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Challenges for Sustainable Cities in Low-Income Urban Communities

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Abstract:

This paper is an attempt to study the environmental health conditions in low-income urban communities of third world countries. By exploring the dimensions of a sustainable healthy cities or cities that contributes to sustainable urban health development and evaluates the findings based on the secondary data. At the first, urban health problems of the third world have been discussed like problems due to congestion or Sprawl and sustainable urban health framework for the third world cities is reached. Secondly, recognizing the components of a sustainable health city, the discussion went on evaluating the earlier available frameworks. The paper concludes with five recommendations establishing that problems of third world urban communities is the problem of the cities that contribute to Sustainable development but developed cities also have the problems with reference to requirements for a sustainable city.

1. Introduction

The pace of urbanization is different both in developed and developing countries. While developing countries have larger potential for urbanization, the problems and prospects of both the cities is very different with reference to healthy life in cities (Ashton, 1992).

Urban living has always been accompanied by environmental risks. These risks have varied significantly, of course over time and space. So have the ways that people have interpreted and responded to them (Hardoy, 2000). A century ago sanitary reforms were in full swing and the urban agenda of the industrialized world had relatively well-defined priorities. For much of the 19th century, average urban life expectancy was lower in urban affluent cities than in surrounding countries (Bairoch, 1998) and local environmental improvements were made to reduce ill-health. In the intervening century, urban population has mushroomed throughout the world and a number of cities have gone pollution revolution-adequate water, sanitation and waste collection. The International urban when the most affluent cities were rife with infectious diseases, the sanitary movement caused to the fore. And this brought 'BROWN AGENDA' prioritizing the environmental health and addressing local issues and sanitation, urban air quality and solid waste disposal.

Another indication of new significance in environmental health is the WHO (1998) report which states that- '*Poor environmental quality is estimated to be directly responsible for 25 percent respiratory infections highest on the list (WHO, 1998, p-123)*'. The quality of the urban environment in many affluent cities has improved, but affluent lifestyles have increasingly threatened the global environment, sustainability has become the watchword.

Historically, the citizens' most affected from urban environmental risks have been those in poverty. People lacking economic assets, political power and social resources are invariably the most exposed to the cities' bad water and sanitation, poor air, water and other localized environmental insults. Malnourishment and other poor health care compound the attendant health risks which still hold true today and accounts for a larger share of burden of diseases (Murray and Lopez, 1996). Inequality, poverty and urbanization are closely linked. By the year 2025, three out of five people live in urban areas, the majority in Southern developing countries where 40-70 percent of the population lives in low-income settlements. There environmental health condition needs to be improved in low income urban communities (UNCHS, 1996 and PUGH, 2000). Further, poverty is the reason of poor health factor management (Hardoy, 2000) and then GREEN AGENDA which prioritize ecological sustainability and issues relating to resource degradation which is also very much linked to the environmental health problem of low income cities. Therefore, environmental health condition in low income urban communities needs to be prioritized to address the health issues for sustainable low income cities. Also, the pace of urbanization has brought some emergent urban forms (Hall, Tim, 2000). "The old idea of the city has focused on the picture postcard landmarks and the central crust of the buildings and spaces. But it is clear that the present day city has long-since outstripped those limits. The new incarnation of the city is endless amorphous sprawl, with which outcrops of skyscrapers or vast shopping malls can appear almost anywhere" (Sudjic, 1993).

