

**Role of Business and  
Asian Countries in Climate Change Policies**

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**INTRODUCTION**

*Sustainable Consumption and Production* in Asia have gone a long way. For one, my organization – *the Asia Pacific Roundtable for Sustainable Consumption and Production (former Asia Pacific Roundtable for Cleaner Production)* was only organized in March 1998 – right after the First *Asia Pacific Roundtable for Cleaner Production* held in Bangkok, Thailand. Some participants felt that more than just a roundtable conference, there should be some action implementation of *Cleaner Production* theories and ideas presented in that first roundtable. As such – the APRCP is now moving towards its fifth (5th) roundtable to be held in Kuala Lumpur, Malaysia on March 15-18,2004.

*Sustainable Consumption* was introduced to the APRCP community sometime in September, 1998 when UNEP held its 5th High-level meeting at Phoenix Park, Korea. There was a Korean United Nations diplomat who was very keen on inviting participants to a *Sustainable Consumption* forum to be held at Jeju Island in Korea in January 1999. At that time, this was really something novel to people. SC would be broached in forums and conferences, both in Europe and the United States, but not much in Asia.

Remarkably, it was in 2000 that Asia was becoming more interested with SC. As for CP – everybody was saying....if it is so good – why has not it taken off or been embraced by the stakeholders especially the INDUSTRIES.

The *Asian Development Bank (ADB)* and particularly UNEP have been promoting it. The World Bank, too, and other donor organizations have likewise done the same. Last year, the ADB concluded that there is a lack of integrative approach especially among government agencies in Asia that made it difficult for the stakeholders to implement.

After the *World Summit on Sustainable Development (WSSD)* in September 2002 at Johannesburg, South Africa, it was resolved that *Sustainable Consumption and Production* be the theme and focus to further implement and carry out *Sustainable Development* among countries.

**SCP AND ENERGY**

*'The Asia Pacific region needs a coherent and effective framework for sustainable development – which inevitably has to mandate the rapid deployment of renewable energy and energy efficiency policies and practices'. (2004 Renewable Energy Foundation Limited/ World council for Renewable Energy Asia Pacific).*

The framework should be supported and implemented by governments and inter-governmental organizations with a focus on the appropriate energy policy formulation and adoption of specific sustainable energy strategies. Present development programs

have fossil fuel or nuclear based projects. Renewable energy and energy efficiency seems to be a difficult task to do.

However, the *Asia Pacific region* holds about one-third of the world's population. *Poverty alleviation or eradication* should be the centerpiece and platform of governments in the region. (*World Bank Report 2001 Asia Alternative Energy Programme, Status Report No.9 December, Washington, D.C.*)

Many donor organizations like the World Bank, the Asian Development Bank, InWent of Germany, UNIDO, UNEP, UNDP and others have this issue as their main agenda or objective

Due to rapid population growth rates, there has to be simultaneous, immediate economic development in order to arrest the widespread growth of poverty in the region the (*World Bank Report 2001 Asia Alternative Energy Programme, Status Report No.9 December, Washington, D.C.*)

Now is the time to have *renewable energy applications in the Asia Pacific region*. The sooner, the better...this is in line with the Millennium Development Goals. With ***Climate Change and Greenhouse Gases*** emerging – the only reasonable approach will be the concept of renewable energy.

### **ASIAN COUNTRIES STATUS:**

Asia has a great diversity that makes it difficult to undertake a unified project. It becomes more challenging because this diversity comes in terms of physical and geographical location, language, culture, religion, and indigenous communities. Some Asian countries such as, Malaysia and Thailand, have a more advanced status as regard renewable resources and energy.

Another dimension that compounds the problem above is the classification of these countries from the poorest to the wealthiest to adopt to environmental, economic, and social pressures.

The poorer ones have to primarily deal with their basic needs of food, clothing, and shelter. However, in order to address these needs, it needs to address first the energy poverty – the lack of ready access to locally generated, affordable, and easily replenished power and fuel. (Ibid, WCRE)

The wealthier ones, however, are threatened with dangerous and massive greenhouse gas emissions due to their dependence on fossil fuels. As such there is the threat of climate change.

