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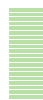


ASIA PACIFIC EXPERT MEETING

**ON PROMOTING
SUSTAINABLE CONSUMPTION
AND PRODUCTION PATTERNS**

**YOGYAKARTA, INDONESIA
21 – 23 MAY 2003**

BACKGROUND PAPER



FORGING NEW PATHS TO SUSTAINABLE DEVELOPMENT

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Abbreviations and acronyms

ADB	Asian Development Bank
CI	Consumers International
CP	Cleaner Production
CPC	Cleaner Production Centre
CSD	Commission on Sustainable Development
DTIE	Division of Technology, Industry and Economics (UNEP)
EMS	Environmental Management Systems
EST	Environmentally Sound Technologies
GEMF	Global Ministerial Environment Forum
GNI	Gross National Income
GP	Green Productivity
IDCP	International Declaration on Cleaner Production
ILO	International Labour Organisation
LCA	Life Cycle Assessment
NCPC	National Cleaner Production Centre
NGO	Non-Governmental Organisations
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing Power Parity
SC	Sustainable Consumption
SD	Sustainable Development
SETAC	Society of Environmental Toxicology and Chemistry
SME	Small and Medium-sized Enterprises
SPC	Sustainable Production and Consumption
UNCED	United Nations Conference on Environment and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational and Scientific Organisation
UNIDO	United Nations Industrial Development Organisation
USAID	United States Agency for International Development
WB	World Bank
WSSD	World Summit on Sustainable Development

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The author would like to extend his gratitude to everyone who commented on the drafts.

Sydney, May 2003



**UNEP Sustainable
Consumption website:**

www.uneptie.org/sustain



**UNEP Cleaner
Production website:**

www.uneptie.org/cp

1. Introduction

Unsustainable consumption and production patterns remain a firm constraint on sustainable development. Remedial actions by various bodies, including UN DESA and UNEP, have expanded in recent years and significant results have been achieved for more sustainable production. This is however being offset by increases in overall consumption levels. The problem is that population growth and economic development are driving increases in consumption levels, which has the effect of negating environmental improvements made at the production side. Increased consumption levels by almost 1 billion consumers in developed countries and 800 million middle-high income consumers in developing countries is putting unprecedented pressure on natural ecosystems.

Greenhouse gas emissions continue to climb, world forest cover has declined by 2.4% since 1990, and a third of global fish stocks are at serious risk.¹ In dire contrast to the developing world's emerging middle class is the 2.8 billion people living on less than \$2 per day. Social and environmental concerns, such as poverty, health, labour rights, deforestation, air pollution and biodiversity loss are inextricably linked to unsustainable patterns of consumption and production.

The last half-century has been one of unparalleled economic activity and subsequent strides in human development. The world's population has doubled to 6.2 billion since 1950, while the gross world product has expanded sevenfold in the same period. Such trends have resulted in large increases in production and consumption of energy, materials and consumer goods. For instance, global oil consumption and paper production have both more than tripled since the early 1960s.² If recent trends continue unabated, consumption expenditures are expected to rise rapidly in coming years.

Box 1A: Consumption inequalities

- Spending on overall household consumption worldwide increased 68 per cent between 1980 and 1998.
- Almost 1.3 billion people live on less than \$1 a day and close to 1 billion cannot meet their basic consumption requirements.
- 80 per cent of the total of \$19.3 trillion in household consumption in 1998 took place in high-income countries, while low-income countries accounted for only 4% of all private consumption.
- 200 million vehicles will be added to the global car fleet if car ownership in China, India, and Indonesia reaches the current world average of 90 vehicles per 1,000 people, roughly double the number of cars in the United States of America today.
- World energy production rose 42 per cent between 1980 and 2000, and is projected under status quo conditions to grow 150-230 per cent by 2050.
- 70 per cent of all freshwater withdrawal is for use in agriculture, where inefficiency abounds; over half of the water drawn for agriculture is lost to leakage and evaporation.
- Television ownership increased five-fold in the East Asia and Pacific region between 1985 and 1997.
- The average citizen of the industrial world consumes 9 times as much paper as the average citizen of the developing world, although consumption is rising fast in many developing countries.

Source: UNEP 2003 (22nd Governing Council discussion paper)

The social and environmental consequences will be dramatic. It is time for stakeholders to look to the challenges and opportunities with renewed vigour.

The inequalities in consumption are striking (see Box 1A). But poverty eradication remains the most pressing issue. Over 2 billion people worldwide battle to meet their daily consumption requirements. The Asia Pacific region is home to an estimated 70% of them. A key element of the outcomes of the 2002 World Summit on Sustainable Development (WSSD) was the need to integrate the issue of production and consumption patterns into sustainable development policies, including into poverty reduction strategies.

Northern consumption patterns are without doubt unsustainable and will require available intellectual and technological skills to reorient the trends. In comparison, is the need in much of the South for increased access to crucial goods and services so that people can find a way out of poverty. However, the changes must occur in respect of ecological and social factors.

The coexistence of very poor and very rich people in developing countries, particularly in Asia Pacific, should also be recognised in strategic thinking.

“China’s remarkably low per capita consumption pattern is an opportunity to avoid the mistakes of many other countries that have developed very high levels of material and energy consumption. Moving towards more sustainable consumption patterns could lead to more competitive domestic enterprises and greater access to international markets.”

China Council for International Cooperation on Environment and Development

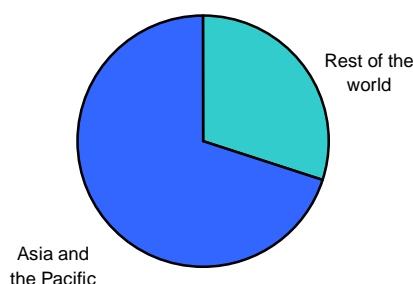
“China is a developing country with a huge population and limited per capita resources. So it is most important for China to advance sustainable consumption and production and ensure sustainable development. ‘Green consumption’ has been put on the agenda as the main theme for action in the current century.”

China Consumers Association

A process of de-linking economic growth from social and environmental degradation must involve an increased efficiency in energy and water uses, waste reduction,

stimulation of a life-cycle economy, decreased externalisation of cost and make practice of the polluter-pays principle widespread. Importantly consumers must be informed, educated and empowered.

Over 70% of Poor: Asia and the Pacific



A strengthened and integrated implementation of consumption and production policies will be a vital asset in any de-linking efforts. Stimulating product and technology innovation along with consumption patterns based on providing optimal combinations of products and services (product service systems) should also be further explored (see Section 4).

The expectation is that goodwill agreements made since the announcement of the *Agenda 21* goals (1992) which attest major social and environmental stress to consumption and production patterns, and that propose sustainable consumption (“Chapter 4”) and cleaner production (“Chapter 20 and 30”) as solutions, will be upheld. In a positive development the WSSD (2002) Plan of Implementation (“Chapter 3”) calls for the “development of a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production patterns that will promote social and economic development within the carrying capacity of ecosystems.”

UNEP played a key role in the WSSD preparatory process and will now pursue the goals of the Plan of Implementation with great endeavour in co-operation with international organisations (incl. UN DESA, UNIDO, OECD), governments, industry, NGOs and consumer groups worldwide.

2. Advancing sustainable consumption and production patterns

In the past decade the 'consumption and production patterns' agenda has clearly switched from discussion and non-integrated initiatives to implementation and progress monitoring.

A range of actors, including governments, NGOs, industry and international organisations like UN DESA, UNDP, UNIDO and OECD are involved.

UNEP, through its Division of Technology, Industry and Economics (DTIE), has played an active role in promoting sustainable consumption and production worldwide. The UNEP Cleaner Production (CP) programme launched in 1989 and the Sustainable Consumption (SC) programme launched ten years later in 1999 continue to mobilise political action, raise awareness, train key people and build capacities, conduct research and measure progress.

This section discusses the two main interconnected components of the plan to achieve sustainable consumption and production patterns: 1. Cleaner Production (CP), 2. Sustainable Consumption (SC). The ultimate need for further integration of consumption and production strategies and initiatives is also explored.

Some major SC and CP accomplishments are highlighted, see Section 3 for specific achievements in the Asia Pacific region.

Cleaner Production defined

Cleaner Production in essence is the pursuit to conserve materials and reduce waste. It is a holistic environmental management strategy, a continuous approach that goes further than one-off activities.³ A range of techniques are on offer that can induce increased productivity, cost reductions for industry, and reduced risk to the environment.

Ever since its inception in 1989, UNEP's Cleaner Production programme has been instrumental in promoting Cleaner Production (CP) around the world. CP was recognised by the Rio Earth Summit's *Agenda 21* as an important strategy for minimising environmental impacts from production processes. Major references to CP and environmentally sound technologies (EST) are made in both Chapter 20 and Chapter 30 of the *Agenda 21* document.

