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Roundtable discussion on eco-products: living in harmony with nature and sharing Japanese values

This roundtable discussion originally appeared in Japanese in the Eco Products Guide 2013 published by Nikkei Business Publications, Inc. The APO News is publishing this translation to give its readers a fresh perspective on how others view eco-initiatives.

How is the concept of “eco-products” viewed from an international perspective? And how should Japan go about demonstrating its presence within this sector? We brought together three Japanese and overseas experts to discuss these questions (discussion chaired by Eiichiro Adachi, Counselor and Head of ESG Research Center at the Japan Research Institute, Limited Center for the Strategy of Emergence).



Eiichiro Adachi (EA): Today we will be discussing the latest trends in eco-products, their significance, and our hopes and expectations for the future. I have with me two guests, Professor Anne McDonald from the Graduate School of Global Environmental Studies at Sophia University and Teisuke Kitayama, Chairman of the Board at Sumitomo Mitsui Banking Corporation (SMBC). Professor McDonald, please tell us how you happened to come to Japan.

(L–R) Japan Research Institute, Limited Head of ESG Research Center Eiichiro Adachi, Sumitomo Mitsui Banking Corporation Chairman of the Board Teisuke Kitayama, and Sophia University Graduate School of Global Environmental Studies Professor Anne McDonald. Photos courtesy of Yuji Ozeki.

Anne McDonald (AM): Having been born and raised in Canada, I came to Japan for the first time as a high school student in 1982, eager to experience something different from my Western upbringing. I came back in 1988 to study social changes at Kumamoto University. Japan was in the middle of its bubble economy, so things were changing at a pretty hectic pace. I was particularly interested in Japan’s rural communities from an ethnological point of view. Over the course of three years, I conducted interview-based studies into the role played in rural communities by skilled artisans born during the Meiji period (1868–1912).

EA: What did you discover?

AM: Artisans from the Meiji period put their skills to good use by crafting items from local materials, such as bamboo, for instance. Food and goods mileages were very short due to the local consumption culture, essentially paving the way for a sustainable society. Then Japan changed completely during the postwar period. I went to a lot of Japanese fishing villages to examine people’s attitudes toward nature and how they lived their lives. I wanted to study Japan from the standpoint of primary industry. From the latter part of the 1990s, I made more of an effort to visit other countries so that I could see Japan through their eyes too.

EA: I hear you travelled all over Japan camping in your van.

AM: That must have been around 1998. Japan’s a bit like a traditional lunch box, with lots of variety. As you go from north to south, every part of the country is different and interesting in its own way. At the time, that was the best way to get around Japan without it costing too much.

EA: Mr. Kitayama, could you start by telling us about your efforts to promote eco-products in Asia over the last few years?

Teisuke Kitayama (TK): About five years ago, I got involved in the Green Productivity (GP) Advisory Committee run by an international organization called the Asian Productivity Organization (APO). We developed an eco-product database of environmentally friendly materials, components, products, and services. The aim is to encourage more companies and consumers to use environmentally friendly products and services in Japan and throughout Asia and promote eco-friendly procurement and consumption.

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Productivity: a continuously evolving concept

Productivity has become a household word. Yet it means different things to different people. It ranges from efficiency to effectiveness, to rates of turnover and absenteeism, to output measures, consumer satisfaction, and to intangibles such as morale, loyalty, and job satisfaction. Productivity must not only be defined but also measured, which poses no fewer problems.

Productivity as a technical concept

Conventionally, productivity has been defined as the ratio between output and input. Output represents the product of an operation, or result of special interest. Input refers to the resources consumed in the production or delivery of output. Traditionally, the inputs are people, capital, material, and energy. This definition is useful for measuring productivity since it measures one's ability to utilize available resources efficiently to produce desired output and thus reflects changes in productivity. Efforts to raise productivity may result in an increase in output with deteriorating quality. In some cases, it may even result in labor-management conflict due to a reduction in the labor force in an effort to increase labor productivity.

Productivity as a social concept

Productivity is above all an attitude. It seeks continual improvement in what already exists based on the belief that one can do things better today than yesterday and better tomorrow than today. It aims to achieve a better quality of life for all.

