

Concurrent Sessions

Session 1

Ideas and Roles of Green Purchasing

Is Green Purchasing a Panacea for the Global Environment?

This session clarified the concepts of green purchasing and its role in establishing a sustainable society, while discussing its position within public policies, its legal structure, and issues. The session also discussed quantitative assessments of the effects of green purchasing, and proposals for effectiveness measurements through international cooperation.

Keywords: **Sustainable development and green purchasing, Public policy, Effectiveness measurement**

Chair: Nobutoshi Miyoshi *Tohoku University*

"The Intents and Effectiveness of Green Purchasing Law, and Its Opportunities"

Hiroshi Kamagata *Ministry of Environment*

The Green Purchasing Law is one of the laws established due to the dioxin problem to create a recycling-based society. This law aims to build a sustainable society in which public organizations including the central government take the lead in procuring and promoting eco-friendly goods and services, and disclose information concerning such products and services. The law provides that each agency related to the central government must promote procurement of designated items based on its own procurement policy, based upon the central government's basic policy. In addition, each local government is obligated to make a sincere effort to implement this provision correspondingly. Moreover, the law requests business firms and people to make utmost efforts to promote green purchasing. Looking at the result of procurement in 2002 to assess the achievements gained through the enforcement of the Green Purchasing Law, we find that more than 95% of the designated items procured were copier paper, and other office paper, with similar results obtained for other stationery materials, office equipment, etc. Conducting procurement in this way, it affected the general trends of supply and demand in relevant industries, the percentage of products that met the relevant criteria substantially increased to 26.6% in 2002. We want to promote such efforts among local public authorities and private enterprises, as well as in the central government, from now on. With FY2010 as the target year, we plan to ensure that all local public authorities achieve organization-wide green purchasing at their administrative departments, and require that at least 50% of companies listed on the stock markets and 30% of unlisted companies are fully compliant.

"'Green' Public Procurement - An Innovative Approach to 'Greening' Manufacturing and Supply Chains"

Jill Michielssen *European Commission*

Public authorities spend 14% to 16% of the overall EU gross domestic product on public consumer goods, so it goes without saying that by greening those purchases, direct environmental benefits can be achieved. Likewise, if public institutions start applying a visible green procurement policy, it sets a good example for citizens. Public institutions may have an important influence on the supply chain, and trigger the development of new environmental technologies. However, the average of all administrations applying a significant level of green purchasing (environmental elements in more than half of their purchases) is only 19%. Reportedly, the three most significant hurdles for greening public procurement are a lack of legal certainty, a lack of environmental know-how, and finally, budgetary constraints.

The European Sustainable Development Strategy has developed public procurement legislation further by integrating environmental elements. Another development has been a handbook on environmental public procurement, which was published in August of 2004, mainly designated towards local authorities in EU countries. The handbook explains in clear and non-legal terms all the different possibilities for integrating environmental elements into a public procurement procedure, which is currently available on the EU website. There are also many links with other useful websites to provide information on green public procurement, along with an environmental database that contains some basic environmental information for some hundred products and service categories in the EU. There are plans to provide detailed environmental information for cut-and-pasting into tender documents for certain identified groups of products that are most suitable for greening. The European Commission will also organize training events all over Europe, and make available tools to measure the actual state of play of green public procurement.

"The Ideas and Roles of Green Purchasing"

Hideki Nakahara *Green Purchasing Network (GPN)*

The Green Purchasing Network (GPN) was founded in February 1992 with the primary mission of promoting the widespread adoption of green purchasing and providing relevant information to interested parties. What we can proudly proclaim before the world is that we now have a network incorporating a wide range of government and industrial sectors, and also citizens. With this diverse support base, our activities could become a model for other countries; Korean GPN and Malaysian GPN have already been formed. Our primary activities are the formulation of green purchasing guidelines, building a database of relevant products and services, promoting and providing education about green purchasing through forums and seminars, and commending organizations that implement excellent green purchasing practices. Currently, our members include about 2,800 organizations including 2,200 private companies and 400 administrative organizations such as local government offices, as well as more than 200 civilian organizations, and the Network is operated with the participation and cooperative efforts of these members.

We have established basic principles of green purchasing, and we conduct our activities based on these. Currently, our Green Purchasing Guidelines cover 16 fields including printing, information paper, and stationary goods. More recently, new guidelines are focusing on the evaluation of service industry such as eco-friendly services in corporate printing operations, hotels and *ryokans*. With these efforts, 85% of the private companies and 80% of administrative organizations are currently implementing green purchasing. Regarding the impact on the market, the percentage of sales of eco-friendly products increased to 51% (2003) from 30% (2001), and the market scale grew to close to 50 trillion yen. In the future, we intend to expand the guidelines in the service sectors, upgrade the purchasing criteria, help to prevent activities from becoming empty routines, expand the activities into small and medium-sized enterprises and municipalities, further promote the activities by educating consumers, and expand the efforts on a global level.

"The Potential of Eco-Procurement in Europe - Results of Latest Research"

Konrad Otto-Zimmermann *ICLEI, World Secretariat*

ICLEI is an organization of local governments for sustainability. We have 460 local government members in 65 countries, and at this moment 12 offices with 30% of our member cities are located in the Asia Pacific.

After Agenda 21 was endorsed at the 1992 Rio Earth Summit, it was followed 10 years later in Johannesburg 2002 by the second phase under the motto "Local Action 21," which contains a Sustainable Procurement Campaign. This campaign is a very important mechanism for local governments to introduce sustainability criteria and to apply them on an ongoing basis. As a project supported by the European Commission, and based on a number of surveys, the RELIEF Project helped ICLEI calculate environmental benefits of green purchasing, and at the same time, develop methods in order to assess the hurdles and barriers, as well as methods to measure the environmental and economic impacts of green purchasing. The conclusion of this research project is that there is huge environmental relief potential that could be tapped by promoting green purchasing by public authorities. For example, potential savings that could be made through the purchase of green electricity amounts to CO₂ reductions equivalent to 7.5 million people. If public authorities would switch to buying organic food, this would result in huge greenhouse gas reductions of 400,000 people equivalents. What is needed is a large-scale implementation across all public authorities in Europe. In order to achieve this, ICLEI launched the Procura + Campaign. Participating local governments do the analysis of their purchasing policies and impacts first, set certain targets, set up a plan how to reach these targets, implement the plan, and monitor progress on an ongoing basis. ICLEI offers manuals and publications, such as "Procura + Manual", that assist by providing essential information on the project.

<Floor Discussion>

During the discussion, a dialog unfolded concerning the expansion of green purchasing methods into local governments, including the relation between central and local governments and, assessment methods of green purchasing.

It was stated that, while currently having some grasp of the data concerning the green procurement market share of each type of product in the Japanese market as well as reported activity results (Example: In the case of copier paper, 26% of procured items satisfied the criteria provided by the Green Purchasing Law), the Ministry of the Environment aims to fully understand the overall situation of greening the entire market and influence trends.

An opinion raised by one of the speakers, concerning the activities required for promoting green purchasing was that there are various roles to be fulfilled according to the sector (such as administration, enterprise, and NGO sectors). Therefore, it is necessary for each sector to engage in green purchasing activities optimized to its needs instead of relying on one standardized criteria.

Lastly, the chair pointed out the importance of green purchasing, particularly the importance of efforts by the public sector, and the necessity of clearly defined criteria and cooperation between stakeholders.