UNEP DTIE's definition of CP presents a systemic approach, encompassing process-orientated concepts such as eco-efficiency, pollution prevention, waste minimisation, and source reduction. "*Cleaner Production is the continuous application of an integrated preventive environmental strategy to processes, products, and services to increase overall efficiency, and reduce risks to humans and the environment. Cleaner Production can be applied to the processes used in any industry, to products themselves and to various services provided to society*".

Progress thus far...

Awareness raising actions have been successful in spreading knowledge of CP across a wide range of stakeholders. The National Cleaner Production Centres (NCPCs) and Cleaner Production Centres (CPCs) have conducted seminars and workshops and manuals, videos and brochures published. Other innovative approaches have also emerged, including the Eco-Efficiency Calendar for Small and Medium Enterprises (SMEs) and the Eco-Accounting Book for Households in Japan.

Two main instruments in spreading CP implementation have been the establishment of National Cleaner Production Centres (NCPCs) and adoption of an International Declaration on Cleaner Production (IDCP). The UNEP/UNIDO NCPCs and other cleaner production centres (CPCs) play a critical role in building

national capacities and encouraging networking on CP (see Box 2A). The IDCP outlines a set of principles that encourage CP implementation and measure progress. The IDCP also acts to improve understanding of CP and provides an opportunity for all stakeholders to demonstrate their support (see Box 2B).

Conducting demonstration projects has been key to CP implementation. Quite often such projects are necessary to allow for the testing, adaptation and optimisation of equipment or technology and to build capacity within industry. NCPCs are key supporters of this process, and collectively they have conducted more than 1000 demonstration projects in diverse industrial sectors. There have also been a large number of successful demonstrations carried out in developed countries including PRISMA in the Netherlands, Landskrona in Sweden, SPURT in Denmark, and AIRE/CALDER and Catalyst in the UK.⁴ International donors such as UNIDO, UNEP and USAID have supported many of these efforts.

Information sharing and networking activities have flourished in recent years. UNEP has organised seven biannual International High-Level Seminars on CP, while a host of other regional roundtables and workshops have also taken place. Other networking platforms that share experiences include the Greening of Industrial Networks (GIN), International Green Productivity Association (IGPA), World Cleaner Production Society (WCPS), InWent's (formerly CDG) Latin American Network, and the Canadian C2P2 network. The International Cleaner Production Information Clearinghouse (ICPIC) provides sources on which centres are active in CP, fundamental CP documents and key CP related web-sites.

Collaborative approaches are needed for effective CP implementation. Stakeholders are increasingly joining efforts in innovative partnerships. Examples of partnerships include Waste Minimisation Clubs, community-business partnerships (e.g. Victorian Environment Improvement Plan Programme) and business-business partnerships (e.g. National Productivity Council in India).

CP education and training is another emerging area. There are currently about 50 undergraduate/graduate CP education programmes worldwide. Journals dedicated to CP have also been established, including the Journal of Cleaner Production and Journal of Industrial Ecology. Training has also continued to expand with various train-the-trainer activities supported by training kits from UNEP, UNIDO and InWent along with others.

Box 2A: National Cleaner Production Centres (NCPCs)

In order to establish models for CP capacity building at the national level, UNIDO and UNEP initiated a National Cleaner Production Centre (NCPC) programme. Today, 23 NCPCs span the globe ensuring adoption and further development of the CP concept. NCPCs conduct training, publish guidance manuals and carry out CP Opportunity Assessments. NCPCs have been instrumental in setting up local Cleaner Production centres (CPCs) of which there are now over 50 worldwide. CPCs are able to provide CP solutions tailored to local conditions. China, for example, has a network of 24 CPCs in the various provinces which draw on the technical experience of the NCPC.

NCPCs have been identified as component partners for major projects being sponsored by international donors such as USAID, Swiss Government, and the World Bank.

The global reach and network that has been established by the centres is significant. The wealth of knowledge available ensures the provision of better services to those aspiring to CP expertise. Centres are now in the position to further expand their service package from the mainstays of demonstration projects and other awareness raising and capacity building functions.

Financial support is needed to promote CP and CP investments. Financing CP has been supported by a number of international donors and in particular the government of Norway. Examples include the NEFCO Revolving Facility for CP investments, UNEP CP Financing Programme, and the CleanTech Fund.

However, overall the progress toward the development of CP policies and strategies has been slow, though the kind of policies adopted has expanded. Developing countries have been shown to mainly prefer the use of grants, research, subsidies and development programmes, whereas countries such as Australia, the United States and the countries within the European Union have made legislative changes that focus on promotion and voluntary instruments. While Australia may lead the region in terms of adopting a national CP policy, other countries have included the CP approach in their national development plans, including China, India, Indonesia, New Zealand, Republic of Korea, Singapore, Sri Lanka, and Thailand.

Box 2B: International Declaration on Cleaner Production (IDCP)

In 1998, UNEP launched the International Declaration on Cleaner Production (IDCP). As of January 2003, the IDCP had over 375 signatories and had been translated into 15 languages. The IDCP acts as an effective tool to mobilise commitment from the various stakeholders. Signatories have been gathered from national governments, companies, universities, associations and local and state authorities.

Specific goals of the International Declaration on CP include the following:

- Encouraging support for the adoption of the CP approach as a prudent economic investment;
- Renewing and intensifying the commitment to CP by industrial and governmental leaders so that they become the local promoters of this strategy;
- Promoting international cooperation and technology transfer to maximize the results and synergies among CP initiatives worldwide;
- Diversifying and broadening the awareness beyond the typical users of CP, thereby, increasing the overall demand; and
- Spreading awareness of CP as a preferred solution to the unsustainable production and consumption of goods and services, in a way that society and community leaders understand exactly how this strategy works and the benefits

The Asian Development Bank (ADB) has made progress promoting policy implementation in the Asia Pacific region, including integrating CP into industrial development in Sri Lanka (see Box 3B). But more remains to be done before government policies are fully based on life cycle approaches.

Sustainable Consumption defined

The need to combat unsustainable consumption patterns gained crucial international attention at the Rio Earth Summit (UNCED) in 1992. The 4th Chapter of Agenda 21 (adopted at the 1992 Summit) deals explicitly with 'Changing Consumption Patterns' and presents strategies for achieving the Agenda 21 goals.

In 1995, the United Nations Commission on Sustainable Development (UN CSD) adopted the working definition of sustainable consumption as: 'the use of services and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle so as not to jeopardise the needs of future generations.'

Since then, global action has evolved from multi-stakeholder discussions and clarification of meanings to a range of promising initiatives, including new innovative approaches proposed by UNEP that will be discussed in Section 4.

Sustainable Consumption (SC) was born from the need to address a range of challenges including social and environmental impacts arising from a well-documented explosion in global consumption expenditure. SC also encompasses important factors such as equity, poverty, quality of life, labour rights, life-cycle thinking, and an appreciation that SC can mean both consuming more and consuming differently, depending on the circumstances. Responsibilities may differ – with developed economies expected to take the lead – but it is clear that all countries and

all stakeholders must play a role in pursuing sustainable consumption patterns.

Progress thus far...


An impressive array of actors have begun to promote and achieve sustainable consumption. UN agencies and international organisations including the UN DESA, UNEP, OECD, UNDP, along with NGOs, research institutes, consumer organisations, industry and governments have implemented various initiatives over the past ten years.

Amongst the most widespread are initiatives focusing on reuse and recycling, eco-design, eco-labelling and certification programmes, product testing by consumer groups and awareness-raising campaigns. Technology and scientific research has played a part with tools such as environmental management systems (EMS), life-cycle approaches, eco-design, green supply chains, sustainable procurement and environmental reporting are being developed.

Arising from growing consumer interest in the 'world behind the product' and a desire to mobilise action in demand-side activities, UNEP launched its Sustainable Consumption (SC) programme in 1999. The UNEP SC programme has recently become the principal driver of global action in the sustainable consumption field. Sectors such as retail, market research, and advertising have been engaged, along with governments, youth and consumer groups in research, information sharing, capacity building and progress monitoring activities. In 2002, UNEP launched a new Life-Cycle Initiative that is bringing together industry leaders, academics and policy makers (see Box).

UNEP's series of informal regional consultations on SC in Africa, Asia Pacific, Eastern Europe and Latin America and the Caribbean, have been instrumental in advancing action-planning, information sharing and strategic thinking on the issue. UNEP recognises the special needs of developing countries. Specifically in terms of how SC is linked to poverty eradication and creating business opportunities. Therefore,

UNEP supports capacity building programmes that raise awareness and inform and train decision-makers.

