



# APO NEWS

Volume 38 Number 8

August 2008



p. 5, Study meeting, ROK



p. 6, Workshop, Indonesia



p. 8, Study meeting, ROC

## Forming a productivity network: APO alumni

**A**t the first session of the APO Alumni Forum, held in Indonesia, 14–16 July, each participant took the e-mail address of one other and all pledged to ask their partners three questions via e-mail within two weeks: “Have you carried out any follow-up activities?” “What are the key challenges in following up?” “What did you do to overcome those challenges?” The idea was to ensure that actions would be taken for the establishment or expansion of APO alumni bodies in member countries. The participants agreed that APO project alumni can play an important role in national and regional productivity networks to yield multiplier effects. It is important to derive additional benefits from sharing their knowledge and experience.



Participants and resource speakers at the Alumni Forum

Currently, Bangladesh, IR Iran, Indonesia, the Philippines, Singapore, and Thailand have APO alumni bodies, and other member countries are planning to follow suit. The activities and best practices of the Singapore Productivity Association (SPA) and the APO Society of Thailand were presented by SPA Executive Director Low Hock Meng and the Thailand Productivity Institute’s International Relations Department Manager Attanon Tassaneeya, respectively. Important factors in the success of an alumni network were cited as effective alignment of alumni activities with the national productivity movement and a close working relationship with the NPO. Indonesia Productivity Professionals Association (IPPA) Head Moedjiman explained how the IPPA supports productivity improvement efforts by the NPO. The examples of Bangladesh, IR Iran, and the Philippines were also introduced in country papers.



Publications by APO alumni bodies

In addition, the forum invited Dr. Sung Soo Kim, President of the Asia Pacific Association of Educators in Agriculture and Environment (APEAEN), an international association born from a 1997 APO project. His presentation on the history and activities of the APEAEN provided a possible avenue for expanding APO alumni activities beyond national borders.

Forum participants drew up follow-up plans for alumni activities, although concluding that each country had its own requirements for alumni activities. Director Ab. Rahim Yusoff, Corporate Services and Finance Division of the Malaysia Productivity Corporation, noted that, “The alumni models of the six member countries provided good inputs for other countries which have not yet launched their own, including Malaysia. The NPOs should study those models and modify them according to their requirements. We would also like to ask the APO to provide guidelines or suggestions for possible options.”

### CONTENTS

- 2... p-Leader
- 3... Comment board
- 4... Reading productivity and economic trends
- 5... Spotlight on the service sector
- 6... Unleashing women’s entrepreneurial and managerial talents
- 6... Learning from Japan on food quality and safety
- 6... Common sense talk
- 7... Program calendar
- 7... New APO publications
- 7... Obituary
- 7... APO/NPO update
- 8... Nanotechnology
- 8... First self-e-learning course on the Balanced Scorecard



Printed on Recycled Paper



## Enhancing the Manpower Capability of Fiji

Jone Usamate

Director General, Training & Productivity Authority of Fiji

**T**he birth of the Training and Productivity Authority of Fiji (TPAF) from the Fiji National Training Council (FNTC) was the result of the country's strong commitment to the development of manpower. Fiji's first development plan following independence in 1970 recognized that the issue of skill shortages posed a threat to the growth of output and national productivity. It led to the conclusion that the only means of circumventing the existing shortage, at both skilled and semiskilled levels, was to institute organized, systematic training. Against this background, the FNTC was established in 1973 as a statutory organization, later becoming Fiji's national productivity organization (NPO) in 1984 when Fiji joined the APO. Since its inception, the TPAF has been one of the leading providers of training in the country, addressing skill deficiencies in the workplace with training being its main activity.

