

## Human Future and Climate Change: An Anthropologist's View

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Speaking on a burning topic that has drawn worldwide attention, fueled political and scientific controversies and drawn social activists on an united front is a hazardous venture. On top of it, within a narrow disciplinary boundary, knowledge base being limited, one is confronted with another set of problems. These include personal knowledge, ability and skill to articulate the issue without personal or private bias. Hence, before starting the talk, I seek forgiveness from those who have authoritative knowledge, long experience and are able to integrate diverse viewpoints to give direction to the current issue.

My association with the issue of "Climate" or "Environment" and human cultural skills to cope with it goes back to little over four decades. In 1967, while working on my Ph.D. thesis under Late Professor Robert I. Miller, we had raised an exploratory question: "How religious fair and festivals are connected with climate cycle in Malwa region of Madhya Pradesh". After after 18 months of field work in Dhar district, Madhya Pradesh. I was amazed to note a perfect fit of culture and climate reflected in agricultural cycle (see Agrawal 1980). Since I did not pursue my research interest in religion on climate change, no further research was done until I began to interact with a whole lot of environment specialists working in Centre for Environment Education (CEE) Ahmedabad in late seventies of last century.

In a modest way, I would like to share some of my observations, highlight human aspects of climate change and raise few questions to speculate the human future in the wake of climate change.

### *Human Intervention in Changing Climate*

Robert Henson (2006) maintains that climate change on the earth is a reality and there is a likelihood of global warming as a result of average surface air temperature of earth in the last century and likely to continue in 21<sup>st</sup> century (also see Pearce 1989 and Pittock 2005). While there are divergent views those climate change it does not provide any direct evidence that climate change is due to any human intervention. However, the Intergovernmental Panel on Climate Change (IPCC 2007) have given an un-univocal verdict of anthropogenic climate change and global warming. In no uncertain terms IPCC (2007) linked earth warming to human activities. "Most of the observed increase in globally averaged temperature since the mid-20th century is very likely due to the observed increase in anthropogenic [human-caused] greenhouse gas concentrations.....". The phrase "very likely" translates to a 90 percent probability, the report authors' note. This is a significant departure from previous reports where it was concluded that humans were "likely," or with 66 percent probability, the cause of global warming in 2001. Intergovernmental Panel on Climate Change in 2001, also issued a benchmark report claiming the world's glaciers were melting so fast that those in the

Himalayas could vanish by 2035. Controversy continues to surround dooms day predictions worldwide.

Henson (2006) predicts very clearly that climate change and global warming will necessarily lead to a major “sea level rise, increase flooding and droughts, more major hurricanes and many species being consigned to extinction and bad news from any perspectives” (Henson 2006:12).

Political solutions in the current national self assertion, competition and conflict seems not forthcoming and in no way are contributing in curbing human ever increasing desire, needs and wants. Historically, few nations dictated, dominated and determined how other nations should curtail their needs and wants and pressured other poor nations to counter negative effects of anthropogenic interventions. The rise of global economic and industrial aspirations especially of the Old World Civilizations like China and India are rising at a very accelerated pace. Hence, the combined global human intervention could have serious negative impact on climate change. Is there a way to reduce this growing anthropogenic climate change without intervening, improving and inculcating new norms of social and cultural life? I personally see no respite since global economic forces are pushing a model of inequitable development to improve quality of life which is directly in conflict with a values and aspirations of large majority of human beings on the earth.

### *Indian Assessment of Climate Change*

Government of India brought out recent report entitled “Climate Change and India: Towards Preparation of a Comprehensive Climate Change Assessment”<sup>2</sup>. The report gives an overview on the climate change and possible areas of impact in a country specific context of India. The most depressing part of the report is that humans are not in the focus of climate or anthropogenic impact of climate change and have not been seriously considered.

