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CHAPTER THREE

ENVIRONMENTAL MANAGEMENT.

Environmental Management is a synthesis of Design and planning for Sustainable development. The main objectives of environmental management are maintain the environment's carrying capacity to achieve goals of sustainable development and satisfying the needs and aspiration to sustain the living condition of human.

3.1. Housing Environment.

The 'environment' is usually looked upon as located outside ourselves. it is the space that we inhabit. This 'bounded' quality of the environment is seen as its defining characteristics. In this chapter a rather different view is expressed ; the 'environment' is looked upon as process rather than form, as the result of a set of relationships between physical space, natural resources and a constantly changing pattern of social and economic forces.

When we consider housing it is not merely for living; As we discussed early "housing is not 'shelter' or 'household facilities' alone. But it comprises a number of facilities, services and utilities which link the individual and his family to the community, and the community to the region in which it grows and progresses. (UN, 63;1) (fig : 06).

In this situation the housing environment is a vast area. For ease of study further clarification of housing environment has separated in to components as follows. (fig : 07).

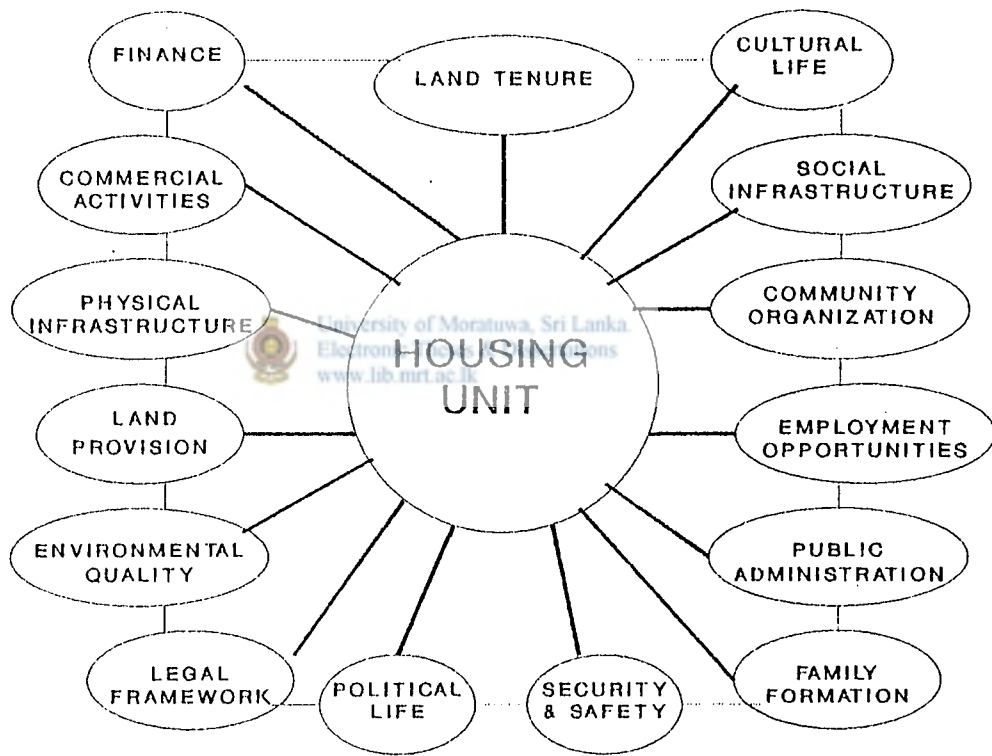


Fig : 06. Housing as a System.
 A planner's point of view on housing environment.