Session 2

Methods, Tools, and Information for Selecting Environmentally Preferable Products

What are Green Purchasing Standards?

This session discussed product selection guidelines and methods, together with useful tools and information used in various countries to practice green purchasing. The development of international guidelines, tools and databases was also discussed in the session.

Keywords: **Green purchasing guideline, Methods to choose environmentally preferable goods and services, Product information, LCA (Life Cycle Assessment/Analysis), LCC (Life Cycle Costing)**

Co-chairs: **Atsushi Inaba** *National Institute of Advanced Industrial Science and Technology (AIST)*

Tak Hur *Konkuk University*

"GPN Guidelines and Database"

Hiroyuki Sato *Green Purchasing Network (GPN)*

Presently, selecting products in green purchasing activities in Japan is based on environmental labels, beginning with Eco Mark, judgment criteria provided under the Green Purchasing Law, and the guidelines and database of the Green Purchasing Network (GPN). GPN database, as mentioned above, provides most detailed environmental information, and its website offers comparable environmental information concerning about 10,000 items in 16 fields, including the service sector such as offset printing service, in addition to items like stationery goods, household electrical appliances, automobiles, and personal computers. This database provides a list of items for comparison instead of setting up an absolute criteria for purchasing, thus enabling users to make their own informed decisions and establish criteria concerning the environmental information they want to confirm. Thus, they can compare and select what they wish. Since GPN does not verify such data, relevant manufacturers register product information based on self-declaration. Next, in the case of the Eco-Challenge Hotel Database, hotels or *ryokans* may be registered in the database as environmentally friendly facilities, providing that a minimum requirement is fulfilled. The database enables potential customers to visually check the level of activity in a wide range of environmental fields based on a radar chart. Moreover, products that cannot be covered by the GPN Guidelines, or input to the two databases mentioned above, can be registered in the Green Purchasing Information Plaza. However, GPN databases do not list information to recommend which product is best for the environment, and furthermore, ensuring the reliability of information registered based on self-declaration remains an issue to consider.

"Global Standardization of Green Procurement Surveys"

Masayuki Saita *Japan Green Procurement Survey Standardization Initiative (JGPSSI)*

In recent years, surveys concerning green procurement are being actively conducted, particularly those regarding chemical substances contained in products. While this type of survey has long been conducted, it is now a rapidly growing trend in response to increased attention to the measures for regulation of chemicals contained in products. As there are no standards for the content and method of this type of survey, each company has conducted the survey in its own way, and thus it has become very inefficient. Accordingly, the Green Procurement Survey Standardization Initiative (JGPSSI) was established in 2001 with the objective of standardizing the surveys of chemical substances contained in components and in raw materials on a certain core level. For this purpose, we are engaged in such activities as the standardizing of criteria for surveys (i.e. creation of guidelines), development of software and manuals required for conducting surveys and implementing the system on a worldwide scale. In 2002, we defined the common requirements for conducting green procurement surveys ([1] Basic information survey, [2] Chemical substances survey, [3] Survey response format) and we started to use them. Moreover, we are making efforts for the global standardization of these requirements in cooperation with the European Information, Communications and Consumer Electronics Technology Industry Association (EICTA) and the Electronic Industries Association (EIA).

"US Resources to Identity and Purchase Green Products and Services"

Julie Shannon *US Environmental Protection Agency*

In the United States, there is not a single Green Purchasing Law that governs the topic nor do we have a national ecolabelling program, but rather there is a series of mandates and drivers that govern green purchasing, such as the Pollution Prevention Act of 1990, a 1998 Executive Order that was signed by President Clinton and then endorsed early in President Bush's administration, the Farm Bill of 2002, and the Federal Acquisition Regulation. The EPA has developed a series of tools based on these policies in order to convey the right actions to take, such as the Environmental Preferable Purchasing database, which now has about 600 environmental standards in it from both domestic and international sources; a General Training Tool, which gives people a very brief introduction to life cycle thinking and gives them federal case studies; also a Promising Practices Guide, Product Guides, and finally EPA leading by its own example. EPA as a purchaser has been trying to lead by example and to show other federal agencies and other purchasers how they can green their purchasing of office supplies, electronics, and building construction standards in particular. State and local governments are very active in Environmental Preferable Purchasing, and federal agencies have definitely made a lot of progress just within the last couple of years. Lastly, industry has become proactive in developing and promoting green products and services in a number of product categories.

"How to Develop a National Tool for Green Procurement - An Example from Sweden"

Peter Nohrstedt *EKU, Sweden*

The Swedish Environmental Management Council (SEMCO) began in January 2003, and is a stock holding company jointly owned by the Swedish state and the Swedish Association of Local Authorities, the Swedish Federation of County Councils, the Hospital Organization of Sweden, and the Confederation of Swedish Enterprises. SEMCO is responsible for three different tools for sustainable development. One is the European Eco-Management and Audit Scheme, for which the company is the acting registering body in Sweden. The second is the Environmental Product Declaration systems in Sweden, for which SEMCO is the confident body. The third tool is the EKU instrument, for ecologically sustainable public and private procurement.

The EKU instrument is available on the Web, where information about green public procurement and green private procurement can be found. Currently, criteria for approximately 65 products, both goods and services, are available. SEMCO also has training programs for green procurement.

For criteria, SEMCO uses a prioritizing model taking into account environmental impact from the products, and potential to get better environmental performance in the future, before taking this model to their board for the final decision. A work group is then put together with expert competence from both the private and public sector. After receiving stakeholder opinions, the criterion is sent for a formal decision, confirmed and published on the web page. Finally, the criteria are updated to sharpen the criteria in order to achieve continuous improvement.

<Floor discussion>

Opinions given during the discussion highlighted that even though the price of a green product is higher at the time of purchasing, it is lower in the long run when it's the total life cycle cost is considered. Also, concerning the balance between the effects obtained by green purchasing and the cost, in order to effectively promote green purchasing, it is important for both government offices and NPOs to take the initiative cooperatively, such as by building international databases.

Session 3

Promoting Green Purchasing in Developing Countries

The Role of Government and Society and Issues Faced by Companies, CSR

This session identified the current situation and future of green purchasing efforts implemented by local companies in developing countries, especially Asia. Methods to increase green suppliers through international cooperation were discussed. The session also discussed how to evaluate suppliers through social aspects as well as environmental aspects.

Keywords: **Green supply chain, Green purchasing in Asian countries, Social aspects, CSR (Corporate Social Responsibility)**

Co-chairs: Takuki Murayama *Asian Productivity Organization (APO)*

Raymond Leung *Environment and Development Foundation, Taiwan*

"Green Purchasing in ASEAN - The Role of Government"

Kiyau Loo Lee *Green Purchasing Network Malaysia*

In the ASEAN countries, large amounts of waste are generated on a daily bases, making environmental measures indispensable. The degree to which green purchasing is implemented varies among nations, but introducing ecolabelling, as well as the ranking system to business environmental measures, have been gradually implemented. The following key points are addressed in promoting green purchasing. ① The government's role by buying "green", leading by example would definitely accelerate promoting green purchasing. ② A comprehensive legal framework with other pressures and drivers will definitely foster rapid green purchasing adoption. ③ It is important to promote green networking among consumers, civil society and producers both locally and internationally. ④ To recognize multinational corporations' lead in green purchasing efforts, the need for strategic alliances, and an effective way for motivating small and medium enterprises through a corporate synergistic arrangement. ⑤ To show that green purchasing need not be at the higher cost to consumers. The question to address here is "economic" versus "environment". ⑥ To support the use of "standardized" green or ecolabel involving criteria, harmonization, as well as mutual recognition agreements among the various countries.