**“...the only means of circumventing the existing shortage, at both skilled and semi-skilled levels, was to institute organized, systematic training.”**

### National skill-building schemes

One of the missions of the TPAF is to develop and manage systems and frameworks that improve the skill base and quality of Fiji's workforce. The TPAF pursues its mission using three mutually reinforcing programs: the Levy/Grant Scheme, National Apprenticeship Training Scheme, and the National Trade Testing Scheme, in addition to its mainstream training activity. After a consensus had been reached on the establishment of a national training institute, it was argued that the support for such training must come from the beneficiaries of skilled labor, i.e., employers. This resulted in the



creation of the Levy/Grant Scheme, which requires all employers in Fiji in both the public and private sectors to pay a levy to the TPAF equal to 1% of gross payroll. All levy-paying organizations are entitled to claim training grants from the TPAF for approved training of their employees. Such training can be provided in-house or by a provider approved and registered by the TPAF for grant purposes. This scheme hinges on the belief that one of the prime factors affecting productivity at the organizational level as well as the national level is the quality of the specific skills of the workforce. The Levy/Grant Scheme compels all employers, including the government, to train their employees to make them more productive.

Another important role of the TPAF is as a national skill builder charged with monitoring the National Apprenticeship Training Scheme, which is designed to produce the best tradespeople and technicians in the country. Since its introduction in 1963, the scheme has produced more than 4,800 tradespeople and technicians. Currently, the scheme supports training in 28 trades and technical areas. Eighty employers are registered under the scheme, with 670 apprentices now in training. To enhance the scheme, competency-based training has been introduced in some pilot trades.

The TPAF also administers the National Trade Testing Scheme, which allows highly skilled workers without certification to become formally recognized for their abilities. Over the past few years, the TPAF

has been developing the National Qualifications Framework for Fiji, focusing in particular on trade and technical qualifications. This role will now be taken over by the National Qualifications Authority.

### Direct training and consulting

Training and to a lesser degree consulting have been the core activities of the TPAF. It conducts training programs in construction, mechanical engineering, electrical engineering, maritime studies, hospitality and tourism, manufacturing, information technology, general management, customer services, human resources management, and commerce. The TPAF also provides training in methodology, such as productivity improvement techniques including ISO9000, quality control circles, 5S, total quality management, benchmarking, etc., some of which occurs under the APO's Technical Expert Service Program. Training programs are focused primarily on individuals already employed to upgrade their skills to become more productive workers. Relevant training programs are developed through methods such as training need surveys, industry visits, and industrial development forums.

**“...the TPAF has gone from strength to strength in its role of spearheading productivity promotion and enhancement.”**

Every year, the TPAF issues more than 25,000 certificates for its courses, which are mostly short and range from one day to three weeks. Certificates are also issued by the TPAF's strategic partners for formal qualifications up to postgraduate level.

### Productivity promotion and enhancement

In 1984, Fiji became a member of the APO, and the TPAF (then the FNTC) was designated as the NPO

for Fiji. Since then, the TPAF has gone from strength to strength in its role of spearheading productivity promotion and enhancement. This is the direct result of strategies developed at the Roundtable Conferences in 1995 and 2005. As the national productivity promoter, the TPAF has conducted productivity awareness campaigns since 1998. The annual Productivity Week has now been upgraded to a Productivity Month with a wider range of promotional activities.

In addition, the TPAF has introduced and utilized various productivity tools and technologies. The promotion of quality circles and 5S has featured greatly in Fiji, and model companies have been developed in the two main areas. Visits to the model companies are organized so that others can learn from their successful strategies. The TPAF is also one of the major local providers of consultancy in ISO9000 and ISO14000. It has assisted 18 companies to acquire certification and is currently working with another three organizations. Consultancy on environmental management systems and HACCP is also provided.

The TPAF continues to innovate in the area of productivity enhancement. It is now working on Fiji's first *Annual Productivity Report* to be published in 2008. Fiji has been involved in various APO projects on productivity measurement and

benchmarking for the preparation of this report, which will be the first attempt to develop a research base for policy advice. The TPAF is also actively participating in programs on knowledge management as well as innovation and creativity.

### Fiji Business Excellence Awards

The Fiji Business Excellence Awards (FBEAs), started in 1999, are designed to encourage and assist organizations in Fiji to become world-class competitors. It recognizes achievements at four different levels. To date, only two organizations have won the highest level, which is the President's Award, while around 40 organizations have received awards at other levels. The increasing participation of government agencies and schools in the FBEA process has been a welcome development, and we intend to encourage participation from local governments.