The UNEP / SETAC Life Cycle Initiative builds on the ISO 14040 standards and intends to establish approaches with best practice for a Life Cycle Economy.

The specific aims are:

- Exchange of information on the conditions for successful application of LCA and Life Cycle Thinking
- Exchange of information about the interface between LCA and other tools
- Implementation of educational activities related to the application of LCA and Life Cycle Thinking
- Enhancement of the availability of sound LCA data and methods
- Provision of guidance on the use of LCA data and methods

Web: www.uneptie.org/sustain/lcinitiative

The UN Department of Economic and Social Affairs (DESA) supports a work programme on 'changing consumption and production patterns' through which some notable achievements have resulted. For example, the development of a core set of Indicators for Changing Consumption and Production Patterns and efforts to update the UN Consumer Protection Guidelines with sustainable consumption. The OECD has also embarked on work on household consumption indicators for such sectors as waste, water and energy, and has outlined SC trends and policies in OECD countries along with policies to promote SC.⁵ UNDP's Human Development Report (1998) focusing on consumption patterns in human development remains a key resource document for all concerned.

In response to an acknowledgement of the relevance of SC policies to consumer protection, the UN General Assembly (1999) expanded the general UN Guidelines for Consumer Protection to include SC. As part of its progress monitoring activities, UNEP in partnership with Consumers International (CI) has recently carried out a review of

these Guidelines (2002).⁶ The survey of fifty-two national governments found generally slow progress in policy implementation. Although many signs of hope were also uncovered. A case in point is that more than 80 per cent of Governments surveyed found the Guidelines useful, and the same number have initiated information campaigns related to sustainable consumption (see Box 2C).

Box 2C: Asia Pacific governments support UN Sustainable Consumption Guidelines

"The UN Sustainable Consumption Guidelines are a good reference for government to use in formulating and strengthening consumer protection policies. The Government is yet to fully implement them."

Herry Hadisanjoto,
Directorate of Consumer Protection, MOIT,
Indonesia

"The UN Guidelines are useful for policymakers"

S. K. Joshi,
Director, Ministry of Environment and
Forests, India

"The Guidelines contain some useful recommendations for the Government to take into account in policy development, and provide a sound framework for the development of strategies to foster sustainable consumption within Australia."

Kerry Smith
Director, Sustainable Industries Branch,
Ministry of Environment and Heritage,
Australia

"The Guidelines are both easy to understand and useful for policy making. The ideas displayed in the Guidelines are useful in the sense that they clarify the necessary policies required for promoting sustainable consumption patterns."

Tetsuya Kamijo
Assistant Director, Policy and Coordination
Division, Global Environment Bureau,
Ministry of the Environment, Japan

Countries like Mauritius, India, Senegal, Chile, and Indonesia have launched awareness-raising campaigns on issues such as energy and water saving, waste

recycling and alternative transport. In fact, 82% of governments identified that their country had implemented some form of recycling practices. Many however, note that substantial improvements are required.

Encouragingly, some countries have begun to introduce environmentally sensitive fiscal policies, including eco-taxation and subsidy reform. Extended producer responsibility requirements are now enforced in various countries, including at least eight in Asia. In these cases producers are required to take back packaging and sometimes entire products such as automobiles and electronic equipment, promoting waste minimisation. The global retail market for organic produce climbed from \$10 billion in 1997 to \$17.5 billion in 2000, and an estimated 17 million hectares of agricultural land are now managed organically worldwide.

Consumers themselves have been responsible for some of the developments. Consumer power continues to encourage government policy development and industry action. A number of governments have supported regional or national labelling programmes, including Singapore, Germany, India and the Nordic countries. International labelling initiatives such as the Forest Stewardship Council and the International Federation of Organic Agriculture Movements supplement national and regional schemes that cover sectors such as textiles, laundry detergents, energy production and tourism.

Studies into consumer trends and behavioural elements continue to proliferate. UNEP has co-ordinated research into youth and global consumer segments and also on sustainable consumption indicators in recent years. The joint UNEP and UNESCO "Is the Future Yours?" research project surveyed over 10,000 young people in 24 countries about their consumption patterns and lifestyles. The advertising and communication industry has also supported investigations into youth consumption patterns. Further research on a wide range of topics must still be conducted.

It is true that successes have been scored in the lead up to the WSSD and beyond. But significant challenges remain. Global action

will require further partnership building and collaborative approaches as proposed by the WSSD Plan of Implementation and UNEP's 22nd Governing Council decisions (February 2003).

Integrating consumption and production activities

There exists a widening appreciation among SC and CP experts worldwide that integrated approaches to deal with current unsustainable trends must be found and implemented.

Traditional strategies of approaching consumption and production in separate unconnected initiatives have proved unsuccessful in dealing with problems that are holistic in nature. Agreement often exists on what strategies are required. And SC and CP are both cornerstones in the desired outcomes. But operating in specific spheres of action (production focused vs. consumption focused) overly simplifies a complex assortment of systems.

The limitations of production-focused strategies have been exposed by work on sustainable consumption. Consumption does not provide an alternative approach, just 'the other side of the coin'. It is systems of production and consumption which need to change – urgently – and changing patterns of consumption requires an understanding of the complex features of such systems which shape particular modes of living, the markets for goods and services and the means by which they are produced.⁷ UNEP has appreciated for some time that cleaner production and sustainable

consumption have more in common than just a shared goal of achieving sustainable development. This is why UNEP has been addressing CP and SC in an integrated manner. Products and services are the targets of both approaches. CP aims at manufacturing products and / or providing services that minimise environmental impact. Whereas, SC pursues the most efficient use of a product or service, combining consumer satisfaction with minimal environmental impact. For example, UNEP's *Product-Service Systems and Sustainability* booklet (2002) contains case studies on combinations of products and services that seek to optimise environmental performance while facilitating financial gains and supporting the local community; win-win solutions for the environment, economy and society.

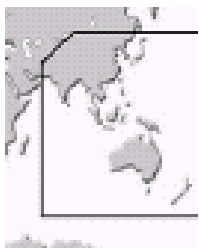
New life-cycle approaches that consider production-consumption systems are needed. The challenge will be to develop strategies for change that incorporate the complexities of such systems. While ensuring that the appropriate actions can be communicated, understood and embraced by all stakeholders (see section 4 for a discussion of global efforts to find integrated solutions).

Actions have to be sensitive to the needs and conditions of both developed and developing countries (common but differentiated responsibilities). Solutions and approaches derived from the experience and practice of developing economies should be taken into account. Change will come only as a result of genuine North-South and East-West dialogue and multi-stakeholder efforts.

Box 2D: Environmental concerns in Asia Pacific region (UNEP, GEO-3)

- More than half Asia's drylands are affected by desertification;
- Of the 15 cities in the world with the highest levels of particulates, 12 are in Asia;
- The region has the lowest per capita availability of freshwater, with about half its population living with severe water stress;
- Half the region's coral reefs are degraded and threatened and more than 60 percent of its mangroves have been lost;
- About three-quarters of the world's species extinctions have occurred on isolated islands in the region;
- Positive changes have included improvements in governance by public authorities, growing environmental awareness and public participation, & increasing environmental awareness in industry.

3. Asia Pacific issues and activities



The Asia Pacific region is the world's most populous (3.2 billion) and also very diverse in respect to culture, geography, economies and demography. It accounts for over 40% of the global economy and is home to 70% of the global poor.⁸

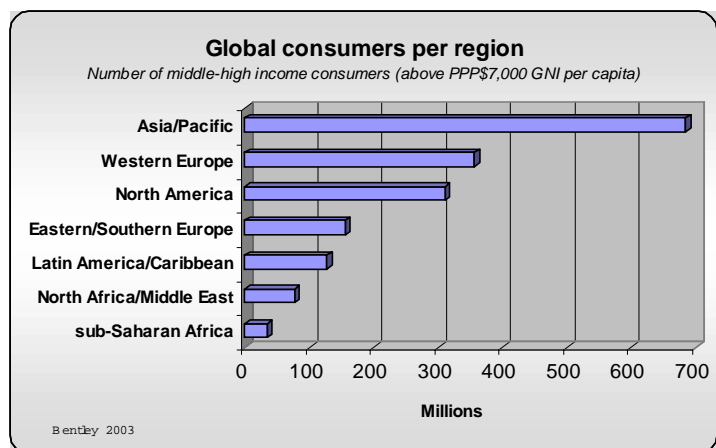
Rapid urbanisation and overall population growth has led to resource extraction, serious environmental problems and various social dilemmas. Economic growth has brought necessary development, but has also put pressure on natural ecosystems. Industrial pollution and the attendant problems of air and water pollution constitute the region's foremost environmental crises.⁹

The enormous rural populations still exist in the developing countries of the region, but vast numbers are migrating to cities fuelling a growing and robust middle class. The consumption demands of these *global consumers* (consumers that share similar tastes and habits, i.e. products, access to IT) are adding further stress to the already fragile social and environmental systems. These consumers, aided by advertising and multinational corporations, are emulating the lifestyles of their brethren in the developed world.