"Efforts of Local Companies in Thailand to Green Their Purchasing"

Pongvipa Lohsomboon *Thailand Environment Institute (TEI)*

90% of factories in Thailand are small and medium companies. Most of them don't have environmental management practice in play due to the limited human, financial and technological resources. On the other hand, large local companies have made an effort to green purchasing. Their activities include the establishment of product procurement guidelines, and adoptions of product criteria of the national ecolabelling program. For instance, the Sian Cement Group established Environmental Conservation and Safety Committees and produced guidelines as well as set environmental management systems of the manufacturers or suppliers. The Group also developed the criteria for 20 product groups and has been implementing them.

To stimulate the green market and disseminate information about green products in Thailand to those who are involved in the purchasing activities, Thai Green Purchasing Network has recently been established under the support of many organizations including the Japan Green Purchasing Network.

The objective of having the Green Purchasing Network is to promote green purchasing in Thailand, to provide "green purchasing" guidelines and information on green products, and to compile and maintain a list of ongoing green purchasing activities. Thai people in general have low environmental awareness, and so there is little pressure from consumers. Another factor is inadequate green suppliers and suppliers of green products; however, recently, on September 10th the government endorsed the concept of a public procurement policy, and it will be studied to make it happen, understand how to implement it and how to develop the criteria.

"Evolving from Green Procurement to Sustainable Procurement"

Christopher Browne *Environmental Agency, UK*

The Environment Agency in England and Wales is the largest environmental agency in Europe. We spend over \$835 million and assess for sustainability from economic, social and environmental perspectives. We identify two categories: expensive commodities or materials (over £ 25,000), or high risk, and secondly, cheaper ones (less than £ 25,000) or low risk.

In the former category, we categorize inputs and outputs in each stage of the life cycle. (Raw material procurement, manufacturing process, usage and disposal) from environmental, social and environmental perspectives to make detailed impact mapping model. Then, before we determine the purchase, we trace the influential factors and examine measures that should be taken. It took ten years to develop this process and still developing (especially concerning social issues). In order to implement this process supporting tool and training that can be used by all officers are indispensable.

"Sony's Green Procurement Activities - Management of Chemical Substances in Products and Green Partner Environmental Quality Approval Program - "

Takeshi Tsuruta *Sony*

Each electronic product manufactured by SONY includes various chemical substances. In order to control the chemical substances contained in the products, as well as in the parts and materials composing them, it is necessary to properly manage activities not only within SONY Group companies but also the supply chain of suppliers who manufacture parts and materials.

SONY has established Management Regulations for Environment-related Substances to be Controlled named "SS-00259" with the intention to create a unified, global system for management of chemicals. This system is designed to respond to the markets of products and the globalization of the supply chain, and clarified the substances to be controlled. And in order to properly put them into practice, the three core principles have been set up: [1] Upstream management, [2] Management of QC/QA Processes, and [3] Application of measurement rules. As an approach to upstream management methodology [1], the Green Partner Environmental Quality Approval Program has been established, and an environment management system and operation management has been arranged. Some 4,200 suppliers, which are approved through auditing procedures, are registered as green partners. As an approach to quality management methodology [2], certificates of non-use of hazardous chemical substances as well as measurement data for parts and raw materials are received from suppliers, and are registered in the database, then a final inspection is made based on analytical measurements. As application of measurement rules and methodology concerning metrics [3], when data is measured, measurement is performed at various stages based on analytical measurement. Quality is thus controlled in this way. We continue to build and maintain strong partnerships with suppliers to assure the production of environmentally conscious products.

"Fair Trade - The Sustainable Business Model: Poverty Alleviation, Livelihoods Promotion and Environmental Protection"

Naoko Tanemori *The Fair Trade Company/ Global Village*

The Fair Trade Company (FTCo) is an organization which implements "Fair Trade" aimed at supporting producers in developing countries through trade and alleviating their poverty. In order to encourage more people to take part in Fair Trade, we are engaged in various activities under the slogan "Ecology for fun, International cooperation with a light heart". FTCo is engaged in three core businesses: [1] Supporting producer partners of 70 organization in 20 countries, [2] Selling Fair Trade products in Japan, Britain and other European countries, and [3] Promoting Fair Trade by educating consumers. As for Fair Trade standards, affiliated with the International Fair Trade Association which is comprised of 200 organizations in 60 countries across the world, including Fair Trade buyer organizations and producer organizations, we observe the nine Fair Trade standards set by IFAT; this includes "Paying fair prices to producers", "Ensuring safe and healthy working conditions", and "Protecting the environment". IFAT conducts a "social review" every two years, in which members carry out mutual assessments to ensure that each member organization is following the Standards. In order to increase the scale of the Fair Trade challenges, we continue to develop marketable products and review conventional trading methods that constitute barriers for disadvantaged producers.

<Floor discussion>

During the question-and-answer session, there was a question asking whether the procurement method used in Britain can be applied to developing countries, and a view stating that the education of consumers cannot be done in a day, but should involve the government.

While views were exchanged, it was confirmed that incentives and compelling force hold the key in promoting green purchasing in developing countries, and this requires the participation of all stakeholders.

Session 4

Green Purchasing by Local Governments

Introduction of the Latest Practices of Green Purchasing by Local Governments in the World

Participants shared the latest local government green purchasing practices. The session discussed future areas of importance in green purchasing and explored methods of international collaboration.

Keywords: **Green purchasing by local governments, Bidding issues to select environmentally preferable goods and services**

Co-chairs: Takashi Arai *Sendai City*

Konrad Otto-Zimmermann *ICLEI, World Secretariat*

"Shiga Prefecture's Efforts in Green Purchasing"

Nagatoshi Ogawa *Shiga Prefecture*

In 1994, with Lake Biwa's water quality problem and shore side trash problem as a backdrop, Shiga Prefecture established "Shiga Prefecture Basic Policy for the Purchase of Environmentally Friendly Goods", and based on the "List of Recommended Environmentally Safe Products", it took the lead among Japanese prefectures in promoting green purchasing efforts. Efforts by Shiga Prefecture's massive base of consumers led to the further expansion of green market principles, awareness and efforts concerning acquisition of ISO14001 certification, and establishment of an environmental policy. In addition, in 1999, the Prefecture established the "Shiga Green Purchasing Network", which engages in local networking activities such as receiving and sending of regional information, research of regional conditions, and provision of educational opportunities for local residents. Moreover, the prefecture built up the "Green Purchasing Self-Diagnosis System", which, through local network activities, enables organizations, including business firms, to check their activities by themselves and monitor them by comparing the level of their activities with other firm's efforts. Based on this, the Prefecture made it an obligatory condition for bidding entering contractors to submit the result of the self-diagnosis. At present, there are plans to implement an electronic procurement system for green bidding, green shipping, etc., within the government offices and expand all these activities in collaboration with Shiga Green Purchasing Network.