### Conclusion

Raising productivity in Fiji is a challenging task, and over the years the strategies used have evolved according to the changes in the technological, economic, and social environment. The TPAF will continue to evolve for its ultimate goal of national productivity improvement. 🌀



## Comment board



*Head of Organization Learning **Arnold Tick Yeow Chan**, Standard Chartered Bank, Singapore.*

Resource Person, study meeting on Learning Organizations, 24–27 June, Indonesia.

“Many participants in the meeting were strong learners who exhibited concrete learning styles. While appreciating the concepts and tools implemented in learning organizations, they showed

great interest in strategies and measures that could address current issues and challenges in the topic. I shared several examples of how to build a learning culture and how to apply those measures to both large and small enterprises. I also spoke on talent and knowledge management using examples of training strategies and talent development programs practiced in some organizations. Discussion and deliberations on policies, talent retention, and leadership coaching and mentoring followed the presentation and continued into the tea break. I was impressed not only with the extensive knowledge of participants but also with their enthusiasm and passion. I believe the launch of the APO KM Framework and tool kit will further enable participants and organizations who are eager to implement their learning plans and manage intellectual capital.”

*Director **Ahmad Fadzil bin Mahmud**, Training and System Development, Malaysia.*

Participant, study meeting on Bilateral/Regional Economic Partnership Agreements, 17–20 June, Thailand.

“The study meeting was a fruitful event where participants shared their insights into bilateral and regional economic partnership agreements (EPAs). Through the numerous insights gained from both the theoretical and practical aspects of free trade agreements (FTAs)/EPAs, it quickly became clear

that trends in FTA/EPA agreements in Asia were changing due to the rapidly changing and intensely competitive global business scenario. It would be value adding if the APO could initiate an inter-NPO study on the relationship effects of national productivity movements on FTAs/EPAs and/or vice versa. This study could yield benefits for productivity drives in APO member countries and reveal new frontiers and strategies for the productivity movement in Asia. In the Malaysian context, we are highlighting the need to deliberate on EPAs for the service sector.”

*Factory Inspecting Engineer **Dehiwala Liyanage Asoka Peiris**, Industrial Safety Division, Department of Labour, Sri Lanka.*

Participant, training course for Certified Lead Auditors for Occupational Health and Safety Management System OHSAS 18001:2007, 17–24 June, Sri Lanka.

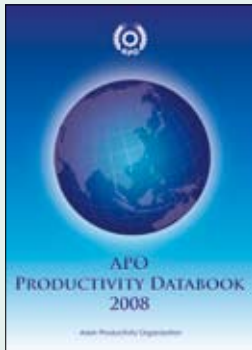
“My objectives of participation in the training course were first to become a lead auditor and second to become familiar with the OHSAS 18001:2007 standards. Through the program, I obtained knowledge, confidence, and practical skills to conduct an audit as an audit team leader as well as the necessary management skills to lead the audit team. Now I am more confident that OHSAS will enhance national productivity through minimizing losses attributable to occupational accidents and disease in industry and thereby nurture a culture of preventive safety. To disseminate OHSAS 18001:2007 implementation and auditing management skills, I will organize or attend local training programs on the issue and encourage more industries to adopt these standards. Although useful and rewarding, it was nevertheless quite stressful and challenging to keep up with the tight schedule of the program. I would like to suggest including at least a one-day rest period in the middle of the course so that participants can have some time to recover from the grueling schedule and review the learning points.”



