

life and living in the Anthropocene

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The term Anthropocene, to the best of my knowledge, has been popularised by Paul Crutzen, a good friend who won the Nobel Prize for his pioneering work in the field of atmospheric chemistry and ozone depletion. The term Anthropocene aptly defines the current geological age, wherein the condition of this planet and all its ecosystems embodies domination of geological forces by human actions.

It is almost paradoxical that despite the wealth and significance of knowledge that is now available to us from the work of the global scientific community, as epitomised by the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC), the world has not woken up fully to the risks posed by climate change, not only for human society, but for all living species and the stability and sustainability of the earth's ecosystems.

For instance, in the Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX), the IPCC clearly stated: "It is likely that the frequency of heavy precipitation or the proportion of total rainfall from heavy falls will increase in the 21st century over many areas of the globe. This is particularly the case in the high latitudes and tropical regions, and in winter in the northern mid-latitudes. Heavy rainfalls

associated with tropical cyclones are likely to increase with continued warming."

Against this background, it is significant that Justin Rowlett of the BBC has provided a perspective on the significance of recent climate-related events in India, which emphasise the need for India to take climate change far more seriously than our policies and actions indicate. The BBC report focuses on the damage caused recently by floodwaters in the area located between Mumbai and Goa and much more.

Any single event can certainly not be attributed to and seen as the impact of climate change, but the trend in terms of frequency and intensity of such extreme events provides powerful evidence of what the IPCC assessed in the SREX and the AR5.

The terrible cloudburst of Mumbai in 2005, which caused large scale death and destruction, the 2013 tragedy in Uttarakhand and the recurring floods in Pakistan are evidence of the vulnerability of South Asia to the impacts of climate change.

Paul Ehrlich, whose positions on ecological and development issues raise the hackles of neoclassical economists, particularly in his own country the US, has rightly classified countries of the world as falling in the categories of developing, developed and maldeveloped. A growing number of countries, including India, remain obsessed with models of maldevelopment, thus enhancing the risks to future generations.

Climate change would have profound implications for our use of water resources, as larger areas of the globe become water stressed. The August issue of National Geographic magazine presents a sobering case study of the Ogallala aquifer in the US, which has been overexploited to an extent that its disappearance is now inevitable. This study describes how drilling at a particular location finds water at a depth of 195 feet, a foot lower than a year before.

This description could apply to many parts of India, and most tragically to the breadbasket of India, the State of Punjab, where the farming community and successive Governments have displayed unrelenting myopia, thus threatening to create a serious crisis in the near future.

Yet, a combination of faulty pricing and distorted subsidies, supported by vested interests and personal greed are leading to pollution and over-exploitation of this vital resource in that State. Exploitation of groundwater resources in India at rates much faster than the replenishment of aquifers is now commonplace. Sadly, in most States which have introduced regulatory measures, their enforcement and compliance remains no more than a joke. And, pricing and taxation measures are seldom employed to bridge the gap between private benefits and costs to society. Yet rational pricing can prove extremely effective, through direct as well as indirect taxes, to account for externalities imposed by private consumption.

The growing use of plastic bags in this country and their wanton disposal pose dangers far beyond despoiling the landscape on land and in coastal areas. A particularly ugly example of this growing menace can be seen along our rail tracks as a train moves slowly into the railway stations of Delhi. There are countless numbers of cattle, birds and even marine species which suffer the ill-effects of millions of tonnes plastic on land and sea, which lead to death in many cases.

Drainage systems in towns and cities are clogged by plastic bags, leading to flooding of roads, homes, shops, factories and offices, causing human suffering and economic loss, particularly for the poor. But, now comes some good news from the UK, where last October a five pence charge was imposed on the use of plastic bags in supermarkets!

The rapid impact of this measure has been an 85 per cent reduction in the use of plastic bags already. As is well-known, the measure adopted requires all retailers with more than 250 full-time employees to charge a minimum of five pence for the single-use, plastic carrier bags they provide for shopping in stores and for deliveries. It is reported that the total number of plastic bags used has fallen from over seven billion a year to less than half a billion in the first six months of the policy, saving 40,801 tonnes of plastic.

Given the damage and destruction caused by patterns of development followed globally since the beginning of industrialisation, it is essential to reorient our policies towards sustainable development pathways and practices.

This requires all stakeholders to play their part. In particular, it is the youth of the world who have to take the lead, because it is their future which is at stake. Their actions, their advocacy and influence on decision-makers are essential for bringing about a redressal of the problems we have created in the past, and for them to become part of a global movement to tackle the menacing challenge of climate change and widespread manifestation of the ills inherent in pursuing pathways of unsustainable development.

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