Introduction

Considering the enormity of sustainable production and consumption topic, this paper addresses limited yet vast area of sustainable purchasing. It will also be focused at youth education. This focus is dictated by a simple consideration that teachers often have the least resources, including time, to acquire systematic knowledge on the complex transdisciplinary subjects.

The paper touched upon several areas – sources of unsustainable production and consumption, some of the learning challenges and areas to be addressed – and intended for the discussion in the expert group.

Overproduction and over consumption – source of the problem and challenges

Consider this…

If an economy grows at 6% per annum, which is the average rate across Asia, in 25 years it will quadruple in size. This will require, with a current rate of resource use, a four-fold increase in resource efficiency.

If an economy grows at 10% per annum, which is the average rate across urban areas in China, in 25 years it will increase ten-fold. This will require, with a current rate of resource use, a ten-fold increase in resource efficiency.

If an economy grows at 6% per annum, which is the average rate across the manufacturing sector in Southern China, in 25 years it will grow twenty five times. This will require, with a current rate of resource use, a 25-fold increase in resource efficiency.

(from presentation of R. Welford during the 3R Conference in Japan, 2005)

Population growth, wealth and distribution

Combination of several factors contribute to the often mentioned issue of overproduction of overconsumption, with population growth and style of consumption among frequently mentioned.

- The demographic studies indicate that the current population growth will result in fifty percent increase by the year 2050. Nine to fourteen billion people will be consuming already significantly depleted resources of the planet.

- The life style of the wealthier part of earth population imposes serious threat on the carrying capacity of the planet and well-being of the poorer nations. In spite of the growing middle class in the developing countries the gap between reach and poor, including that in the developing countries, is widening. For example, the world annual expenditure on makeup is 18 billion dollars (Economist, 2003; Renner, 2003, sited in Tojo, 2004). At the same time, it is believe that 19 billion dollars would solve the problem of hunger and malnutrition of the world.

- There is often reinforced assumption that the volume of consumption is linked positively to the well-being constitutes a foundation of new affluent life-style.

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1 The Ministerial Conference on the 3R initiative, Tokyo, 28-30 April 2005
Relevance for the regions – developed and developing countries

It is frequently stated that unsustainable production and consumption, particularly in the industrialised countries, is a cause of deterioration of the environment and social fabric of the society. Main responsibility is clearly in the hands of developed nations with their technological and financial capabilities and wealthier consumers. It does not deny the relevance of the subject for many developing countries. While the relevance of the SPC subject as relevant to own consumers might be dismissed by the governments in developing countries, it remains urgent outside of the arena of political debate. Growing middle class in India, China and some other developing countries calls for bringing SPC debate to each and every area. More than eighty percent of population in industrial countries belong to the class of “consumers” as of data from 2002. (Gardner, Assadourian and Sarin, 2004: 7). Fast economic growth in some countries lead to the growing middle class with ‘western’ consumption patterns. As of 2002, for example, 19%, 12% and 33% of the local population belonged to the consumer class in China, India and Brazil respectively. (Gardner, Assadourian and Sarin, 2004: 7). Economic growth of China and India will add two billion “Western” consumers (UNEP, 2002).

In the Asia-Pacific region, it is particularly important to address the issues of sustainable consumption - the region has more middle-income earners than Europe and North America together. Two-thirds of the population growth takes place in this region.

The middle class often constitutes a group that defines trends of life-style. Another reason for attention to SPC in developing countries is a hope for that the trajectory of development might take a different turn favouring sustainable development. Finally, understanding of the effect of particular SPC systems on the environment and people in developing countries could produce an educated and active citizenry able to participate in the complex interactions of SPC.

Among other issues, the important concern for developing countries in end-of-life management of the products. Increasingly, the producers are encouraged to design goods that could be taken back, reused, recycled or taken care in some other safe and reliable ways. Often, product disassembling process takes place in the developing countries, taking advantage of cheap and abundant labour. While such

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3 Such rhetorical rejection is done with an intention of putting main responsibility in addressing the root causes of unsustainable production and consumption on the developing countries

business provides jobs for many, health and environmental security of such operations needs to be strictly monitored and higher standards of operations enforced (UNEP, 2002).