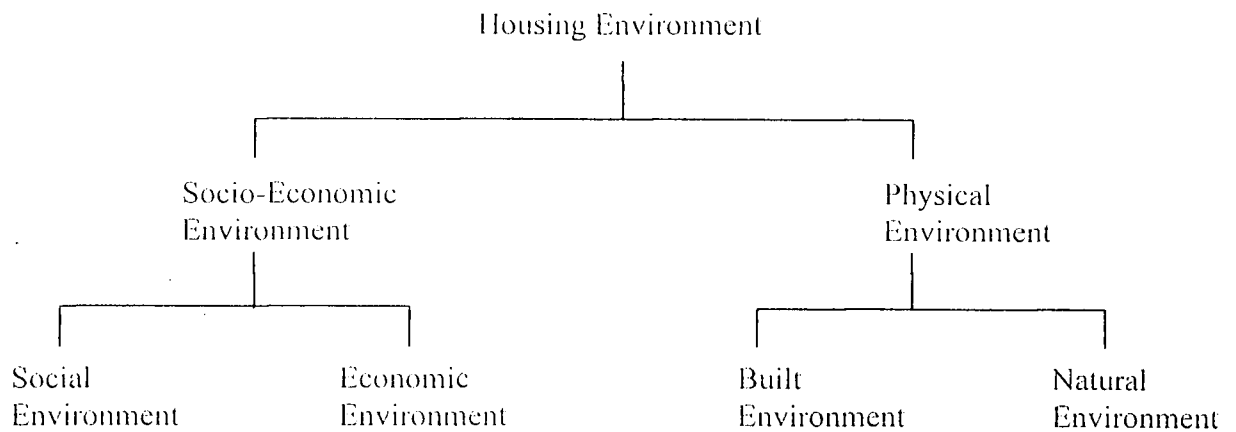


Fig : 07. Components of Housing Environment.

Although these are separate for the purpose of study these components are integrated with each other, therefore it is a very difficult task to analyze a single component in depth without considering others.



3.2. Need of Consideration on Housing Environment.

In today's context, a common situation that can be seen is the ignoring of environmental aspects on development, as sometimes it may be less awareness or deliberate negligence according to prevailing market conditions.

The awareness of the housing environment should be raised even if the professionals' point of view is devalued. Appleyard (1972;272) state that "Professionals see the environment as a physical entity, a functional container, an accumulation of goods or commodities, a setting for social action or programs, a pattern of land-uses, a sensuous experience, or a natural ecosystem, but rarely do they see it as a social or political symbol."

When considering the socio economic environment of housing Pyatok and Weber (1978;203) go into discuss; "Most people's contact with their environment

has been reduced to the experience of a user of a commodity. The existing social relations do not permit people to become makers of the environment, involved in the critical process to bring it into being continuously. For this reason the design and development of residential settlements require that their makers / users reexamine their own internal relations as well as their links to the existing context. They need to identify how these relations constrain and handicap their very ability to conceptualize an alternative. The creation of an alternative process and product, the reexamination of social and political relationships and the formation of a language to accomplish this must all organically evolve together”.

Lack of human qualities have failed to satisfy users in mass housing schemes, where people require an emotional bond with the physical structure. (Allsop, 1974 ;38) He further states that failure to provide adequate homes for people and the provision of mere accommodation have severe consequences for the society.

“The built environment and its patterns have a clear and direct relationship to the sustainable growth of any society. It is not possible to imagine a self-sustainable system of built-environment, but a built environment which will contribute to sustainable growth both in material and spiritual terms. In this regard the human settlements or housing play a vital role because it occupies a major portion of habitable land” (Chandrasekara, 1996:13).


According to these consequences we can see housing today has somewhat deviated from its sustainability. Further it can be apparent when examined the following sets of variables (Lawrence 1987;211) on housing environment.

1. The personal characteristics of the respondents(including demographic and socio-economic variables and their residential biography).
2. The physical feature of a sample extant residential environments and the respondents appraisal of the maintenance and cleanliness of collective areas.

3. The resident's images of the residential environment.
4. The appraisal of the residential environment by the occupants.
5. Their degree of satisfaction with that environment, and
6. The reported (rather than the observed) behavior of the respondents.

3.3. Housing Development and Socio-Economic Environment.

Satisfying the needs and aspirations is a prerequisite for a long term sustainable housing solution. Therefore, to achieve the consequences of satisfaction on the occupant, socio-economic environment of housing should have a greater consideration.

 In other words, sustaining the socio-economic environment of housing is very important to improve the quality of life. Socio-economic environment of housing for individual person could be considered as his family, neighborhood, community with cultural, religious and demographic background, level of education and health, employment and workplace etc.

How can housing contribute to social development? Decent housing is widely recognized as housing has an important role to play in social development. It relieves overcrowding , create a more sanitary environment and, in the case of housing for sale, fosters a statutory sense of property ownership. Housing, of course also enables its occupants to carry on many activities, such as sleep, entertainment, cooking and the like, which have implications and consequences directly related to an individual's physical, mental and social well-being as housing is only one of many independent variables affecting well-being. However, more must be learned about the causal relations that exist between housing and the many factors which constitute its well-being.