Futuristic planning for comprehensive climate change assessment is quite evident. Mr. Jairam Ramesh has announced the launch of the Indian Network of climate change assessment<sup>3</sup>. Further, the effort is to undermine the earlier estimates like methane emission from rice paddy cultivation or impact on black carbon on Himalayan glacier. This is in spite of the univocal warning that anthropogenic activities have led to climate change which may lead to abrupt changes in the climate and continuous warming of the atmosphere. It is most unfortunate that in the entire proposal, there is no mention about the main actor largely responsible for climate change. The humans in the proposal are passive recipients rather than active agents to mould the direction of destruction, degradation and degeneration of the entire bio-social system.

The entire focus of the Indian assessment of climate change remains sectoral and adaptive. It is aimed to be developed to “decipher the impacts climate change and associated vulnerability and prioritize the same. The adaptive frameworks will be built on the current adaptation strategies of the concerned communities that have traditional knowledge of adaptation to combat climate variability and also will look into the additional strategies required to upgrade technological or technical impetus required to adapt to climate change”<sup>4</sup>. In this framework, human beings remain passive though references have been made to develop innovative skills to combat climate change.

### *Anthropological Concern of Environment*

Recently two American anthropologists brought out a reader entitled Environmental Anthropology (see Michael R. Dove and Carol Carpenter. editors 2008). The editors lamented about anthropologists’ late arrival on the scene to discuss human environment interaction in a systematic manner though the issue of effects of environment on culture has had been an

important aspect of investigation and speculation. Since the days of Hippocrates who is considered “the most important classical scholar of society and environment relationship” the issue has been discussed (Dove and Carpenter 2008:1).

Within the Indian Civilization, the relationship between environment, in the broadest sense of the world, and all flora and fauna including human beings, have been an issue of philosophical debate, religious discourse and social confrontation. Also there has been an explicit acceptance that human beings must not intervene and destroy anything on the earth to the best of their ability. Both Vedic literature like Rig Veda and the preachers in the later period much before Christian era have advocated this view.

Environmental Anthropology, as it is known today, has become an important scholarly arena of investigation and study. After the Second World War, in less than six decades, it has gone through a number of cycles of indifference, serious efforts and focus of applied anthropology to help tackle innumerable negative effects of industrial revolution on various human groups across the globe. The focus remains on industrialization, urbanization and deforestation of virgin lands occupied by the indigenous people to meet the growing greed of few population extension and to give material comfort to even fewer.

Dove and Carpenter (eds 2008) in their long introduction concluded that “Environmental Anthropology is today extraordinary interdisciplinary in character, reaching out to a multitude of other disciplines and freely crossing the natural and social sciences (Dove and Carpenter 2008:61). Having said so, it has become imperative on the part of anthropologists to take their discipline seriously to protect, preserve and prevent future shocks of climate change to whole lot of human beings living in different socio- economic and climate zones in the world. More specifically it demands that we anthropologists in India begin to redefine our role as students of *homo-sapiens* for holistic understanding to save ourselves from self destruction. This is clearly possible by sharpening our tools to identify cultural forces and cultural skills that would help adaptation of changing social and cultural life and re-adaptation to new ways of life that would reduce possibilities of green house effects and carbon dioxide emission in the environment.

Few anthropologists worked within the government system specially in the Department like - Ministry of Environment and Forests have taken up the issues of climate change as an environmental issue and clearly identified the physical and socio- cultural aspects of environment which have been largely ignored by most anthropologists in India (Chandra, ed. 2000) earlier.