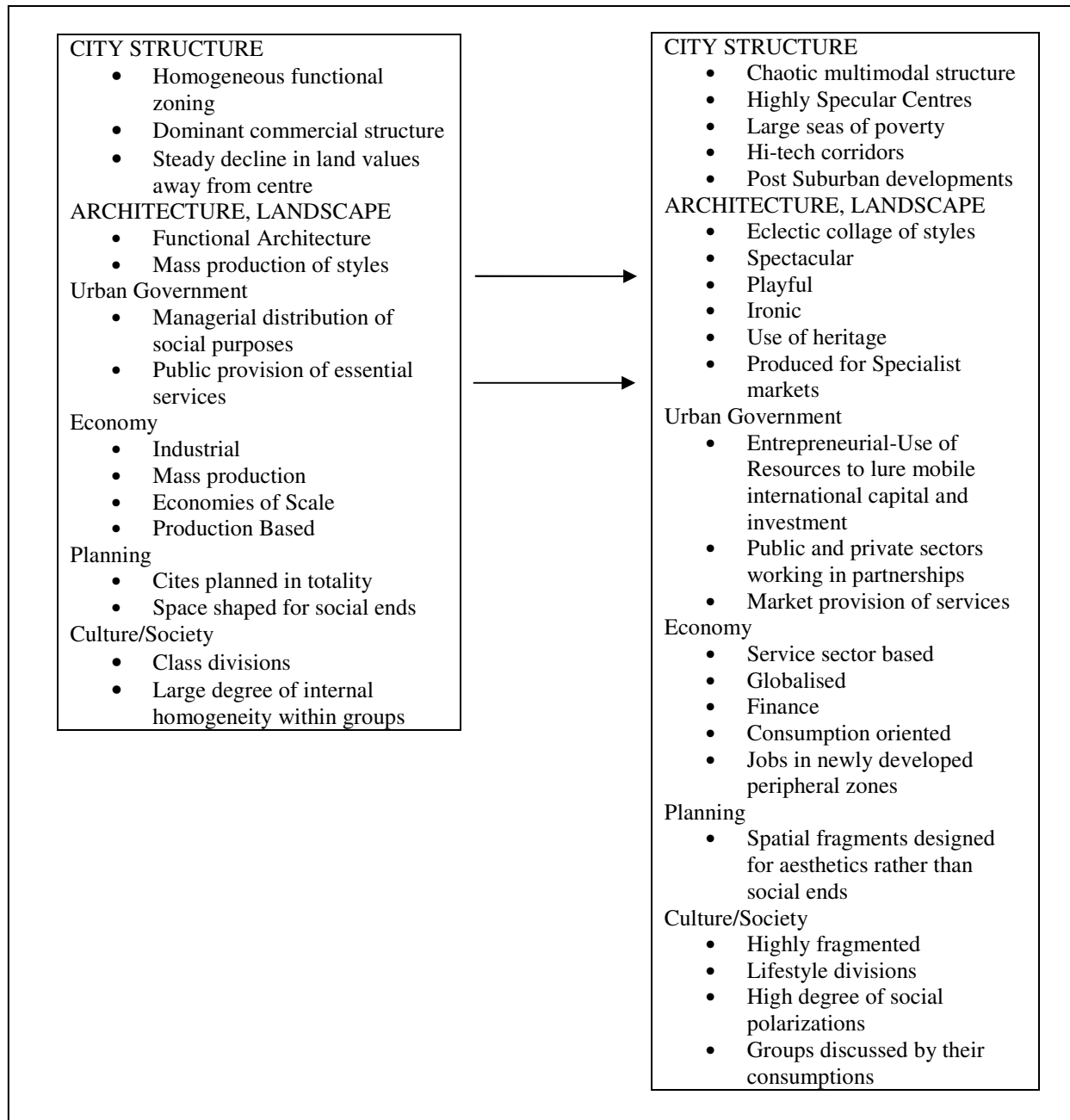


Figure 1

Source: Tim Hall, 2000; *Urban Change and Emergent Urban Forms*, Routledge Contemporary Human Geography Series

The above Figure vary clearly narrates the problems/prospects of the new forms of cities. Now it becomes necessary to look into the main challenges of sustainable cities and of low-income urban communities that contribute to sustainable development.

Common understanding has been that urbanization would bring the same long term health gains to the South as the cities of Europe seemed to deliver. In other words, it is thought that perhaps there is an inevitable ‘satanic mills’ or dirty phase of urban development, which once over implies the economic prosperity and health (Smith and Lee, 1993). But evidence implies that is has been a fallacy to think that the process of urbanization in the developing world bring long-term health and wealth to the majority (Sather Waite *et al*, 1990; Stephans *et al* 1996). As Cohen has pointed out recently that, macroeconomics shifts have been instrumental in population movements towards towns and cities, but they have not been shifted towards healthy lives for the majority: ‘the metropolitan city areas of the world are, above all, marked by their differences; differences in access by individuals, households and community to services, resources, opportunities, and most of all, quality of life’ (Cohen, 1998c). Infect, urbanization and urban sprawl has brought more clear evidence of health inequalities between peoples masked before as an issue of urban/rural power, but now revealed to be an issue of power between health and poverty within cities, with nations and between nations (Pugh, 2000).