Productivity as an economic concept

Productivity is one's ability to create more value for customers. For many businesses, the economic goal of existence is value creation. It is measured in terms of value-added output. A productivity-driven growth model reflects resource efficiency and output superiority in the market.

Productivity as a management concept

Productivity has been equated with efficiency and effectiveness. Efficiency and effectiveness are both management concerns to ensure that desired products and services are provided in the right manner, at the least cost, in the least possible time, with the highest quality to maximize customer and employee satisfaction at all times.

Productivity as an integrated concept

As an integrated concept, productivity is viewed in two ways: as an objective and as a means. Productivity as an objective is explained by the social concept of productivity. As a means, productivity pertains to the technical, economic, and management concepts. Productivity can have different meanings, for example: for employees, increased compensation, development of skills, and job satisfaction; for employers, improved competitive position in the market; for customers, lower prices, higher quality, and timely delivery; for society, low inflation, higher living standards, and environmental protection; and for government, more revenues and more resources for social services.

Multifactor productivity

Numerous inputs are associated with output, e.g., labor, capital, materials, energy, and water. Multifactor productivity measures are useful for analyzing changes in overall efficiency and total costs. However, factor productivity measures such as labor productivity are useful for analyzing unit labor costs.

Green Productivity

Green Productivity (GP) is a concept originated by the APO for sustainable socioeconomic development. It applies appropriate productivity and environmental management tools, techniques, and technologies to reduce environmental impacts while enhancing profitability and quality of life. Apart from greater efficiency in utilizing resources, the elements of increased safety, reduced toxicity, and overall reduction of environmental burdens is integrated into the measurement of GP.

The price of happiness

We live in an age of stark contradictions. The world enjoys technologies of unimaginable sophistication while at least one billion starve. The global economy reaches soaring new heights of productivity through ongoing technological and organizational advances, yet is relentlessly destroying the natural environment in the process. Countries achieve progress in economic development as conventionally measured, yet succumb to new crises of obesity, smoking, diabetes, depression, occupational health problems, and other ills of modern life. This means

that material gains alone cannot fulfill our deepest needs.

The USA, the world's economic superpower, has achieved striking economic and technological progress over the past half-century without gains in the self-reported happiness of the citizenry. Instead, uncertainties and anxieties run high, socioeconomic inequalities have widened, social trust is declining, and confidence in government is at an all-time low. Perhaps for these reasons, life satisfaction has remained nearly constant during decades of rising GNP per capita. Therefore, GNP may not be the only indicator of productivity levels.

"Gross national happiness (GNH)" was coined by His Majesty the Fourth King of Bhutan Jigme Singye Wangchuck in 1972. It refers to the concept of qualitative and quantitative measurement of well-being and happiness. GNH has four pillars: good governance; sustainable socioeconomic development; cultural preservation; and environmental conservation. As shown in the Figure, the four pillars are subdivided into nine domains to deepen understanding of GNH and reflect the holistic range of its values: psychological well-being; health; education; time use; cultural diversity and resilience; good governance; community vitality; ecological diversity and resilience; and living standards. A single number index called the GNH index was developed from 33 indicators in the nine domains, based upon a robust multidimensional methodology known as the Alkire Foster method. These indicators emphasize different aspects of well-being and different ways of meeting human needs.

A survey was carried out in Bhutan in 2010 to measure the GNH index with the above methodology, and 10.4%, 47.8%, 32.6%, and 8.3% of respondents were "unhappy," "narrowly happy," "extensively happy," and "deeply happy," respectively. These four groups correspond to people who felt fulfilled in less than 50%, 50–65%, 66–76%, and more than 77% of domains.

A second-generation GNH concept, treating happiness as a socioeconomic development metric, was proposed in 2006 by President Med Jones of the International Institute of Management. The metric



Figure. Nine domains and 33 indicators of GNH.

measures socioeconomic development by tracking seven development areas: economic wellness, environmental wellness; physical wellness; mental wellness; workplace wellness; social wellness; and political wellness. The GNH value is an index function of the total average per capita of the measures.

