

# Ecological crisis in the land usage specially in context to increasing urbanisation

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North Africa was a granary of the Roman Empire, but vast areas of it became deserts as civilisation declined. This could have happened on account of over-exploitation of the land and other natural resources. A similar process of decay is happening at least some parts of India. A time could come when historians would point out such geographical areas and say that human beings lived there once upon a time. The habitat which man kind has, needs to be protected, But the so-called development which is taking place today means destruction of great gifts of nature like earth, water and vegetation. Deforestation, degradation of land, siltation of rivers, pollution of air and water are the common ecological challenges which we face. They need careful study and based on the result, the right conscientisation should follow and this should ultimately change the attitudes of all concerned-planners as well as the general public.

## Resource depletion

In a country like India, problems of resource depletion are attributed to the increase in population. This interpretation is not so realistic because in the experience of the European countries with much less population, environmental issues are critical with acute resource depletion. Natural resource endowments are generated and maintained by some basic ecological processes, the knowledge of which is essential for understanding how the environment crises are generated and how an economic development is threatened in the absence of ecological stability?

By and large, there is a consensus that the economic industrial process has given rise to ecological imbalances which are irreversible in the near future. It was the plutonic elites in the West who sounded the alarm bells of the eco-crisis. The former socialist bloc went to the extent of describing ecology as a disease of capitalism. Today the eco-crisis has over taken the Third World in an unprecedented manner, resulting in environmental degradation followed by floods, famine and drought. With large-scale misery and loss of life, it is the world's poor who are the worst affected in terms of their life needs and expectations. This study is limited to the harm being done to the agro-eco-system and the worst results of increasing urbanisation in India.

## Agriculture and industry during the Raj and later

In many parts of India, a process is taking place by which the productivity of nature and natural resources are being eroded. The industrialisation process till recently was being continued by independent India. During the British period, the industrial and trade policies gave advantage to the British. They ruined our textile and many other Industries. As a historian puts it "The plains of Hindustan have been bleached by the bones of the Indian industrialists. During that period, in every family, certain persons used to look after agriculture, whereas others were engaged in industry. The ruin of the industries resulted in all male members of the family getting back to their respective villages for the purpose of taking up agriculture. The resulted in increased pressure on land and in consequence it led to the sub-division and fragmentation of lands, and that added greatly to our agriculture problem.

In independent India, tremendous harm is being done to the agro-eco-systems through irresponsible interference with the soil and water systems. For the sake of short term economic returns from land, biological productivity is threatened in the long run. The agro-eco-system has been degraded for several decades. Soil erosion is a serious problem leading to loss of fertile top soil, siltation of reservoirs and even disasters like land slides. Two factors have contributed to soil erosion. Bringing of increased land area under monoculture cultivation and deforestation of vast-areas. Continued denudation of forest areas and lack of vegetable cover in catchment areas are increasing the problems of flood hazards, as we see in the Himalayan plateau and in Bangla Desh.

Desertification is an irreversible of soil and vegetation of dryland. The change to aridisation and decreasing of biological productivity could ultimately result in the loss of biospheric potential and conversion of the land in to desert. Certain parts of India are threatened by desertification. An easy solution to world hunger was thought to be irrigation, but experience teaches us a different lesson, Iraq's Mesopotamian plains were known as the cradle of civilisation where irrigation began 6,000 years ago. Loss of drainage caused water-logging and Salinisation led to saline and unproductive soils. The collapse of this civilisation should be a warning to us.

## Large-Scale irrigation

Large-Scale irrigation is seen as a panacea for food short age. Increasing water-logging and salinisation are threats to vast irrigation sites. The use of pesticides in India is wide spread. In Japan, even if the use of pesticides is more, it is localised. A survey done by the central plan protection training institute, Hyderabad (Joshi 1984. Personal Communication) revealed that the various food items tested contained residues above permissible levels. Today we are using thousands of tonnes of pesticides including insecticides, fungicides and weedicides. Several investigations have proved that as much as 50 percent of the pesticides applied to foliage eventually reach the soil. After all, soil is the

ultimate sink for the bulk of pesticides applied to the soil or to the foliage. Once the pesticide reaches the soil, it is acted upon by several combinations.