# Reading productivity and economic trends

## Part 3. The role of structural shifts in productivity enhancement

by Eunice Y.M. Lau and Dr. Koji Nomura



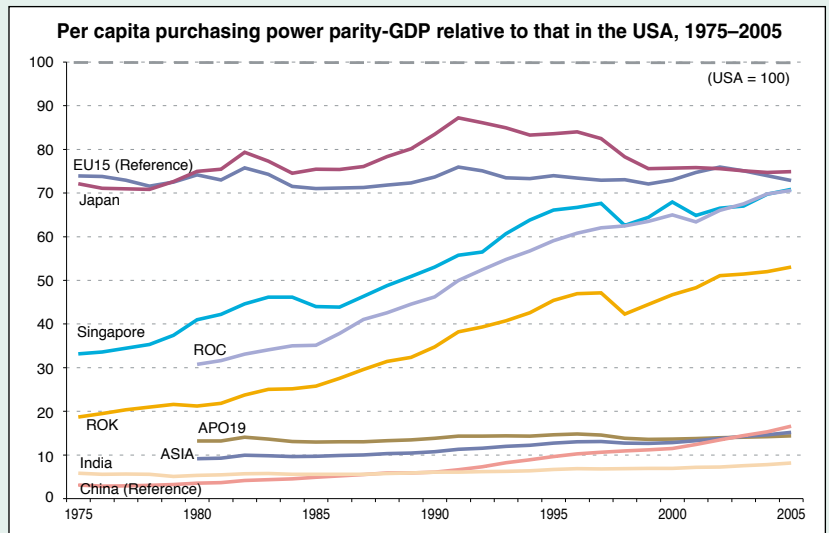
**P**roductivity gains from structural shifts could be highly significant in economic development. More specifically, it has been argued that the rapid shift of capital and labor into the “modern sector” of higher labor productivity played a pivotal role in the Asian Miracle by preventing a decline in the return on capital despite the sustained high investment ratios in these high-performing economies (see, for example, Nelson, R. and Pack, H., The Asian Miracle and Modern Growth Theory, *Economic Journal*,

1999; 109: 416–436).

Since the 1960s, a handful of East Asian economies, notably Singapore, the Republic of China, Hong Kong, and the Republic of Korea, have managed to set themselves off on a path of impressive growth. With their real per capita GDP growing at a pace of 4–5% per year on average, these economies outperformed other comparable developing countries in the 1960s and stand out as the only region that has managed to catch up to the living standards of the advanced countries. The accompanying figure (Figure 5 in the *APO Productivity Databook 2008*) shows how these economies rapidly closed the per capita income gap with the USA from 1975, against the background of little progress made by the region as a whole. Because of its potential policy significance, what has been the recipe for the Asian Miracle has been a subject of vigorous academic debate.

Among other views, narrowing the “idea gap” was put forward as an explanation by Paul Romer (Idea Gaps and Object Gaps in Economic Development, *Journal of Monetary Economics*, 1993; 32: 543–573). He argued that underlying the success of the East Asian economies was their ability to adopt existing technologies from the advanced economies. If true, this represented a less costly approach to economic development than the accumulation view whereby the road to prosperity is through savings and investment, in other words, forgone current consumption, which many poor countries cannot easily afford.

Empirical evidence, however, has lent little support for this view. East Asia’s rapid growth has been found to be largely driven by factor accumulation, with total factor productivity (TFP) growth accounting for only one-fourth of the region’s growth in labor productivity between 1960 and 1994 (Collins, S. and Bosworth, B., *Economic Growth in East Asia: Accumulation versus Assimilation*, *Brookings Papers on Economic Activity*, 1996; 2: 135–203). The main lessons from East Asia’s success therefore are not about which policies best promote TFP growth. Rather, the focus should be on how to achieve and sustain high rates of savings and investment, defying the law of diminishing returns.



With an investment ratio of over 20% of GDP, Nelson and Pack (1999) argued that the success of the fast-growing Asian economies lay in their extraordinary ability to absorb and assimilate technologies superior to their own at a rapid pace sustained over a long period without slowing. This process involved uncertainty and economic risk in an essential way. To sow the seeds of success, a favorable policy environment was first required to nurture learning, innovation, and entrepreneurship. Subsequently, it was the shift of resources into the more modern, capital-intensive technologies through aggressive entrepreneurship and progressive learning that held the key to sustaining high rates of return on capital and in turn investment, which drove growth. In other words, the observed dramatic shift in the product mix and firm size in these Asian economies should be seen as an integral part of their success story which ran far deeper than simply factor accumulation. 🌀

### Contributors

Ms. Eunice Y.M. Lau is a visiting research fellow at Keio Economic Observatory, Keio University. She has served as economic advisor at the Industry, Economics and Statistics Directorate, Department of Trade and Industry, Government of the UK; Head of the Productivity Economics Branch, Economic Analysis Directorate, Office for National Statistics, Government of the UK; and lecturer in the Department of Economics, University of Portsmouth, UK.