Thus the concept of productivity has evolved from a mere output-to-input ratio to a measure of economic prosperity with a better quality of life ensuring well-being and happiness. Its improvement should contribute to the sustainable, inclusive socioeconomic development of a country. 🌱



Dr. S.K. Chakravorty holds a postgraduate degree in Plant Engineering, PhD in Production Engineering, and Master's in Chemical Engineering. He is trained in Advanced Industrial Maintenance Systems & Techniques and Advanced Risk Assessment and Hazard Analysis. Dr. Chakravorty is a Lead Auditor in OHSAS 18001 and has worked on management of physical asset projects in areas such as industrial tribology and lubrication management, vibration analysis, industrial thermography, wear debris analysis, total productive maintenance, and lean manufacturing. A contributor of numerous papers to international journals, Dr. Chakravorty is presently Deputy Director General of the National Productivity Council, India.

ICT and service-sector productivity

Twenty-four information and communication technology (ICT) specialists from 12 member economies gathered for five days in the workshop on ICT Impact on the Productivity of the Service Sector organized by the APO in collaboration with the Ministry of ICT, Government of IR Iran, and National Iranian Productivity Organization, 19–23 January in Tehran. During the opening ceremony, Vice Minister Mohammad Karampour acknowledged that ICT had become vital for achieving higher levels of productivity and improving national economies. ICT Vice Minister Abdolmajid Gharibreza attended both the opening ceremony and site visit and distributed certificates to all participants, indicating the degree of interest by the ministry in this workshop.

The workshop discussed ICT-related policies and development programs; the latest ICT and techniques for the service sector; storage, retrieval, manipulation, transmission, and receipt of digital data; and understanding ICT for continuous innovation and overall productivity growth in the service sector. Recent advances, especially in software, have made the sector a hotbed of innovation and technological progress for service providers. The Internet, interactive platforms/websites, smart phones, etc. have direct/indirect impacts on service-sector productivity. Effective ICT applications in service organizations can heighten productivity significantly, make processes leaner, and result in better quality, cost-effectiveness, and shorter delivery times. ICT and process integration lead to greater customer satisfaction.

Several participating countries also shared their initiatives. In Bangladesh, the health and education sectors have been targeted for the creation of Digital

Bangladesh. To help spread ICT, import taxes on equipment and systems were reduced in Cambodia. Business concessions are offered by Fiji's government for services such as ticketing, telemedicine, call centers, etc. to promote ICT use.



Vice Minister Gharibreza giving a "best participant" souvenir to a Lao participant. Photo courtesy of Ministry of ICT, IR Iran.

Malaysia initiated an e-procurement project to improve government service, including internal approvals electronically. In Sri Lanka, an e-government policy is being developed to provide more efficient services to citizens. The Smart Thailand 2020 Program includes smart services by improving ICT infrastructure and human resources. In a survey in Vietnam, 77% of healthcare, telecom, and travel service providers agreed that their productivity was boosted by ICT.

The participants also visited the National Iranian Oil Products Distribution Company that developed a nationwide "smart fuel system" using ICT technology resulting in US\$12 billion in savings while improving service. At the end of the workshop, participants developed steps to implement ICT in education, healthcare, public services in general, and telecoms, with recommendations for their governments to promote ICT in the service sector. 🌱

EA: How is the term “eco-products” perceived in other Asian countries?

TK: I can’t speak for the entire region, but I think it’s fair to say that Asia as a whole has an incredible natural environment that is also highly regenerative. I feel that Asians view nature as something they should live in harmony with, rather than something that needs to be tamed. However, as industrialization continues, modern-day comforts are rapidly becoming part of people’s everyday lives and this raises concerns about the destruction of nature. That’s why I believe eco-products could help put a stop to further ravaging of nature.



EA: Professor McDonald, what images come to mind when you hear the term “eco-products?”

AM: It tells me that I can make a difference to the environment by buying that product. I think that’s the perception that most people around the world have of eco-products. Issues such as climate change are challenges on a grand scale; eco-products are an important concept in thinking about what each of us can do as individuals about environmental problems.

I’m a member of a Japanese government review team that is working with the Intergovernmental Panel on Climate Change, and I feel that it’s especially important to solve issues such as climate change at a regional level. I am particularly aware of the different ways in which people interact with the natural environment in Asia, for instance. There is a stronger sense that human beings are part of nature and not entities existing separately from it. In that sense, there is a great deal of potential for eco-products within Asia. Unfortunately, I don’t think we have fulfilled that potential yet.