Another related issue might be shipping of the waste, including hazardous waste, to poorer nations and communities. Inadequate treatment facilities combines with a lack of training might lead to serious health and environmental consequences in these regions (Puckett et al., 2002 cited in Tojo, 2004).

**Challenges within the production-consumption systems**

Serious attempts of the industries, particularly in developing countries, to address environmental and social challenges resulted in significant improvements in production and product. Corporate social responsibility, cleaner production, eco-design, environmental management systems are among many instruments that contribute to the improvement of material efficiency and, consequently, minimization of waste generation. Such improvements, however, were greatly offset by the effects of the growing population and “rebound effect” – a response to cost reduction due to the efficiency gains.

Efforts on the side of the companies cannot reach desired effect for the reasons beyond control of the producers of goods and services. Often, there is no system that would link the product design and the end of life management of the product (Tojo, 2004), particularly across countries and the regions.

One of the serious challenges for the sustainable production and consumption is the fact that profit of the producers is often directly linked to the volume of sold goods and services and, thus, to the resource consumption. While de-linking such dependency requires serious system innovations, some solutions, such as lending, renting, leasing of goods, are available already (the whole domain of product-service systems –PSS – deals with the challenge).

**Sustainable consumption**

“Sustainable consumption is not about consuming less but consuming differently, consuming efficiently and having an improved quality of life” (Jacqueline Aloisi de Larderel, UNEP)

The volume of consumption, due to the increasing population, constitutes one challenge of sustainable development. The social, environmental and economic impact of consumed goods and services is also defined by the ways such goods and services are produced, distributed, used and managed at the end of their life. Understanding of this interconnections helps to minimize impacts of consumption through specific actions.

Conceptual clarifications form UNEP (2002) highlight that consumption of goods and services refers to demand and volume while consumption of resources and generation of waste alludes to the ecological impact of consumption.

UNDP, in its Human development report (1998) emphasized the main principles of sustainable consumption. The consumption should be

- **Shared;** ensuring basic needs for all
- **Strengthening;** building human capabilities
- **Socially responsible;** does not compromise well-being of others
- **Sustainable;** without mortgaging the choices of future generations.

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Issues of sustainable procurement

Sustainable procurement (SP) is a procurement based on principles of sustainable development. It is not only about environment but about human and labor rights and economic progress (see table 1).

Table 1. What should be considered within sustainable procurement

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<tr>
<th>Social Aspects</th>
<th>Environmental Aspects</th>
<th>Economic Aspects</th>
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</thead>
<tbody>
<tr>
<td>Working conditions</td>
<td>Environmental impact of production processes, services and products</td>
<td>Quality/price</td>
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<tr>
<td>Compensation</td>
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<td>Economic relations of the producers with suppliers and clients</td>
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<td>Skills development</td>
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<td>Relations with civil society</td>
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SP is about minimizing resource depletion and pollution while improving standard of living, particularly in developing countries. SC is a process of acquisition of goods and services while keeping in mind (Interagency Sustainable Procurement Group 7)

- the best value for money considerations such as, price, quality, availability, functionality, etc.
- environmental aspects ("green procurement": the effects on the environment that the product and/or service has over its whole lifecycle, from the cradle to the grave)
- the entire Life Cycle of products
- social aspects: effects on issues such as poverty eradication, health, international equity in the distribution of resources, labor conditions, human rights

There is a range of approaches to sustainable procurement, which can be applied to purchasing public organisations 8:

- Specifying environmentally superior products and services, e.g. produced from recycle materials, with minimum materials, environmentally superior in use (less energy consumption, etc.)
- Specifying products that take into account ethical and fairtrade issues
- Considering the whole life costs of purchases.
- Buying from companies that are identified as superior in their environmental and social activities, e.g. have SCR programme and/or environmental management system

Challenges for educating young consumers

Education of youth should aim at developing understanding that becoming a responsible consumer is one of the important steps towards becoming more responsible citizen. It should also equip students with skills of making shopping decisions based on the principles of SD. The challenges of such undertaking are enormous. The survey of young people’s consumption habits in 24 countries undertaken jointly by UNEP and UNESCO 9 (2000) indicated main areas of concern. While young people recognized the environmental and social impacts of their use and disposal of products, they fail to fully understand contribution of their shopping behavior. The situation is somewhat better when it

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7 http://www.sustainableprocurement.net/home2.html
8 These approaches are developed for public procurement. They are, however, applicable to any purchasing decision by businesses or private consumers.
9 UNEP and UNESCO (2000) Youth, sustainable consumption patterns and life styles
comes to the understanding of impact of services. Still, these figures leave humongous room for actions. A "country average of 52% are of the opinion that the way in which they dispose of their waste affects the environment, 42% believe that the way they travel has an impact on the environment, 41% think that their use of water affects the environment, and 29% believe that their energy use (gas and electricity) has consequences for the environment” (UNEP and UNESCO, 2000).