### ***Main Constraints/ Problems***

Studies have demonstrated that the following are the main constraints in adopting renewable energy:

- Governments Policies
- Lack of Funds
- Raising Awarenesss

- Capacity-Building
- Capital Intensive
- Integrated Programs
- Transfer of Technologies

### ***Renewable Energy Programs Being Developed***

- ✓ Solar thermal
- ✓ Wind energy
- ✓ Photovoltaic
- ✓ Biomass
- ✓ Geothermal
- ✓ Small hydro power
- ✓ Energy from waste
- ✓ Ocean energy

### ***Challenges***

- ❖ Provide energy to large population in the developing countries
- ❖ Simultaneously reducing greenhouse gases emissions but addressing barriers

## **PATTERNS AND BEHAVIOR<sup>1</sup>**

### **CLEANER PRODUCTION AND SUSTAINABLE CONSUMPTION**

- **Raising Awareness**

UNEP may be the big driver to pushing Cleaner Production to where it is now in Asia and the region. As I mentioned earlier, the 5th UNEP High-level in Korea where they launched the *International Declaration of Cleaner Production* set the stage for its moving towards the direction it is today. Countries in Asia gave their support. It led to the initialization of the *National Cleaner Production Centers* in China, Vietnam, Sri Lanka, Korea and even before that in India and Australia and New Zealand. Other countries like the Philippines, Thailand, Malaysia, Indonesia, Japan, Singapore, Taiwan/Hongkong (Province of China), Nepal, Cambodia, Laos, Bangladesh likewise included CP in their environmental agendas.

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As mentioned earlier, the UN and some of its agencies, especially UNEP have also been in the forefront of promoting *Sustainable Consumption*. The non-government organizations (NGOs) particularly liked the idea, but promoting it was a different story. SC did not take off as fast as CP. Implementing it was even more difficult. It is really only after the year 2000 that SC was included in the environmental programs in Asia. During the last 4th APRCP big conference in Chiang Mai, Thailand...UNEP tried to broach the idea, especially after WSSD in Johannesburg, that in place of CP, it would be better to include SC. There were resistance actions from some stakeholders particularly those from the United States of America.

- **Obtaining Commitment**

UNEP's International Declaration on CP made a lot of countries in Asia commit to implementing CP in their programs. The Philippines, particularly, with the big support from UNDP led the *Business Agenda 21*, patterned after Rio de Janeiro's *AGENDA 21* for Philippine industries to make their environmental programs for the coming years. Similarly, other countries especially those that established the *National Cleaner Production Centers* like India, China, Vietnam, Sri Lanka, Korea, Australia had concrete CP programs. The other Asian countries adopted CP in other forms such as Waste Minimization, Pollution Prevention and similar programs.

As regards SC, it was mentioned that UNEP, UNDP, World Bank and other donor organizations led the way for the commitment of SC...but it did not take off as fast as the CP programs.

- **Building National Capacities/ Education & Training<sup>2</sup>**

International Donors through the bilateral or multilateral agreements made it possible for the Asian countries such as India, Korea, Vietnam, Sri Lanka, China to set up their *National Cleaner Production Centers (NCPC)*. The Swiss Government, together with UNEP and UNIDO were responsible for the assistance given to the NCPC in Vietnam. The Asian Development Bank, UNIDO, UNEP led the way for the establishment of the NCPC in Sri Lanka. UNIDO and UNEP greatly gave their assistance to the India, China, and Korea NCPCs. Other Asian countries that still don't have their NCPCs are able to include and adopt CP Programmes and Agendas by networking with UNEP, UNIDO, ADB, World Bank, CDG/InWent; GTZ, DSE and other programs of

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Germany, Norway, Sweden, Denmark and the donor-led organizations that have substantial relevant CP projects and programs.

An example is the proliferation and adoption of CP/EMS projects in these Asian countries. The emerging *Environmental Management Accounting (Cost Accounting)* has been developed in countries like the Philippines with the assistance of the CDG/InWent of Germany. They have brought trainers from Germany to train their local counterparts in Asia. Training seminars and workshops have been done in countries such as the Philippines, Vietnam, Indonesia, Thailand, and some others. Local accountants have developed and tailored the Environmental Management Accounting programs to the local culture. These included the development of *Environmental Performance Indicators*. This development is still at its infancy stage, but the Asian countries are already included in the *Environmental Management Accounting Association* developed in Europe and the Americas.

In the arena of education, it is Australia that led the way in the establishment of CP courses, in the undergraduate and graduate levels. Partnerships with the European Academic sector have been formed. An example is the International Institute for Industry, Environment, and Economics (IIIEE) of Sweden that has undertaken a partnership program in Japan and India regarding CP programs and courses. There are others that have similar programs in Thailand, Malaysia, Taiwan, Hongkong, Philippines, Indonesia. The Norwegian Cleaner Production Capacity Building Programme has partnered with the Sri Lanka NCPC as regards capacity-building and education of CP programs.