"Green Purchasing in Public Construction - Evaluation System for Recycled Materials in Aichi Prefecture 'Aicle' "

Yoshihiro Nishio *Aichi Prefecture*

In 2002, with the objective of promoting green purchasing in public construction, Aichi Prefecture established an evaluation system for recycled materials called "Aicle" (a combination of the prefecture's name, Aichi, and recycle) and this system is currently being utilized. "Aicle" is an assessment scheme that authorizes the use of certain materials based on known information about the origin of recycled materials and manufacturing location of recycled resources, as well as its position as a part of "Aichi Prefecture's Environment Management System". From 2002 until 2004, 21 items, 435 cases, 1,329 materials have been authorized as "Aicle" materials. In addition, we have increased the use of "Aicle" materials from the start of this system, and in 2003, "Aicle" materials equivalent to about 2.4 billion yen were used for public works engaged in our prefecture. With the use of recycled materials, resulting savings to the external economy were estimated as equivalent to 1.27 billion yen, including the reduction of waste disposal costs, natural resources, etc. "Aicle" materials are effective in promoting recycling as they urge manufacturers to engage in recycling and break the stereotype that recycled resources are expensive.

"Practices of Green Purchasing - A Case Story of Kolding City"

Karsten Andrup Pedersen *Municipality of Kolding, Denmark*

The City of Kolding, located in the south region of Denmark, is the country's sixth largest municipality with 6,000 public employees. The budget for the Logistics department alone is 1.4 billion Danish Kroner (US\$500 million). Legislation in the early 90's called for strengthening environmental efforts and reducing environmental impacts, and a green purchasing policy was adopted in 1998 to promote low-impact production, demonstrate the municipality as a frontrunner to these efforts, and set an example for citizen consumption patterns. After resetting *all* purchasing actions, Kolding hired a biologist to make and evaluate questionnaires sent to businesses, which are used to award contracts. A point score system facilitates purchasing, with the environment assessed on par with price, quality, and level of service. This is transparent, but bidders do not see others' scores.

This has been done without extra economical funds by creating an easily applicable assessment. There have been positive reactions from both citizens and suppliers. Slightly higher prices have only been found in the group of organic food. It is also reasonable to say that there is a sufficient range of green products on the European market.

Kolding reached 25% green purchasing in the first year, and over 80% by 2003. By 2005, Kolding will have achieved a near 100% purchasing policy.

"Green Purchasing Practices: Regional Co-ordination"

Conrad Young *London Business School, UK*

UK purchasing has shifted from pure emphasis on cost to purchasing within regional consortia, which include assistance from environmental NPOs and other organizations, like FSC, Energy Saving Trust. The organization Remade (Recyclables Market Development), works with consortia in five areas in the UK, offers brokering services, tradeshow events, online reports and so on. One consortia, ESPO (Eastern Shires Purchasing Organization), sources goods and buys in bulk, which is one of the ways in which it gets economies of scale, and uses a "Schedule E Questionnaire" to determine whether suppliers meet minimum environmental criteria. ESPO's catalogue also includes a green coding system. There is a catalog, which all of the client organizations use to order their supplies, and in that catalog there is a green coding system to allow them to make the sort of cost benefit analyses which were referred to earlier on by other speakers.

Remade's "Buy Recycled" program in local governments takes place in a framework of voluntary, regional procurement code. Remade offers free practical help, identifies product areas, and in the process becomes part of the marketing in purchasing organizations it assists. At the highest level, the purchasing organization commits to measurable targets in recycled content purchasing. There are other projects as well, such as the LEAP project.

"From Green to Sustainable Procurement in Australia and New Zealand"

Michael Oke *ICLEI Australia/ New Zealand*

In Australia and New Zealand, local government green purchasing is not supported by strong legislation to implement policies; such as it has in Europe and Japan. However, there are many successful local programs, such as Australia's ECO-Buy program, and EcoSpecifier, the searchable database of products, suppliers and environmentally preferable outcomes, primarily for the building and construction industry. Also, join purchasing is increasingly becoming a mechanism employed by local governments to save time and costs and enhance environmental benefits. Online purchasing has grown quickly in Australia, and will assist in making it easier to link to internal and external information and documents, and for staff to prove due environmental consideration and assist in the monitoring process.

ICLEI has three international campaigns providing tangible environmental benefits for local governments. The climate protection and water quality campaigns have many participating councils and are making great strides. In Australia, an ICLEI project run in 2004, focused on greenhouse purchasing through the climate protection program. Online software and a quantification toolkit were also developed.

The third, through Local Action 21, is the Triple Bottom Line project. Many companies will produce TBL reports, which operate within the parameters of economy, society, and environment to measure performance. ICLEI-A/NZ has recently started a sustainable reporting alliance with 11 local governments, working to develop a common methodology for TBL performance reporting.

"ECO-Buy - An Australian Success Story"

Adrienne Stephens *ECO-Buy*

ECO-Buy is a green purchasing program in Victoria, Australia that rewards changes in positive behavior. To join ECO-Buy, all the councilors must pass a resolution saying they commit to these actions, and the CEO of the council must sign a memorandum of understanding with ECO-Buy committing the council to these actions. Also, there must be a nominated leader within the council, an established working group with representation across all departments, an adopted green purchasing policy, and commit an annual action plan for the following 12 months. They also must track what green products they purchased throughout the year, and report that to ECO-Buy with how much they spent on those products. At the same time, they also report their main barriers to green purchasing, so the program can plan for the next year and know what resources they need to overcome those barriers.

ECO-Buy started in 2000, and now has 74% membership of all councils in Victoria. What began as a "buy recycled" program, they increased the range of products to include broader green products other than the recycled products. As an example, members spent six times the amount on recycled products in 2003, compared to 2001. Additionally, 98% of the members have said they have increased their green purchasing actions since becoming members. To assist their members, they have a range of tools to help them overcome their barriers to green purchasing; one is the Eco-Guide, as well as Eco-find, and Eco-train tools. Recently, an ECO-Rewards program offers incentive, such as discounts or donations, to suppliers or partners.

<Floor Discussion>

There were questions asked regarding (1) how to raise the awareness of personnel and how to deepen the understanding of top management, (2) if the use of recycled resources affects the result of bidding, how to spread this advanced model currently centered only on local municipalities among general citizens and business firms, and (3) how to control costs in public procurement. An active exchange of views unfolded concerning how green purchasing should be developed in local municipalities. It was confirmed that, while there are various approaches and tools, it is important to put Green Purchasing methods into practice, since green purchasing will not result in rise of cost on the whole.

Session 5

Promoting Green Purchasing to Consumers

What are the Effective Incentives to Change Consumers' Purchasing Activities?

Participants shared government and NGO efforts to promote green purchasing to consumers, while showing examples of environmental marketing and issues. Discussions involved the effective incentives to change consumer purchasing activities and how to develop international collaborations in order to promote this change.

