

# Environmental Health Aspects of Metropolitan Planning and Development

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THE RELATIONSHIPS BETWEEN health and sanitation on the one hand and city and regional planning on the other are not readily understood or appreciated by planners.

As far back as 1948, the First World Assembly adopted a resolution recommending collaboration with the United Nations Social Commission, and United Nations Economic Commission for Europe, and other regional commissions of the United Nations with special reference to the hygiene of housing, is an endeavour to obtain adequate representation in any international scheme for town and country planning or for the improvement of housing. There is a constant need for co-ordination and co-operation between the various agencies responsible either directly or indirectly with urban planning and development.

The various factors related are —

- (i) Vocational training for building trades and improvement of productivity in the construction industry; co-operative housing and workers' housing;
- (ii) Problems related to co-operative housing and workers' housing;
- (iii) Improvement in housing, also through the development and use of forest products in building and through the assistance of home economists in plans for family housing;
- (iv) Studies on the social aspects of housing and of urban development; and
- (v) School building research and training programme for officers connected with development programmes.

Perhaps no problem facing mankind at the present time is of greater concern than that of uncontrolled urban development. The population is increasing at a rate never before experienced and this is occurring at a particularly serious rate in all the developing countries. The greatest pressure is being felt in urban and metropolitan areas due to the huge rural-urban migration.

This rapid increase in the urban situation is not necessarily due to the fact that people like living in them, but because of their apparent efficiency as centres of industrial production.

Before the end of this century, the world's population will have more than doubled. Since only 8-10% of the population will be able to produce sufficient food the rural-urban drift will continue and the vast majority of the 3,000 million new people added to the present population of the world will be urban dwellers. The problem of the cities will continue to become more and more serious with the passage of time.

Urbanisation has its good points as well as its bad ones. It affords opportunities for improving the standards of living, education, housing, social satisfactions, and public health.

But uncontrolled and unplanned development and encroachment on space (in terms of land, air and water) will lead to an increase in the danger of a spread of disease, and the threat to health from noise, overcrowding, and the general degradation of man's physical, psychological and social environment.

In spite of this potential danger, there remains the real hope that mankind, in the years to come, can

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achieve great advances. For the first time ever, man is equipped with knowledge and material to control his environment. He can use recent advances in science and technology to the benefit of the human race. Never before have so many people and so many nations been concerned about human welfare and the human condition.

The problems to be faced in social and economic development are tremendous, but man has the ability to be equal to the challenge.

Because of its complex and varied nature, urban development requires numerous agencies to work together to achieve the common objective of a well planned situation. Due consideration must be given to public health, safety, convenience and welfare, and to the development of the aesthetic, economic, social and cultural potential of metropolitan areas.

Our world is in the midst of a fundamental transformation, from agricultural and rural life to a highly urbanised way of life, with industry as a chief source of livelihood.

The movement of people from country to town is not a new phenomenon, but the rate at which this is happening is causing alarm.

The economic and technological resources needed for the job at hand are staggering. In India, for instance, up to U.S. \$22,000 million will be required in a period of 25 years, to house new inhabitants of cities with over 100,000 people. Similar figures for Malaysia are not available. The cost of improvement to the traffic system in Kuala Lumpur alone is estimated to cost U.S. \$50 million and if this can be taken as an indication of the extensive costs involved in urbanisation programmes, one can well imagine the cost of improving the total environment in urban areas. The sudden and unprecedented pouring of rural people into unprepared urban areas within developing countries may reach catastrophic dimensions within the next decade. Because of the low earning capacity, poor nutrition, and crowding of the people, the danger of disease becomes especially menacing in the tropical and sub-tropical regions of the world.

It creates, in fact, a far greater possibility of disaster than the Industrial Revolution of a century ago. What makes for even graver danger is, first, the climatic differences between the temperate and tropical or sub-tropical zones of the earth and the different disease vectors associated therewith, and, secondly, but not necessarily in a secondary sense, the educational unpreparedness of the emerging countries.

Although it might appear that technical knowledge is available to deal with any mass disease situation

that may arise, the fact is that there are not enough adequately educated people at the present time to meet even the every day problems of the growing communities of the developed countries, let alone the developing countries.

It cannot be denied that the health and sanitary aspects of urban areas are fairly well known, and we may even conclude that there need be no further investigation. This is, in fact, not so. The most important consideration is money. Costs are high and funds are usually limited. What we must search for is not merely a method of control, but a feasible method of control; a solution, therefore, must be within the economic and operational reach of the people to be protected or within the financial and administrative capacity of the country concerned, or, failing this, within the operational capacity and willingness of the international community.

