

ALUMNI LECTURE SERIES

Understanding 'India' Sustainably: The economics and politics of resources

Lecture I: Coping with energy resource scarcity...sustainably?

"The question whether the glass is half empty or half full has a third answer, there is too much glass for the job to be done!"

This aptly reflects the current energy situation in India- that it may not always be about lack of accessibility of energy sources but about the limited supply or naturally constrained availability of the energy sources in the country. Thus, any solution to cope with the growing concern is to reduce the size of the glass itself, that is, to reduce consumption to make it more sustainable.

To reflect upon the issue of sustainability of resources, the Department of Economics held the first lecture as part of the series entitled "Understanding 'India' Sustainably: the Economics and Politics of Resources" on October 1, 2013. The lecture was delivered by Dr. Nandita Mongia, a senior academician and adviser to the National Clean Energy Fund, India. This lecture is also a part of the initiative by the department to increase interaction with the alumni of the college.

The lecture began by highlighting the foundational distinctions among various energy sources. A common terminology used in the energy sector is primary and secondary energy. Primary energy is the raw coal, oil and petroleum and secondary energy uses them to make energy. Commercial energy is the energy that we buy and sell while non commercial energy comprises of energy sources like bio mass fuel. Another common terminology used is renewable energy sources (those that can be regenerated easily within a short period of time) and non renewable energy sources (those that cannot be regenerated within a small time period).

Dr Mongia then explained the concept of sustainable development with reference to the 1987 Brundtland Report, which defined sustainable development as the development that meets the needs of the present generation without compromising the ability of future generations to meet their needs. Three aspects need to be met for a country's development to follow a sustainable path: social objectives, environmental objectives and economic objectives. We need to reach a point where all three are completely integrated.

Dr Mongia then took up the issue of oil. There is a huge mismatch between supply of and demand of oil. Hence, its price rises and subsidies need to be provided. This translates into a budget deficit which in turn translates into a foreign exchange problem.

The next issue to be discussed was the composition of rest of the energy in India. Thermal power, which is primarily coal, is the major source of power. But it is called the "dirty" fuel in terms of pollution. However, there is a solution to it – renewable energy. The use of renewable energy sources has risen sharply over the years, which is good news. Renewable energy is costly upfront, but if you look at the environment cost it compensates for, or if you internalize the

external damages, then the cost of damages is much more than the cost of the energy. In India, renewable wind energy is huge whereas the proportion of hydro energy is small comprising merely 15%. Also, bio mass solar energy comprises 14% and 6% of the energy source. These meagre proportions are not sufficient to serve the needs of a large population like ours.

Decentralized energy generation, like a district heating system, is not common in India, but it is otherwise an important tool for sustainable development. We have more than 800 million people living under \$2 a day while 75% of our population needs just basic energy. A possible intervention on the supply side is with regards to supply efficiency. Usually, when thermal plants generate electricity and transport energy, some energy is lost in the process. Our transmission and distribution loss is around 30%. Most of the coal power plants are very inefficient. Coal producing technology is old, and so we are not producing the maximum that we can produce without setting up new power plants. The need of the hour is to bring in energy efficiency. Ever since India has enacted the Energy Conservation Act, it is compulsory to have labels on electrical equipments with the number of stars denoting how much electricity they save. These norms need to be followed by everyone.

And, of course, everyone should strive towards the goal of reducing the size of the glass itself!

Lecture II: Water, culture and power: Economics for the 21st century

In the second lecture under this series, we were fortunate to have amongst us Dr. Amita Baviskar who is a highly renowned academican and an associate professor at the Institute of Economic Growth, University of Delhi. She delivered a very interesting and enlightening lecture on the intertwining issues of environmental economics, politics of water resources, conventional economic cost benefit analysis and valuation systems.

She began by highlighting the various conflicts that exist in the current valuation system i.e. the way different sets of people value resources. We have local traditional communities that respect and value forests and the environment and use them judiciously for meeting their basic subsistence needs of fodder, food and timber. Conversely, we have the forest officials, with their single minded focus on tapping the economic benefits by clearing large acres of land and planting it with cheer pine, which provides commercially valuable products like timber wood and gum. Thus, while no major monetary value is attributed to subsistence activities (fuel and fodder wood collection of traditional communities), the planting of commercially profitable species of trees like the cheer pine shows up as a great income source and caters to the needs of the consumerist urban class, while destroying the very source of livelihood of local communities. Moreover, it is difficult to ascertain in monetary terms the ecological and cultural loss that is entailed in the name of development and industrialization since market economies fail to put a value to the traditional belief systems of village communities, the aesthetic beauty of the environment and local indigenous culture.

It has also become increasingly important to analyze the issue of power relations, which is responsible for inequity and unprecedented destruction of forests. The question of power relations can be addressed in economics only in a limited manner that can be seen in the views of Karl Marx, who talks about industrialization as an empowering force for the worker community, which will enable them to fight for their rights. According to Dr Baviskar, since economics is the dominant discipline used in policymaking, we need to look at the broader