In the area of SC, it is the local consumer organizations that promoted SC but only to a certain extent. The programs did not receive as much attention as the CP programs where the donor organizations were more active.

- **CP DEMO PROJECTS<sup>3</sup>**

There have been successful CP Demo projects in Asia. Such examples are the DESIRE project in India with the textile, paper, and other industries. UNIDO fully supported this project. In Indonesia, there was the BAPEDAL project with the support of GTZ of Germany. The Asian Productivity Organization (APO) with 18 member countries in Asia have worked with industries such as the textile, pulp and paper, metal finishing, tanneries, cement and other sectors with a focus on SMEs.

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The Carl Duisberg Gesellschaft (CDG) now InWent of Germany carried out CP projects in the Philippines, Vietnam, Indonesia, Thailand, Cambodia, Laos and other Asian countries. They introduced *Environmental Management Systems (EMS)* programs and projects together with local organizations to ensure the success of their projects. In the Philippines alone, they have trained hundreds of people and organizations on EMS and EMA through a demo project carried out in eight (8) months. They have done likewise in the other countries.

The Asian Development Bank had a Technical Assistance (TA) project in Sri Lanka and Indonesia wherein CP programs (such as the adoption of EMS/EMA) were introduced. The CP project in the Philippines is still being undertaken with the introduction of CP Technologies and Environmental Performance Indicators.

The United Nations Development Program (UNDP) is currently undertaking a similar project with export-oriented companies in the Philippines, wherein these companies have to develop and implement *the Environmental Management Systems (EMS) and the Environmental Management Accounting (EMA)* as part of the improvement of their economic, social, and environmental performance.

The Philippine Business for Social Progress together with the United States Asia Environmental Partnership is likewise having the 'greening of the supply' chain with several large and medium enterprises in order to improve their operations and efficiencies.

These Demo Projects have improved the air and water quality in the Asian countries such as those handled by the Asian Productivity Organizations where continuous programs have been undertaken with their greening productivity activities. They are also active in doing the 'greening of the supply chain' program. They have been active in mobilizing international and local trainers to do various similar CP programs.

In Thailand, the Asian Development Bank, World Bank, UNEP, DANIDA, GTZ, InWent and a lot of other donor organizations also have CP Demo projects that have greatly improved the air and water quality of industries and the solid waste activities in the country.

In Cambodia, Laos, Bangladesh, these same donor organizations have introduced CP concepts and practices. Some have been very successful as evidenced during the 4th APRCP conference in Chiang Mai, Thailand where papers were presented regarding these stories.

The success of China is a whole story by itself. UNEP, the Asian Development Bank, World Bank, and a lot of donor organizations have been assisting China in improving their environmental performance. These efforts have paid off because the Chinese integrated approach is now the focus of other Asian countries as to how they became successful in their approach. The recently concluded UNCTAD workshop held in Bangkok, Thailand for the shoe and leather industries demonstrated the beautiful integrative approach that China has taken in preparing the country for the coming *World Trade Organization* programs. They have the early warning systems for these industries; an

inventory database program of the banned toxic and hazardous wastes involved; the statistics of other countries export and import of the commodities that will compete with their products and an integrated strategy approach on how to best compete with the market in order to have the proper market access, penetration, and share. For that matter, China now has more than fifty (50) percent of the global market share in the shoe industry.

Japan, Australia, New Zealand, Singapore, Korea, Malaysia have similar CP demo success projects and these may be found in the UNEP reports that are available in their website and other UNEP forms of communication.

As for Sustainable Consumption, programs were not done through the demo project approach but more on consumer information and education as well as consumer protection through the various consumer organizations.

If one were to gauge the 3Rs advocated by the CP programs, then in this way, Sustainable Consumption was and is successful. More and more, consumers have been educated as to the repair, reuse, and recycling of their products. More will be given about this in the coming pages.

- **Networking/ Partnerships<sup>4</sup>**

The Roundtables, conferences, workshops continuously going on in Asia indicates the strong networking and partnerships that have occurred since the launch of CP. An important tool of these networking and partnerships are the websites of the different stakeholders in each country. It demonstrates the power of the information technologies. The internet, e-mails, and similar tools have been instrumental in the rise of more networking and partnerships in the region. These have strengthened the networking and partnerships of the CP community. It gave rise to more exchanges of information, activities and other programs. Both developed and developing economies in the Asian region benefitted from the advancement of the information technologies.