In 1970 an adhoc expert group on social programming of housing, concluded that “In the fulfillment of social needs, housing plays both a direct and indirect role, and both roles are decisive. In its direct role housing serves as the area where the individual becomes capable of experiencing community and privacy, social well-being and shelter and protection against holistic physical forces and disturbances. In its indirect role housing serves as the area where an abundant supply of social relationship and services are accessible, such as places for social intercourse, education, recreation, sports, social welfare and health protecting services, shopping and transportation. (UN Sales No 71;13)

Lawrence (1987;192) has done a literature survey on socio-economic environment of housing and identified eighteen hypothetical variables related to residents’ satisfaction as follows.

- a. Density / Crowding
- b. Safety / Security
- c. aesthetics / appearance
- d. Site facilities
- e. access to friends
- f. Site location / access to community
- g. maintenance
- h. economic cost
- i. Sense of community
- j. Management policy
- k. Personal freedom / privacy
- l. resident’s perception of surrounding community
- m. perception of neighbors
- n. personality characteristics of residents
- o. demographic characteristics of residents
- p. behavior in public spaces
- q. Comparison of the current residence to prior residence
- u. Future aspirations of the residents

The above variables are simply the needs and aspirations of a normal human being which could satisfy from a sustained living condition.

When we consider housing, from a consumption point of view, much of public housing serves primarily a social overhead function, it has been seen in the preceding section that the construction of housing provides jobs and training in the building industry; moreover, cost benefit analysis has been applied to increased worker productivity improved educational opportunities and reduced health costs, when measured in monetary terms and discounted to find their present value costs to the government of housing. It should also be noted that housing is often an essential component to the development of a new industry or to such activities as land reclamation and irrigation. On the other hand however, there is no doubt that a sustainable and equitable subsidized housing program will play a major role in the redistribution of income in a developing nation. Therefore sustainable socio-economic environment of housing can be considered as a national economic development tool.

But the socio economic environment of housing cannot be developed independently. Other elements of housing also have to be considered with socio economic development.

3.4. Housing Development and Physical Environment.

Physical environment of housing can be broadly classified into two separate components namely natural environment and man made or built environment. This composition of the housing environment of course may vary according to the degree of urbanization and scale of housing development.

The condition of physical environment has direct relationship with the socio-economic environment of housing. As an example the poor physical environmental quality would create unhealthy unlivable situation. Direct impact of this can be seen on occupants' socio-economic lives when they have to spend most of their income for

medical treatments and medicine, and also an increase of birth to death ratio within the settlement.

In other words, development involves a progressive transformation of economy and society. A development path that is sustainable in a physical sense could theoretically be pursued even in a rigid social and political setting. But physical sustainability cannot be secured unless development policies pay attention to such considerations as changes in access to resources and in the distribution of costs and benefits. Even the narrow notions of physical sustainability imply a concern for social equity between generations, a concern that must logically be extended to equity within each generation.

Within the process of housing development more attention should be paid to the natural environment as well as the built environment for sustainability of the development.

Creating the conditions for housing development has often meant interference with the natural environment and in many cases, outright destruction of part of that environment. The construction and expansion of settlement areas has involved innumerable intrusions upon the environment, some of which have been beneficial to nature but many of which have been proved detrimental. The concern should be not how to prevent development from infringing upon the natural environment, but rather how housing can enhance the total environment. There can be environmentally sound development of housing, within which man can live decently and in ways which will enhance the beauty and harmony of the environment. An environmentally sound process must deal not only with pollution, but also with physical and mental health, the conservation of resources including aesthetically interesting and pleasing visions. The transportation of people, the communication of ideas, and a host of other environmental issues.

As we discuss the importance of the housing environment to its development, a considerable amount of attention should be paid to planning and designing of new housing and, update and maintenance of existing housing environmental conditions. Therefore the need of managing the environment arises.

3.5. Environmental Management for Sustainable Housing Development.

The condition of housing environment is very vital for a reasonable living condition as we discussed in the earlier chapter. Therefore actions should be taken to upgrade the housing environmental quality and prevent further deterioration of the environment. The action may be a kind of process or a set of techniques to manage the environment, towards sustainable housing development.