A recent doctoral study (2003)¹⁰ estimates Asia Pacific to be home to 684 *million global consumers* – middle-high income consumers earning above PPP\$7,000 GNI per capita. India, China, Korea and Indonesia account for 63% of global consumers in the region and 25% of global consumers' worldwide. Today, only twenty-six percent of the region's population satisfies such individual medium to high-income levels. Thus, the scene is set for a significant increase in their numbers if economic growth continues.

The coexistence of both very rich and very poor people across the region further substantiates the need for a diverse range of options used to promote sustainable consumption and production. The increasingly service-based economies of Japan and Korea, large agricultural and natural resource suppliers like Australia and New Zealand and production-focused powerhouses such as China will all need to consider strategies and initiatives that best fit their circumstances.

Activities that pursue more efficient and cleaner production processes must combine with the need for increases in consumption in some countries and less or more efficient consumption in others. Of course, while respecting environmental and social systems. Integrated approaches may be one way to resolve these imbalances.



Poverty eradication, consumption scarcity, labour rights, subsidy reform, population growth and urbanisation, consumer protection and the globalisation of trade and information are some of the priorities that the developing countries of the region have identified as peripheral to achieving sustainable consumption and production. The developed countries on the other hand should consider their responsibilities in supporting regional change while also finding ways to reorient their own current consumption and production patterns toward sustainability, i.e. energy and water efficiency, waste reduction, product design,

polluter-pays principle, consumer education, and the stimulation of a life-cycle economy.

Regional issues and concerns

Asia Pacific is strategically important in any legitimate attempts to achieve sustainable consumption and production for all. The large population, range of economies and environmental conditions, mix of rich and poor people and the diverse cultural and political landscape make the region a challenge for sustainable consumption and production promoters and policy-makers.

Box 3A: Consumption pressure per person (WWF, 1998)

Taiwan, China	3.42	Thailand	1.52
United States	2.74	Philippines	0.99
Korea Rep.	2.35	Indonesia	0.79
Japan	2.35	Pakistan	0.78
Canada	2.35	China	0.85
Spain	1.92	India	0.47

1 = world average consumer in 1995

Urban population as % of total (UNDP, 2001)

	1999	2015
China	31.6	40.7
Fiji	48.6	60.0
India	28.1	35.9
Indonesia	39.8	54.8
Korea, Rep.	81.1	88.2
Malaysia	56.7	66.4
Philippines	57.7	67.8

Human Poverty Index (UNDP, 2001)

China	24	Fiji	37
India	55	Indonesia	38
Malaysia	13	Nepal	77
Pakistan	65	Sri Lanka	31
Thailand	21	Vietnam	45

Number of TVs in millions (UN, 2000)

	1990	1997
China	309	400
India	27	63
Indonesia	10	14
Japan	75	86

It is clear that the earth's natural ecosystems will not be able to support an Asia Pacific region that emulates present-day Europe or North America. Therefore, tactics must rely on new innovative life-cycle approaches and 'leapfrog' practices. The meeting of basic needs and poverty elimination is crucial, but development must come in a form that respects environmental and social systems in the region. Just as importantly, developed countries in the region should find ways to reorient their current unsustainable consumption and production patterns toward sustainability and support their developing neighbours in sustainable development.

Total production output in most sectors and services in the region is expected to climb over the coming decade, regardless of any improvements made by more efficient production processes. The increased production of motor vehicles, household appliances, food, clothing, energy and transport, along with new information and communications equipment such as mobile phones and mobile data-transfer devices, pose threats to the environment. Tourism, aviation and some sports activities are also raising concern. The forces of urbanisation, globalisation, lifestyle changes and the depletion of basic natural resources in some areas further accentuate these trends. Cleaner production activities in combination with sustainable consumption strategies such as behavioural change, recycling and reuse will need to be pursued in an integrated manner to offset social and ecological disturbances.

UNEP's *Global Status 2002 on Sustainable Consumption and Cleaner Production* identified some key regional concerns relating to globalisation and the adoption of sustainable consumption and production patterns:

- poverty and consumption scarcity;
- population growth;
- the globalisation of communication and information;
- globalisation of trade;
- the role and power of trans-national corporations;
- intellectual property rights and the Agreement on Trade Related Intellectual Property Rights (TRIP);

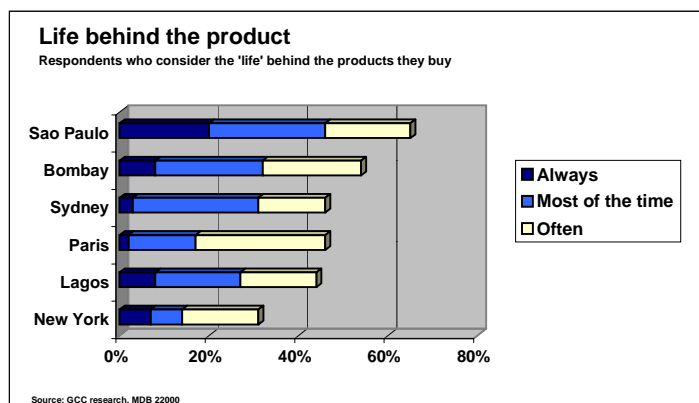
- the process of urbanisation;
- the role and impact of tourism and;
- consumer protection.

Add to this a call by participants of regional consultations on consumption and production patterns to better integrate sustainable consumption and cleaner production strategies and initiatives. Along with other regional factors including the need for subsidy reform and fair trade, greater involvement by industry (including SMEs), strengthened regulatory frameworks by governments (SC Guidelines, IDCP), de-linking economic development from environmental stress, and consumer information (eco-labelling) and empowerment.

Asia Pacific's current consumption pressure per capita is around half that of Western Europe (WWF, 1998). It is from this fact that the South may derive its greatest advantage from adopting a sustainable consumption and production form of development. Developing countries should be made aware of the opportunities awaiting them should they move toward more sustainable consumption and production patterns, as identified by countries such as China. Imposing more sustainable patterns could lead to more competitive domestic enterprises and greater access to international markets.

Asia Pacific consumers are increasingly concerned and aware of their consumption impacts on the environment. A recent UNEP global study (Global consumers, 2000) included analysis of two cities in the region (Mumbai/Bombay and Sydney). The survey found that consumers in developing countries to be generally more concerned about such impacts than consumers in developed countries. Over sixty percent of consumers in Mumbai said that they were very much or quite concerned about the effects of their consumption on the environment. More than half of these same consumers said that they either always, most of the time or often considered the 'life behind' the products they buy. While 45% of consumers surveyed in Sydney indicated that they at least often consider the 'life behind' products. These trends should inspire some hope. Policy-makers and

industry need to act to develop the infrastructure necessary for consumers to pursue more sustainable lifestyles.



Some specific limitations relating to cleaner production promotion in the region could include¹¹:

- Insufficient awareness and political commitment.
- Insufficient enforcement of environmental legislation.
- Limited access to financing.
- Lack of easy access to cleaner technologies.
- Limited outreach to smaller companies.
- Lack of transparency.

Some specific limitations relating to sustainable consumption advancement in the region could include¹²:

- Lack of knowledge and belief in the opportunities.
- Insufficient political commitment.
- Lack of support from industry sectors such as retail and finance.
- Rules on misleading and ambiguous claims are needed to ensure that labelling initiatives provide clear, transparent and reliable information on the environmental impacts of products and services.
- Consumer education and behavioural change by middle-high income consumers.

A more detailed evaluation of possible future regional challenges and priorities will be covered in Section 4.

Cleaner Production in Asia Pacific

The diverse nature of the region has unsurprisingly ensured a range of actions and varying levels of CP advancement. Developed economies such as Australia, New Zealand, Japan and Korea have been involved in CP promotion for years, while other economies including Laos and Nepal have only started moving along the CP path.

CP summary of activities

Although CP uptake has been generally slow. Australia and New Zealand have converted CP into policy and planning efforts, while both Australia and Japan offer financial support for CP initiatives in the region. India, Korea and China have made significant strides in the CP area, particularly in training, networking and implementation.

Box 3B: Asian Development Bank (ADB) promotes CP policies

ADB selected five countries (Philippines, Indonesia, Vietnam, India and Thailand) to participate in a Regional Environmental Technical Assistance (RETA) programme. The RETA initiative (2001) promoted CP policies and practices in the five countries.