### **Increasing Urbanisation**

An ecological system may be simply defined as a self-sustaining community of plants or animals existing in its own particular environment. The increasing interference of men could destroy the system. Man in a rural setting has limited influence on the environment. He can get a product out of land only. If he puts something in to it. But the urban situation especially in India is quite alarming. The urban societies are the scenes of constant human activity in highly concentrated forms.

Every human settlement is an eco-sub-system. Small settlements fit in to a larger system because their disruptive influence is limited and nature itself has a self-healing capacity. However, large urban settlements sometimes not only constitute autonomous eco-systems, but exert an influence over the neighboring non-urban eco-systems. These urban societies are the scenes of constant human activity in highly concentrated form. It is the constant refrain of history that both in size and concentration of settlements of man / woman keep growing.

In India, the sheer economic imperatives of seeking a livelihood will drive people to non-agricultural pursuits, and our cities will continue to grow. An environment which has only the prospects of starvation is the worst.

### **Inescapable Fact**

The inescapable fact of our cities is that they grow and interact with their environment and create eco-systems that will be in a state of flux. It is in relation to land that our urban crisis begins. As cities grow, they eat into land, no amount of creation of city forests and parks can compensate for the environmental damage done permanently by bringing land out of cyclical use and converting it in to a wholly-built usage.

The major crisis of urban eco-system is the massive growth of cities. Open lands are converted into a built environment which naturally disturbs the balance of water, land and living organisms. That is often done with no regard to the purpose for which the land is best suited. As a settlement expands spatially. It drives out plant and animal life. There is not a city in India which, 30 years ago, did not have wild animals visible in the suburbs. Mammals, rodents and reptiles have been driven out, bird life severely depleted and beneficial insects destroyed. What remains is mosquitoes and cockroaches- all carriers of disease Chanakyapuri in New Delhi teemed with small game and bird life in 1951. Ghatkopar and Goregaon in Bombay were sylvan abodes to small birds and animals as late as 1952. All these eco-sub-systems have been swept away by men by encroachment on the land to expand the city.

### **Second Major Crisis**

The Second Major crisis arises out of resource depletion. Besides land, urban settlements require servicing both for physical sustenance and economic activity. There is a tremendous depletion of water resources and massive pressure on natural drainage systems. Surface and ground resources in most cities are already over-exploited. The colossal requirements of power, human effort and carrier conduits to transport water over long distances constitute a major drain on the earth's resources. As every eco-system. A third major crisis arises out of the by-products of human action and endeavour. Recycling of land, elimination of waste and renewal of waste are the solutions which do not find much favour with the planners. Industrial waste is not a nation wide phenomenon because industry concentrates in urban areas. However, utter disregard of our industries for social responsibility needs to be pointed out. Our lack of social hygiene and the highly unsatisfactory system of garbage storage, collection and disposal create health hazards in all our cities but nowhere more than in Calcutta.

The fourth dimension of crisis is waste. Our planners still plan neatly-zoned cities which require commute linkages. That means more land under wider roads more use of aggregate and asphalt more use of metal for buses, more use of fuel more wastage of time in commuting. The fraying of nerves and rising of tempers constitute an ecological degradation. The fraying of nerves and rising of tempers constitution ecological degradation. Man as a living organism and the city's physical structure adversely affects his climatic suitability and their cooling calls for massive use of electric power.