EA: There’s definitely the potential for eco-products to take root in this region based on the premise that we are part of nature as a whole. At the same time, however, there is such a strong emphasis on solving these issues that eco-products tend to rely entirely on high-tech science and technology. Trends like that can sometimes put people off.

AM: Developing high-tech eco-products is obviously important, but at the same time, I think it’s also critical that we look toward more low-tech, low-cost, and low-impact solutions. One example in the primary industry that I have come across is in Okayama prefecture, where efforts to build artificial reefs from oyster shells have been a huge success. It may be unbelievably low tech, but developing these sorts of eco-products is where we need to put more effort in future.

Providing more than physical products

EA: There is also the potential to turn agricultural produce into eco-products.

AM: Unfortunately, all the greenhouse gases produced by the agricultural industry

are massive. From machinery to fertilizers, I’m afraid you could hardly call agriculture environmentally friendly. As a member of the National Council for the Promotion of Eco-Friendly Farming, I also think that we need to look at how to change farmers’ attitudes toward the environment. One option would be to export agricultural produce grown using environmentally friendly farming methods to other countries and at the same time transferring farming methods and technologies to those countries.

EA: Expanding on the notion that eco-products are more than just high-tech manufacturing, banking is one of our leading nonmanufacturing industries. Could the concept of eco-products be applied to banking too?

TK: Banks obviously don’t make physical products. At SMBC, for example, we have taken steps such as signing the Equator Principles in 2005. This means that whenever we finance a large-scale development project, we pledge to examine the impact it will have on the natural environment and the local community carefully. We have also set up an Environment Analysis Department as part of our International Banking Unit and have been conducting environmental and social risk assessments since June 2006.

We also assess environmental initiatives implemented by corporate clients in Japan as part of the terms and conditions of our lending services. Basically, we can provide eco-products in various different forms, not necessarily as physical products.

EA: So if the fundamental philosophy of eco-products, “living in harmony with nature,” can exist within financial activities, this would be significant in making the economy greener. Changing the subject slightly, something I read in one of your books, Anne, really stuck in my mind. You wrote, “When I first came to Japan, it seemed like such a claustrophobic country.”

AM: I am definitely glad I came to Japan. It shifted my view of the world 180 degrees compared with when I was living in Canada. We have such limitless access to natural resources in Canada that people hardly ever think about them. Our attitudes toward nature are different too. I did feel a little claustrophobic in Japan initially but soon began to appreciate the benefits of living in a finite environment, of making the most of things to create your own lifestyle.



Japan has a deep-rooted set of values based on an appreciation of quality over quantity. Producing goods has always been a combination of functionality and beauty. Now in the 21st century, we all need to switch from the notion of quantity to quality. People from other countries may tend to have a continental view of nature, in that resources are limitless. Their coming to an island country like Japan would help to change their mindsets.

EA: I think that the example of your change in mindset stemming from feeling claustrophobic could help show the way forward for eco-products and sustainability too. It ties in with the “*mottainai*” anti-waste slogan introduced to the world by the late Wangari Maathai from Kenya, who won the Nobel Peace Prize in 2004. We need people who discover the values of Japan and then share them with the rest of the world.

Low-tech, low-cost eco-products

TK: I think the concept of trans-boundary exchange could really be effective. One of the key issues with promoting the use of eco-products in Asia is the added cost it involves. If you talk to businesspeople in Asia, they appreciate the benefits but might shy away from eco-products due to the assumption that they would cost more. We need to convince people that eco-products can be low tech and low cost. One option would be to invite more people from Asia to Japan.



EA: As a potential opportunity to contribute to such a purpose, the Eco-Products International Fair (EPIF) is taking place again this year, isn't it?

TK: The APO has already organized seven EPIFs to date, with the eighth scheduled to take place in Singapore in March 2013. I chaired the Preparatory Committee for two of the previous fairs (the fifth in the Philippines and sixth in Indonesia). On both occasions, I was surprised by the level of interest in eco-products from governments, companies, and consumers around Asia. At the March 2010 event in Indonesia in particular, I personally felt that the government really wanted to tackle environmental issues and was committed to environmental industries as part of its national strategy for the future.

EA: I think that it would be nice if people interested in Japan could visit the country, find useful eco-products, and then introduce them to their home countries. Such a virtuous cycle would be ideal.