“..... the concept of sustainable development does imply limits-not absolute limits. But limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities. But technology and social organization can be both managed and improved to make way for a new era of economic growth.” (WCED, 1996;8)

As we emphasize the need of environmental management for housing the question arises, What about the existing statutory regulations and, are they not enough to give guidance to manage the housing environment in a proper manner? Our experience gained from the past and present realize that only planning regulations are not enough, to achieve the goal. Therefore environmental management has to tackle those aspects to ensure sustainable housing development. The environmental management can be described as “ a responsive set of techniques rather than a framework for implementing policy.” (Redclift, 1987;133).

Balasooriya describes that “The dominant intellectual traditions, which shape urban and suburban policies, are based on instrumental, rational and analytical thinking, obvious systems, like planning sewerage, water utilities, roads and even human values were taken into consideration to create safe, healthy environments, however, science and logical thinking has its limits. Values could be given to these utilities and even healthy environments. But there were no values given to the environmental degradation brought about by human intervention, nor were there criteria for assessment of its sustainable properties, logical, rational and technological

reasoning is a useful tool, but we must now get rid of rigid preconceptions and open ourselves to new thinking and fresh compromises.” (Balasooriya, 1996)

Further he states that “with this new constraint, even our approach to creativity would be, to think of the problem afresh, through experimentation, with originality; and by rewriting the accepted rules to the extent of being non-conventional. The implication is that we need to enrich the scientific and quantitative traditions with insight gained from qualitative approaches, but orientated towards a sustainable environment.” (Balasooriya, 1996)

Most industrialized countries have learnt from the experience that in order to have long term sustained development it is necessary to have sound environmental management for housing. The developing countries are only gradually coming to accept this view.

According to the definition of sustainable development, A hypothesis could be made, that sustainability of the housing could obtain through the management of housing environment. (fig ; 08).

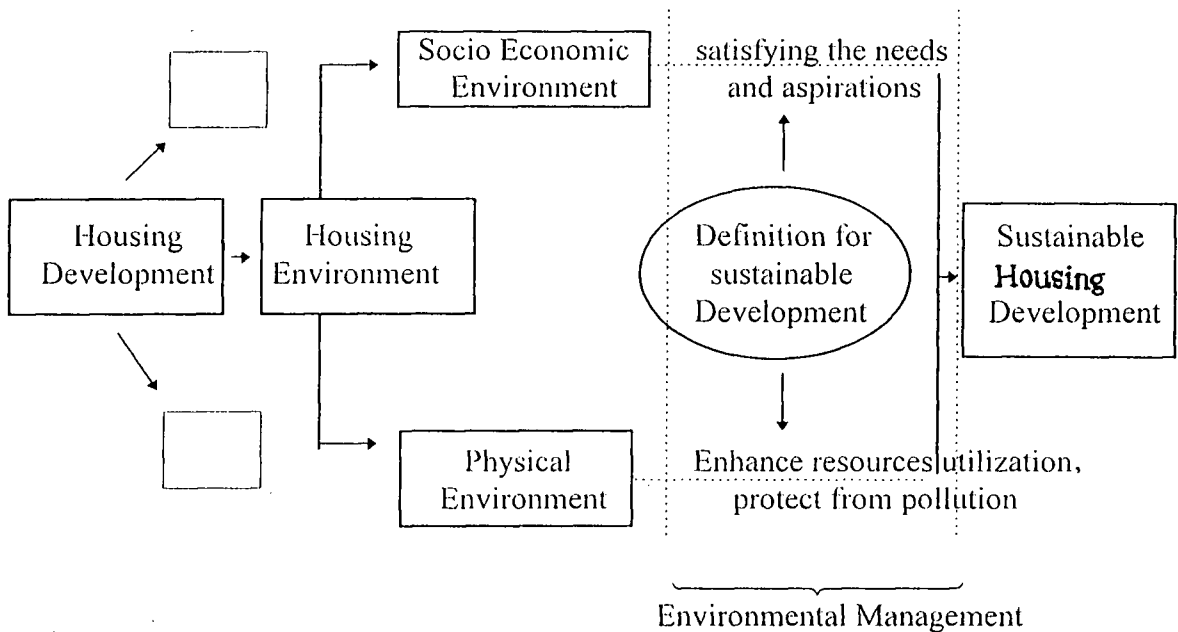


Fig : 08. Environmental Management for Sustainable Housing Development.