Training was provided on subjects such as policy development and CP planning and merging areas for CP applications to a larger audience of Asian nations. Participating country experiences were drawn on to develop generic guidelines for national policy development and strategic planning. Processes were also put in place to facilitate regional networking, cooperation between assistance agencies and other interested stakeholders in Asia.

The UNEP/UNIDO National Cleaner Production Centres (NCPC) have been the principal drivers of CP in Asia Pacific. NCPCs exist in China, India, Vietnam, Republic of Korea and Sri Lanka. The Asia Pacific region is presently home to sixteen percent of the world's NCPCs and CPCs.

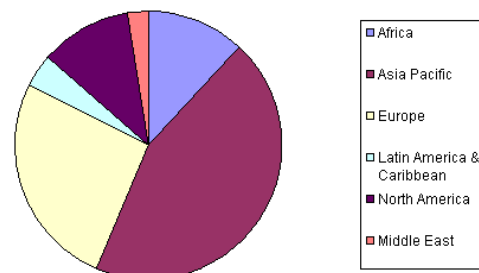
CP activities in the region encompass training, capacity building and demonstration projects, often supported by external donor

contributions. Some of the major CP programmes in the region include:

- UNIDO and local NCPC collaboration on CP demonstration projects in India and China. The target was SMEs in a number of key sectors.
- The five-year (1997-2001) China-Canada Co-operation Project in Cleaner Production included activities on training and awareness raising, CP development plans for priority sectors and policies and regulations for CP implementation.
- Green Productivity (GP) promotion by the Asia Productivity Organisation (APO) has resulted in GP demonstration projects being completed in China, Thailand, India, Hong Kong and Singapore in the last few years. APO has also initiated GP promotion programmes in Fiji, India, Indonesia, Korea, Malaysia, Nepal, Philippines, Singapore, Thailand and Vietnam. GP and CP are considered relatively similar.

The national governments of China, Vietnam, Korea, Thailand, Philippines, along with individual organisations in Australia, Indonesia, Mongolia, and Vietnam are signatories to the International Declaration on Cleaner Production (IDCP). The IDCP currently has over 300 signatories worldwide, with almost half of them coming from the Asia Pacific region (see below).

Signatories by Region



Encouraging support has come in the way of loans from organisations such as the Asian Development Bank (ADB) and the World Bank. For example, ADB has initiated CP loan projects/programs in China, Thailand and Vietnam and technical assistance in CP

to Sri Lanka. Economic instruments have also been instigated in many countries, resulting in a range of successes. For example, Australia, Sri Lanka, Singapore and Vietnam offer special credit lines for CP. While Hong Kong (China), Indonesia and the Philippines have introduced taxes and fees on resource consumption or waste discharge.

Training and networking activities in the region continue to expand. Demonstration projects, capacity building and training programmes have been particularly successful in countries like India and China. Four regional roundtables on CP have been held in the last four years, in Bangkok, Brisbane, Manila and Chiang Mai (Thailand). National roundtables, various workshops and training meetings, along with electronic information platforms further advance CP knowledge and understanding in the region.

Australia, China (including Taiwan), India, Indonesia, New Zealand, Republic of Korea, Singapore, Sri Lanka and Thailand have included CP elements in national development plans. A National Strategy for Cleaner Production has been developed by the Australian and New Zealand Environment Conservation Council (ANZECC). The Strategy includes implementation promotion, capacity building and progress measuring components. The Regional Environmental Technical Assistance Programme (RETA) that was established by the ADB promoted cleaner production policies and practices in five countries in the region (see Box 3B). ADB continues to support CP implementation in the region via a range of other projects.

UNEP has further supported the regional promotion of CP by conducting a global review of cleaner production and sustainable work since Rio. The *Global Status Report 2002* includes a regional overview of Asia Pacific.

As with SC implementation in the region, the wide variety of socio-economic, political and cultural conditions require the range of options used to promote CP to be diverse and flexible.

Sustainable Consumption in Asia Pacific

Progress toward sustainable consumption in Asia Pacific has thus far been slow. However, owing to the diverse makeup of the region, trends are difficult to establish. This is best encapsulated by the broad range of actions implemented to date by governments, as identified by a UNEP and Consumers International survey (2002) of consumption and production policies in the region. Countries like Japan, Australia and the Republic of Korea have started to implement a wider range of policies than Pacific island nations such as Fiji and Kiribati. But some activities, namely information campaigns on energy and water saving, have occurred throughout most of the region.

SC summary of activities

A number of actors have made headway on promoting sustainable consumption in recent years.

International organisations such as UNEP and UNDP have been active in the region. UNEP has inspired discussion and built capacities in the region by conducting research and organising regional roundtables and workshops on sustainable consumption. As part of their regional series of consultations on the topic UNEP organised the Workshop on Sustainable Consumption for Asia Pacific (Malaysia, August 2001) with Consumers International, CDG and the Australian Government.

As part of their progress monitoring activities UNEP, in partnership with Consumers International, conducted a global review of national government policies to promote sustainable consumption. The 2002 report, *Tracking Progress: Implementing sustainable policies*, found generally slow progress by the 52 governments surveyed on implementing policy in accordance with the benchmark UN Guidelines for Consumer Protection, which include a section on sustainable consumption.

The Asia Pacific region was strongly represented in the global review with 12

governments participating in the survey and three supplying national case studies for the report (China, Japan, Australia). Other countries were partially responsive to the exercise and solid contacts were established, including with Pakistan, Nepal, Bangladesh, Malaysia, Brunei and the Philippines.

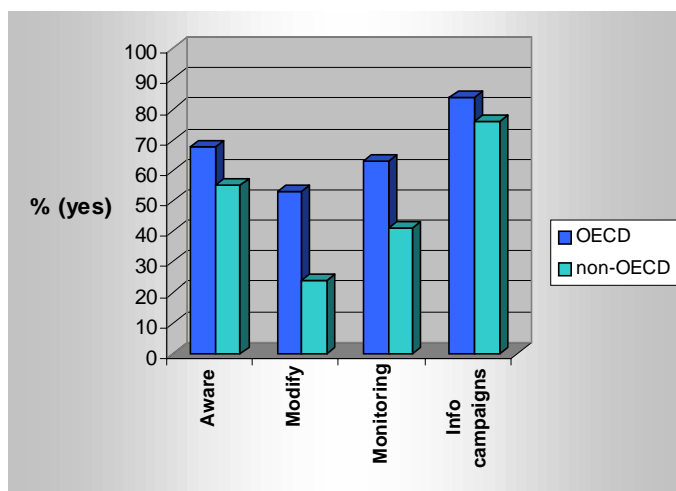
The participating Asia Pacific countries were:

- Australia
- China, People's Republic of
- Fiji
- Hong Kong, China, SAR
- India (received Sept. 2002)
- Indonesia, Republic of
- Japan
- Kiribati, Republic of
- Korea, Republic of
- New Zealand
- Sri Lanka
- Vanuatu

Governments have started to act more decisively to bring about sustainable consumption patterns in the region. Although progress in many policy areas, namely economic instruments, product testing, designing indicators to measure progress and carrying out research, remains relatively weak. Some positive trends appeared, such as 85% of responding Asia Pacific governments had implemented information campaigns related to sustainable consumption. The activities ranged from the Clean Water and Sustainable Forest programmes in Indonesia to waste minimisation and reuse campaigns in Sri Lanka to education campaigns on recycling in Kiribati and Vanuatu.

A couple of the standout achievements included China's Law on Protection of Consumer Rights and Interests, publicity and education programmes, and a 30% sales tax reduction for light vehicles; Japan's Laws on green procurement, recycling and waste management and financial incentives for buying electric, natural gas, methanol and hybrid vehicles; and Australia's "Green Games 2000 Initiative", recycling programmes on aluminium cans, mobile

phones, batteries, newsprint and waste oil, Environment Industries Action Agenda and a tax on Sydney car park spaces. At least eight countries in Asia have instituted "take-back" laws requiring companies to recycle or reuse packaging discarded by consumers.



UN Guidelines' awareness, modification, monitoring of implementation and information
(Source: UNEP/CI, 2002)

The need for further dissemination of information was highlighted, with only half of the responding Asia Pacific countries aware of the existence of the UN Sustainable Consumption Guidelines prior to receipt of the survey. Encouragingly, 84% of governments surveyed in the region had started to implement sustainable practices in their own operations, while 75% had started to impose fiscal instruments, comparing favourably with global figures of 70% and 56% respectively.

The UN Guidelines were overwhelmingly supported by Asia Pacific governments with almost eight in ten claiming they are easy to understand and useful for policymaking (see Box 2C). However, compliance monitoring remains a problem with just over sixty per cent of governments conducting reviews of progress toward sustainable consumption.