Keywords: **Non-governmental organizations, Promotion of green purchasing to consumers, Environmental marketing by corporations**

Co-chairs: **Hideki Nakahara** *Green Purchasing Network (GPN)*

Conrad Young *London Business School, UK*

"Japanese Green Consumer Activities and Challenges"

Ikuo Sugimoto *Citizens Environmental Foundation*

It was after I read the content of "The Green Consumer Guide" published in Britain and "Shopping for a Better World" published in the United States that I first thought I wanted to promote such green consumer activities in Japan. At the beginning, there was no environment developed in Japan for preparing such a guidebook, but by mobilizing a lot of volunteers, I was able to issue the Local Green Consumer Guide in Kyoto in 1991. This activity was then spread into other areas, and currently there are a variety of guides published in more than 100 localities. In addition, a network was formed with local civil groups and we issued the National Green Consumer Guide intended for super markets, convenient stores and co-ops in 1994 and 1999. Since then, local governments around the country are recently beginning to give active support to green consumer activities, we have successfully established partnerships with civil groups and are conducting training for fostering the relevant leaders. Moreover, we joined hands with the retail industry to implement a campaign for the reduction of global warming in the same year that the Kyoto conference on global warming was held, and we developed standardized ecolabels and conducted a campaign to promote eco-friendly products.

Also, we actively conducted a campaign to promote purchasing of energy-saving household electronic products that were authorized to display our ecolabels while performing relevant training for sales staff before the campaign, and as a result, the sales of energy-saving products increased and the number of stores that conduct such campaigns increased as well.

"Promotion and Education by Local Government for Citizens and Businesses"

Makoto Hosoi *Sendai City*

Not only are local governments responsible for local administration, but each is also a key entity driving regional management, thus imparting great impact on the local economy. Therefore, each has obligations to take the initiative to promote green purchasing while paying attention to the great impact that will be felt by such a shift, as well as to establish partnerships with citizens and business firms to promote the general acceptance of green purchasing into the local society and to change the local economy into an eco-conscious one. In order to fulfill these obligations, Sendai City is aiming to be a "Green Purchasing City" in which citizens, business firms and government administration all proactively address relevant issues.

For that purpose, we consider it is important that administration takes the lead to become a model for the region, works to promote it and educate citizens and make a mechanism allowing a participation of citizens and business firms. Specifically, we are promoting our activities to citizens through the creation of the "Sendai Green Stationery Recommendation System", a system to recommend stationery goods that are recommended as eco-friendly, and the preparation and spread of the Green Purchasing compliant models of *Sugoroku* and *Karuta*, Sendai Eco-Challenge (Action check list for families). We are also promoting to business firms through the creation and spread of the environmental management system for small and medium-sized enterprises "Michinoku Environmental Management Standard". Moreover, as part of green purchasing efforts made by the city, 230 items in 18 categories are currently available for green purchasing, and from 2004, green purchasing has been introduced officially, and the Green Purchasing Standard is applied to hotels and ryokans located in the city for use of their meeting rooms.

"Promoting Eco-Procurement in Vienna"

Eva Persy *Vienna Ombuds-Office for Environmental Protection, Austria*

Public green purchasing affects hospital food, public housing development, and public authorities' day-to-day activities. Vienna City Council has an influential affect on suppliers when they practice green purchasing to cut electricity use, and save water. Organic food in Vienna's public canteens (cafeterias) has increased demand and regulated prices to bring 1/3 growth in some organic farming sectors.

The Vienna Ombuds Office for Environmental Protection and their project "OekoKauf" is working with about 180 officers, and a steering group of the heads of various departments. There are 18 working groups developing the criteria on an equal number of product groups. A consultative committee of seven experts handles public relations.

The PR committee incorporated a corporate design for their logo, including the program slogan and homepage address, as well as an additional homepage for the 60,000 citizens' administration officers in Vienna. Posters, folders and videos are produced and often displayed or distributed in waiting rooms, such as at hospitals. A program to promote the 50% share organic food program at kindergartens was to produce a game collection to teach kids about organic farming. Lastly, they focus on mass media, such as articles, press conferences with well-known people, and TV appearances.

"Promoting Green Purchasing to Consumers in Korea"

Duk Seung Lee *Green Purchasing Network (GPN), Korea*

Following the 1988 Olympic Games in Seoul and an increase in GDP, Korea began green purchasing activities in 1990. Unfortunately, initial responsiveness faded due to poor quality and uncertain environmental efficiency of the greener products. Catalytic action is necessary to transfer consumer environmental consciousness into real purchasing behavior in the market. Consumer opinion polls showed they recognize green products, but feel they are expensive. Government participation, on the other hand, is most efficient, but needs to promote competitiveness. Local Agenda 21 programs in four regions are active in green purchasing monitoring for public institutions, promotion of greener product production, and establishing green purchasing regulation. Also, Seoul's green purchasing criteria is notable, with six product groups and an aim for 16 product groups and a green purchasing law to be in place by the end of 2004.

Korean NGOs show concern about lack of media and consumer attention. NGOs' main plans for green purchasing activities are, first, education for consumers and purchasers, followed by an organic campaign, corporate green purchasing, monitoring corporate greener production, and publishing a guideline book for green purchasing.

Finally, the attitude of global corporations in domestic markets is an important variable for activating consumer green purchasing. For this reason, a green purchasing global partnership network would seem indispensable.

"Citizens' Green Purchasing - From Current Status to Further Promotion"

Keiichi Aoki *Environmental Forum Sendai Steering Committee, Environmental Network of "City of Trees"*

On October 2 and 3, the "Environmental Forum Sendai 2004 - Green Purchasing Festival" was held. It was a green purchasing related educational event, which was held by citizens and attended by citizens. Many environment activist groups and volunteer citizens who are dealing with environmental issues also convened there. The event, in which about 3,000 citizens as well as about 30 related organizations participated for a period of two days, was a comprehensive event combining citizens, groups and administration. During the two days, participants took part in activities such as painting an earth wall, hand-making paper, and a quiz show was also held to promote learning about eco-friendly products. Finally, through an open discussion, action guidelines drafted by citizens to encourage the public to promote green purchasing were adopted and declared as the "Sendai Citizens' Principles of Green Purchasing". The principles consist of 10 provisions and are organized based on the three viewpoints, namely "Purchase only what you need, "Choose products carefully when you purchase them!", "Use products carefully". In addition, besides green purchasing practices, it is necessary to separate products properly, by material, when disposing of them. Proper recycling leads to more effective green purchasing. Also, in connection with practical green purchasing, it is necessary to review cases of purchasing green products at a store open very late at night or at shop located where a private car is required to get there. Lastly, we ask that the city administration develop bicycle roads that would allow easier-access of citizens to stores offering green products.

"Promoting Green Purchasing to Consumers"

Bill Werlin *Patagonia*

Patagonia makes technical and comfortable clothing for active outdoor people, with worldwide annual sales in excess of 25 billion yen, and 1,000 employees. They follow the mission statement, "Make the best quality product, do the least amount of harm, and inspire and implement solutions to the environmental crisis." Patagonia's customer demographic generally includes older consumers over 35 years who are generally self-aware, highly educated, and on a higher socioeconomic scale; however younger people 20+ years old are taking a more active role in "green living".

The components of an effective green message are believability based on real actions and real experience, consistency by staying true to the original message, creative repetitiveness by seeking innovative and creative ways of sending the same core message, and the effective utilization of message channels.

What does a company have to gain by pursuing this commitment strategy? One: loyal customers. Two: customers who connect with your company on a level in addition to your product. Three: your own personal satisfaction for doing the right thing. And for those who do not pursue the strategy, the words of one of this century's most influential thinkers, David Brower, says, "There is no business to be done on a dead planet".