United Nations (1976) also set up a structure for improvement of settlements in relation to the environment management of them. (fig : 09).

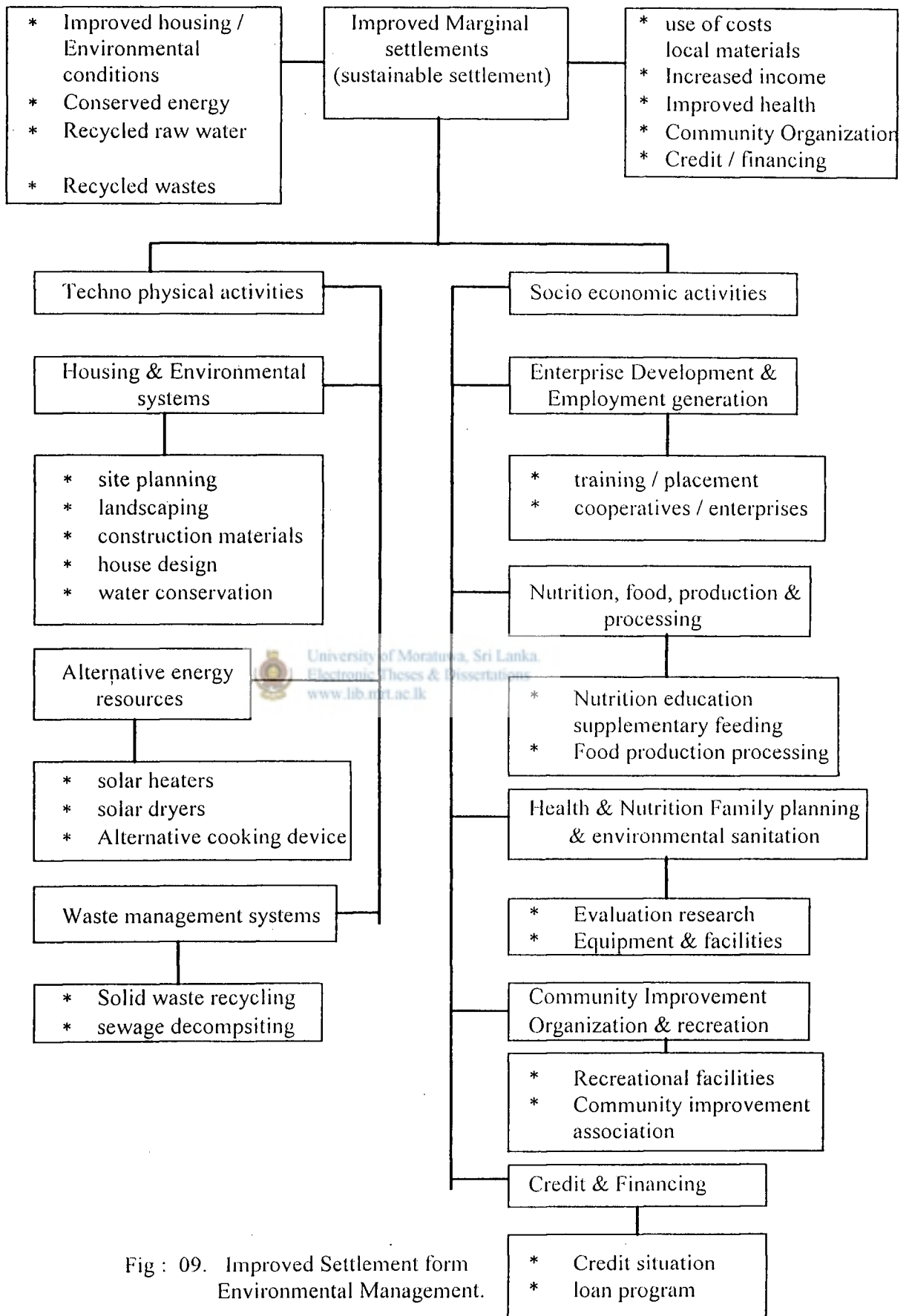


Fig : 09. Improved Settlement form Environmental Management.

(Source : UN;1976)

The above structure describes how to manage the environment under various environmental aspects as well as giving the actions which should be made for manage those.