The European-ASEM or Asia Environmental Management Program have been conducted in countries such as China and the Philippines. The Graz University of Technology had a workshop in Cebu, Philippines with forty European and Asian participants on *Sustainable Consumption and Production* and the innovations that have evolved.

The World Business Council for Sustainable Development has been promoting their *Eco-efficiency programs* in the region. The ECOPROFIT in Austria has reached Bangkok, Thailand and other Indonesian programs. The Regional Institute for Environment (RIET) of Singapore together with the European Commission has undertaken many partnerships in the region. Their programs covered the CP and SC agendas.

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UNEP has been the most active in the networking and partnership activities. Since their launch of the Declaration of CP, continuous CP programs have been adopted. They have done this together with UNIDO, UNDP, and other donor organizations. The examples in China is an evidence of their CP successful program. The NCPCenters are another indicators of their successful CP networking and partnerships.

- **Technology & Cooperation<sup>5</sup>**

The multilateral environmental agreements such as the *Basel Convention*, *Stockholm Convention on Persistent Organic Pollutants (POPs Convention)*, *Montreal Protocol*, *CITES*, and the *UN Framework Convention on Climate Change* have been major DRIVERS in the cleaner technology market. Most of the Asian Countries are signatories to these agreements.

Other drivers are the *Foreign Direct Investments (FDIs)* that have led the Asian countries to adopt Cleaner Technologies. Others are the *Ecolabeling and ISO-14000 activities*. These have greatly affected textile, leather tanning, metal finishing, food, pulp and paper, cement, steel, electronics industries to look for better alternatives in the elimination of their toxic and hazardous chemicals. Most of all the *Cleaner Production Approach*, where reduction of these wastes are done at source made the *Greening of the Supply Chain* a successful program in these Asian Countries.

The above in turn led to the innovative CP-Financing programmes of which UNEP was highly instrumental in introducing this framework to countries in the African and Latin American continents. They have done the same approach in Vietnam and Australia. They still have to undertake a major program in Asia as regards this program. The World Bank and the Asian Development Bank have had TA projects in this regards. They have undertaken the promotion of Handbooks relevant and useful to CP.

As for Sustainable Consumption, it is the ecolabeling programs that have pushed SC. Australia has completed a project to introduce LCA in to the construction industry and software package (LCAid) – see UNEP Publication on *Tracking progress...(see reference)*. However, not all countries in Asia have really adopted this program.

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- **CP Policies & Strategies<sup>6</sup>**

China leads the way in having CP as a legislative policy. Like Australia, they have successfully placed the *National Cleaner Production Strategy* in their legislation. This provided them with an overreaching framework for a more integrated approach to *Cleaner Production* encompassing process, product, services, and consumption.

Australia has a range of economic measures to promote more sustainable consumption, particularly at the state level.

As such they are prepared for the market and WTO. This likewise makes them attuned with the Asia Pacific Economic Cooperation (APEC) which formally adopted a CP strategy in 1997.

The Asian Development Bank supported a Regional Environmental Technical Assistance Programmes for the Promotion of Cleaner Production Policies and Practices in Selected Developing Member Countries such as Thailand, Philippines, Indonesia, Vietnam, and India. Each country came out with their National Strategic Action Plan with the adoption of CP in all sectors. A review of past, present, and future CP programmes was also included.

Lately, the Asian Countries like the Philippines, Indonesia, Thailand, Vietnam, India and some others have included CP in their legislation. The markets have already influenced both production and consumption by the building of awareness by way of the ecolabeling programs, establishing voluntary codes of conducts, greening of the supply chain or simply implementing environmental management systems (EMS).

As mentioned earlier, for the Sustainable Consumption activities, it is the 3Rs, green procurement and media and advertising that are the major DRIVERS. Korea, Japan, Malaysia, Taiwan (Province of China), Australia are the major Asian countries that have clearly demonstrated that these practices have been successfully adopted. China's Consumer Association has put '*green consumption*' on its agenda as the main theme of the current century to advocate and promote sustainable consumption among Chinese consumers.

