



Editorial

Locating Science: In the Contexts of Climate Change, Ecological Security, and Inclusivity

Rise in carbon dioxide and other greenhouse gases in the atmosphere is not a recently discovered phenomenon. The built up of greenhouse gases in the atmosphere since the post-industrial revolution has been reported in many scientific reports and publications since last hundred years. Global Warming and Climate Change are the inevitable consequences of this. Sadly, and unfortunately, these profound changes in the wake of anthropogenic activities have been refused to be accepted by many until recently. Also, more importantly, the scientific research findings on the anthropogenic impact in the global environment have been hardly integrated with policies of governments. And what ever policy incorporation of environmental issues and concerns have been there are at best idiosyncratic. Policy integration of the scientific research findings for governance and management call for separate deeper research. This has not happened.

The fact that development in science and technology and innovation have accelerated and accentuated the anthropogenic impact on global environment and climate is undeniable. But it is never to be said that science and technology is responsible for the mess that we have created in our environment. The wrong and unscientific application of science and technology is solely responsible for the life threatening and alarming situation that we witness and experience in our environment and climate today. Lack of policy directions regarding the importance of maintaining the following four major equilibria have led to the disastrous consequences of pollution, erosion, flood, drought, man -elephant conflict, cultural and ethnic violence, and emergence of deadly pathogens-

1. Human and the abiotic components of the environment
2. Human and the other animals
3. Human and human
4. Human and microbes

The fallouts of the disequilibria between the afore important components, do not respect political boundaries and affect life everywhere. Our ecological security calls for urgent review of policies with respect to the reckless application of science and technology for the so called development.

Eminent physicist and thinker Richard P Feynman very correctly referred to the Buddhist religious proverb that – *“Everyone is given the key to the gates of heaven. But the same key can also open the gates to hell”*. Feynman said that the same applies for science. It is for us to decide as to how science and technology is to be used. Scientists work and do research for the cause of truth. Scientists don’t develop policy about application of science and technology. It is for the people and the government chosen by the people to work out the right policy (ies). Scientists do express caution about the wrong application of science. The Pugwash Movement after the nuclear bomb explosion at Hiroshima and Nagasaki and the Asilomer Conference in the wake of the

invention of the cloning technology for Genetic Engineering by Herbert Boyer and Stanley Cohen in 1972, are examples of such caution.

However, there is urgent need and significance of undertaking Policy Research at Universities and other academia on every issue and subject of public concern. The Rockefeller Foundation and the Ford Foundation in the US brought in the percept and practice of policy research in the larger perspectives of sociology, culture, and politics way back in the nineteen forties. In India the University Grants commission introduced Area Study Centers with similar objectives. But this important initiative is now limited to mainly one Indian University-the Jawaharlal Nehru University, New Delhi. Professor Shiv Visvanathan observed in his book- A Carnival for Science – *“One must emphasize that the new directions in the philosophy and sociology of science came not from academia but from the questions raised by grass-roots movements. The grass-roots groups were the dissenting academics of the eighties and nineties which raised issues that the Universities were reluctant to confront”*

Another important concern is the non- inclusivity of women in science. Almost half of the humanity comprises of women. But there is very disproportionate participation of women in science globally. As a result of this non-inclusivity, science and society have been deprived from the benefit of the perspectives from the points of view from women. This has deeper implications with respect to environment. The Sustainable Development Goals projected by the United Nations have several goals that have implications for women. Though one of the SDGs- SDG 5, is for Gender Equality, women’s concerns with respect to the other SDGs like, SDG 15 related to forests and SDG 14 relating to fish resources lack clarity as to the access of women to these resources, so crucial for producing and procuring food by women. Similarly, the SDG 13 on Climate Action does not consider the vulnerabilities of women farmers in the vagaries of climate change.

It is high time the world revisits our policies for global environment management and relocate science in the position that is missing now.

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