Tying in with all aspects of our lifestyles

EA: Finally, I would like to hear your thoughts on what we need to do in the future to promote the idea of eco-products.

AM: Looking at it from Japan's point of view, I think if government agencies can come up with an across-the-board policy to give eco-products a real push, this would bring the country closer to creating a sustainable society. Then you've just got to deal with consumers. I believe we need a change in terms of consumer behavior. Conscious consumers will do their own research on products before purchasing them, whether it is food or clothing. However, if you were to go to a large electronics store, I'm not sure you'd find that many people who could explain eco-products to you. I don't mean simply explaining a product's energy-saving performance. I mean that there are very few people who can explain in a way that ties in

with all aspects of our lifestyles. We need to come up with new ways to convince people that eco-products do fit in with their daily lives.

TK: The APO, the organization behind the GP Advisory Committee, was established 50 years ago as part of a regional intergovernmental initiative. Its role is to undertake projects leading to the sustainable socioeconomic development of its members. I think that's a really significant mission.

Japanese industries are undergoing some major changes at the moment. As other Asian economies continue to grow and assert a stronger presence, Japan urgently needs to establish more of a two-way relationship. If Japan can make the most of products and services under the established banner of “Japanese eco-products” and share the concepts behind those products, I think that would be a great help in establishing this. It would also make a huge difference in terms of creating new added value.

EA: This has been a fascinating discussion, full of useful suggestions. When we think about rural communities or fishing villages, there is tendency to look down at their “old-fashioned” ways or insist that we can't go back to the “good old days.” But those are the communities where environmental awareness originated. When the attitudes and lifestyles established in such communities are expressed in the form of products or technologies, eco-products that are attractive to the entire world can be created. I think that about sums it up. 🍵

Eiichiro Adachi

Adachi is a graduate of the Faculty of Economics, Hitotsubashi University. He joined the Japan Research Institute, Limited in 1990. He worked in the Management Consulting Division and Technology Research Division and subsequently was appointed head of the ESG Research Center, dealing mainly with industrial research and corporate evaluation from the standpoint of corporate social responsibility. Publications include *CSR Management and SRI* (Kinzai), *Businesses Growing on Global Warming* (Toyo Keizai), and *Introduction to Environmental Management* (Nikkei Publishing).

Teisuke Kitayama

Kitayama graduated from the University of Tokyo College of Arts and Sciences in 1969. He joined Mitsui Bank, now Sumitomo Mitsui Banking Corporation (SMBC), before being appointed to the Board of Directors of Sakura Bank in 1997. After the establishment of SMBC in 2001, Kitayama held various positions including Managing Director and Senior Managing Director. In June 2005, he was appointed President of the Mitsui Sumitomo Financial Group (up to April 2011) and Chairman of the Board of SMBC (to present).

Anne McDonald

Born in Canada, McDonald graduated from the University of British Columbia in 1991, going on to head the former United Nations University Institute of Advanced Studies Operating Unit Ishikawa/Kanazawa. She has served as a temporary member of the Central Environment Council and is a member of a Japanese government review team working with the Intergovernmental Panel on Climate Change. In 2012, she was appointed professor at Sophia University Graduate School of Global Environmental Studies. Publications include *Days Past—Body and Soul: Japan's Countryside Story*, and *Introduction to Environmental History* (Shimizukobundo).

Innovative irrigation water management for sustainable food security

Challenges to ensuring food security in the 21st century, issues like climate change and population growth, and the need to manage the world's rapidly growing demand for water in a sustainable way are intertwined. World food demand is projected to nearly double by 2050. Most Asian countries, however, have limited land and water resources for agricultural and irrigation expansion. Irrigated agriculture in Asia, which contains 70% of the world's irrigated land, has tremendous potential to contribute to achieving food security by raising the productivity of existing irrigated farmland. As water resources shrink, and competition from other sectors grows, irrigated agriculture must produce more food with existing or even less water, prevent the deterioration of water quality through contamination, and use poor-quality water for safe food production. Climate change could add further uncertainty to the water supply.