The Asia Pacific region was second only to the OECD segment of countries in terms of overall implementation of the eight selected policy areas from the UN Guidelines. However, the ratings only measured a *start* to policy implementation.

Box 3C: UNEP youth forum in Sydney

Australia will host the first event of UNEP's new global strategy for children and youth, approved last month by environment ministers and high level delegations from 130 countries. The Eco-Innovate 03 Forum, initiated by Bayer, the University of New South Wales (UNSW) and UNEP, will take place at UNSW from July 14 to 18, 2003.

The 4-day programme, to involve high-profile speakers, discussion forums, hands-on design sessions, and mentoring by business and technology leaders, will attract more than 100 young people aged 15-23 from Australia, New Zealand, Singapore, Thailand, Indonesia, The Philippines, China and India. The forum will include various activities on sustainable consumption and production patterns.

From UNEP Press Release, March 2003

UNEP has conducted research in the region on consumption patterns and lifestyles of youth and global consumers. The UNEP and UNESCO "Is the Future Yours?" project surveyed over 10,000 young people in 24 countries (including Thailand and Australia). The UNEP global consumer survey of 1,000 consumers worldwide (including Mumbai and Sydney) witnessed similar findings to the UNEP/UNESCO youth survey showing consumers in developing countries were generally more concerned about the impact of their consumption patterns than those in developed countries. UNEP's work on youth and sustainable consumption continues to advance with dissemination of a new interactive sustainable consumption training kit (youthXchange) due in countries in Asia Pacific in 2003.

UNEP is also engaging the advertising sector in Asia Pacific through the UNEP Advertising and Communication Forum and governments, industry and the research community through the UNEP/SETAC Life Cycle Initiative. The Japanese Institute of Advanced Industrial Science and Technology (AIST) and UNEP co-hosted a workshop on sustainable consumption in Tokyo, 19-20 March 2003. Some of the key subjects that were discussed at the workshop included research on consumer awareness and acceptance, the question of

defining needs and life-cycle based approaches.

Industry actions in Asia Pacific have been mixed with manufacturing and natural resource companies in countries like Australia and Japan supporting more efficient and cleaner practices, while further engagement with and support from sectors such as retail and finance will be crucial for any significant improvements in consumption concerns in the region.

Consumer groups and NGOs throughout the region have been identified as being instrumental in recent efforts to promote sustainable consumption, mostly via information campaigns and research. There has been a proliferation in the number and size of consumer groups in the region in the last few years, e.g. in Thailand, Philippines, Indonesia, Sri Lanka, India and Bangladesh.

Consumers International has been responsible for a number of sustainable consumption campaigns since the adoption of Agenda 21. For example, 'Greening Consumer Choice?' was published in 1995 to examine environmental labels, and CI's Regional Office for Asia and the Pacific conducted a nine-country examination of household consumption patterns¹³ in the region (1997) and also distributed a series of case studies, entitled 'A Matter of Living on Earth'. Other relevant work included the report, 'Meeting Needs, Changing Lifestyles', issued at the World Consumer Rights Day on March 15, 1997 and the impressive collection of books and campaign materials as support to consumer organisations in promoting sustainable consumption on *green testing*, *green claims* and *green guidance*.¹⁴

Consumers have used their power of choice to change consumption patterns in the region. For example, Thai consumers have used information from an appliance-labelling programme to increase the market share of energy efficient, single-door refrigerators from 12 per cent in 1996 to 96 per cent in 1998. Whereas, carbon dioxide emissions in China fell by 6-14 per cent between 1996 and 1999 owing to improved energy efficiency and reduced coal use, while its economy grew by 22-27 per cent.¹⁵

4. An integrated future

Global efforts to develop integrated approaches

Although valid attempts have been made in the past decade to align consumption activities and production activities in overall strategies, new innovative approaches are now required. UN agencies, UN DESA (changing consumption and production patterns) and UNEP (integrating sustainable consumption and cleaner production programmes) have laid the groundwork along with other actors such as the NGO-dialogue International Coalition on Sustainable Production and Consumption (ICSPAC). But consumption and production issues to date have rarely been dealt with in a holistic manner. This being a key obstacle to social and environmental improvement.

Various chapters of Agenda 21, the UN Sustainable Consumption Guidelines, International Declaration on Cleaner Production and a host of other global agreements have pursued elements of consumption-production integration. But the WSSD (2002) outcomes clearly state the need for a process of implementation that takes into account “science-based approaches, such as life-cycle analysis”.

Through an extensive process of negotiation and discussion at the WSSD and its preparatory committee meetings (prepcoms), agreement was made by all governments on a Plan of Implementation to promote sustainable consumption and production patterns. Chapter 3 of the document calls on all parties to “encourage and promote the development of a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production to promote social and economic development within the carrying capacity of ecosystems by addressing and, where appropriate, de-linking economic growth and environmental degradation through improving efficiency and sustainability in the use of resources and

production processes, and reducing resource degradation, pollution and waste.” (see Box 4A)

Box 4A: Changing unsustainable patterns of consumption and production

- (a) Identify specific activities, tools, policies, measures and monitoring and assessment mechanisms, including, where appropriate, life-cycle analysis and national indicators for measuring progress...
- (a) Adopt and implement policies and measures aimed at promoting sustainable patterns of production and consumption, applying, inter alia, the polluter-pays principle.
- (a) Develop production and consumption policies to improve products and services, while reducing environmental and health impacts...
- (a) Develop awareness-raising programmes on the importance of sustainable production and consumption patterns, particularly among youth...especially in developed countries, through, inter alia, education, public and consumer information, advertising and other media...
- (a) Develop and adopt, where appropriate, on a voluntary basis, effective, transparent, verifiable, non-misleading and non-discriminatory consumer information tools to provide information relating to sustainable consumption and production...
- (a) Increase eco-efficiency, with financial support from all sources ... for capacity—building, technology transfer and exchange of technology with developing countries and countries with economies in transition, in cooperation with relevant international organizations.

Paragraph 14, from the WSSD Plan of Implementation, September 2002

In short, work must continue to improve production processes; to accelerate innovations in product design; to promote science-based, reliable tools for assessing the environmental impacts of products

throughout their life-cycles; and to encourage environmentally and socially sensitive purchasing decisions by individuals, industries and public institutions.

UNEP, and its partners, intend to build a framework for action in which producers and consumers can move together along the path to sustainable development, as called for in the WSSD Plan of Implementation and the Chairman's Summary from UNEP's 22nd Governing Council in February 2003 (see Box 4B).

Broad-based coalitions will be critical if solutions that go beyond focuses on products and industrial sectors are to be found. Remaining important is capacity building and technology transfer to developing countries.

A *function-based* approach may be one way of ensuring integration of future consumption and production work. This approach focuses on meeting human needs for critical services and fulfilling key functions, such as providing nutrition, shelter, clothes, health, knowledge, mobility, leisure and security. The functions are then analysed in a systematic way to (1) evaluate their economic, environmental and social implications, (2) carry out pilot projects to develop and implement options for improvements and (3) monitor and report the progress achieved.¹⁶

The following describes an example of a function-based approach for the production and consumption of books¹⁷. Three types of interventions could be:

- encouraging cleaner production efforts of the pulp and paper production process;
- facilitating the improved design of books, resulting in books made of reduced, or more environmentally sound paper and easier to recycle;
- engaging sectors that could contribute to meeting the needs or preferences for books, including encouraging and supporting them to develop additional options, such as e-books, radio dissemination and story-telling.

Benefits of this approach are threefold:

- it contributes to improved environmental gains as process and/or product improvements will eventually reach a plateau;
- it helps achieve better economic results by identifying new business and innovation opportunities;
- it stimulates social and cultural progress through the fulfilment of knowledge and entertainment needs, as well as opportunities for jobs in new service sectors.

This new holistic approach will provide better solutions for improving the performance of consumption and production systems. Interventions that affect the whole system rather than those that simply place the burden elsewhere will be identified and new stakeholders will be involved.

Governments for example, can implement policy instruments with stakeholders, such as the retail industry, that may have significant indirect impacts on actors upstream or downstream in the chain.

Future challenges and priorities for Asia Pacific

As already stated, prevailing trends in Asia Pacific including an enormous and growing population, urbanisation, poverty, demands for improved quality of life, coexistence of very rich and very poor people along with diverse cultural, political and economic conditions, all pose varying challenges to the region. Environmental and social stress related to these factors must be curbed through integrated and innovative multi-stakeholder approaches. Implementing sustainable consumption and production patterns will result in flow-on benefits to other problem areas.

There are some common challenges for those promoting CP and SC in the region. Including insufficient political commitment, weak capacities to identify solutions, lack of knowledge about CP benefits and SC opportunities, and general scarcity of information and policy frameworks.

