

## MFCA: Interview with experts

**T**he APO always seeks multiplier effects from its projects so that as many as possible can benefit from them. Secretariat Industry Department Senior Program Officer K.D. Bhardwaj, who is in charge of MFCA projects, interviewed General Manager, Sustainable Development, Yoshikuni Furukawa of Nitto Denko Corp, who is Secretary to the ISO TC207 WG8 (MFCA), and Managing Director Hiroshi Tachikawa of Propharm Japan Co. Ltd., who is MFCA Technical Expert for Japan and Assistant Secretary to the group, via e-mail on behalf of the APO. The following is an edited version of their e-conversation.

*How long have you been associated with the APO?*

**Furukawa:** We became aware of the APO approximately 10 years ago. Since then, as we led the ISO publication on material flow cost accounting (MFCA) in 2011, we began to work with the APO more closely. As technical experts, we provided training in various projects and recently successfully completed an MFCA-related demonstration project in India.

*What type of services have you provided to the APO?*

**Tachikawa:** We provided various MFCA-related services. The key activities include the MFCA-related demonstration project, an e-learning course, and MFCA-related training course in the ROC, all since March 2011.

**Furukawa:** As the first company to apply MFCA successfully in Japan, Nitto Denko Corporation also welcomed delegates from the ROC to demonstrate to them practical knowledge of MFCA several times. One of the visits took place in September 2013.

*What is MFCA and how did it start? Why is MFCA important? Why should the APO promote it?*

**Tachikawa:** MFCA traces the flows and stocks of materials within an organization and quantifies them in physical units (e.g., kilograms) and the costs associated with those material flows. This information assists organizations in achieving enhanced productivity, cost reductions, and fewer environmental impacts at the same time. MFCA is applicable to any organization that uses materials and energy, regardless of its products, services, size, structure, location, and existing management and accounting systems. Basically, MFCA is a sustainable management tool to encourage the implementation of Green Productivity (GP).

**Furukawa:** The concept of MFCA was originally developed in Germany but the approach has been rapidly disseminated in Japan since 2000. Nitto Denko Corporation was actually the first company in the world to implement MFCA.

**Tachikawa:** MFCA is important because it contributes to both organizational internal impacts and external impacts (e.g., contribution to the external environment). We understand that one of the strategic directions of the APO is GP, and effectiveness of MFCA perfectly matches with the goal of GP (enhancement of competitiveness and simultaneous contribution to the environment).

**Bhardwaj:** Based on the APO's experience, let me add that the implementa-

tion of MFCA requires sharing of process-related information such as raw material used, their exact costs, etc. in detail, which most industries are wary of. This is one major bottleneck for speedy implementation of MFCA.

*Do you think that the APO has been doing well in promoting MFCA?*

**Furukawa:** Yes. For example, I have seen the widespread media coverage given to the MFCA-related activities carried out by the APO.

**Tachikawa:** Yes, I agree. One of the key examples is India after our successful completion of the MFCA project there in March this year. Currently, India is promoting MFCA on a broad scale as one of the key tools for the enhancement of productivity using the cluster approach.

*Which APO member countries have already adopted MFCA?*

**Tachikawa:** Malaysia and India are currently disseminating MFCA at the local level. We also provide technical support for those countries as necessary. In addition, other APO member countries including Vietnam, Thailand, and the Philippines are applying MFCA.

*How does MFCA help promote GP?*

**Furukawa:** As we indicated, MFCA is a key tool to achieve the goals of GP. Specifically, MFCA can show you how much cost savings you make from your efforts. This goes beyond simply talking about "Let's be environmentally friendly." Therefore, you can actually feel and see the effects related to MFCA efforts.

*What type of benefits APO member countries derived by implementation of MFCA?*

**Tachikawa:** In the first place, internal benefits, in terms of cost reduction, can be seen fairly soon when implementing MFCA. From my experience, I have seen a total of at least US\$2 million in cost reductions in SMEs in APO member countries. MFCA does not necessarily require large investments; a lot of it consists of small kaizen activities, such as changing peoples' behavior and establishment of more consistent standard operational procedures to reduce material losses.

*What is the future of MFCA standards?*

**Furukawa:** MFCA was internationally standardized in 2011, under the title "Environmental management—Material flow cost accounting—General framework." Now, active discussion is underway on the second international standard "Environmental management—Material flow cost accounting—Guidance for practical implementation in a supply chain (tentative title)." Both of us are dedicated to leading the development of this international standard.

**Tachikawa:** It is our hope that we can always provide up-to-date information and guidance on the technical MFCA approach to the APO through our leading of the international discussion.

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**Bhardwaj:** Once understood, industries will realize that MFCA is a powerful tool to save costs and want to apply it in all areas of business. However, unlike other ISO systems, there is no third-party certification for implementation of MFCA based on ISO 14051. To enhance MFCA acceptance in future, the ISO should consider certification.

*How has the Japanese Ministry of the Economy, Trade and Industry (METI) has been supporting this initiative?*

**Furukawa and Tachikawa:** METI has been supporting our MFCA-related ISO initiative since its beginning for local and international dissemination. The historical/present MFCA-related supporting activities include funding, technical advice for international development, and raising awareness of MFCA among the mass media.

**Tachikawa:** Also, this international standardization activity is led by Japan with the involvement of various stakeholders from industry, government, and academia. In particular, Professor Katsuhiko Kokubu is the convener to the group and Professor Michiyasu Nakajima is the technical expert.

*Do you have suggestions for the APO and NPOs in their attempts to promote MFCA?*

**Furukawa and Tachikawa:** From our experience, we feel that it is important to demonstrate that MFCA can work for every member country. While each has different industrial and cultural contexts, the assignment of experts is an effective way to commence MFCA applications. At the same time, it is important to establish mid- to long-term schemes to promote MFCA in each country. 🌐



Furukawa



Tachikawa