

Sustainable Production and Consumption

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1. Historical Perspective

Evolution of global production and consumption patterns are reflected in various development theories and related lifestyle changes. In the ancient times, humans survived by hunting and gathering. Discovery of agriculture and fire as new technologies improved their living conditions dramatically. However, at that age, human beings respected natural resources as sacred entities with spiritual understanding that, life on earth could not exist without natural resource such as wind, water, mountains, trees, and sources of energy such as sun and fire. Even today, endless strings of small flags around mountains are a common seen in Bhutan, a South Asian Country, which considers "Happiness" as the indicator of human well-being.



This spiritual interpretation of power and the potential of nature to either keep the human beings or to destroy them based on human activities is currently being replaced by scientific evidences.

The traditional practices to hunt and gather resources could not cope with rapid increases of population combined with changing lifestyles. Gradually, the humans have developed many ways to expand their ability to improve their standard of living passing various evolutionary stages in different countries at different levels. The initial practices of hunting and gathering for living have progressively changed to "Production".

2. The Challenge

Today, the current civilization is recognized as computer based civilization. Computers which support two way communications between man and a machine are quite unlike the technologies of mass communications. However, computer based systems and applications are developing so rapidly that it is hard to predict what will come next (Predicting the Future 2005).

This evolutionary process explains the gradual changes in human capabilities that have been instrumental for changing production and consumption patterns for humankind from ancient to present times. However, despite numerous radical, technological improvements, human poverty has increased, widening the gap between the rich and poor globally and locally, although the standard of

living, in certain classes, improved remarkably. In some regions of the world, dramatic increases in abject poverty have occurred as a result of uneven development.

Globally, 20% of world's people in the highest income countries account for 86% of total private consumption expenditures – the poorest 20% a minuscule 1.3%. More specifically, the richest fifth:

Consume 45% of all meat and fish, the poorest fifth 5%;

Consume 58% of total energy, the poorest fifth less than 4%;

Have 74% of all telephone lines, the poorest fifth 1.5%;

Consume 84% of all paper, the poorest fifth 1.1%;

Own 87% of the world's vehicle fleet, the poorest fifth less than 1%

(HDR/UNDP 1998 – Overview)

The HDR 1998 claims that “the new human poverty index (HPI-2) shows that 7-17% of the population in industrial countries is poor”. It can be seen that the disparities of the consumption-poverty-inequality-environment nexus are widening. The HDR 1998 suggests that “consumption must be shared, strengthening, socially responsible and sustainable (shared implies - ensuring meeting basic needs for all; strengthening implies - building human capabilities; socially responsible implies - the consumption of some does not compromise the well being of others; sustainable implies – without mortgaging the choices of future generations).”

The first international conference held in Stockholm on Human Environment in 1972 connected environmental dimensions into this framework by recognising the limitations of the carrying capacities of the ecosystem to absorb increasing pollution levels and natural resource depletion. This concept was further strengthened by the Brundtland Commission's publication of *Our Common Future* (1987) and subsequent International Conference (Earth Summit) held in Rio de Janeiro in 1992. A key result of the Rio conference was Agenda 21, comprised of 40 chapters that outlined the key areas and approaches that societies must take to make progress toward sustainable development. Chapter 4 of Agenda 21 focuses on unsustainable production and consumption patterns prevailing in the world and upon the need to take measures at international and national levels to reverse the those trends by taking into account the imbalances in the global patterns of consumption and production.

Almost all the subsequently developed multinational environmental treaties include provisions to take action to promote SPC directly and indirectly. However, so far the international community has failed to achieve the needed results despite the number of international policies taken through these Conventions. United Nations Environment Programme (UNEP) defines sustainable consumption and production as a holistic approach to minimizing the negative impacts from consumption systems while promoting quality of life for all (*Paving the Way for sustainable consumption and production* 2011).

Both, overconsumption and under-consumption (unsustainable production and consumption) pose daunting challenges to human development and ecosystem stability. According to the IPCC's (International panel of climate change) carbon budget, the environmentally permissible carbon quota per person for 2009 is 2170 Kg. The world average is 4700 Kg that is twice the permissible level. The global sustainable average equals about 6 Kg per capita per day. That means even low emitting countries cannot emit more for their economic development activities as permissible carbon space has already been exploited by industrialised countries. These challenges are increasingly daunting due to the net addition of more 70,000,000 humans to our planet each year. Therefore, innovative approaches are necessary to do 'more' with 'less' to avoid harmful impacts on human beings and other life supporting systems on earth.

The kind of innovation required at the macro level to address the present multiple global crises is not limited to a particular technology. The innovations should be able to promote behavioural changes of the world community locally (nationally), regionally and globally to resort to more sustainable production and consumption patterns to safeguard our common future. 'Development Theme' is still mostly viewed as economic development nationally and internationally while few countries recognise 'Happiness' as a guiding principle of development.