Although the structure describes the environment under techno physical and socio economic activities it could be considered as same as the physical environment and the socio economic environment which were discussed in this study. But under socio economic activities the above structure does not describe about the psychological concepts of the human which is very important in satisfying the needs and aspirations, though they are represented in the planning and designing of housing and the other environmental aspects.

Although various environmental management strategies are proposed by the professional bodies and the authorities it is very difficult to be implemented by government or the local authorities alone, without peoples participation. Therefore incorporation of people is very important in environmental management.



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3.6. People's Participation.

While environmental conditions have severely deteriorated in almost all human settlements, many innovative and non formal approaches to environmental management have been or being undertaken. Community or people's participation is one approach in environmental management.

U.N (1992) describes, people can be involved in environmental management in several ways: ranging from awareness creation about environmental issues and mobilizing "people action" for pollution control, for provision of environmental infrastructure and services. (fig : 10). The success of people's participation depends very much on the specific political, economic, and social conditions in a settlement. However, no matter what the socio-economic conditions are, some form of public participation would prove successful.

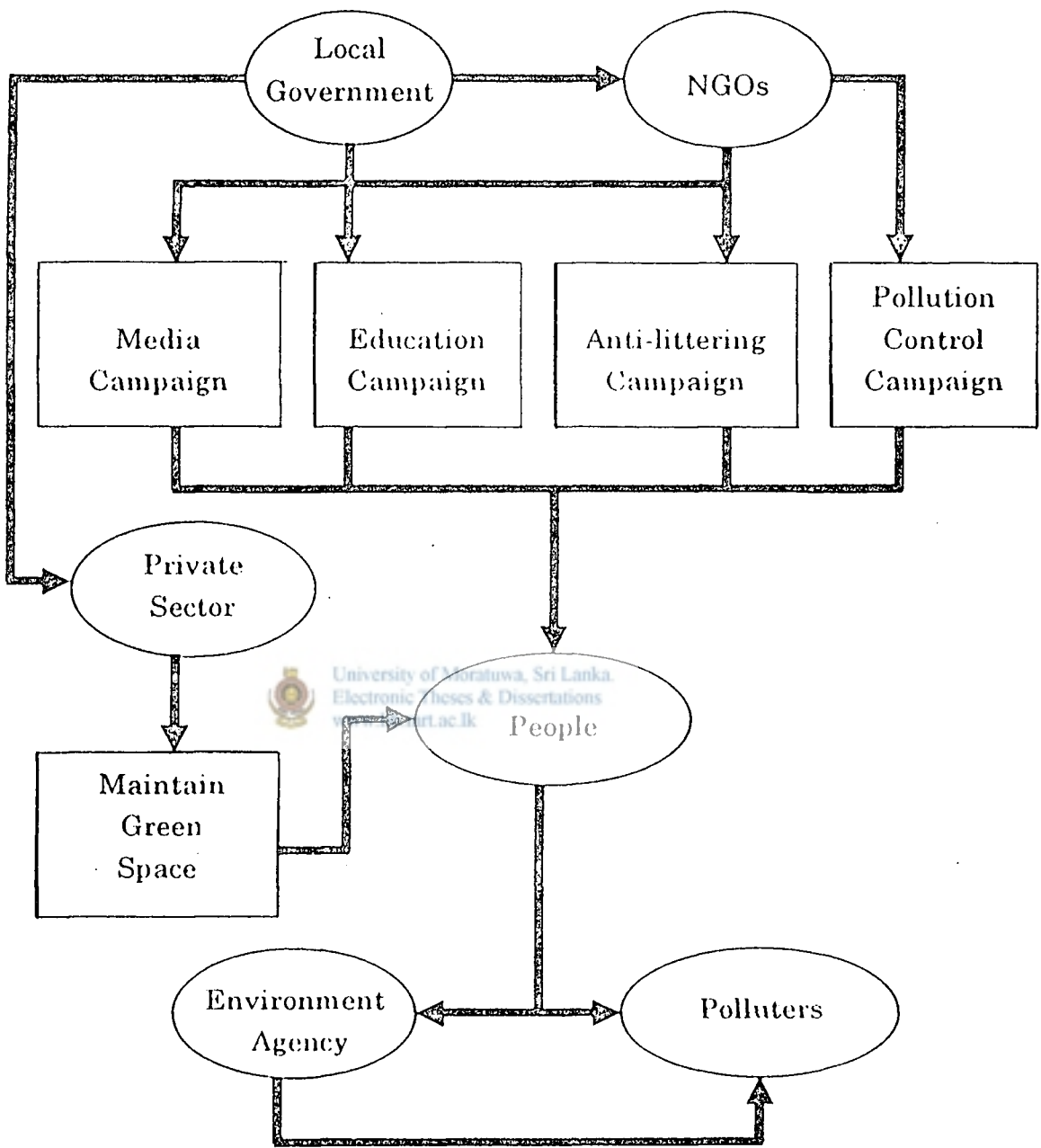



Fig : 10. People's participation in Environmental Management.