### **Fifth dimension**

A fifth dimension of crisis is aesthetics. An eco-system does require an environment which is visually pleasing. The urban environment in India is mostly ugly, Kerala, where affluence has caused a rash of building activity, is now just one urban mass of houses of hideous designs. Our cities are a compound of crassly, vulgar commercial structures and mass housing of unbearable monotony. Pavements are unfinished or encroached upon. Many cities stink and the symptoms of decay are visible, The Sixth dimension of crisis is social organisation. In the name of management, we centralise under Municipal or Corporation bodies, development authorities, etc. Decision-making becomes remote and the average citizen can no longer relate himself to the process of decision-making. Increasingly, therefore, decisions are mechanical and imposed from above. Co-existing with such centralisation is the fermented form above. Co-existing with such centralisation is the fomented form for the Indian society in which family caste, village of origin, locality and profession

become more important than the city itself. One reason why a shopkeeper can successfully encroach on a public passage, inconveniencing all pedestrians, is that the social cohesiveness which protests against irresponsible behaviour is very weak in the Indian urban society. In better-developed societies, such encroachment would invite public protest or police intervention with public approval. Our law enforcement system is weak and therefore, justice is often denied. The citizen does not force the Government to act against individual who spoil the urban environment. He tolerates illicit constructions, does not protest against obnoxious or dangerous trade, is resigned to pollution and adulteration, accepts bureaucratic discourtesy and tolerates inefficiency and corruption as a way of life. Perhaps this dimension of crisis, the social organisation, is the most alarming, for it is only an aroused and alert citizenry that can protect the urban environment and there by the eco-system.

### **Main Thrust**

Nationally India will have to decide whether the main thrust of economic activity will be resource-depleting or resource-conserving. The former will inevitably lead to increasing Concentration of Industrial activity and future degradation of the urban eco-system. The choice is not between the charka and a steel plant, but rather between Industry which gainfully employs without exploiting and that which produces more and more at the cost of earth itself.

The concept of spatial and vocational planning is important so that new activities aim at optimising land use. This must be made mandatory in all planning exercises. At all city levels, there should be sensitive and meticulous land-use planning. For example, most of Western and North-Western Karnataka has poor soil, low rainfall and unproductive agriculture. Should not urbanisation focus there instead of around Mandya on the Cauvery?

### **Two basic factors**

In urban planning two basic factors are important:

1. A zoned city works against the interests of the poor because they can neither spare time nor money, for inter-zonal travel. Therefore they squat near their areas of work. Squatting is unplanned and unserved and therefore pollutes the environment. We shall continue to have cities peopled by the poor who can only afford to shack as shelter. Any planning to the exclusion of the sack must fail. The nature of the building need not pollute, even visually, if the location and general pattern are properly planned. It is lack of services which pollutes, not the temporary nature of the building. From these two basic truths must flow a system of planning which will create self-contained clusters within the city, where people can live and walk to work and where self-help housing is properly serviced. Serviced colonies predominate. Such planning can encourage people to strive for upward gradation of their structures as economic conditions improve. Certainly, such a city, by cutting down on commuting, could economise on land for roads, fuel for transport and simultaneously reduce the pollution load from automobile emissions. The plea here is for planning cities with a minimum transport requirements as contrasted with the mass-transit based Cities of the West.

### **Conclusion**

The Church should play a creative role in the society, especially in the process of nation-building and development. The models of development we have and the ideals of growth we pursue are from the West or Countries like Japan or Singapore. The nation should aim at an integrated growth and the church could play a creative role here. Increasing urbanisation and concentration of industries in and around the cities only create other formidable problems. So far we have been neglecting the thousands of Indian villages. It is high time that our priorities change. A situation should emerge in which people should be able to live decently in villages only through proper development of villages.

Mathama Gandhi had a prophetic vision when he said that India's development is really dependent on the integrated growth of the villages where by the poor Man and Woman have their basic necessities met and decent living guaranteed. The enlarged production in all sectors is enjoyed by a small minority. Unless this is changed, any percentage of increase in the GNP would not help the marginalised peoples of India. Our ecological problems could only aggravate and not mitigate their misery. Even in developed countries, the real development has come to a saturation point and the negative ecological and dehumanising effects of Industrial process is destroying the quality of life it had initially helped to create. As a church in India, it is essential that we give new paradigms of development instead of passive witnesses to distorted development. Right conscientisation and development of correct attitudes also must be in our agenda.

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