Today, it has become a challenge for industrialized countries to reverse the trends of their unsustainable production and consumption patterns based on resource intensive production systems and infrastructure development exceeding the carrying capacity of global ecosystems. At the same time, other countries including the countries with emerging economies having over 80 percent of the world's population are facing unprecedented challenges to ensure the well-being of their population within a shrinking environmental space. Under the globalization no single country will be able to face these challenges in isolation.

3. The Local Perspective

In Sri Lanka, various specific policies are available to promote sustainable production and consumption at various levels. Many initiatives have been taken to promote resource efficiency, cleaner production, greening industries etc. which are directly related to greening the economy. Almost all the major MEAs were ratified by Sri Lanka. Effective implementation of these MEAs needs green human resources at all levels.

The Haritha (Green) Lanka programme launched in 2009, the National Green Reporting System launched in 2011, the Green Rating System developed by the Green Building Council of Sri Lanka in January 2012, the National Cleaner Production Policy, Sectoral Cleaner Production Policies for Health, Tourism, Fisheries and Agriculture, the National Energy Policy to reach a minimum level of 10% of electrical energy supplied to the grid to be from natural renewable energy by 2015¹, Establishment of a Sustainable Energy Authority under Ministry of Power and Energy, Establishment of a National Cleaner Production Centre under the Ministry of Industrial Development are some of the significant milestones in greening the economy. At present, the Ministry of Environment is taking steps to update the Haritha (Green) Lanka programme to expand its scope based on the lessons learned.

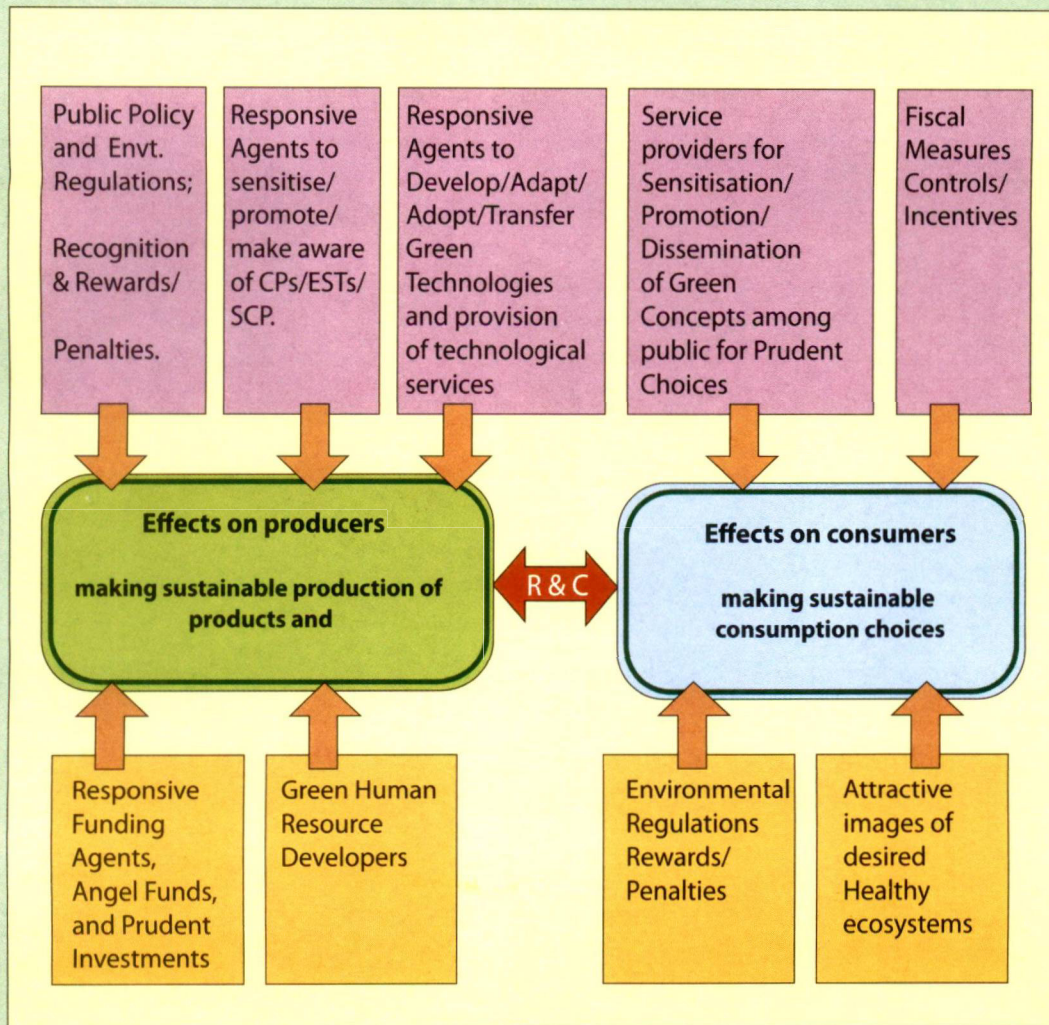
Deficiencies in skilled human resources, especially in the modern environmentally sound technologies and knowhow are seen as constraints in greening the economy, while rapid economic growth has become imperative to improve the human wellbeing of the country.

