

ENSURING FOOD, WATER AND ECONOMIC SECURITY

A CASE FOR ZONE-SPECIFIC PLANNING - INDIA AND BEYOND

Introduction

India is a land beautifully crafted by the hand of God. The Himalayan Ranges and the Western Ghats are two marvels of the Indian landscape. The Himalayan ranges protect us from the cold northern winds while the snow-fed rivers that originate in the Himalayas provide succour to the massive Indian population inhabiting the Indo-Gangetic Plains.

Towards the South and West of India, the forest-covered Western Ghats are vital to the South West Monsoons and provide much of the inflow to the life-giving rivers across the Deccan Plateau and South India, sustaining about a fourth of India's population.

Without the Himalayas and the Western Ghats, much of India would have possibly been a cold, wind-swept and arid landscape. It is more than obvious that these two regions are to be regarded as the principal eco-regions of India and long-term policy measures are formulated and put in place to protect and safeguard the ecology of the Himalayas and the Western Ghats.

Rationale for protection

The protection of these regions is vital in order to ensure food and water security for the people of India. Huge quantities of water are also required for Industries that propel the nation's economy. The 'Make in India' strategy cannot be sustained without adequate water for industries. For example, the manufacture of a single mid-size car requires approximately 1,50,000 litres of water! Therefore, environment protection is not at the cost of development but is for ensuring long-term sustainable development and economic stability.

Food and water security in their true sense also ensure health security by addressing the issues of malnutrition and water-borne diseases caused by river pollution at source and beyond. Degradation of catchment areas and reduced water availability for downstream urban centres will result in overdependence on bore-wells. This has already led to groundwater in Indian cities plummeting

to levels where the water is dangerously contaminated with underground minerals and salts.

Kodagu District, Karnataka

To analyse the matter in greater detail, it would be useful to take a look at Kodagu in Karnataka. Kodagu is a small district of 4,108 square kilometres, astride the Western Ghats. It is the principal catchment for River Cauvery and provides almost 50 percent of the total inflow. River Cauvery sustains about 80 million people across South India and also provides water for hundreds of major industries.

Protection of the Kodagu landscape and other similar regions is in national Interest. Hence, it is a matter of deep concern that these areas are being subjected to rapid urbanisation, and invasive tourism. Paddy fields and coffee plantations are fast being converted to residential layouts, sites, villas and tourist resorts. Meanwhile, development projects such as state highways, railways, power lines and hydro-electric projects are poised to rip through Kodagu.

Urbanisation and 'development'- Lessons from the Pandemic

Meanwhile, in the face of the Corona crisis, the tragedy of migrants trying desperately to reach the very villages they had once abandoned is a harsh reminder that during our decades after Independence our model of 'Development' has not been in sync with the actual needs of the Indian People.

Urban sprawl is gradually eroding food-producing areas in India. Productive agriculture land is being fast exploited by Real Estate and Construction interests. This in turn degrades rivers across the country as huge quantities of sand are mined from the river beds. True, the Government has brought in regulations to curb irregular sand mining. However, the paradox here is that while it is perfectly legal to produce millions of bags of cement and boost the cement industry, there are strict regulations for the sand that will be required for the cement when it is used for construction. The Government has therefore created a Demand and Supply situation that has given rise to the 'Sand Mafia'. Sand is still available but at a price. Measures to curb rampant urbanisation and protection of food-growing regions from Real estate interests will enhance food security and will also protect our rivers. It will also be crucial to identify alternatives to sand for use by the construction industry.

On the other hand, policy-makers look at massive river-interlinking projects across the country in order to overcome drought. The economic costs amount to mind-boggling figures of thousands of lakh crores! Mountain ranges, deserts, forests and river systems have evolved through the millennia. Drastic man-made changes to these geographic features carried out directly or induced by man will only cause irreparable harm to humanity.

The country can well be drought-proofed by proper watershed management programs. The simple brilliance of Anna Hazare and Father Bacher in the Ahmednagar region of Maharashtra needs to be carried to the rest of the country. The existing watershed development agencies have to be revamped. There needs to be in-depth analysis on the reasons why large parts of India remain prone to drought despite several watershed schemes. Watershed schemes must be transparent and monitored at the Gram Panchayat level.

Awareness programs, capacity building and participation by Gram Sabhas need to be ensured. Basically, the drought conditions in India are due to reduced inflow into the peninsular rivers originating in the Western Ghats, while the floods are caused by excessive water flow into the Eastern Himalayan Rivers. Both the droughts and floods can be addressed by going into the causes in the catchment areas and by adopting benign measures such as water shed management, protection of wet lands, forest land restoration and reducing the emissions of short life climate forcers. The costs would be perhaps about one tenth of the funds required for the river interlinking projects.

