change was not the only driver for cleaner production, and said that resource scarcity was also relevant to national concerns.

Rismawarni Marshal, Executive Director, Indonesian Cleaner Production Centre (ICPC), described the ICPC’s work in Indonesia to promote cleaner production practices. She explained the role of the ICPC in training trainers, and how they are linked up with industry, government and academia to spread cleaner production knowledge and practice. Noting that voluntary measures have been unsuccessful due to a lack of capacity in the clean production service industry, she said the ICPC focuses on education and training of industry and service providers.

Iresha Somaratne, Head of Energy and Environment, Brandix Group, reported on cleaner production methods introduced in his apparel company. He said the company has improved energy, water, and waste management practices considerably since implementing numerous cleaner production measures, in addition to employee well-being improving. He said this cleaner production strategy was needed given the fact that many of their consumers are environmentally conscious and underlined the short payback period and profitability of the strategy.

Robert Pagan, Board Member, Asia Pacific Roundtable for Sustainable Consumption and Production, used the food industry as an example of the challenges that face cleaner production service providers. He noted that perceptions regarding waste are a primary barrier, and that stronger regulation is needed. He expressed the belief that “fear” could bring about dramatic results, citing water conservation restrictions imposed as a result of the drought in Queensland, Australia as an example. He said that strong rational and political will is need to “propagate” clean production.

Jenny Tan Suat Eam, Council Member, Environmental Management and Research Association, talked about reducing resource intensity in Malaysia. She noted that there was strong attention to energy use, but said that SMEs were often hesitant to consult with government, and urged further interaction. She said that legislation without training and education has been inefficient, and the focus was now on guidelines, green supply-chain mentoring, and delivering grants and funding.

Nguyen Van Thanh, Deputy Director-General of Industrial Safety Techniques and Environment Agency, spoke on reducing resource intensity in industrial processes in Vietnam. He noted that barriers facing cleaner production in Vietnam include: old technology; weak financial capability; lack of internalized environmental costs; and weak enforcement on effective usage of resources. He recommended that the government of Vietnam lead the greening of industry by setting environmental and natural resources taxes and facilitating bilateral technology transfer.

In the discussion, participants addressed issues such as including cleaner production in environmental impacts assessments, and integrating resource efficiency across industry, consumers, government and academia. Participants also discussed how to correctly set the price of natural resources, and develop incentives and profitability as strong drivers for industry to adopt cleaner production methods.

**Moving to Low-carbon Industrial Processes:** This session was moderated by Ned Clarence-Smith, Global Environment Facility Coordinator, UNIDO.

Noting the continued reliance on fossil fuels whilst cleaner technologies remain expensive, Edgar Chua, Chairman, Shell Philippines, stressed that energy efficiency measures has the potential to account for half of the required reductions of carbon dioxide. He said coordinated action is need in energy efficiency, security and diversity as well as carbon dioxide management. He noted that Shell is already concentrating on efficiency gains, and that continued investment into research and development will assist customers in using less fuel.

Bob Williams, Senior Industrial Development Officer, UNIDO, said that energy efficiency in business is not well understood as it is not well managed or measured. Outlining UNIDO’s work in this area, he noted that most efforts focused on the transfer of knowledge and skills. He outlined the implementation of the International Organization for Standardization’s energy management standard (ISO50001) whose components include measurement, management and documentation, continuous efficiency improvements, and establishing key performance indices.

Chandra Bhushan, Director of the Centre for Science and Environment, India, noted that increased energy use will lead to increased greenhouse gas emissions, and that energy efficiency alone would not be a solution.

Roland Schroder, Director, Henkel Company, noted that the choice of raw materials used in manufacturing is important for reducing emissions. He highlighted that product packaging has decreased over time, in some cases by a factor of three. On life cycle assessments of some of Henkel’s products, he noted that most of the waste and carbon dioxide emission from their products occurred during usage, not in production.

Sidi Si Ahmed, Montreal Protocol Branch, UNIDO, emphasized that the Montreal Protocol has been more beneficial for climate change compared to other initiatives, such as the Clean Development Mechanism.

Sivanappan Kumar, Dean, School of Environment Resources and Development, Asian Institute of Technology, said that further development is needed to create a hydrogen economy. He stressed the need for cross-sectoral participation and cooperation in moving towards a low-carbon economy.

Victor Gao, Director, China National Association of International Studies, highlighted the growth of the Chinese economy, but stressed that as the growth was both labor and resource intensive, it was not sustainable. He emphasized the need for green financing to support low-carbon industries in developing greener economies.

In the ensuing discussion, participants questioned why energy businesses were concentrating on reducing emissions and increasing product efficiency. Chua noted that, aside from improving reputation, this was a more sustainable business model as customers would opt to buy a particular brand. One participant noted that technology coordination across industries was necessary for efficiency gains to be effective. On the necessity for a fundamental paradigm shift, as opposed to incremental actions, participants stressed that price barriers prevented the uptake of technology that could aid the paradigm shift. Participants also noted that political will would be the biggest driver of change.

#### THINGS TO LOOK FOR TODAY

**HIGH LEVEL PLENARY:** The President of the Philippines, Gloria Macapagal-Arroyo, will give a keynote address in Summit Hall C and D from 10:00am. This will be preceded by a message read on behalf of the UN Secretary-General Ban Ki-moon.

**GREENING OF INDUSTRY UNDER THE MONTREAL PROTOCOL:** This UNIDO side event takes place from 11:00-13:30 in meeting room 4.