The region will continue to witness an explosion in new industry sectors, such as

information technology, communications (e.g. mobile phones), tourism and aviation, which each pose further challenges to CP and SC promoters. Including increased waste, resource use, and various environmental impacts.

An overriding challenge remains the de-linking of economic development from environmental stress. The pursuit of quality of life improvements in the region is fundamental, but change must occur with respect to the environment. Governments, business and consumers should consider their actions in a long-term perspective and address ecological and social concerns in their decision-making. Information dissemination and capacity building will be useful. While life-cycle-based approaches and an integration of consumption and production initiatives should lead to more equitable outcomes.

The UNEP *Global Status 2002* report has identified some specific proposals for action for both sustainable consumption and cleaner production in Asia Pacific. The proposals for sustainable consumption activities were agreed upon at a regional multi-stakeholder event in Malaysia (2001), they are:

- Governments should take a leadership role in ensuring sustainable government procurement policies, by enforcing regulations, and economic and social instruments, and by sector-specific policies in such areas as land use, transport, energy and housing.
- Governments should support UN consumer protection guidelines and widen debate about consumption patterns, the environmental impacts of consumer choices and behaviour, efficient use of materials, energy and water, and of recycling.
- Governments should encourage, promote and incorporate sustainable consumption in all sector policies and development plans.
- Support multi-stakeholder regional coalitions for sustainable consumption where appropriate collaborative

activities can be developed and sustained. These should involve consumer, youth, government, business, industry and unions.

- Business should be supported to 'domesticate' the globalisation process by making a sustainable use of regional (natural and human) resources and supporting traditional technologies and knowledge, and culturally specific production, products and services.
- Business should accept an obligation for resource efficiency and eco-design – in the uptake of industry methodologies, investment and development programs, and the creation of products and services, which deliver environmentally sustainable consumption in cost-effective and socially benign ways.
- Micro-small and medium-sized enterprises need to be actively involved and consumption approaches linked closely to cleaner production and eco-design, within a life-cycle framework.¹⁸

The Global Status 2002 cleaner production recommendations for Asia Pacific include:

- Spread CP into more relevant sectors (e.g. agriculture, mining, tourism).
- Emphasise CP solutions for SMEs (the success of approaches such as WMC's in India and CSS in Taiwan, China should be built upon and shared with other SMEs).
- Develop/enhance institutional capacity for CP promotion and implementation.
- Strengthen CP education (there is an urgent need to build CP education into school and university curricula, and the NCPCs should collaborate with educational institutions to develop such courses).
- Use EMS as a vehicle to mainstream CP (given the widespread acceptance of EMS and ISO certification, CP could be mainstreamed through the use of these instruments).

- Integrate CP into the planning process and in re-industrialisation/expansion.
- Sensitise the financial sector towards CP (for long term internalisation of CP financing, it is important that innovative financing models, as well as new avenues for private sector involvement, be developed).
- Initiate policy level change.

All stakeholders in the region may also consider the outcomes and conclusions on SCP advancement from the WSSD (see Box 4A) and from UNEP's 22nd Governing Council (see Box 4B).

Some of the main priorities for the region include the need to implement policy (e.g. polluter-pays principle), identify appropriate activities and tools (e.g. life-cycle approaches and national indicators for measuring progress), improve products and services, provide better awareness and information for consumers (e.g. advertising campaigns and eco-labels) and enhance capacity building and technology transfer for developing countries (e.g. leapfrogging).

In addition, new market opportunities should be explored, subsidies reformed, training and capacity building provided, innovation in industry promoted (e.g. SMEs), regional differences respected, and consumption and production integrated in the development agenda. There is also a pressing need for the establishment of regional and sub-regional initiatives (see Annex 1 and Activity Questionnaire).

Box 4B: UNEP Governing Council, February 2003

Decision 22/6. Promotion of sustainable consumption and production patterns

Recalling paragraph 14 of the Plan of Implementation of the World Summit on Sustainable Development, which states that fundamental changes in the way societies produce and consume are indispensable for achieving global sustainable development. All countries should promote sustainable consumption and production patterns, with the developed countries taking the lead and with all countries benefiting from the process, taking into account the Rio principles including, inter alia, the principle of common but differentiated responsibilities as set out in principle 7 of the Rio Declaration on Environment and Development. Governments, relevant international organizations, the private sector and all major groups should play an active role in changing unsustainable consumption and production patterns,

Recalling also the work undertaken by the United Nations Environment Programme since 1992 to promote cleaner production, pollution prevention and sustainable consumption, in cooperation with other United Nations organizations and other stakeholders, Recognizing the results in the field of cleaner production, pollution prevention and eco-efficiency already achieved and documented in regular progress reports published on the occasion of the biannual high-level conferences on cleaner production, and the remaining and emerging challenges with respect to sustainable consumption and production,

1. Requests the Executive Director to strengthen sustainable consumption and production activities of the United Nations Environment Programme within its existing mandate and subject to available resources, and consistent with the recommendations adopted at the World Summit on Sustainable Development;
1. Requests the Executive Director to strengthen existing eco-efficiency, cleaner production and sustainable consumption programmes, such as the United Nations Environment Programme's regional cleaner production roundtables and its partnership with the Society of Environmental Toxicology and Chemistry, including facilitating the transfer of environmentally sound technologies, especially to developing countries and countries with economies in transition, and activities to stimulate the design of sustainable products and services;
1. Invites the Executive Director to build upon the United Nations Environment Programme's existing activities and initiatives with relevant governmental institutions and the private sector, including with the finance sector, tour operators and the telecommunications industry, to contribute to strengthening the role of business and industry in promoting sustainable consumption and production patterns;
1. Requests the Executive Director to support initiatives and activities to enhance corporate responsibility and accountability, within the existing mandate of the United Nations Environment Programme, as referred to in paragraphs 18 and 49 of the World Summit Plan of Implementation;
1. Requests the Executive Director to develop and facilitate consumer awareness campaigns and provide information to Governments to assist in implementing sustainable consumption approaches, such as those contained in the United Nations Guidelines for Consumer Protection;
1. Requests the Executive Director to further develop training, awareness raising and capacity-building programmes in support of Governments, local authorities and business and industry, in particular in developing countries and countries with economies in transition, on sustainable production and consumption in cooperation with other relevant United Nations organizations and international intergovernmental organizations;
1. Requests the Executive Director, in implementing the present decision, to take fully into account, inter alia, gender issues and differing circumstances in regions and countries, in particular the characteristics, development needs and capabilities of developing countries, particularly small island developing States and countries with economies in transition, so that all countries can benefit from the process, by setting up, or contributing to, regional programmes, building upon existing networks and activities;
1. Requests the Executive Director, within the mandate of the United Nations Environment Programme, to take an active role, working in cooperation with Governments, other relevant United Nations organizations and intergovernmental organizations and involving other stakeholders, in pursuit of the development of a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift to sustainable consumption and production patterns, as set out in paragraph 15 of the Plan of Implementation, and to bring forward at the next special session of the Governing Council/Global Environment Ministerial Forum, in 2004, a report on its activities, with regular reporting thereafter;
1. Requests the Executive Director to report to the Commission on Sustainable Development, as appropriate, on the progress of the work done;
1. Invites Governments to provide financial and technical assistance and capacity-building to enable developing countries and countries with economies in transition, especially least developed countries, to take an active part in these activities.

Annex 1

Activity list for Asia Pacific

This list is a non-exhaustive sample of activities/initiatives on sustainable consumption and production in the region.