To explore innovative ways to increase irrigation water-use efficiency, minimize externalities associated with traditional irrigation systems, reuse agricultural water, and harness nontraditional sources like waste and low-quality water, the APO in cooperation with the NPO, Ministry of National Food Security and Research, FAO, US Department of Agriculture, and World Confederation of Productivity Science organized a seminar on Innovations in Irrigation Water Management for Sustainable Food Security in Islamabad, Pakistan, 21–25 January.

Nineteen participants from 10 member economies, seven local observers, and six experts from the International Water Management Institute, ROK, Pakistan, Turkey, and the USA attended. ROK expert Dr. Jin-Yong Choi was impressed

with participants' qualifications and attitude toward learning. Expert from Pakistan Muhammad Saleem stated that excellent country papers by participants had provided valuable information. Participant Kuo-Hua Lin of the ROC, along with several others, singled out relatively new ICT applications to monitor and control irrigation systems as a high point of the resource presentations.



Briefing on use of biogas and solar energy for pumping groundwater for drip and sprinkler irrigation at the Water Resources Research Institute, National Agricultural Research Centre, Islamabad. RHS solar panels for a photovoltaic pumping system can be seen behind participants.

To observe innovations in irrigation water management such as the use of solar and biogas energy for sprinkler and drip irrigation, as well as bioremediation of sewage for agricultural use, participants visited the National Agricultural Research Centre's project areas in Islamabad and Fatehjang. They also formulated action plans to improve irrigation water management in the Asia-Pacific region. It was agreed that irrigated agriculture would continue to play an important role in achieving food security in the region but innovative policy and technology interventions would be needed to ensure efficient, effective, and ultimately sustainable use of water resources. ☺

Improving the performance of rural tourism

Tourism is an important industry in Nepal, accounting for about 9% of GDP and 8% of employment. Overall, tourism development prospects in the country look bright after the recent stabilization of the political situation. However, the forecast growth in the sector still pales in comparison with that in most other countries in the region. Furthermore, the economic downturn in the EU and North America has not eased and could affect tourist travel from those regions. Improving the performance of this sector is crucial to generate more positive impacts on the population of about 30 million, of whom around 90% are rural dwellers and about 30% lived below the poverty line in 2011. Considering that the population of Nepal is mostly in rural areas, it is appropriate that tourism development efforts should also be focused there.

Inspired by previous APO training courses on rural tourism and ecotourism in Sri Lanka and the Philippines, respectively, participants in those courses from Nepal and the National Productivity and Economic Development Centre (NPEDC) with the support of the Lalitpur Chamber of Commerce and Industries organized a national conference on Improving the Performance of Rural Tourism for Increasing Employment and Rural Income in Kathmandu, 1–3 October 2012. The conference was inaugurated by Minister of Industries Anil Kumar Jha and Ministry Secretary Uma Kant Jha, APO Director for Nepal. It attracted 90 participants, almost twice the targeted number, which included high-ranking government officials, leaders in the hotel and tourism industry, community workers, business professionals, and academics. "The Government of Nepal is still in transition,

policies in various sectors of the economy are being reviewed, and stakeholders believed that this forum was an opportune time to share their views and recommendations to improve the tourism industry," stated NPEDC Acting General Manager Durgesh Shrestha. Dr. Bhawani Dunghara, a political economist and adviser at the Institute of Integrated Development Studies who chaired two sessions, emphasized that, "Tourism is a strategic sector in Nepal and its development will have tremendous impact on our economy and our people, especially those in rural communities."



Minister Jha delivering his keynote address during the inaugural session at Shangrila Hotel, Khatmandu.

The conference concluded that Nepal had enormous potential for tourism development, especially that based on wildlife, adventure, and homestays. However, improved coordination in policy implementation, resource allocation for crucial infrastructure, public-private partnerships, and inclusion of local communities in planning the development and management of natural and cultural tourism resources are needed. ☺

APO/NPO Update

Republic of China

New APO Liaison Officer

Name: Dr. Eugene Yu-Ying Lin
Designation: Director, Planning and Training Division
e-Mail: 1391@cpc.tw
Phone: 886-2-2698-2989 (ext. 1391)
Effective date: 1 January 2013

Indonesia

New NPO Head and APO Liaison Officer

Name: Mr. Darwanto
Designation: Director, Productivity and Entrepreneurship, Directorate General of Training and Productivity Development, Ministry of Manpower and Transmigration
Effective date: 30 November 2012

