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Sustainable Development and Relevance of Ancient Wisdom

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Highlights of the Thesis

Research Background:

Environmental degradation and climate change have emerged as the most serious challenges to humanity in the recent decades posing existential threats. Existence of life is closely inter-twined, with nature. Nature provides the support system for survival of different species of life that exist on the Planet Earth. As evident from historical records, for thousands of years, humanity lived in harmonious relationship with nature. The Industrial Revolution marked a major turning point in Earth's ecology and humans' relationship with their environment. However, the full impact on the world's psyche would not begin to register until the early 1960s, some 200 years after its beginnings when machines began to replace human beings in work places and mass production from large-scale industries at lower prices started flooding the market, making small and cottage industries unsustainable.

Since the on-set of Industrial Revolution, modes of transport have catapulted human life from simple horse drawn carriages to spacecraft cruising at unprecedented speeds into outer space. Simple wooden boats have been transformed into large luxurious sea cruisers, which are no less than floating cities on the ocean surface. Simple two-way oral communication has travelled a long way to high speed wireless internet and cellular and satellite phones with instant connectivity all around the globe and beyond. Traditional small and cottage industries have been replaced by large scale production units with unprecedented automation, churning out billions of products every day to satisfy ever growing human desires. Genetic and medical sciences have precisely mapped the human genome and body organs; and have invented highly complex systems of diagnosis, medication and surgical intervention. Internet, cellular and digital connectivity have reduced the world to a global village. Most of these amazing transformations have occurred in our own lifetime. Moreover, the pace of transformation continues unabated and at an ever-increasing speed.

These technological innovations have intruded into every sphere of our life from food to clothing, from sports to music, from education to medicine, from habitation to work places, from transportation to communication, from entertainment to travel, from relationships to sex and from production to distribution to consumption completely transforming the life-style adding considerably to human comforts.

Consumer Society and Environmental Challenges:

With increasing production and services, Gross World Product (GWP) has recorded unprecedented growth since 1950 giving birth to what we call 'consumer society'. It now takes less than two weeks for the world to produce the same output as the whole of the year 1900. Despite massive economic growth large-scale incidence of hunger and poverty, extreme inequality of income and wealth, and large and growing slums continue to characterize human society. Over one billion people live with less than US\$ 1.25 per day. In addition, almost one billion people live in urban slums in sub-human condition. Ironically, despite high incidence of poverty and

deprivation, the number of global billionaires is rising very rapidly.

Unfortunately, this massive economic growth has come at a great environmental cost. Human induced activities are leading to massive degradation of environment. Extraction of minerals is taking place at an unprecedented rate of 60 to 65 billion tons each year with gross extraction amounting to over 100 billion tons. With increasing use of chemicals and pesticides, intensive agriculture and continuing deforestation over 35 percent of world's top soil has been degraded threatening food security. Fresh water consumption has gone up 9 times during the last century due to increasing industrial, agricultural and municipal use. Per capita availability of fresh water on a global basis fell from 17,000m³ in 1950 to 7,300m³ in 1995 and is presently estimated to be less than 5,000m³. Water bodies are shrinking and are getting contaminated with increasing amount of industrial and municipal effluent. In addition to the huge quantity of industrial effluent, globally 330KM³ of municipal sewage and over 1.7 billion tons of solid municipal waste is

generated every year. According to United Nations Environment Programme (UNEP) 6.4 million tons of litter consisting of 8 million items is dumped directly into the oceans and seas every year. There are 13,000 pieces of plastic every KM² of ocean surface. Due to growing air contamination, quality of air has deteriorated in all the major cities around the world. In many cities air quality is rated as 'unhealthy to hazardous'. Presently 92 percent of urban population is breathing air quality far below World Health Organization (WHO) norms. Over 11 million people die every year directly due to air and water pollution, in addition to several hundred million who suffer from a variety of health problems.