"A Hint for the Popularization of Green Merchandise"

Ryosuke Yasukawa *Dentsu*

The Subcommittee on the Environment of the Japan Advertising Agencies Association, with the cooperation of SEIYU Corporation, conducted comparative research on efficient communication in stores in order to investigate the potential of sales promotions of green merchandise by means of advertising communications. In this research, "toilet paper/ coreless toilet paper," "sink drain bags" and "plastic wrap/ heatproof plastic wrap" were chosen from Seiyu's proprietary green merchandise product lines, and the merchandise of each type were separated into three different groups according to the level of detailed information to be displayed. Specifically, Group A, in which "Ecological specifications" (i.e. the environmental considerations that are incorporated into the product) are shown for the product, as well as "Ecological advantages" (the environmentally improved effects and benefits generated by the product); Group B in which only the "Ecological specifications." are shown for the products; and Group C, in which only the "Ordinary display" is maintained. Based on this study, a comparison was made between the data obtained according to the three relevant four-week periods of time, (before the display, during the display), and after the display, in order to determine which products sold most effectively with which type of explanation display. From the results of the study, it was determined that in almost all items, products in Group A showed the highest purchasing rate. Therefore, we concluded that green merchandise could be promoted effectively to consumers by communicating not only the ways in which the merchandise is environmentally friendly but also the effects that use of the merchandise has on environmental improvement.

<Floor discussion>

Views were exchanged concerning the securing of reliable methods of displaying environmental information, forms of incentives to encourage consumers to practice green purchasing, marketing methods to convey long-term advantages, as well as green purchasing efforts regarding foods, including opening hours and location of supermarkets, method of selling foods, etc., for which there are presently few examples in Japan. Lastly, the six keywords, "Life Cycle Cost", "Eco Label", "Reliability", "Real Cost", "Incentive", "Education to consumers" were clarified.



Session 6

Environmental Technology for the Future

Explore the Mechanism of Leading edge Environmental Technologies and Products!

This session introduced leading edge environmental technologies and products, and Japan's policies to promote their development. The session also involved some international examples.

Keywords: **Environmental incentives to promote environmental technologies, Environmental technologies/products**

Chair: Kouji Yamaguchi *Green Purchasing Network (GPN)*

"Japan's Environmental Technology Policy"

Yoshiaki Nakamura *Ministry of Economy, Trade and Industry (METI)*

While Japan is working toward becoming an Environment-Oriented Nation, we also aim to realize "compatibility between environment and economy." To achieve this target, it is necessary to tackle three environment-related constraints: (1) global warming issues, (2) waste and recycling issues, and (3) the management of hazardous chemicals. The core efforts to tackle such environmental constraints are those made based on the consensus among the people as well as the government and industry, and they are also a function of progress in technical innovation.

First of all, (1) efforts to address "global warming issues" include: greenhouse gas reduction in Japan, leveraging the "Kyoto Protocol" mechanism, and building the future framework to outline the long-term strategy after a period defined in the Kyoto Protocol. (2) Efforts to address "waste and recycling issues" include: creation of a legal framework, and support for technological development of recycling businesses. (3) Efforts to promote "the management of hazardous chemicals" include: reducing the use and emission of chemicals by new industrial processes (green chemistry and biotechnology), substituting chemicals and products with alternatives having less environmental impact (alternative CFCs and materials free of hazardous substances), and remediation of hazardous materials. Technology alone is not sufficient to proceed with these efforts, and in addition to a legal framework that effectively works under the existing market economy, recycling and reuse efforts on a local community level, which are inseparable from a large scale recycling system, are equally necessary.

"Rapidly Chargeable/Dischargeable Batteries with Excellent Benefit for Less Energy Consumption Society"

Shunji Kishida, Masato Shirakata and Masaharu Satoh *NEC*

Currently under development are Li ion(Mn) batteries and organic radical batteries which realize high power density, quick charging and discharging, lightweight and long life, as well as low toxicity and freedom from rare resource drain issues.

In contrast to conventional cells, in which the practicality of "power storage technology" was subjected to numerous constraints, resulting in relatively inefficient storage, these new aforementioned cells can realize a far higher efficiency of utilization, thereby greatly promoting less energy consumption in society.

For example, as the use and spread of such batteries in hybrid vehicles increases, fuel consumption is expected to improve substantially due to the enhanced efficiency of regenerative braking systems. In addition, the spread of power storage through the use of these high-performance batteries will enable the power demand to level off and bring to society the effects of energy saving and conservation of natural resources through the promotion and spread of highly efficient small-lot distributed power generation.

"Toward a Recycling Oriented Society - Polyester Fiber to Polyester Fiber Recycling -"

Akihiro Suzuoka *Teijin Fibers*

The Teijin Group established its Global Environmental Charter in 1992 and has been environmentally focused ever since. The company is now focusing on the development of technology for raw materials recycling, to recycle used products and utilize such materials to produce products of higher quality with less environmental load. Regarding polyester, the company is now performing three kinds of recycling processes to turn used polyester fibers into renewed polyester fiber, old PET bottles into new ones, and likewise, renew old polyester film back into new. The voluntary collection system, "Eco Circle," designed to recycle used polyester fibers, currently has 60 member companies, and they collect group and school uniforms, sporting clothes, menswear, and similar items. They are then recycled to be used in the manufacture of new company uniforms and general-purpose clothes, as well as office and interior equipment, and a wide range of other products. From materials produced with such collected products, products of a higher degree of purity than those based on petroleum also can be produced. Furthermore, compared with manufacturing polyester from petroleum, 84% of energy can be saved and carbon dioxide gas emissions can be reduced by 77%. In view of the importance of our global environment, we believe that to realize a society producing no mass waste through complete recycling of materials is important.

"Field Test of Home Network-Oriented Energy Conservation"

Toyoyuki Yamane *Matsushita Electric*

Various national projects have been promoted to assist greenhouse gas reduction, as specified in the Kyoto Protocol. As a part of these efforts to drastically reduce the ever-increasing energy consumption in the household sector, a field test of the Home Energy Management System (HEMS) was carried out featuring a sample of 300 general households in the Kansai District. HEMS aims at promoting energy conservation through automatic control of multiple household devices such as electrical home appliances and water heaters via home networks to significantly reduce energy consumption in the consumer sector. The HEMS is mainly characterized by: (1) automatic control functions, which limit wasteful power consumption to save energy, (2) information supply functions to raise the awareness of energy conservation, and (3) additional useful functions that monitor by capturing camera images and control equipment from a remote location. The field test showed that HEMS had reduced CO₂ emissions by 8.7%. Moreover, the test results demonstrated that HEMS was effective for energy conservation by such findings as: (1) The information Service function helps to raise user awareness concerning energy consumption, and (2) HEMS is effective not only for electricity, but also for reducing consumption of other forms of energy such as gas and petroleum. System commercialization requires further improvements, including an upgrade of automatic control functions and information content as well as the addition of convenient functions.

"Eco-Steel-Products"

Gen Yoshida *Nippon Steel*

An abundant raw material, easily identified thanks to its magnetism, returnable to nature, with a wealth of applications and only a small quantity of rare elements, steel products represent an excellent recyclable material. With this in mind, Nippon Steel is striving to optimize the lifecycle of steel, including its manufacturing process, while also continuing our efforts to address environmental challenges based on the conditions of usage by our customers. The environmental challenges tackled comprise all areas and regions, including: energy-saving to address global warming issues; reduction of the environmental risks of chemical substances; extending the lifespan, and facilitating recycling to encourage the effective use of resources. In the area of energy-saving, the company developed electromagnetic steel plates to increase the energy efficiency of motors used in vehicles and electrical appliances, and concerning measures against chemical substances, we developed chromate-free painted steel plates, in which resin films are developed without chromic acid, a substance that prevents deterioration due to rust. Moreover, we developed thinner steel cans, which promotes recycling and further resource conservation through weight reduction. In these ways the company is making tangible progress to reduce environmental load.