Prudent investments in application of sustainable production and consumption strategies will be a way forward. As mentioned earlier, ample policies are currently available in the country to improve efficient resource use and reduce wastage. For effective implementation of these policies, an integrated approach is necessary combining policies, regulations, incentives, technologies and financial resources with public, private and people sector engagement.

The figure below presents an integrated approach necessary to achieve sustainable production and consumption in Sri Lanka. Absence of or deficiencies in one of these elements will have negative impacts on achieving the desired outcomes. The root causes of failures of many significant initiatives to achieve expected outcomes in the country is due to either failure of or inability to consider the system perspective of an integrated approach to address the challenges during implementation through strong monitoring and reporting systems.

¹ It is expected to increase this target to 20% by 2020

Integrated (Systems) Perspective for Sustainability



R & C - Responsiveness and Collaboration for SPC

CP – Cleaner Production

EST – Environmentally sound technology

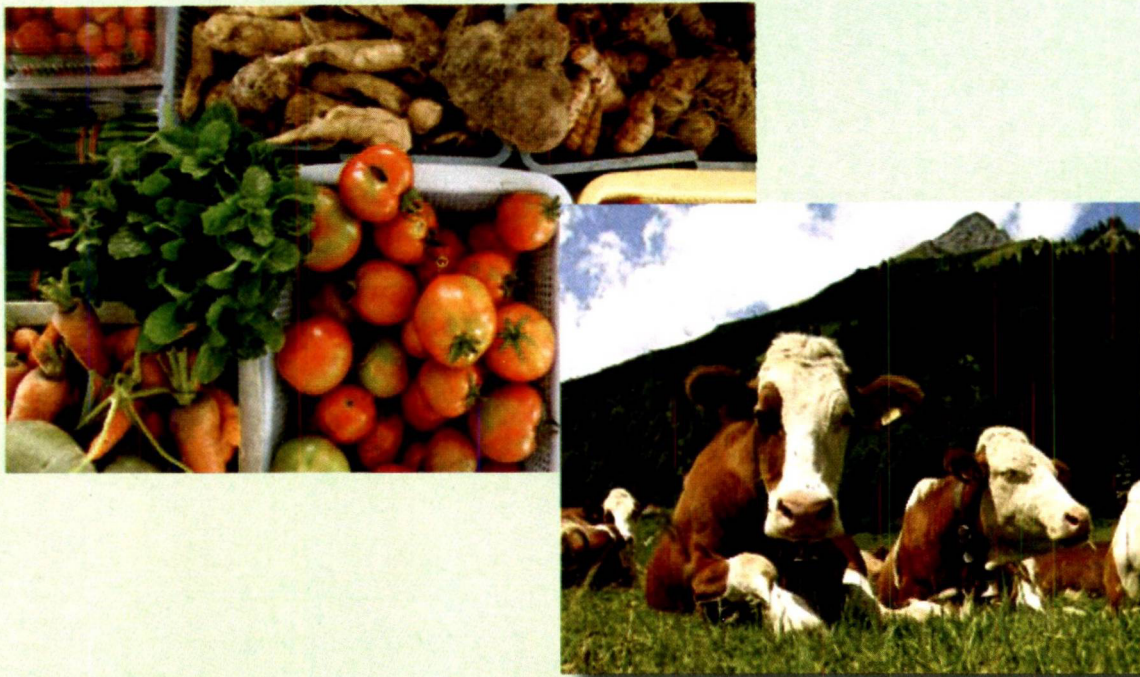
SP – Sustainable Production

Source: Batuwitige (2011)

Effective periodical monitoring and reporting systems are necessary to evaluate the performance of the policies and programmes available to help identify the right mix of policy instruments and other infrastructure necessary to bridge the gaps in the journey towards sustainable Production and Consumption.

4. Striking a Balance for Sustainability

At this stage, it is worthwhile to note a comparison of the manmade rules through constitutions with physical laws of nature, made by Meadows (1999). *"In the functioning of the ecosystem, the rules are governed by nature itself. The interpretations and delineations by humans over the functioning of the ecosystem can be overruled by the rules of the nature, which is more powerful. Physical laws of nature are absolute rules whether mankind understands them or not".*



It is clear that manmade systems designed without paying attention to the rules of the functioning of the ecosystem can initially cause fluctuations and eventually destroy the carrying capacity of the ecosystem which in turn will impact the social systems. The development of modern environmentalism was a result of the challenge posed by the rules of nature interacting with the feedback loops of the social systems.

For living in harmony with nature with extraordinary satisfaction, it is necessary to avoid both affluence and abject poverty in the process of economic development. "The Middle Path" is encouraged by our ancient culture and it is no way antagonistic to physical well being. Adhering to sustainable lifestyles focusing on simplicity and non-violence leading to credible satisfaction of results is the key to achieve sustainable development worldwide.

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