(Source : UN , 1992 ; 20)

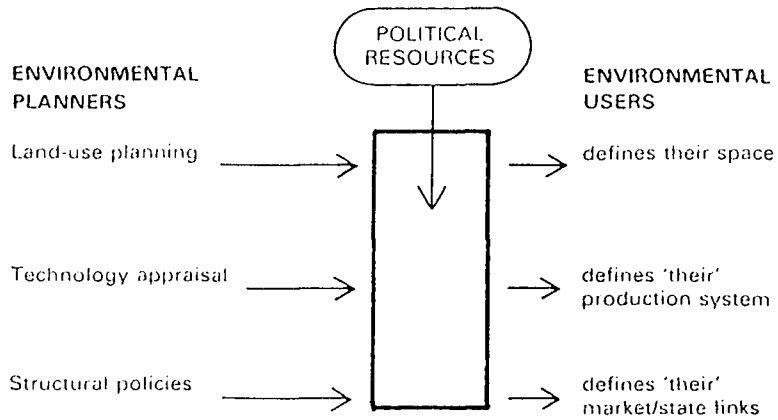
People's participation means involving people in the process of planning, design and implementation of development or management activities. It involves reliance on the people's resources, both human and monetary, in development and management activities. People's participation strategies imply a change in the role of government from that of provider to that of facilitator. In other words, instead of providing infrastructure and services, the government creates conditions in which people themselves can meet those needs, with their own resources, while the government supports them with technical and managerial assistance and enabling laws and regulations. (fig : 11).

It is being increasingly recognized that local governments cannot tackle housing environmental problems alone. Their human and monetary resources are usually insufficient to undertake such a major task. People's participation offers opportunities to supplement local governmental efforts with the monetary and human resources of the communities and of the private formal and informal sectors.

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For local governments to tap the resources of people, it is necessary not only to determine their ability to contribute their human and monetary resources but also to motivate them to willingly contribute towards the costs of the project. Perhaps the most efficient way to ensure the ability and willingness of the people to contribute their resources is to involve them in every stage of planning, design and implementation of an activity. This would ensure that their concerns and ideas would be incorporated, thereby increasing their willingness to pay for the costs of the project. Because of their continuous involvement, the extent of their contributions would also be determined.

Providing some sort of incentives rather than rules and regulations would encourage the people for participation in environmental management.

ENVIRONMENTAL 'MANAGERIALISM'



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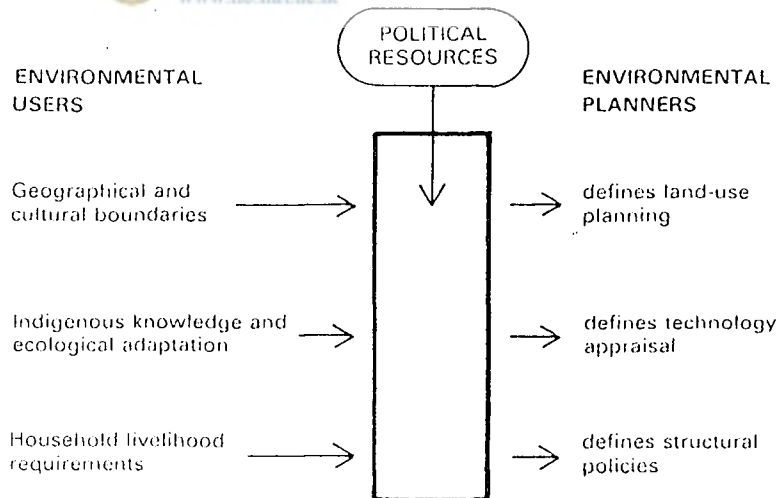


Fig : 11. Collaborative Environmental Management.

Source : Redclifi, M. (1987 ; 158).