"Ways to Eco and Cost Efficient Computing: Thin to Rich Clients in Network Centric Computing"

Silvio Weeren *IBM Germany*

Overall system efficiency, including energy, should be considered for hardware and software components of computing tasks. Public procurement and other customer demand, if strong enough, could improve industry energy saving factors from 10 to 100 in the next 3-5 years. It is important to seek demand for energy efficiency data from suppliers, in addition to rewarding energy efficiency in tenders. Including life cycle considerations, such as Energy Star criteria, will help drive innovation. Thin and rich clients have the potential to reach higher levels of energy and cost efficiency with network centric computing; among other things, rich clients improve manageability while thin clients enable user mobility. Server consolidation, using virtual servers and such, grid computing, and a Climate Savers Program with WWF to reduce CO₂ by 4% annually are some of the energy management strategies at IBM integrated in the whole organization.

"The Passive House - A Low Energy Standard for the Present"

Ralph Wortmann *Wortmann & Scheerer*

Passive Houses (buildings that minimize the amount of energy consumed for lighting and air temperature control, by using "passive" solar energy), especially if used with energy saving household appliances, drastically saves on heating and electricity costs. A passive house design needs a compact building that is well insulated, no thermal bridges, a tight building envelope, high solar gains, and high efficient heat recovery for ventilation. Although initial investment costs are higher for a passive house, the cash value through energy reduction costs after 50 years is nearly triple that of even an efficient building with good insulation and windows, ventilation, and heat recovery.

Since the first prototype in 1992, there are now over 5,000 of them in Germany and Austria. A controlled ventilation system with high efficiency heat recovery is key to regulate air pressure while also getting filtered outside air. Shadowing simulations, and other computer simulations, have helped with technical design, low cost functionality, and brought improvements for residential and industrial developments. Hundreds of new products for the passive house have been developed, mostly by small and medium-sized businesses.

In order to start passive housing programs, support from government state-aided programs, universalities and such is needed, as well as quality management to test and evaluate new products. It also needs marketers, and training of architects, engineers and, equally as important, the craftsmen who build them.

Special Session

Environmental Labelling in the World

[1st Session] Future Trend of Environmental Labelling

This session introduced the trends of environmental labelling in the world (mainly Type I labels). The session also explored the development of international mutual recognition of ecolabels.

Keywords: **Environmental labelling, Mutual recognition on ecolabels**

Co-chairs: Seiji Taguchi *Japan Environmental Association (JEA)*

Ning Yu *Global Ecolabelling Network (GEN)*

"Introduction to the GEN, Its Members and Recent Initiatives/Activities"

Ning Yu *Global Ecolabelling Network (GEN)*

The Global Ecolabelling Network (GEN), founded in 1994, is a non-profit association of third-party environmental performance labelling organizations and pro environmental labelling associates. Two offices represent the GEN secretariat in Canada and Japan.

Type I Ecolabelling programs provide a logo pattern, which can be identified by consumers, and license applicants' products with best performance to display the logo. The first few years of a set criterion, for example refrigerators, would license only 20-30% of the products within this category. Preset criteria are announced to the public and manufacturers to apply, so that GEN acts as a credible and transparent third-party implementation and product certification body. Life cycle considerations are also taken into account.

Of GEN's 27 participants, most have had programs for 12 or 13 years, and cover all continents except Africa. GEN is also associated with Consumer's Choice Council and ISEAL Alliance.

GEN's mission includes fostering cooperation through capacity building and facilitating access to information, such as through a forum for general knowledge as well as technical assistance.

Some important developments include the Voluntary GEN International Coordinated Ecolabelling System, or GENICES, (under discussion), recommendations and guidance from WSSD, and discussion of ecolabelling programs and "unnecessary barriers to trade" with WTO.

"Future Development of 'Blue Angel'"

Wolfgang Lohrer *Federal Environmental Agency of Germany*

The Blue Angel ecolabel was introduced in 1978 to distinguish products with a special environmental friendliness, and the exclusion of harmful substances. Ecolabelling, as a voluntary instrument, permitted legislation in accordance with the precautionary principle, without creating trade barriers. Public awareness has been as high as 80%.

Over the past 10 years, there have been some notable developments in the Blue Angel program; many health risks have been eliminated, and criteria have taken sustainable development aspects, like LCA, into account. However, global competition and lower consumer spending, has resulted in fewer environmental considerations. In this situation, Blue Angel products are often at a disadvantage due to their higher prices. There are an estimated 1,000 different labels on the market, yet their specific backgrounds often remain unclear for consumers, and as a result consumers might take less notice of respectable labels as well. The European "flower" ecolabel is confronted with even more of the same problem. So, how should labelling continue in the future? Labelling has to follow the principles of accurate information, ecological optimization and transparency. Other important measures are increased public advertising, more emphasis on consumer benefits, and improved marketing strategy.

Ecolabels play an important role in public procurement - 13% of German GNP. There is also a call for international cooperation of ecolabelling systems, in the form of unilateral or mutual recognition, or common criteria for specific product groups. Lastly, sustainable consumption patterns, production and processing integration and corporate social responsibility are important areas to consider for the future.

"Future Development of the Nordic Swan - Two Ecolabels Side-by-Side"

Björn-Erik Lönn *The Nordic Ecolabelling Board*

The Nordic Swan and the EU Flower are run by the same organizations - private bodies on behalf of 5 countries with a total inhabitation of 25 million people. The Swan has issued 1,000 licenses in 48 out of 59 product groups; the most numerous in the product groups of printed matter, hotels, and laundry detergents. The first main goal is the possibility of the Swan as a trademark, with a 2 out of 3 awareness rate, ranking sixth in consumer trust. Another goal is to measure the environmental benefits of ecolabelling. Lastly, cooperation with other schemes to get more labelling, more labeled products, and more publicity in the media.

In the future we will see more theme based groups (office equipment, families with small children), work with services to increase demand for ecolabeled goods, and more fast-track criteria work outside of currently defined products, such as that seen in Canada.

There is a lot of promising evidence of cooperation and recognition between different schemes in the future, from Japan and Korea's agreement on copiers, and the discussion of GENICES at Global Ecolabelling Network (GEN). Another way to do this is to simply "borrow" criteria without any formal agreement.

"Mutual Recognition of Type I Labelling - Experiences of Korea"

Seung-Sik Moon *Korea Environmental Labelling Association*

Mutual recognition agreements (MRA) can remove obstacles to international trade, save time and cost for global companies, and follows WTO, ISO, and GEN principles and future aims. The four steps toward MRA are building of mutual trust, recognition of verification, harmonization of criteria, and integrated operation programs.

The Korean ecolabelling program was introduced in 1992, and now has 102 criteria, and certified 1,360 products from 430 companies. International cooperation through MRA has taken place through agreements, first with Thailand in 1992, also Taiwan, Australia (2003), and Japan (2003), in addition to common criteria development. The unique case with Australia resulted in the acceptance of Korean eco-labeled products acceptance by Australia's program without further verification. A previous MRA with China last year may need revision to be signed again.

