

The Limits to the Application of Science and Technology for Sustainability

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„The Earth has enough for everyone’s Need but not for everybody’s Greed“

– *Mahatma Gandhi*

Let me begin with a small anecdote which I heard recently: The mother Earth has fever. It is lying in bed red in face with a scarf round her head and a thermometer in her mouth. The nearest neighbouring planet, Moon, came to visit and console her. She enquired: ‘What happened? You were alright until a few thousand years ago! ‘For that the Earth replied: ‘I do not know what has happened, I have high fever for the past few years and the temperature is rising. I have requested Dr. Mars to help me and he made a house call and conducted some clinical tests. He concluded that I have a deadly viral infection called Homo sapiens. Moon consoled by saying: ‘Don’t worry, you remember that you had another viral infection called Dinosaurs a million years back and it had suddenly disappeared on its own. Similarly, this infection will also run its course and will disappear on its own in a few decades!’ This anecdote clearly highlights the limits to the growth of human civilization in its present form.

After the industrial revolution, science and technology was responsible for the spectacular growth in the standard of living of the human race. Only until a few years back it was firmly believed both by the people and the governments that industrialization is the only solution for the poverty and backwardness in the developing or underdeveloped countries of Asia, Africa and Latin America. The model of development in Western Europe and North America was held as a role model for the rest of the world, and they were encouraged to copy it by the so-called development aid by international agencies like World Bank, United Nations and the like. Most populous countries like China and India have enthusiastically embraced this model in improving the standard of living of their people – with apparent success! The number of cars, telephones, refrigerators, etc. – the visible symbols of prosperity – have multiplied and even the status symbols like air travel have increased dramatically. But only of late the realization has dawned on people that all these developments have a price to pay.

The environmental degradation has raised its ugly head with the air unbreathable, water undrinkable and the food contaminated with chemicals. Suddenly the quality of life has become a new paradigm in the human development. It is recognized that growth for growth sake is not only undesirable but can be dangerous to the survival of mankind. But the chain of events which were set in motion in the human development were not only difficult to stop but often impossible to reverse.

New messiahs of doom and destruction in the form of Senator Al Gore have appeared on the scene, armed with scientific measurements of global warming with dark forebodings of raising sea levels. This has been dramatized by the President of Maldives – a country consisting of several islands in the Indian Ocean where the highest point on land is hardly 1 meter above mean sea level – who has urged his countrymen to abandon their homes and migrate to other countries before it is too late. Refugees seeking asylum for environmental reasons has become a reality for the international community. Besides, we have been warned of increasing rapidity of floods, earthquakes and other natural disasters related to environmental degradation.

What are the solutions? People have been asked to look for alternative and renewable energy sources to the conventional coal and oil burning technologies. Suddenly even hydro-electric power has become suspect and nuclear power downright dangerous. Scientists and Technologists were asked to refocus their aims and efforts to find new forms of sustainable technologies. In this context, the German-Indian workshops on Sustainability assume special significance. Germany with its rich experience in green technologies and its public awareness for environmental degradation is an ideal partner for India which is trying to improve the standard of living of its billion plus people with an eye on the environment. In addition, they have a long history of successful scientific co-operation and both being democratic countries where the results can be implemented in the society without much resistance. Hence, joint research projects with social relevance must be undertaken by scientists from both countries. It is important to associate institutions in both countries which have their roots in the society, like non-governmental organizations, which will ensure speedy implementation of the scientific results at the grassroots level.