Finally, on average 37% of the young respondents admitted that answering the survey made them for the first time think about their consumption.

**Consuming wisely, what should be learned?**

Understanding of interdependencies between economic, ecological and social systems through the market place where consumer becomes a major player is one of the goals in educating for sustainable consumption. Another goal is understanding of mechanisms, including own actions that could lead to more sustainable production and consumption.

This section lists some ideas. The ideas are not exhaustive but constitute a base for discussion.

Dependent on the socio-political situation different aspects of SPC would have different importance. To understand and to differentiate among this different aspects, several skills should be developed. While these skills are important for education as a whole, they are essential for the SPC.

**Interdependence - Aspects and impacts**

Understanding of interdependence between production and consumption and poverty, employment, stability of different regions, etc. creates awareness between actions and their consequences. It also helps to avoid oversimplification of the subject. For example, it is seldom understood by the general public that moving production to some of the developing countries, e.g. China or India, would help to mitigate potential unemployment-related instabilities in these countries. Similarly, justifiable criticism of affluent consumption of more economically developed countries often neglects the fact that it provides investments and work for developing countries.

*What should be learned:*

- Ability to reflect on the interdependence between personal actions and state of the society, economy and environment – actions and multitude of consequences
- Ability to reflect on the interdependence between local and global
- Ability to understand the interrelation of consumption, state of environment, health, poverty, employment, etc.
- Ability to understand relations between different styles of consumption and state of environment and society
- Distribution of effects - positive and negative (trade issue is important)

**Understanding of leadership and good citizenship**

Role of different societal actors and self in promoting sustainable consumption needs to be understood so that actions would follow motivation. Such understanding should be reinforced by the knowledge of
possible actions. Clear analysis of actors’ opportunities and imitations would help to avoid unnecessary simplification of the situation and help design effective actions.

What should be learned:

- Understanding of role different actors in the society, i.e. government, private sector, civil society can play in forming different patterns of consumption and production
- Understanding of relationships between personal behaviour (life style) and environmental and social consequences
- Understanding of actions that lead to more sustainable consumption by individuals, families and schools

Quality of life and life style

The discussion of quality of life, as defined beyond economic growth, has long presence in the intellectual and political community. Multiple indicators were developed to account for progress that accounts more fully for social cohesion, health, education, stability and state of the environment. UNDP human development index is one such measure. More than thirty years ago, Butan announced their commitment to measure Gross National Happiness rather than Gross National Product.

What should be learned:

- Understanding of difference between needs and wants and appreciation of complexity of the topic
- Understanding what affects a desire for a particular life-style, e.g. peer-pressure, advertising and media, etc, and differentiation between quality of life and a life-style
- Ability to differences the quality of life and volume of consumptions

Areas of consumption

Individuals consume goods and services in several main “areas” – food, shelter, transportation, and clothing. Discussion of impacts in different areas of consumption will benefit, among other things, from a) relating it to the type of environment in which consumption takes place (urban/rural and type of ecosystem); discussion of different consumption alternatives (green electricity or nuclear energy, car or bus, buying of leasing, etc.), c) social aspects of consumption (job generation, social stability, etc.)

Traditionally, there are several areas which governmental organisations, including schools and universities, consider in the area of sustainable purchasing:

- Sustainable buildings
- Vehicles and travel
- Office consumables and equipment
- Recycling/ waste minimisation

Information and guidelines available in these areas might constitute a good source of information.

Volume of consumption

Additional challenges came from the analysis of the motivation for purchasing (UNEP&UNESCO 2000). Among four product criteria – eco-friendliness, quality, price and fashion, eco-friendliness was
the last with only 40% of respondents claiming it to be a base of their purchasing decisions. Many young people are, predictably, motivated by peer-pressure in their purchasing and think (44%) that having more would make them happier.