Lao PDR

New name of NPO

Department of Small and Medium Enterprise Promotion, Lao National Productivity Organization
Effective date: 2 November 2012

Mongolia

New designation of APO Alternate Director

Name: Dr. Sharav Munkhtseren
Designation: Chief Advisor, Human Development, Research and Training Center
Effective date: 7 December 2012

New e-mail address and phone number of APO Liaison Officer

e-Mail: pbaygal@mpo-org.mn
Phone: 976-99118770

New e-mail address of NPO

info@mpo-org.mn

Nepal

New NPO Head

Name: Dr. Puneshwar Keshari
Designation: General Manager, National Productivity and Economic Development Centre
Effective date: 21 December 2012

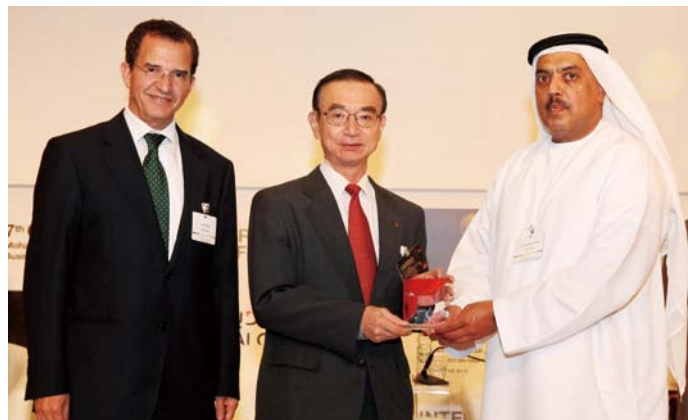
New APO Liaison Officer

Name: Mr. Prabin Kumar Acharya
Designation: Branch Chief, National Productivity and Economic Development Centre
Effective date: 7 January 2013

Japan to host 55th GBM

The 55th Session of the Governing Body Meeting (GBM) will be held in Japan, 21–23 May 2013. There will be approximately 60 delegates comprising APO directors and their advisers from 19 member countries, and observers from various national agencies and international organizations. The important GBM agenda items will include the annual report of the Secretary-General, the APO revised budget for 2014, and the report of the APO membership contribution formula.

Photo news



Abdul Rahman Saif Al Ghurair (R), Chairman of Dubai Chamber of Commerce & Industry, presenting a memento to Secretary-General Yamazaki (center), flanked by Dr. Belaid Rettab, Senior Director of Economic Research & Business Development, Dubai Chamber of Commerce & Industry, UAE, during the Launch Conference of the 7th Cycle of Business Excellence Awards in Dubai.



On 20 December 2012, APO Secretary-General Yamazaki (R) made a courtesy call to Keio University, with which the APO has collaborated in joint research for the APO Productivity Database project since 2007. He met Keio University President Professor Atsushi Seike and expressed his appreciation for the university's contribution to high-quality research outputs. The Secretary-General also met the database project researchers at Keio Economic Observatory who are directly involved in the project. Photo courtesy of Keio University.



Delegates from Kenya under JPC's Training Program in Japan "Organizational Strategy for Productivity Institutions" visiting the APO Secretariat on 23 January 2013.



Waste minimization circles under the NPC

The approach to environmental management has changed from treatment/cleanup to prevention/conservation. Waste minimization (WM) can play a significant role in this approach, especially among SMEs. The National Productivity Council (NPC), India, saw the need for a new mechanism that could overcome various barriers faced by SMEs in WM efforts and developed the WM circle (WMC) concept in cooperation with the Ministry of Environment and Forests (MoEF). A WMC is a small group of SME entrepreneurs manufacturing similar products and employing the same processes who meet regularly on each others' premises to analyze operations, identify sources of waste generation, and undertake WM options to increase individual profitability and reduce pollution loads (Figure).