There are two points to be made here: evidence now shows that inequalities in health from cities as diverse as London, Washington, Accra, Continuo, Cape Town, Sao Paulo and Belo Horizonte (Stephens *et al*, 1996; UNCHS, 1996). It was clear decades’ age that the urban poor in the South were not benefiting from urban development in terms of health. However, it was not until the 1980s that the

health of the Urban Poor began to be documented in contrasts of the health of the urban wealthy in developing country settings (Stephens *et al*, 1994; Benneh, 1993). History suggests the fallacy of using 'Urban' as the definition of relative health for the majority-the poor in cities have always borne ill health and the wealthy have evaded most illness, even in Epidemics as far reaching as the Plague that hit London in the 17th Century. For example, in the case of the third world countries, Kolkata (India) is a metropolis with over 12 million people-evoked by many as an extreme example of the urban development crisis. Up to 50 percent of Calcutta's live in extreme poverty, with a higher figure in central municipalities of Kolkata and Howrah (CEMSAP, 1997). The people in Kolkata rely currently on 'dirty industrialization', as do the people in many other urban centres internationally. The crux of the urban development crisis is how to move these people out of material poverty without resorting to dirty industrialization. Following table gives a glimpse off the Urban Health Problems at some centres.

Environment Indicator	Accra (City)	Jakarta (City)	Sao Paulo
Water			
1. Household Water Consumption (Lt per capita per day)	82	138	215
2. Total water Consumption (Thousands cubic metres per day)	263	1469	5017 (metro)
Sanitation			
1. Sewage Flow (Thousand cubic metres per day)	46	35	2400(metro)
2. Sewage Treatment (percentage treated)	20	1	26
Solid Waste			
1. Households Solid Waste Generation (kg per capita per day)	0.4	1.0	1.2
2. Municipal Solid Waste Generation (tons per day)	1000	9000	12000
3. Percentage of Waste Collected	75	83	90
Outdoor Air Quality			
1. Car Ownership (% of households)	16	16	33
2. Mean Annual Total Suspended Particles (TSP) ($\mu\text{g}/\text{m}^3$)	137 (1990)	271 (1990)	86 (1990)

Table 1: City Level Environment Indicators in Accra, Jakarta and Sao Paulo

Source: 'Shifting Environmental Challenges in Jakarta, Accra and Sao Paulo' in the *Citizens at the Risk: From Urban Sanitation to Sustainable Cities*; McGranhan *et al*; 2001; Earthscan Publishers.

It can clearly be said that there are high urban environmental health problems in third world countries. A look at some conditions of the Cities would be highly ponderable. Jakarta appears at least superficially to have the worst of two world's environment; it faces severe city problems, affecting fishing, agriculture and its watersheds (Dougleas, 1989, Hardoy *et al*, 1992), but due to poorly developed environmental infrastructure, has made little headway towards solving the unhealthy environment in many neighbourhoods. Still, most households are far more affluent than those in the Accra, which is reflected in the many private solutions towards improving the household environment (Surjadi *et al*, 1994).

Diseases spread by water related insect vectors are among the most pressing environmental problems in many cities. These include malaria. Although commonly considered a rural disease, there are severe problems with malaria in urban areas in large parts of Africa, Asia, Latin America (Rossi-Espangnet and others: 1991 as quoted in Tim Hall).

Hence, the association between the affluence and different environmental problems is clear in these cities. The city level problems, that tend to increase initially with increased affluence, but eventually decrease with even further economic development, are also compounded by city size (which is not independent of economic growth). The main point, however, is not that these tendencies are inevitable. Instead, they are created by collective human action accustomed (or non-action). Although there are logical explanations why human beings have different abilities and priorities at different wealth levels, the actions that lead to different environmental situations are by no means predetermined. Rather, in order to ensure appropriate environmental management or to support it, is important to be critically aware of these tendencies and not to risk misdirecting efforts and funds (McGrahnan *et al*, 2001). The discussion also highlights that it is always possible that the neglected sections of the society of the urban communities (slum dwellers, migrated people, transit camp people and people on the move in cities) are at the risk of facing environmental health conditions and also in the wake of HIV/AIDS, this condition gets aggravated. Thus we can summarily present a flow chart which very aptly discusses the environmental health issues in third world developing countries.