In any case, what would happen to river interlinking once the glaciers have melted and there is no excess water to feed the drought prone rivers? Moreover, by diverting river water away from estuaries, there would be further incursion of saline sea water into the mainland. The other implication of manipulating river water flow away from the oceans is that the sea level rise due to climate change will cause more damage since there will be a drastic reduction in the silt deposit at the deltas.

One of the previous Governments at the Centre had embarked on a program of identifying and encouraging Special Economic Zones with a slew of incentives. But why is there no attempt to identify, encourage and provide incentives to food-producing and plantation crop zones? Why not identify and provide incentives to communities in principal catchment areas such as the Himalayas and the Western Ghats? Other countries already have the concept

of Payment for Ecological Services [PES]. It is a simple idea of Upland Communities and Low land Beneficiaries.

Planning of development zones

The Prime Minister has announced that the North Eastern States would be turned into a global hub for organic produce. This is precisely what needs to be done for the entire country. Each region or sub-region needs to be identified as a zone for a specific purpose and the policies should be formulated and implemented accordingly. Principal eco-regions [essentially catchment areas] and food-growing belts need to be kept relatively free from demographic pressures to the extent possible. The concept of zone –level planning if successfully implemented in India, can also be adopted by other countries.

The Policies at the National Level should be formulated with a time-vision of around Year 2050. At that time-line, the policy makers can easily foresee the projected population with estimates of the productive and dependent percentage and the requirements by that time in terms of:

- A. Water
- B. Food
- C. Energy
- D. Housing
- E. Education
- F. Employment
- G. Industries
- H. Infrastructure in relation to the above factors.

Accordingly, the zoning process will need to be progressed.

The predicted scenario of Climate Change by the year 2050 can be broadly assessed and this must also be factored in for the planning.

This could be a possible way forward for a 'Win Win' situation for the Country.

Forests

Forests are often linked with catchment areas. India has de-notified 700,000 hectares of forests during the past decade for the sake of Development projects. Today, vast areas of our country reel under the spectre of drought.

Meanwhile, across the country, man-animal conflict is on the rise. Elephants, leopards, bears and even gaurs are increasingly coming into direct contact with human populations outside forest areas. Monkey menace is also a serious problem in many places. There is growing anger and frustration among communities adjacent to forest areas. There is constant demand on the Forest Department to capture, cull, trans-locate and barricade. But unfortunately the focus is only on the species and not on the root causes of habitat destruction. Prime TV Channels and celebrities love to line up for 'Save the Tiger Campaign' but as a nation we need to go far deeper into environment concerns.

Development Vs. environment Debate

The common line is that "Development cannot be stalled for the sake of Environment".

All too often we come across those mouthing clichés like 'Development comes at a cost'. Our policy-makers have to introspect; what is 'Development' and what is 'Cost'. Can the Uttarakhand tragedy be written off as cost against Development? The 'development' in the Kashmir valley led to the encroachment of 85% of the Dal Lake and this was a contributory factor to the devastating floods some years ago.

We also need to look beyond our borders when it comes to the looming threat of Climate change. The most important case in point is the Himalayan ranges. The Himalayas are vital to food and water security for a sixth of the world's population across South Asia, China and South East Asia. The effects of climate change in the Himalayas could also pose a threat to our internal security. Rising sea levels could force huge numbers of displaced 'climate refugees' to move into India from Bangladesh. There would also be millions of Indian citizens moving inland from coastal areas. This could lead to social tensions and strife.

If the Himalayas are to be protected from Climate Change there is a need for cooperation between these concerned nations. Climate change mitigation strategies through reduction of Short Life Climate Forcers [especially Black Carbon] are easily within our reach and at almost no cost. The measures for cutting down emissions of Short Life Climate Forcers need to be combined with attempts to regain the glory of the Himalayan Forests. In India, we have excellent scope for afforestation of the Himalayas through Ecological Territorial Army units manned by able bodied ex-servicemen.

Conclusion

The Himalayas and the Western Ghats are threatened with irreversible damage to their ecology and await the sad fate termed as the 'Tragedy of the Commons'. But there is still time to save these precious eco-regions. The Himalayas in particular holds out immense opportunity for international cooperation and this could be a beacon of hope for other shared eco-regions such as the Alpine ranges, the Andes and the Arctic ice cap. India could well lead the way.

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