Dr. Koji Nomura is an Associate Professor at Keio Economic Observatory, Keio University. He is also chief expert of the APO Productivity Databook project, as well as project manager of the APO Productivity Database project. He has done extensive research on productivity, particularly on measuring capital. He has served as senior visiting research fellow at the Economic and Social Research Institute, Cabinet Office, Government of Japan; economist at the OECD; and fellow at the Center for Business and Government at Harvard University JFK School of Government.

The APO News started this series of short columns on specific topics closely related to the analyses contained in the APO Productivity Databook 2008 from the June 2008 issue. Presented in a bite-sized, reader-friendly format, focusing on pertinent topics and expanding on their implications for productivity measurement, this column will help readers to maximize the use of the APO Productivity Databook 2008. This series in 12 columns will continue until the May 2009 issue.

# Spotlight on the service sector

The last decade witnessed a tremendous expansion of the service industry in Asia. In many APO member countries, the contribution of the service sector to GDP is now sizable and employment generated by the sector increasing. The APO has identified this sector as an emerging area and organized numerous projects to maximize the benefits of productivity endeavors in it.

The APO study meeting on Expansion and Development of the Service Industry in Asia held in the Republic of Korea, 17–21 June, in collaboration with the Korea Productivity Center (KPC), was part of the APO's ongoing efforts to identify new issues and challenges related to the sector and recommend strategies and policies to address them. The meeting focused on three aspects of the service industry: trends in its expansion; challenges in productivity enhancement; and issues specific to the customer satisfaction index in relation to service.

Several hypotheses explaining trends in service-sector expansion were discussed. The traditional hypothesis states that as incomes grow, consumption shifts from goods to services, triggering the expansion of the sector. Another hypothesis argues that economic growth will inevitably slow as the service sector expands. However, several recent studies have indicated that this is not always the case. In many APO member countries overall productivity growth is driven by the service sector. A third hypothesis is that service outsourcing, IT development, and an increased rate of female participation in economic activity are causing the service sector to expand.

It therefore becomes obvious that each country should enhance its service-sector productivity to increase global competitiveness. However, devising effective strategies is a complex task mainly due to unique features associated with the sector including its diversity and variability. These attributes require productivity methodologies, tools, and techniques (PMTT) to be extensively customized for the service industry.

Equally important is determining how to measure the quality of service as a basis for improvement. Of the many tools devised, the customer satisfaction index has drawn attention from some member countries. "Customer satisfaction (CS) is a crucial goal for most organizations. Compared with agriculture or manufacturing, the service sector has to interact directly with a larger volume of customers; therefore, CS is becoming one of the important and interesting subject areas for this sector," explained KPC CS Management Center Director Hyung Beom Kim. Kim gave a detailed presentation on the National Customer Satisfaction Index (NCSI) of the Republic of Korea, a CS measurement tool developed by the KPC and modeled on the American Customer Satisfaction Index.



Touring the Grand Intercontinental Seoul, no. 1 in the hotel sector NCSI in 2006 and 2007



Aramark's business excellence strategies explained

In parallel with the study meeting on the service industry in Asia, the APO deputated a fact-finding mission to the USA, 16–20 June, to learn about productivity measurement in service-sector enterprises and the best service business practices. That mission was led by Chief Expert Dr. Toshiyuki Matsuura, Hitotsubashi University-cum-Research Institute of Economy, Trade and Industry with six national experts from member countries.

To study the issues in and new initiatives for measuring service productivity in the USA, the mission delegates visited the Brookings Institution and the US Bureau of Labor Statistics (BLS), both in Washington, DC. The Brookings Institution, an American nonprofit public policy organization, conducts independent socioeconomic research to provide innovative, practical recommendations. The BLS is the principal fact-finding agency of the US Federal Government in the broad field of labor economics and statistics. Dr. Matsuura, in his preliminary mission report, stated that, "In the case of the USA, the statistical system has recently made significant progress in improving the data available for the analysis of productivity in the service sector to adapt to new circumstances." He pointed out that progress had been made in two areas: first, increasing the coverage of data available for the service sector; and second, improving consistency among US statistical agencies.