Anthropogenic greenhouse gas emissions are rapidly increasing giving rise to global warming. According to the Intergovernmental Panel on Climate Change (IPCC) between 1880 to 2012 global mean temperatures have risen by about 1.1 degree centigrade. Since 1979, the Greenland and Antarctic ice sheets have been losing mass at an increasing rate. The annual mean Arctic sea-ice extent decreased over the period 1979 to

2012 at a rate of 3.5 to 4.1% per decade. Each succeeding decade has been warmer compared to the previous one, with the last 17 years of this century being the warmest ever. Over the period 1901 to 2010, global mean sea level rose by 0.19 [0.17 to 0.21] m. Weather patterns are becoming increasingly erratic resulting in manifold natural disasters all over the world. Glaciers and ice sheets are melting and sea levels are rising. Oceans are absorbing increasing amount of CO₂ resulting in acidification of oceans. Additionally, oceans are getting contaminated with massive amount of plastic accumulating in the ocean beds. As a result, marine life and coral reefs have been seriously affected. Marine bio-diversity has declined and thousands of species have become extinct with thousands more being on the verge of extinction. Due to massive deforestation to meet the increasing need of land for agriculture and human habitation, forest cover has declined substantially. Thus, Earth's ecosystem as a whole, has taken a heavy toll and production and consumption patterns have become unsustainable. The basic problems we face today could be summarised as follows:

- a. Unsustainably large and growing human population with fast growing consumption patterns that exceeds the carrying capacity of the Earth.
- b. Evolution of large-scale production and marketing systems with gradual destruction of small and cottage industries in rural areas.
- c. Massive migration to urban areas requiring large infrastructure of roads, water supply, drainage, waste disposal, energy supply and education & health, growth of urban slums and growing disconnect with nature.
- d. Increasing concentration of global wealth and means of production with massive poverty and extreme economic disparity.
- e. Highly entropy-increasing technologies that deplete the earth of its resources and whose unassimilated wastes (including non-biodegradable, toxic and nuclear) poison the air, water and land.

- f. Land conversion and depletion of forest cover that destroys habitat, increases soil erosion, and accelerates loss of species diversity.
- g. Increasing amount of liquid and solid waste from urban areas and industrial units is contaminating soil, water bodies and oceans.
- h. Increasing CO₂ emissions leading to global warming, climate change, extinction of species and ecosystem imbalances.

In view of the above, serious doubts have been raised on the sustainability of the ongoing economic and social path of humanity. Negotiations on sustainability have been on the international agenda since the Stockholm Conference on Human Environment, 1972. Since then several impressive reports, protocols and declarations have been produced by the World Commission on Environment and Development 1987, the Earth Summit in Rio in 1992, the UN Millennium Summit 2000, the World Summit on Sustainable Development in Johannesburg in 2002, the Rio+20 Summit in Rio in 2012, the United Nations Sustainable Development Summit in

New York in 2015, and a host of conferences held under the United Nations Framework Convention on Climate Change. As part of 2030 Agenda for sustainable development, a set of 17 sustainable development goals and 169 targets were adopted by the United Nations in 2015.

While the complex international negotiations in various forums in many exotic places around the world have produced thousands of documents and declarations, the situation on the ground continues to deteriorate with increasing CO₂ emissions, ever-increasing solid and liquid waste, degradation of soil, contamination of water bodies, shrinking of fresh water supplies and deteriorating air quality. The pace of environmental degradation in the recent 15 years from 2000-2015, has been the worst with 50% increase in emission of greenhouse gases, growing desertification, increasing contamination of oceans and unmitigated deforestation.

Research Questions:

This thesis investigates consequences of fast-growing production, consumption and contamination particularly since the Second World War and the failure of international negotiations in containing environmental degradation. The following four questions form the core of the research undertaken by me.

- 1. What is sustainable development? Is there a paradox between sustainability and economic development? Could they co-exist?**
- 2. What is the connection between rapid economic and technological transformations and environmental degradation?**
- 3. What is the current status of international negotiations on issues of sustainability?**
- 4. Since our ancestors lived in harmony with nature for thousands of years, could their wisdom be relevant to**

contain further environmental degradation?