Regional/sub-regional activities

- The UNEP/UNIDO network of National Cleaner Production Centres (NCPCs) and affiliated Cleaner Production Centres (CPCs) stimulate regional promotion and implementation of cleaner production. The NCPCs/CPCs have been instrumental in driving CP in Asia Pacific. Demonstration projects, training seminars and publishing guidance manuals are among their core activities. NCPCs have been established in China, India, Vietnam, Republic of Korea, and Sri Lanka. NCPCs have also expanded their reach by setting up local CPCs; for example there are currently 24 CPCs in the various Chinese provinces. Asia Pacific accounts for sixteen percent of the world's NCPCs and CPCs. The regional network of NCPCs/CPCs is growing and continues to provide its wealth of knowledge on CP to a broader audience, including the support of regional and sub-regional CP activities.
- The Asian Development Bank (ADB), under the auspices of its Regional Environmental Technical Assistance (RETA) programme, has promoted cleaner production policies and practices in selected member countries. The Philippines, Indonesia, Vietnam, India and Thailand have received assistance to develop the policy framework, integrated action plans and institutional capabilities they need for rapid and efficient adoption of CP. The ADB has also encouraged CP adoption through a range of other projects in countries like China, Thailand and Vietnam.
- UNEP and Consumers International measured progress by Asia Pacific governments to implement sustainable consumption policies in a 2002 global review. The project *Tracking Progress: Implementing sustainable consumption policies* surveyed 12 governments in the Asia Pacific region. The survey team, working through both UNEP's and CI's regional offices, liaised with a total of approximately 30 governments and at least 25 consumer organisations. The survey team raised awareness of the UN Sustainable Consumption Guidelines (the basis for the survey) and established contact databases and answered queries about the UN Guidelines (including sending copies of the Guidelines and providing further information on SC to many governments and consumer groups in the region).
- The Asia Pacific Roundtable for Cleaner Production (APRCP) was initiated in 1997 when the first regional roundtable meeting on CP was held in Bangkok, Thailand. The APRCP mission is to foster dialogue among industry, government, academia, and non-governmental organisations in the region to address pollution problems and work together on collective solutions. Roundtable goals include promoting information exchange among its members through newsletters, e-mail list servers, technical journals, special publications, conferences, and symposia. The main event of APRCP is the regional CP Roundtable meeting, which is organised biannually. For further information, please refer to: www.aprcp.org
- InWent's Sustainable Consumption and Cleaner Production Capacity Building for Cleaner Production Centers will be facilitated in more than 10 countries in the summer of 2003. The training package is available on the web: <http://www.uneptie.org/pc/cp/library/training/cdgpac/start.htm>

National activities

- Japan's laws on green procurement, recycling and waste management and financial incentives for buying electric, natural gas, methanol and hybrid vehicles support sustainable consumption. The "Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Law on Promoting Green Purchasing)", which was enacted in May 2000, encourages consumers to seriously consider the environmental aspects of products and services when purchasing them. For more information see: <http://www.env.go.jp/en/lar/green/index.html>
- China's Law on Protection of Consumer Rights and Interests, publicity and education programmes, environmental labelling, energy-saving campaigns for household electrical appliances, certification of environmentally sound products and 30% sales tax reduction for light vehicles. On 15 March 2001, the China Consumers' Association in collaboration with other related government departments launched a large-scale "Green Consumption" campaign.
- The Australian and New Zealand Environment Conservation Council (ANZECC) developed a National Strategy for Cleaner Production in 1996. The Strategy strives to advance implementation, capacity building and progress measuring. This strategy evolved out of extensive consultation between various stakeholders and a series of background consultancy projects. The strategy document is available at: <http://www.environment.gov.au/epg/environet/eeep/pubs/nscp.pdf>
- New CP legislation in China: China has now adopted a law that requires all companies above a certain size and which do not meet the environmental standards set by the authorities, to either close down, or to undertake a CP audit. The audit will give the company some grace time to achieve improvements through CP, before the authorities decide to take action against them (and hopefully they would come into compliance with the help of CP).
- A range of training seminars and workshops to promote CP have been conducted all over the Philippines. These have been supported by local and international donor organisations, industries, government agencies, and non-government institutions. Companies in the Philippines have initiated, developed and implemented different programs that contribute to CP. They have also actively participated in various programs and projects. As of 2001, eighty-three companies are ISO 14000 certified and adopt cleaner production approaches. Various stakeholders, particularly industry, have also developed case studies and demonstration projects on CP.

Annex 2

Marketing 'Cool' Life-Styles Key to Selling Clean and Green Products

Psychologists and human behaviorists are being enlisted by the United Nations Environment Programme (UNEP) in a pioneering new initiative to save the planet.

Nairobi, 4 February 2003 - Experts believe that the traditional messages from governments and green groups, urging the public to adopt environmentally friendly life-styles and purchasing habits, need to be overhauled.

There is concern that many of these messages are too 'guilt-laden' and disapproving and instead of 'turning people on' to the environment are switching them off.

Klaus Toepfer, Executive Director of UNEP, said today: " Messages from governments, exhorting people to drive their cars less or admonishing them for buying products that cause environmental damage, appear not to be working. People are simply not listening. Making people feel guilty about their life-styles and purchasing habits, is achieving only limited success".

Indeed studies indicate that only five per cent of the public in northern countries are embracing so-called sustainable life-styles and sustainable consumerism.

"So we need to look again at how we enlist the public to reduce pollution and live in ways that cause minimal environmental damage. We need to make sustainable life-styles fashionable and 'cool' as young people might say. We also need to make it clear that there are real, personal, benefits to living in harmony with the planet, " he said.

UNEP experts today cited campaigns by KIA, the Korean car manufacturer, and the European detergent industry, as two examples of selling positive,

environmentally-friendly, consumerism and life-styles.

KIA has a campaign in the United Kingdom which urges people not to use cars for short journeys, only long distance ones. It provides a mountain bike with every new car purchased and helps organize "walking buses". These create networks of parents who assist in escorting children to school on foot.

The European "Wash Right" campaign extols the virtues of low temperature washing by emphasizing the benefits to the clothes as well as the energy-saving made.

The turning to social scientists and behaviorists is being carried out under UNEP's Sustainable Consumption Programme and Life Cycle Initiative which is looking at a wide range of issues, from labeling to eco-friendly product design, to deliver more environment-friendly consumption.

It compliments initiatives, some of which are being orchestrated by UNEP, to develop a network of cleaner production centres across the globe to reduce polluting manufacturing processes.

Sustainable consumption patterns, and how governments, industry and the public can play their role in delivering these, are among the key issues being discussed this week at UNEP's 22nd Governing Council taking place in Nairobi, Kenya.

Over 50 young people from across the globe underlined the importance of the issue in a statement to ministers:" We commit to awareness raising campaigns to lifestyle change at a community level and request governments to further encourage sustainable consumption. We support the UNEP YouthXChange programme as an excellent example of work in this field".

It provides case studies of youth organization's that have made a real

difference in achieving sustainable purchasing patterns. For example, a fashion company in Brazil, Copa Roca, have made a real hit and a profitable business out of making clothes out of re-cycled fabrics.

Jacqueline Aloisi De Lardere, Director of UNEP's Division of Technology, Industry and Economics which is spearheading the new initiative, said: " Sustainable consumption is not about consuming less, it is about consuming differently, consuming efficiently, and having an improved quality of life. It also means sharing between the richer and the poorer".

"This is not just an issue for so called rich countries. Many rapidly industrializing, developing countries, such as China, are keenly aware of the environmental threats posed by uncontrolled consumerism and the risks of not making products environmentally-friendly".

She said it was no coincidence that the ministerial debate on consumption patterns, scheduled for tomorrow (Thursday) is being led by Zhenhua Xie, the Chinese Environment Minister and Borge Brende, the Norwegian Environment Minister.

Indeed China is among 52 countries, surveyed by UNEP in collaboration with Consumers International. It found that many countries are trying to promote sustainable consumption through a variety of measures including public awareness campaigns and 'green taxes' that favor environmentally-friendly goods.

China, for example, has factored sustainable consumption into its Law on the Protection of Consumer Rights and Interests. Actions include publicity and educational programmes, ecolabelling, certification of environmentally-sound products and 30 per cent sales tax reductions for light, less polluting, vehicles.

Bas De Leeuw, Co-ordinator of UNEP's Sustainable Consumption Programme, said they were also working with industry and businesses to make products and services more environmentally-friendly way.

He cited Kluber, a leading lubricants company based in Munchen. It has developed a mobile laboratory that visits industries to ensure their machinery is operating efficiently. Benefits include reductions in smoke, vibrations and noise pollution.

Allegrini in Italy, which supplies detergents, uses a mobile shop to sell direct to consumers reducing the need for term to travel by car.

The UNEP initiative is also drawing up 'green procurement' information material for governments and local authorities in developed and developing countries so that their big purchasing power is environmentally-sound.

"Many developing countries are keen to buy environmentally-sound products and services but do not know where to go. We are developing an information network and Internet service so that if they, say, want to buy environmentally-friendly pens or vehicles, they know where to go," said Mr De Leeuw.

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Annex 3

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About UNEP DTIE

The mission of the UNEP Division of Technology, Industry and Economics (UNEP DTIE) is to help decision-makers in government, local authorities, and industry develop and adopt policies and practices that: are cleaner and safer; make efficient use of natural resources; ensure adequate management of chemicals; incorporate environmental costs; and reduce pollution and risks for humans and the environment.

UNEP DTIE, with its head office in Paris, is composed of one centre and four branches. It focuses on raising awareness, improving the transfer of information, building capacity, fostering technology co-operation, partnerships and transfer, improving understanding of environmental impacts of trade issues, promoting integration of environmental considerations into economic policies, and catalysing global chemical safety.

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- ¹⁷ Ibid.
- ¹⁸ In addition, the UNEP Global 2002 – Sustainable Consumption (p. 35-37) provides a list of Actions and Approaches for each major target (business, consumers, international agencies and government).