The mission also visited two service companies, Aramark Ltd. in Philadelphia, PA, and PHH Arval Co., Ltd. in Sparks, MD, to observe their best practices. Aramark Ltd. is a world-class company offering a variety of services, with food services being the most well known. PHH Arval, a frequent recipient of business awards for service excellence, is North America's second-largest provider of commercial fleet management services and undertakes numerous environmental initiatives.

"These two projects, building on previous related ones, reconfirmed the unique features of the service sector and its potential for expansion. It also highlighted the future challenges in developing productivity measurement tools and PMTT," stated APO Secretariat Research and Planning Department Director Mukesh D. Bhattarai. "They also suggested that PMTT need to be customized and should be identified by regrouping various types of service into subsectors," he added. Ongoing research related to a productivity database and on PMTT for the service sector are underway based on subsectors. All these efforts are aimed at producing effective strategies and policy guidelines for the development of the service industry in APO member countries. 🌀

# Unleashing women's entrepreneurial and managerial talents in agribusiness

**"M**ore women can move up the agribusiness managerial ladder and be successful as agribusiness entrepreneurs if proper training is given them to cope with the requirements of the emerging opportunities," was the conclusion of the 27 participants from 13 countries who attended the recent workshop on Improving Managerial Skills of Women Entrepreneurs in Agribusiness. It was held in Indonesia, 10–14 June, and organized by the APO in cooperation with the Ministry of Agriculture and the Ministry of Manpower and Transmigration of Indonesia.



Mushroom production facility at C.V. Volva

The participants, who were managers of agribusiness enterprises, representatives of academia or training institutions, and consultants, pointed out that there were

implicit policies and cultural norms in many countries in Asia which prevent women from accepting managerial positions, especially in agribusiness. They also pointed out that another factor contributing to the continued dominance of men in managerial positions in agribusiness is that few women are trained to take on such roles.

The workshop suggested that the relevant institutions in member countries should set up human resources development (HRD) programs to address the needs of both women entrepreneurs and women in the agribusiness workforce so that they can assume more responsible positions. The following were among the various topics discussed: management functions in business organizations; opportunities and challenges for women managers in agribusiness enterprises; basic management tools and techniques for agribusiness managers; and designing learning tools for women entrepreneurs and managers in agribusiness.

At the end of workshop, participants produced three templates for use by the APO and member countries in undertaking HRD for women in agribusiness: a model for a trainers' training course on Improving Managerial Skills for Women Entrepreneurs and Managers in Agribusiness; course on Building the Capacity of Women in Value Chain Management in Agribusiness; and Seminar on Strengthening the Participation of Women in Agribusiness Development. Participants were also able to observe onsite the challenges faced by women running their own businesses and received practical advice when visiting two agribusiness enterprises managed by women, C.V. Merapi Farma Herbal and C.V. Volva, involved in the production and processing of herbal products and mushrooms, respectively. 🌱

## Learning from Japan on food quality and safety

**A**n eight-person delegation from Singapore visited Japan 23–25 June to examine Japanese food safety mechanisms and systems under the APO's Bilateral Cooperation Between NPOs (BCBN) Program. The mission was jointly conducted by the APO and Japan Productivity Center for Socio-Economic Development. The delegation, led by Quality Assurance Director Kong Hong Lam, SPRING Singapore, was also comprised of two other SPRING Singapore staff, three governmental officials promoting Singapore's food exports, and two senior managers from private companies in the food industry. They visited governmental departments and national institutions involved in Japanese food quality and safety regulatory systems and facilities of food production companies over the course of this three-day program. "It was indeed a very fruitful trip. The meetings gave me an in-depth understanding of Japanese customs and quarantine regulations. This will definitely assist us to be more efficient in our export coordination," said Regional Business Development Manager Claire Chng, Sin Hua Dee Foodstuff Industries Pte Ltd. 🌱



BCBN delegates at Kamaichi, a Japanese ISO-certified company

### Common sense talk

"Discovery is the ability to be puzzled by simple things."

Noam Chomsky

"I suppose that leadership at one time meant muscle but today it means getting along with people."

Indira Gandhi

"Imagination was given to us to compensate for what we are not; a sense of humor was given to us to console us for what we are."

Mack McGinnis

"Human diversity makes tolerance more than a virtue; it makes it a requirement for survival."