### *Diminishing Cultural Skills for Survival*

The anthropologists and whole hosts of other experts directly or indirectly studying humans, their behaviour and biology have considered humans as unique having adaptive cultural skills. Conviction of human uniqueness is based on the observations of the human ability to have culture. "Adaptation refers to the process by which [humans] organisms cope with environmental forces and stress" (Kottak 2008:4). In a limited way, the observations of few anthropologists in India of selected Scheduled Tribes namely Santhal and Birhor of Jharkhand (Verma 1977), Yanadi of Andhra Pradesh (Agrawal, Sudhakar Rao and Gurivi Reddy, 1985), Mukhodbhara of Andhra Pradesh (Naidu and Saheb 2000:90-110), Tribal displacement and resettlement of Kanha National Park, Madhya Pradesh (Chandra 2000b:119-152) and Onges of Andaman and Nicobar islands (Raha and Coomar 2000:111-118) directly or indirectly indicate gradual loss of cultural ability to counter act against any adverse climatic change. The same holds true for a large number of other communities in the world. It is not difficult to predict that if process of economic globalization continues along with ongoing industrialization and international migration, there will be higher degree of cultural homogenization. Such a process will reduce cultural skills of many to counter the negative effects of climate change.

### *My experience with Yanadi*

More than three decades ago in 1976, I along with three other anthropologists Dr. N. Sudhakar Rao, currently Professor at Hyderabad Central University, Dr. P.C. Gurivi Reddy, Social Worker and Grain Merchant and Sri Bageshwar Singh retired anthropologist from Anthropological Survey of India started working with Yanadi tribe living in the island of Shriharikota in Nellore district of Andhra Pradesh (see Agrawal Sudhakar rao and Gurivi Reddy 1985). The island is now known as Satish Dhawan Space Centre (SDSC) Shar.

Late Professor Dhawan as a concerned scientist asked us to visit the island to help Yanadi, who live on the island from time immemorial. The first encounter that came to Yanadi life was when British colonialists decided to use their land for plantation of casurina (*Casurina eucalyptus*) for fuel fire. For transportation of casurina to Chennai (then Madras) they had dug up Buckingham Canal. In the post independent India efforts to bring about changes in the Yanadi continued. The last encounter with large scale migrants was seen in 1970s, when Indian Space Research Organization (ISRO) decided to use the island for satellite launching and began to build a world class launching centre.

Today, the Yanadi children who have become adults and old and many of them died since we met them in 1976, but the new generation of Yanadi looks no different than the Andhra Pradesh population living in and around the island due to what have referred to as process of "cultural homogenization". Other anthropologists referred it to as a process of 'induced cultural change' and 'assimilation'. When we reflect back after interacting for more than five years with Yanadi where N. Sudhakar Rao, P.C.Gurivi Reddy and Bageshwar Singh continuously lived on the island along with other Andhra Pradesh employees, scientist and engineers from several states of India, we feel somewhat happy and also equally depressed.

Satish Dhawan Space Centre (SDSC) Shar has achieved a place of eminence on the world map as satellite launching centre which only few nations have achieved in the world. Yanadi today are only known as *Adivasi* for the purpose of getting government support and employment in the special category of Scheduled Tribes. But what they have lost I personally feel a great deal of cultural skills of survival, that enabled Yanadi to save themselves from serious climate change and be able to live in harmony with nature.

While Yanadi to-day are confident and feel secure they have lost several cultural skills of survival especially the young Yanadi. During cyclone on the island of SDSC some years ago, in spite of large scale devastation, Yanadi remained in their age old hut designed to withstand cyclone. To-day, I am not sure if Yanadi, like anybody else would be able to withstand cyclone since they have lost their cultural skills to do so. The point I am deriving here is that "climate change" as a natural phenomena can't be controlled. But humans can to some extent take care by diverse existing cultural skills. The process of homogenization has put the entire humanity into single basket to face the consequences of climate change without diverse cultural skills. The illustration of Yanadi and for that matter several communities of the world need to be advocated by anthropologists to preserve cultural skills to adapt climate change in the future.

I personally believe that it is in this area that anthropologists can, should and must extend their micro in-depth understanding of human adaptive abilities and cultural skills for arresting and fighting climate change and global warming. It is clear to my mind that it is not an impossible task as assumed by some policy makers and technologists. I believe that it is a much simpler task, if village-specific, community-specific, tribe-specific multiple approaches are followed and cultural diversities, agricultural diversities and similar other diversities are encouraged. This should be promoted and carried out in conjunction with the ongoing impact study and vulnerability and adaptive assessment

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