Although it may be argued that scientific discoveries will, ultimately, make all things possible, the implementation of a scientific discovery is a technological undertaking, calling for understanding of the use of man, money, and materials. Indeed, it is doubtful if technology can ever overtake science.

#### Planning for environmental health

It is most gratifying to note that there is better appreciation of a rational approach to social and economic development. There is an acceptance of long-range economic, social and physical planning.

The lack of proper guidelines is the basis of the inherent difficulty faced by planners in the complex task of thinking constructively about the metropolitan area of the future. It is important to think of the metropolitan area as a coherent whole and to recognise the interplay of social, political and economic factors which must be taken into consideration.

It is not often appreciated that the health agencies have an important responsibility in planning. If planners are to develop effective programmes, they must rely on the environmental health profession. There is no more effective way of justifying planning standards than to relate them directly to health standards. The problem faced by the planners is, therefore, in the final analysis, an environmental health problem.

The establishment and maintenance of a healthful environment, particularly in urban areas where environmental problems are most acute and require the bringing together of the social, biological and physical sciences concerned with the health aspects of man's relationships with his environment, involve safe-

guarding water, air, food, conveyances, dwellings and the recreational and living environment. It involves not only the control of the quantity and quality of the basic necessities, but also, importantly, the control of waste by-products, whether solid, liquid or gaseous. These by-products, if left uncontrolled, would lead to widespread disease.

A study of the public health problems associated with metropolitan development and urbanisation, particularly in the developing nations, reveals that the more immediate problems are to be found in the environmental health field. This is confirmed by recent studies and surveys carried out in various parts of the world by the United Nations and its specialised agencies specially. These problems pertain to the inadequacy of water supplies and of waste disposal, the unhygienic condition of housing and of the residential environment, the poor selection of sites and layouts for residential neighbourhoods and industry, and the pollution of the environment by noxious chemical and microbiological agents. Other problems closely related to environmental health include zoning, urban renewal, land use, subdivision regulations, school and recreational facilities, and vehicular traffic. These activities are all of great concern to public health administration.

#### **Objectives**

While the objectives of both planners and environmental health workers is to improve the health and well being of the people, it is of particular significance that they both lay emphasis on prevention rather than cure. This common purpose arouses the expectation that the urban population, through the positive and co-operative action of planners and public health officials, will have an urban environment in the future.

Community environmental planning must reach beyond the concept of simple disease prevention towards the long-range goal of comfort, efficiency, and the promotion of well-being. Sometimes these objectives are partially included within the meaning of aesthetics, but it is surprising how clearly the general public sees them as "health-related".

#### **Conservation of Resources**

To assure future generations of their birth right, immediate steps must be taken in many parts of the world to control gross pollution of air, land and water. Pollution is a major destroyer of resources. Even today, in many areas, pollution by faeces and sullage water is a direct menace to health. In other places, mine wastes, large-scale industrial dereliction,

the indiscriminate dumping of garbage and refuse, erosion, sand and gravel pits are important factors contributing to destruction of resources.

Water pollution is perhaps the easiest form to recognise. Although water is a resource to be shared by industry, power, transport, agriculture, and communities as well as individuals, far too often self-interest prevails and irreparable damage results.

Air must be increasingly regarded as a world resource to be conserved and utilised in perpetuity.

#### **Lines of Action**

The possible lines of action for more effective environmental health planning programmes fall into three main categories:

- (1) By the citizens and citizen groups;
- (2) By institutions of higher learning, research centres and professional organisations.
- (3) By governmental and intergovernmental agencies, including international groups.

Urban communities are, in fact, social systems and subsystems that develop and change as a result of the interplay of intricate, at times almost bewildering, combinations of forces or influences — technological, social, economic and intellectual. Though it is only too well-known that changes occurring in one part of a system leads to changes in other parts of the system, yet there are far too many examples of public administration throughout the world where public administrators and their non-official allies are pressing ahead with their own programmes with little heed or concern for their by-products or side effects. This is particularly true of re-housing projects where relatively large numbers of individuals, families and businesses are moved without sufficient thought being given to the side effects of such moves.

#### **Organising for Action**

Planning is useless if means are not provided for its implementation. These means normally include legislation, finance, organisation, professional co-operation, and public understanding and support. No universal formula for planning urban and metropolitan areas can be suggested.

In conclusion, I wish to say that the problems arising out of urban living will continue to increase and the challenges must be met with sound planning and determined efforts, so that the great advantages accruing from urbanisation will far outweigh the disadvantages.

In this way, we will reduce the environmental hazards to a minimum and make urban living a thing to be cherished.