Rene Dubos

## Program calendar

November

### *Republic of China*

#### **Workshop on Reduction of Greenhouse Gas Emissions, 3–7 November.**

▶ Objective: To discuss the latest trends and developments in greenhouse gas (GHG) emissions; identify solutions for the reduction of GHG emissions and available technologies; and examine policy instruments and prepare recommendations for the reduction of GHG emissions.

▶ Participants: Energy and environment professionals from industries, municipalities, and governments involved in GHG emission reduction-related activities.

#### **Training course on Food Safety Management for Seafood Processing and Marketing, 17–22 November.**

▶ Objective: To enhance participants' knowledge and skills in developing a seafood safety management plan; familiarize participants with different regulatory requirements; and formulate practical follow-up action plans for food safety management systems for seafood-processing SMEs.

▶ Participants: Managers/officers of seafood-processing companies, consultants of NPOs, trainers in governments and NGOs, and academics involved in the seafood-processing business.

### *India*

#### **Study meeting on the Development and Utilization of Biofertilizers for Promoting Sustainable Agriculture and Green Productivity, 5–11 November.**

▶ Objective: To review the current status of and recent developments in biofertilizer development and use; and analyze issues and challenges on the topics and formulate strategic recommendations to address them.

▶ Participants: Competent experts and professionals in the public or private sectors involved in the development, marketing, and utilization of biofertilizers.

### *Indonesia*

#### **Workshop on Strengthening the Management of Nonbank Financial Institutions Catering to Farmers and Rural-based Agribusiness, 17–21 November.**

▶ Objective: To examine the best management practices of successful non-bank financial institutions (NBFIs) and related organizations involved in rural microfinance; identify the critical human resources development needs of NBFIs and related organizations; and develop strategic plans to build and/or enhance their capabilities.

▶ Participants: Officers and managers of microlending organizations, agricultural insurance and credit guarantee companies, and agricultural and/rural development banks; and senior officials in government organizations responsible for this field.

### *IR Iran*

#### **Training of Trainers in GP and Energy Efficiency, 15–19 November.**

▶ Objective: To develop a pool of trainers on energy efficiency; and prepare a training manual on energy management.

▶ Participants: Those who completed the e-learning course on energy efficiency.

### *Japan*

#### **Multicountry observational study mission on Waste Management in the Food-marketing and -processing Sectors, 4–11 November.**

▶ Objective: To review the status of waste management in the food-marketing and -processing sectors; learn about the modern technologies and practices adopted in these sectors; and observe the state-of-the-art technologies and practices of Japan.

▶ Participants: Middle- to top-level managers, officials, academics, or consultants of government, the private sector, or NGOs involved in waste management in the food-marketing and -processing sectors.



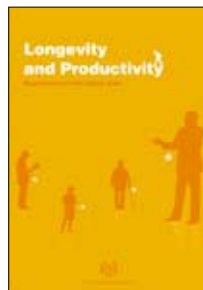
## New APO publications



### **INNOVATIVE CORPORATE STRATEGY IN GLOBAL COMPETITION**

APO 36 pp. July 2008  
ISBN: 92-833-2388-2 (print edition)  
ISBN: 92-833-7072-4 (e-edition)

Report of the APO Top Management Forum on Innovative Corporate Strategy in Global Competition held in Japan, 3–5 March 2008



### **LONGEVITY AND PRODUCTIVITY: EXPERIENCES FROM AGING ASIA**

APO 111 pp. July 2008  
ISBN: 92-833-2387-4 (print edition)  
ISBN: 92-833-7071-6 (e-edition)

Selected papers of the APO Study Meeting on Productivity in Aging Societies held in the Republic of China, 17–20 July 2007

## Obituary

It is with deep sorrow that we announce the demise of APO Director for Japan and first Vice Chair of the APO Tadao Chino, who passed away on 17 July 2008 at the age of 74. Chino had served as the APO Director for Japan since 30 August 2005. He attended the 48th and 49th Governing Body Meetings in Seoul and Ulaanbaatar, in 2006 and 2007, respectively, where he actively participated and contributed significantly to the discussions on the new APO membership contribution formula, leading to its smooth adoption in Ulaanbaatar.