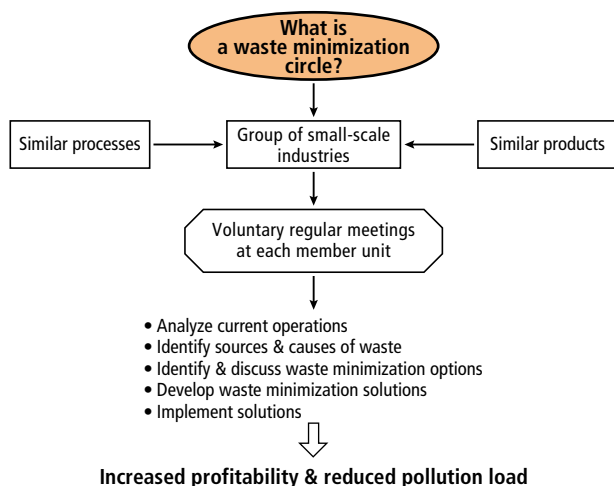


Figure. Outline of the WMC concept.

The NPC's WMC project is part of manufacturing extension services for SMEs. It started in 1994 and has undergone three phases after monitoring and review of the initial results. To date, 158 WMCs have been established in 17 states, representing more than 40 industrial sectors. The consolidated results of each phase are summarized below.

Phase I

In phase I (1994–1997), 15 WMCs were established, covering five industrial sectors (pulp and paper, textiles, electroplating, etc.) in three states. They involved more than 75 SME units and identified over 170 WM options, of which more than 120 were implemented. Some 25 workshops/training courses were organized in this phase. The participating units achieved savings of US\$0.28 million, including 10–30% reductions in energy use and 5–20% in water use.

Phase II

Phase II covered the period from July 1997 to 2005, during which a project review was undertaken by an independent consultant in 2000. The results led to a revision in the terms of reference of the WMC project by the MoEF in consultation with the World Bank to optimize monitoring and streamline WMC operations. By the end of phase II in 2005, 118 WMCs had been established (against a target of 100). In addition, a new plan for networking was devised where research institutions, state pollution control boards, private consulting firms, and industries interact through

the WMC framework under MoEF/World Bank sponsorship and facilitated by the NPC to lay a firm foundation for the WM movement.

In concrete terms, 10 training programs for 168 individuals representing 112 enterprises were organized in phase II. The number of WMCs reached 118, with 45 facilitator organizations establishing circles, including six in NPC regional offices. The number of industrial sectors covered expanded to 41, with the addition of the foundry, tannery, textile-processing, ceramic, and hosiery subsectors. The numerous WMCs in operation identified more than 600 WM options, of which over 250 were undertaken in SME industrial units. While circle members made investments of US\$5.56 million in WM efforts, they reaped annual savings of US\$3.7 million, bringing total savings to US\$9.26 million by the end of 2005. The environmental benefits included reductions in water, energy, and material consumption of an average 10–30%; reduction in solid waste generation of 5–20%; and yield improvement of 2–5%.

In terms of multiplier effects, the activities of WMCs reached over 6,000 individuals in various forms. For example, the project awareness materials developed included a training package along with a WM manual and the launch of a dedicated website (www.wmn.nic.in). By the end of phase II, 21 issues of the *WMC Newsletter* had been published, with 1,800 copies of each distributed widely. Five posters, an audiovisual CD, and a technical brochure aimed at the textile industry were also created.

Phase III

Because of the numerous successes during phase II of the WMC project, coupled with rising demand for more WMCs from both WMC facilitators and SMEs, phase III of the project started from July 2007 with the initial target of establishing 20 more WMCs across the country, especially in priority industrial sectors. This target number was based on budgetary constraints and the necessity of addressing other environment-related project activities like the National River Conservation Plan.

As of October 2012, 25 additional WMCs had been set up under phase III, of which 10 were under facilitator organizations. They covered 14 industrial sectors with the addition of the earthen tile, steel rolling, paint and resin, engineering, and pharmaceutical (ayurvedic) subsectors. Five training courses had been organized, which trained more than 60 representatives of over 25 SMEs and other enterprises. Public outreach continued to clusters and individual organizations. The training package was revised in phase III, and 11 new issues of the *WMC Newsletter* had been published as of October 2012.

Conclusion

The unique concept of WMCs and associated methodology have had a positive impact on the Indian industrial sector and changed mindsets in enterprises. The WMC project catalyzed group efforts for better environmental management and benefited SMEs in concrete terms. The NPC believes that this model can shape future policies and technological interventions for the sustainability of the SME sector, national economy, and environment. *Contributed by M.J. Pervez, Group Head (Environment) & Director (NCPC), NPC, India.*