**Knowledge of alternatives**

Knowledge of environmentally and socially superior products, e.g. fair-trade goods, locally produced goods, and knowledge of appropriate use (reuse) and disposal should be combined with knowledge of mechanisms of differentiation among these goods. Among such mechanisms are

- environmental labels and, e.g. product declarations,
- understanding of the life-cycle concept of goods and services help in selecting the best alternatives and forms of ownership (buying, leasing, renting, etc.),
- Knowledge of companies environmental and social conduct – reputation of the producers needs to be understood not only from the view point of quality and popularity of their product but also to the effects of their social and environmental conduct

**Other actions of responsible consumers**

Purchasing is only one form of “voting” by the consumer. Other forms of actions are socially and environmentally responsible campaigns, boycotts, etc. might be also effective in the situations where awareness of the SPC in the society is low.

Understanding of the basic rights of the consumer and mechanisms of consumer protection is integral part of preparation for SPC.

**Challenges of integration into educational programmes**

**Cross-disciplinary nature and existing capacity**

The SPC is an area that systematically links activities of individuals, organisations and groups of organisations to environmental, political and economic issues at different levels. It simultaneously touches subjects within several disciplines and areas of public concern. Being a great advantage, it also presents a considerable challenge. Questions of environment, economy, human rights, employment, trade, etc. become natural subjects for discussion of SPC and sustainable procurement as a part of it. However, teachers and instructors that are called to facilitate CPS knowledge development might not have sufficient knowledge in the area. While such knowledge exists in the institutions of higher education, and professional groups, e.g. businesses, consumer protection organisations, governments, it has only minor presence at schools.

**Direct challenge to the value-system (link to actions)**

ESD is expected to contribute to the world where everyone has the opportunity to benefit from education and learn the values, behaviour and lifestyles required for a sustainable future. SPC is an area that explicitly links individual life style to the social, economic and environmental areas locally and globally. That is where individual value system is, often for the first time, is exposed and questioned. According to many young people participating in the UNEP survey on sustainable consumption (UNEP, 2000), the questionnaire, for the first time made them think about effects of their consumption.

Understanding of the consumption patterns, defined by personal value-system, need to be, eventually, linked to the change of learners behaviours. Rule 4/40 - in the surveys about preferences for “socially-
correct” choices, 40% are indicating their will to follow these; in reality, only 4% are doing so – confirms the magnitude of the challenge.

**Teaching and learning methods**

It would be beneficial to make the learning of SPC a highly experiential process. Trip to the market, supermarket or a local shop will allow comparison of the products, their prices, quality (e.g. health aspects of the product), environmental (e.g. packaging, coloring) and socio-political (e.g. place of production, employment) aspects.

Linking consumer education to management and maintenance of the organization (e.g. school) through discussion of organizational purchasing decisions (programmes on energy efficiency) might further contribute to developing a sense of agency.

**Some of the promising collaborating partners**

**On issues of sustainable consumption**


*UNDP*, had a programme on environmentally sustainable consumption.


*WBSCD*


*Individual businesses* – for example, UNU-IAS and UNESCO, following recommendations of the Steering Committee on DESD in Asia Pacific region, initiated a project targeting TNCs as well as their main suppliers, as a first step for engaging with the private sector and issues of SPC within the context of DESD. Such focus is informed by the consideration that the effect of TNC activities is felt across the whole supply chain with the most impact on local communities in developing countries. It is not always obvious, however, which actors along the supply chain could create a leverage for SD actions. Small suppliers (small and medium-sized enterprises: SMEs) to the TNCs and communities around such SMEs are considered to be the main beneficiaries of the proposed project. The overall goal of the project is to initiate a process leading to creation of training and awareness-raising programmes in the area of SD that will eventually be run by the actors across the supply chain or local actors, i.e. NGOs and/or local governments.

**On issues of sustainable procurement**

*Consumer Protection organisations*

*The Interagency Sustainable Procurement Group* – a consortium of the multilateral development banks (MDBs), United Nations (UN) organisations, and a variety of non governmental organisations

*Consumer International – Asia Pacific office* published materials guiding consumers to more responsible purchasing decisions.