## APO/NPO update

### **New APO Liaison Officer for Mongolia**

Ms. Ganchimeg Budragchaa, expert, National Productivity and Development Center, was appointed new APO Liaison Officer for Mongolia, w.e.f. 17 July 2008. Her e-mail address is [info.npdcc@yahoo.com](mailto:info.npdcc@yahoo.com).

*Kindly contact your NPO for details of future activities, including eligibility for participation. The project details along with the address of your NPO are available from the APO Web site at [www.apo-tokyo.org](http://www.apo-tokyo.org).*

# Nanotechnology: the path to industrialization

**N**anotechnology, the science of creating and utilizing materials on a molecular or atomic scale, differs significantly from current methods of production and promises to serve as a future platform for the introduction of new materials or novel process technology while preserving natural eco-systems. A prime example has been the enormous progress in electronics in recent years.




The ROC's TECO, an SME, showcases its first nanoproduc

Recognizing the nearly infinite potential and benefits of nanotechnology, along with significant industry interest, the APO's first nanotechnology project was an observational study mission to the Republic of Korea, considered a nanotechnology leader. As a continuation, a follow-up expert study meeting on Strategic Industries: Nanotechnology was held in the Republic of China, 10–13 June, to coincide with the Nano Taiwan event held 12–14 June in Taipei. The meeting had the twin objectives of gaining a broad understanding of developments in member countries in this field since the previous APO project and exploring a regional collaborative framework to facilitate strategic alliances among key players for industrializing nanotechnology.

The study meeting examined the Japanese, Korean, and Australian models of nanotechnology industrialization. Current national nanotechnology strategies of three groups were analyzed: the large industrial leaders (USA, Japan, Germany); the industrializing nations (PR China, India, Brazil); and smaller industrialized nations (Australia, Republic of China, Malaysia, Singapore, UK, Thailand, Switzerland). Differing levels of technology and interest have produced different degrees of commercialization, industrialization, and policy support. The meeting agreed that a common concern in scaling up nanotechnology is the lack of a viable business model. The most realistic model may fall between the current IT and biotechnology models. Another immediate challenge is the creation of long-term markets for nanotechnology products. Scientific innovations must be linked with businesses for future applications, and public perception of nanotechnology products must first be positive. It was noted that all would prefer not to repeat the painful lesson of the poor introduction of genetically modified organisms, which still are unable to gain public acceptance or market share.

Nanotechnology development will be long and complex, with multiple uncertainties. However, public/private-sector partnerships among industrial produc-

ers, R&D centers, universities, and policymakers will go a long way toward developing a commercial nanotechnology industry. Participants discussed how to prioritize strategic areas for growth and mapped out a framework for the Asian Nano Forum (ANF), a collaborative network of academic and industrial researchers in the Asia-Pacific region established in 2004. Of the 13 ANF member economies, all but three (New Zealand, PR China, and Australia) are also APO members. It was suggested that a formal working structure be developed between ANF activities and APO nanotechnology projects, creating synergy while advancing the nanotechnology agenda within the region. 

## First self-e-learning course on the Balanced Scorecard



The APO is offering its first Web-based self-e-learning course on the Balanced Scorecard (BSC) as a follow-up to previous projects on the topic. It is hoped that this will increase awareness of the BSC among member countries

and encourage its adoption by both SMEs and large private corporations. This course will act as a springboard for the development of more practice-oriented projects covering advanced elements of the BSC. This first e-learning course will be launched in phases for three groups of countries beginning on 21 and 28 August and 5 September, respectively. The program can currently accommodate 2,000 online students at any time and will be available to all member countries. A brochure containing detailed information on the curriculum and registration is available on the APO Web site.

The *APO News* is soliciting contributed articles on productivity endeavors, rewarding experiences during and after APO projects, and/or encouraging and inspiring examples of the productivity mindset in action, which will provide new ideas and energy to the dissemination of the productivity movement in member countries. Those whose articles are accepted for publication will receive an APO T-shirt. If you would like to share your valuable experiences, please contact Information Officer Sunju Lee at the APO Secretariat ([slee@apo-tokyo.org](mailto:slee@apo-tokyo.org)).

