Kesavan, A. "Urban Planning And Environmental Management For Human Health" in Martin J. Bunch, V. Madha Suresh and T. Vasantha Kumaran, eds., *Proceedings of the Third International Conference on Environment and Health, Chennai, India, 15-17 December, 2003*. Chennai: Department of Geography, University of Madras and Faculty of Environmental Studies, York University. Pages 211 – 216.

URBAN PLANNING AND ENVIRONMENTAL MANAGEMENT FOR HUMAN HEALTH

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Abstract

I. Environment : The most important elements in Urban Planning relating to the Environment are primarily land and water. Equal to the demand of the water, there is also ever increasing demand for Urban Land. Hence the demand for water is steadily increasing and facing a threat to the Urban planner all over the world. As a result of the above said phenomena, the most productive agricultural areas are being gradually sacrificed for Urban Development.

II. Land Use Planning : The role of land use planning in the context of environmental management and natural disaster management is the starting point of the land use planning process. Land use planning principles are important for the overall guiding principles, which are determined at the National Level where the social economic growth and the Environmental visions are defined. Land use planning for sustainable economic development and the conservation of water sheds, and hazardous reduction would mainly involve the delineation of various development zones, with regard to optimum combinations of maintaining sustainable output and economic value levels of the land resources.

III. Urban Environmental Management: Urban environmental degradation has a disproportionate negative impact on the poor. It is observed that environmentally sensitive and hazardous Urban Areas, lacking basic environmental services and infrastructure are mostly occupied by the poor people. Lack of resources of local bodies, leads to inadequate maintenance or the expansion of basic amenities in Urban Areas.

IV. Key Environmental Public Health Problems: Human exposure to the hazardous industrial emissions cause wide spread health problems, like chronic obstructed lung diseases, acute respiratory infections, low birth weight and cancer etc.

In adult morbidity, the diseases such as Tuberculosis, and Cerebrospinal Meningitis are mainly caused due to over crowded living, sub–standard housing and poor ventilation and air pollution, which also causes respiratory ill–health among children. Atmospheric pollution and

unhealthy conditions in work places or a combination of both causes environmental diseases such as Lung cancer and Tuberculosis.

I. ENVIRONMENT

In today's urbanisation, the two important elements that the Town Planners have to deal with are primarily land and water. In the recent past there has been growing pressure on water resources in many countries of Asia. In the rapid urbanisation processes today, water use has increased rapidly in most of the countries due to the rapid growth of urban population. Due to the expansion of irrigated agriculture land and due to the phase of industrialisation in many countries today, the requirement of water in terms of human use and industrial requirements have increased. The available water is inadequate and still there is a great demand for water due to the above reasons. Therefore it is concluded that the demand for water is steadily increasing and facing a threat to the Urban Planners all over the world.

Equal to the demand of water, there is also an ever-increasing demand for urban land which encourages deforestation and the occupation of watershed areas, which causes erosion and consequently results in water floods. Now there is a tendency of reduction in dry lands in the Urban areas, which is considered as worthless. It is also observed that poorly planned, designed and implemented irrigation systems causes water logging and salinisation of soil in many areas of the different countries all over the world.

The denuded watersheds have given rise to higher floods during rainy seasons. There is also a great change in the direction of flow of perennial rivers due to the efflux of time. There are occasional erosion problems along the courses of rivers. The higher sedimentation flow is also threatening the existence of costly reservoirs. The vegetation covers are gradually thinned off on slopes, which causes land slides after heavy rains. Such land slides cause loss of human life and properties in that area. Such occurrence are seen in Malaysia, Nepal, Pakistan, Philippines, Turkey and in Afghanistan, which leads to the conclusion that effective land use planning and appropriate technology in water shed management is an area that needs the immediate attention of the urban planners before formulating any development plans for the urban areas. Apart from the above phenomena the pollution of water sources, pollution by the municipal sewerage, smoke and effluent from industrial plants and the storm water in urban areas, cause much damage to human life. It is also to be pointed out here that dry agriculture, chemicals, mines, drainage and other substances are also damaging the watershed when they are not managed properly. Various studies conducted have indicated that the lack of effective land use planning is responsible for natural disasters and low agriculture productivity which contributes to the unsustainable situation in overall social and economic development of the urban areas in many countries in the world.

As a result of the above said phenomena the most productive agriculture areas are being gradually sacrificed for urban development, the expansion which reduces the area under the

cultivation, which decreases the food production gradually. Therefore it is clear that an appropriate land use plan is needed, for the productive measures for watersheds, and without this also leads to low productivity. The other main aim of land use planning could be the minimisation of landslides, due to natural hazards.

II. LAND USE PLANNING

A) AIM OF LAND USE PLANNING

Land use planning for sustainable economic development and conservation of watersheds would mainly involve the delineation of various development zones with regard to optimum combination of maintaining sustainable output and economic value and land resources of the water shed, and also the risk associated with placing that particular economic development activity in an area vulnerable to natural hazards. A natural resources management division on United Nations Economic and Social Commission for Asia and Pacific (ESCAP) has evolved the following guidelines for assisting the above said calamities.

1) It was decided to assist the developing countries to alleviate Poverty, through the increased levels of economic returns from the activities in the watersheds and significantly decreasing the losses due to natural hazards.

2) To assist the developing countries in their efforts to develop appropriate policies, development and management practices, to minimize the depletion and the degradation of water and land resources for long-term sustainability of the resources and the ability to meet the further demands of growing population.