Some obstacles arise in differences between "counter-partner" (government vs. private scheme), verification methods, and practical limitations like language. However, there are future plans for expansion of MRA into the industrial sector, sharing knowledge at the working level such as protocol preparation, GEN-level agreement including minimization of specific-country oriented criteria, as well as regional agreement like North Asian countries.

"China Environmental Labeling Program"

Xin Zhou *China Environmental United Certification Center*

China's environmental labeling was founded in 1993, and now has 70 categories of criteria (of those, 54 are currently used), over 12,000 products in 54 of these criteria, and saw a sharp increase in participating enterprises to more than 800 after WTO accession in 2001. Since late 2002, three organizations have been approved and authorized to carry out national environmental labeling certification: the Environmental Certification Center of China's State Environmental Protection Administration (SEPA), the technical committee, China's Certification Committee for Environmental Labeling Products (CCEL), and the China Environmental United Certification Center (CEC).

Strict certification procedures, which include quality, safety, hygiene, and on-site inspection, allow all parties of society to propose a new category for SEPA approval. All criteria are based on benefits to consumer health, protection of the natural environment and regional environment, and to sustainable development. There are many examples of laundry detergent labeling, and plastic packaging in relation to pollutants. International standards have been incorporated in eco-textile (Oko-Tex100) and computer (Tco99) criteria, in addition to products for the 2008 Olympics in Beijing. Research of foreign government green procurement policies and systems has also assisted SEPA to affect social consumption tendencies.

China's eco-labeling program aims at incorporating international standards, largely in accordance with ISO14020 series, type I standards. Although CEC is not currently a member of GEN, discussion with several GEN members, and the Nordic eco-labeling scheme will hopefully help realize China's membership in the future.

[2nd Session] Development of A New Program and Quantitative Evaluation of Environmental Labelling

This session introduced the trends of environmental labeling in the world (mainly Type I and III). The session also explored new developments in environmental labelling, including a new program, along with quantitative evaluation on environmental labels.

Keywords: **Environmental labelling, Quantitative evaluation on environmental labels**

Co-chairs: Seiji Taguchi *Japan Environmental Association (JEA)*

Ning Yu *Global Ecolabelling Network (GEN)*

"Indonesian Eco-label Program"

Mohammad Helmy *Ministry of Environment of Indonesia*

Since 1997, the Indonesian government has worked to develop an eco-label as an environmental management voluntary instrument. The Indonesian eco-label aims at a synergy of life cycle considerations and environmental impact control, encouraging supply and demand (such as through Type II self-declared labels), and preparing criteria and a certification system. The Indonesian logo features two leaves in a yin-yang configuration with *Ramah Lingkungan* ("Eco Friendly") written below.

Industries will apply to certification institutions, and then the auditor will evaluate the industry for a license to use the eco-label. There are now eco-label criteria for printing paper, textile and product textile, and powder detergent, plus drafts for leather, shoes, and tissue. Some important considerations for criteria are: 1) scope to define product category, 2) threshold value to review significant environmental aspects such as compliance with environmental regulations as well as the implementation of an environmental management system, 3) fulfillment of a quality standard and quality management, like environmentally friendly product packaging, and 4) testing method and verification.

Future plans are for the implementation of an eco-label accreditation and certification pilot project by the end of 2005, promote the program to large cities in Indonesia, capacity building for related bodies and personnel, acquiring technical support, and possible membership in GEN.

"Procedures for Establishing Ecological Criteria for the EU Eco-label"

Jill Michielssen *European Commission*

The European eco-label scheme covers some potential 375 million consumers, and is part of a broader strategy of the European Union commission to improve sustainable production and consumption patterns. The scheme is based on various legal aspects, and relies heavily on the European Union Eco-labeling Board (EUEB), as well as competent bodies of member states, and the Consultation Forum composed of representative stakeholders. Successful applicants for the eco-label will receive validation for a certain period of time, and pay an annual fee (0.15% of total sales in Europe in the previous year) to the competent body. Methodology for criteria is: feasibility and market study, life cycle considerations, improvement analysis and proposal of criteria. Currently there are 21 product groups, including textiles, tourism, and campsites, and 192 licenses.

The procedure for adopting eco-label criteria into practice is involvement of interested parties, and open consultation and transparency, while maintaining individual confidentiality. The committee or the EUEB itself initiates the draft procedure, and form a working group. If accepted, the draft is sent for Inter-Service Consultation (among director generals of the commission), then submitted to a regulatory committee, consisting of representatives of member states, which makes a vote. If a majority passes it, the criteria are published in the official journal, along with assessment and verification requirements.

"Status of Type III Environmental Label, Eco-Leaf"

Hideo Jibiki *Japan Environmental Management Association for Industry (JEMAI)*

EcoLeaf is a Type III label started in 2002. The label, which discloses to the general public information concerning the effects of a product or service on the environment, is characterized by its standardized display of quantified environmental data concerning a product, covering its full life cycle stages from raw material extraction, production, and distribution, to use and disposal/recycling based on the approach of LCA.

The label consists of three sheets: PEAD (Product Environmental Aspect Declaration), PEIDS (Product Environmental Information Data Sheet), and PDS (Product Data Sheet).

Particularly in regard to the PEAD sheet, estimated contributions to global warming, acid rain, energy consumption, etc., of a product are displayed plainly using a graph based on the unique notation and methods standardized under the Eco-Leaf mark. As of the end of August 2004, the cumulative number of products with registered labels is 159.

The advantages for an enterprise to register a label are that the enterprise can make use of helpful data and information collected by EcoLeaf toward the development of new products with less environmental load, as well as taking advantage of EcoLeaf mark's marketing value. In addition, local governments use this registration as an index for commending enterprises that are enthusiastic about environment-consciousness management. This label can be used for the purpose of green purchasing. The remaining issues for the future include efforts to further spread the program and expand the number and type of products.

<Summary>

The chair gave the following report that summarizes both the First and Second Sessions.

Ecolabels function as an economic incentive and facilitate the delivery of green products to the market. They are also a tool for educating consumers about the importance of green purchasing, as well as a policy tool that helps the government to lead to green consumption or green consumers, and sustainable development.

There are various kinds of ecolabels in the world, including Type I, Type II, Type III and even Type IV, and even labels like FAC that are used in one unique sector such as forestry products. They do not compete against each other but complement each other. The information provided by Type II, Type III and Type IV labels enable us to choose a product that provides the best environmental performance, and formulate the independent criteria for Type I labels.

There are various approaches to ecolabels. Five countries, for example, started the scheme of the Nordic Swan symbol, while the scheme of EU was started by twelve countries and currently implemented by 25 countries. In addition, there is an approach to build up mutual recognition among members in consideration of different approaches, different criteria, and different recognition procedures. This promotes recognition process and provides a great advantage for manufacturers that they have only to gain recognition under their relevant scheme.

There are five important issues for an ecolabel program. The first issue is what kind of criteria should be developed, or how to select product categories. The second one is concerning methods of recognition, specifically, how mutual reliance can be established among members. The third one is a promotion of the ecolabel program. The fourth is international cooperation, and lastly, it is to find sources of funding to maintain the ecolabel program.