Research Methodology:

Extensive literature review based on the authentic data from the United Nations Organizations (UN, UNEP, FAO, WHO, UN Habitat, UNESCO and UNICEF), World Bank, International Monetary Fund, Intergovernmental Panel on Climate Change, NASA, European Environmental Agency and so on has been undertaken on the environmental implications of the economic journey humanity has undertaken since the II World War. Thereafter, in order to test the research hypotheses, empirical research has been undertaken in two different townships that have been founded on sustainable living practices based on the time-tested concept of moderation in consumption so that the humanity is not on a constant war with nature, which nurtures and supports our very existence. These are; Auroville in South India founded in February 1968, based on the vision of human unity and sustainable living and

Krishna Valley in Hungary founded in 1993 as ecological township based on consciousness based sustainable living. The first township is located in a developing country and has an international character with habitants coming from 53 different nationalities; while the second township is located in a developed country with habitants mainly from Hungary. Separate studies have been undertaken on the sustainable living practices followed in these townships with different characteristics. A comprehensive survey on the sustainable living practices and on the experience of the residents was undertaken in each of the two townships. Initial surveys were conducted with the help of a scientifically designed questionnaire, which was followed by group discussion and brainstorming sessions held with small group of residents in these townships.

Research Conclusions:

After studying and analysing the practices followed in these townships, and results of the survey undertaken with the residents, I have come to the conclusion that the task ahead is not easy given the

evolution of new comfortable life-style based on consumerism since the on-set of Industrial Revolution. Temptations of consumerism are now deeply rooted in human psyche. Mass production systems, increasing population and vast urbanization are further complicating the problem of sustainability. Therefore, the new sustainable practices introduced during the last few decades, particularly since the early 1990s to support evolution of green economy need be further promoted. Innovations and technology could supplement efforts towards sustainable development of agriculture, housing, transport, water and energy practices and recycling of waste. Large production and marketing systems have led to concentration of wealth and have reduced humans to robotic life suppressing their ingenuity. Hence, revival of rural economy and reducing dependence on large-scale production units are very important aspect of sustainability. In the recent decades technology has successfully dismantled monopolies of large production units in many sectors of economy such as; solar and wind energy, cellular phones, radio and electronic media and so on. Similarly, 3D printing has the potential to replace

large-scale production units into thousands of smaller units scattered all over. Governments and scientific communities could promote such innovative technologies to return back to diversified small and cottage industrial systems to restore human ingenuity, creativity and dignity and to make people self-sufficient and reduce their vulnerability to large anonymous systems. Such technologies will also help in reducing excessive concentration of wealth and income and reduction in extreme inequality.

More importantly, ancient wisdom dictates that austerity and moderation in consumption and respect for nature are the only concrete and lasting way to contain environmental degradation. This is **one-stop comprehensive solution** to all the challenges of environmental degradation, global warming and climate change. This is the way that governed the life of our ancestors who lived for thousands of years in harmony with nature. Nature nurtures each one of us every single day. The air we breathe, the water we drink, the food we eat, the habitation we live in, the clothes we wear and

whatever else we consume comes directly from the Mother Nature. The day this stops, human existence will come to an end. This is ancient wisdom and a plain and simple truth. No complex statistics, graphs or tables are needed to understand this simple fact. Under these circumstances how can we treat nature as an object of exploitation and a dumping ground for human induced waste? If we continue to do so, we are waging a war against our own existence. These is also the lesson we can learn from the living practices in Auroville and Krishna Valley. Similar living practices can also be found amongst the nomadic people of Mongolia, Kovcheg village in Russia and Lammas Eco Village in Wales. In recent years some Nordic countries have started following minimalist approach towards consumption which is a good beginning.

Education based on consciousness is key to sustainable development. Enlightened are those who can manage with less. Needs are limited while the desires are infinite and they grow in geometric progression. Chasing these desires is the primary cause of human distress and

environmental degradation. Therefore, mad race for higher Gross Domestic Product (GDP) and more and more consumption must come to a halt. Environmental issues, harmonious co-existence with nature and the insatiable nature of human desires must form part of education system in all the countries to raise the level of human consciousness. Respect for nature must be cultivated in the same way as we teach respect for other humans, traffic rules and social behaviour. In each nation, social, political and economic leaders should be persuaded to present examples of moderation and austerity in consumption to the younger generations. A paradigm shift is needed towards enlightened living practices as prevailing in Auroville and Krishna Valley if we wish to mitigate the challenges of environmental degradation and climate change and to protect the very survival of human race.