B) IN THE SHORT THE PROJECT AIMS :

a) To assist the third world countries in the formulation of appropriate land use polices and in the implementation of effective land use planning and practices for the proper management and conservation of water sheds which directly contribute to natural disaster reduction and sustainable development.

b) To promote regional and international co-ordination in the field of sustainable watershed development and management through exchange of expertise and information on appropriate land use planning and practices.

The aim of land use planning is mainly to consolidate the national development process based on the above adopted approach to the system.

C) ROLE OF LAND USE PLANNING :

The role of land use planning in the context of environmental management and natural disaster reduction is the starting point of the land use planning process and is thus included in the above guidelines. The land use planning principles are important for the over all guiding

principles which are determined at the national level where the social economic growth and the environmental vision are defined.

It is necessary to make proper attempts to describe the important aspects of watershed management, which include, economic, social, environmental, legal and institutional considerations. Such an approach satisfies the requirements of funding arrangements, institutional and legal framework, including public participation in the implementation of the said projects.

D) LAND USE PRACTICES :

The important practices, which are generally grouped into three categories are namely, the project was arranged to mobilise the active participation of the following four main groups of experts:

a) The international consultant or consultancy firm with good knowledge of the past achievements and the latest development in the related fields and the extensive experience in the region will pay the control role in the preparation of the manuals and the guidelines.

b) Three selected national consultants to provide background materials of relevance and their rich experiences in three pilot countries in the region. It is expected that the case studies prepared by the national consultants together with the report of the international consultant would provide practical experiences in the integration of watershed management and disaster reduction into the national social and economic development process in various stages of development as much as possible.

c) Relevant experts at the economic and social commission for Asia and Pacific (ESCAP) to provide the guidance and comments based on the past experience and latest achievements in the related fields to ensure that the efforts made in this project would ultimately be followed and integrated towards the regional and global programmes on sustainable natural resources development and management. Further more active participation of the ESCAP staff is expected to provide continuity in the follow up actions for the publication as well as to ensure the implementation of related recommendation.

E) EFECTIVE LAND USE PLANNING :

Effective land use planning and the application of appropriate practices in watershed management is an area that needs immediate attention. Lack of effective land use planning and practices is one of the major factors responsible for natural disasters, and low agricultural productivity, contributing to unsustained overall socio–economic development.

There is an immediate need for appropriate land use planning, for undertaking protective measures for watersheds to reduce erosion rates and siltation, and for the application of the appropriate practices to increase crop production by optimum use. This would result in the

minimization of risk for lives and property due to natural hazards, particularly for setting of critical facilities, such as hospitals, schools, bridges, roads and other infrastructures.

F) SUMMARY :

To summarise, land use planning for sustainable, economic development and conservation of watersheds and hazard loss reduction would mainly involve delineation of various development zones, with regard to optimum combination of maintaining sustainable output and economic value levels of the water and land resources of a watershed and risks associated with placing that particular economic development at an area, vulnerable to certain natural hazards.

III. URBAN ENVIRONMENTAL MANAGEMENT

Urban environmental degradation has a disproportionate negative impact on the poor. It is observed that environmentally sensitive and hazardous urban areas, lacking basic environmental services and infrastructure are mostly occupied by the poor people.

Poor environmental problems are caused by the spatial pattern of Industrial locations, impact on health, industrial pollutions and other similar environmental problems.

Low-income groups in cities generally suffer from poor sanitation facilities, whereas the higher income groups in cities suffer from hazardous solid wastes, ambient air pollution and lack of green spaces.

A large number of institutions involved in problem areas cross jurisdictional boundaries, Central Govt., Local Government conflicts and tension between forces for centralisation and devolution of authority cause the management of Urban environmental problems very complicated.

Lack of resources of local bodies leads to inadequate maintenance or expansion of basic amenities in urban areas.

IV. KEY ENVIRONMENTAL PUBLIC HEALTH PROBLEMS

Human exposure to hazardous industrial emissions cause widespread health problems like chronic obstructed lung disease, acute respiratory infections, low birth weight, cancer etc.,

Inadequate sanitation of sewerage causes health hazards like diarrhoeal diseases, Parasites like Ascaris and high infant mortality, malnutrition, hook worm, tape worm and guinea worms.

Inadequate drainage of storm water may cause diseases like Dengue, Malaria, Yellow fever and Filariasis. In certain countries, diarrhea is co-related with poor drinking water and toilet facilities, the infestation of flies, in living quarters, and proximity to litter bins. Acute respiratory infection is linked to over crowding, unventilated construction, insufficient light, air pollution from smoking, cooking and ambient air pollution. Malaria, Dengue fever and Filariasis are caused by mosquitoes that breed in stagnant pools of water remaining undrained at the end of the rainy season.

Declining life expectancy (the average number of years new born babies can be expected to live if health conditions stay the same) in many countries is due to higher rates of Cardio Vascular diseases, Cancer and Digestive tract illness and viral infection. This phenomena is due to high levels of contamination of the food with industrial effluent and due to exposure to air pollutants, which cause heavy stress on the cardio respiratory system.

Infant mortality (The number of deaths per 1000 number of infants born alive aged less than one year) is increased due to environmental pollution problems, which affect the respiratory system and causes infections in the intestines. About half the infant deaths are due to the above reasons.

In adult morbidity, the diseases such as Tubercluosis and Cerebrospinal Meningitis are mainly caused due to over-crowded living, sub-standard housing, and poor ventilation and air pollution which also causes respiratory ill–health among the children. Atmospheric pollution and unhealthy conditions in the work place or a combination of both causes environmental diseases such as Lung Cancer and Tuberclosis.