UNEP has observed that the Asia Pacific region *needs to focus on supply chain models to influence CP especially in SMEs. The region also has to take up the infrastructure and service sectors as PRIORITY SECTORS for Cleaner Production INTERVENTIONS. There is also a need in the region to CONVINCING the National Governments towards MAINSTREAMING CP in their policies and regulations. (UNEP SC & CP Global Status Report 2002).*

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## **CONCLUSION:**

In conclusion, for Sustainable Consumption and Production to be successful in Climate Change Policies, the following measures need to be undertaken (according to the UNEP report and survey):

1. A formal integration between Cleaner Production and Sustainable Consumption may provide a concurrent framework that guides producers and consumer behavior on lines more aligned with the long-term objectives of sustainable development. This may be gleaned with the successful integrated approach of China in their leather and shoe industry; the same hold for Vietnam
2. CP promoters must establish, document, and communicate the CP Implementation Principles and Processes that can be commonly understood and applied across all sectors and by all stakeholders
3. It may be strategic to establish a synergy between Cleaner Production and implementation of various Multilateral Environment Agreements (MEAs) at the national level ( an example is the close coordination among NCPCs globally through UNIDO and UNEPs' efforts)
4. Determine which governments know about the UN Guidelines for Consumer Protection and what they have accomplished. Identify good practices and lessons learnt from other countries. Raise awareness of the UN Guidelines for Consumer Protection (see Section G: Promotion Of Sustainable Consumption of the UNEP Publication on *Tracking Progress: implementing sustainable consumption policies*)
5. It is vital to expand the vision and agenda of CPCs and NCPCs and to equip them with skills to run the Centers like Strategic Business Units and for them to establish models and approaches for future CPCs and NCPCs to follow (there should be adequate positioning to mainstream CP and SC in national policies and regulatory framework. There should also be close partnerships with the financing institutions, technology development agencies, and consumer-based environmental NGOs
6. CP could provide an excellent platform to address minimization of health and safety-related risks while meeting the market demands of codes of conduct, brands, and eco-labels. As such, supply-chain based approaches may be more useful
7. Cleaner Production and Sustainable Consumption should be covered in all sectors and by all stakeholders, especially the private sector. It should be knowledge-based and should be multiplied
8. Education, information dissemination and communication are important drivers to ensure its success
9. CP implementation would be accelerated if it were stressed through the national policy framework, as in the case of mandatory CP assessments for critical aspects of appraisal and risk analysis
10. CP must be integrated in the standard project appraisal process as well as in the risk management framework when it comes to retrospective financing or operation of cluster loans
11. Building of local level multi-stakeholder partnerships greatly ensures the adoption of CP and SC. The increased role of the private sector and community ensures ownership and on-going support of integrative multistakeholder CP and SC implementation programs

In closing – let me point out that UNEP suggest that many of the strategic interventions described above HAVE TO BE INTERRELATED AND SHOULD BE INDEPENDENTLY CONSIDERED. To achieve this – there has to be pre-consultations meetings with all stakeholders involved, identifying needed pre-requisites and overcoming barriers.

“An expanded charter of Cleaner Production along with Sustainable Consumption will perhaps show the way – by obtaining commitments at all levels and by establishing new partnerships between government, business, and communities – to take forward the *Agenda of Sustainable Development*. (*ibid*, *UNEP Global Status Report 2002*)<sup>7</sup>

### **RECOMMENDATIONS:**

- ❖ increase access to energy services by the poor
- ❖ realize other strategic development objectives
- ❖ to encourage investments in renewable energy, energy efficiency and greenhouse gas abatement technologies in developing member countries
- ❖ help reduce greenhouse gas emissions
- ❖ develop capacities of national policymakers, technical experts, and staff of financing institutions for promoting renewable energy, energy efficiency and greenhouse gas abatement
- ❖ support policy, regulatory, and institutional reforms, including removal of energy pricing distortions
- ❖ facilitate access to private sector financing

### **REFERENCES:**

*Sustainable Consumption and Cleaner Production, Global Status 2002, UNEP Publication 2002. United Nations Environment Programme, Division of Technology, Industry, and Economics. Paris, France. 23 pp.*

*Status Report Cleaner Production in Asia Pacific, UNEP Publication, 2nd Edition 2001. United Nations Environment Programme, Bangkok; Asia Pacific Roundtable for Cleaner Production; Thailand Environment Institute. 59 pp.*

Tracking Progress: Implementing Sustainable Consumption Policies, a global review of implementation of the United Nations Guidelines for Consumer Protection. UNEP Publication, First edition 2002. United Nations Environment

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<sup>7</sup> **Olivia la O' Castillo, D.B.A.**  
**Chair/President – Asia Pacific Roundtable for Sustainable Consumption and Production**

Programme, Division of Technology, Industry, and Economics. Paris, France  
and Consumers International. May 2002. 80 pp.

Asia Pacific Roundtable for Cleaner Production Website: [www.aprcp.org](http://www.aprcp.org)