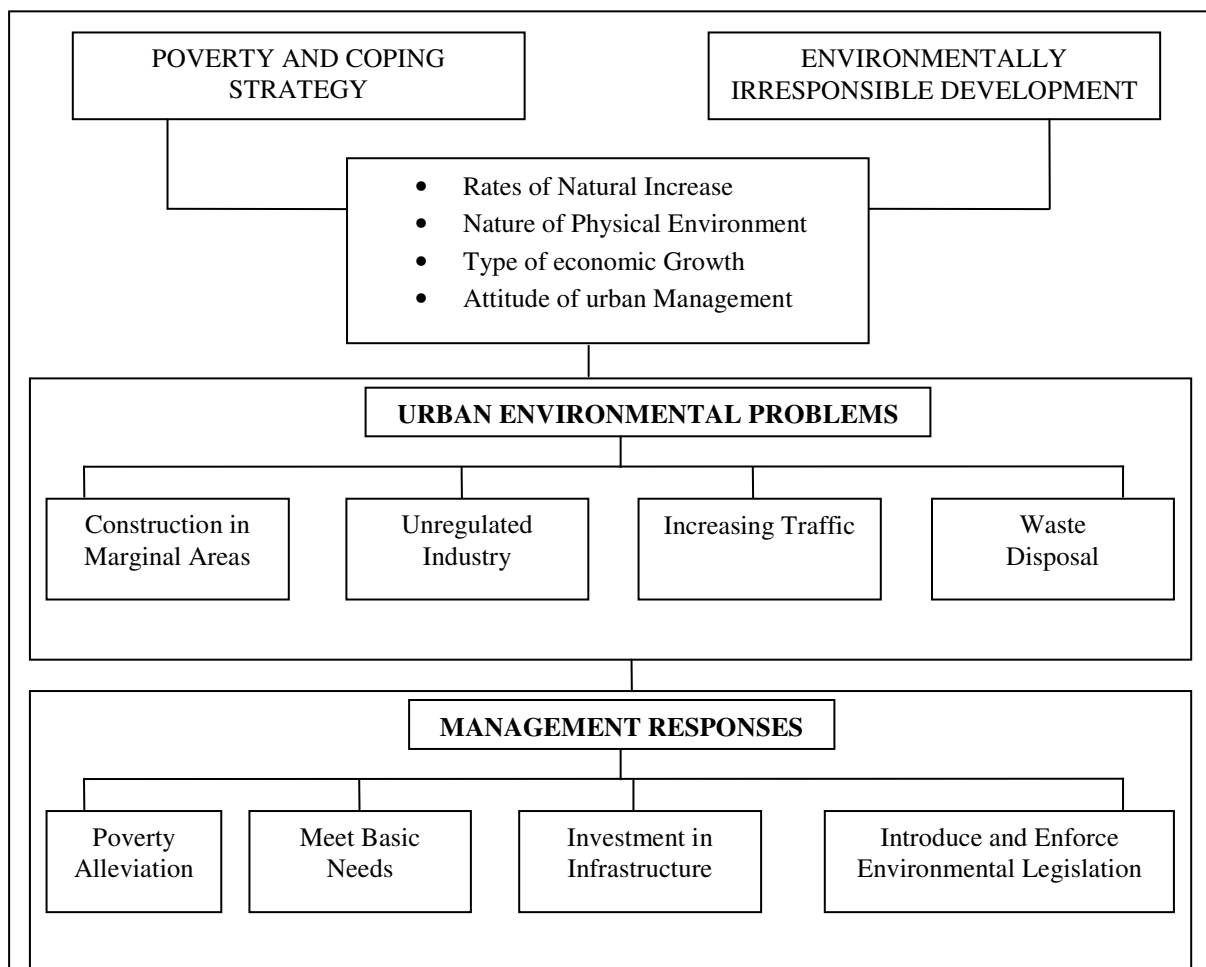


Figure 2: Main Sources of Environmental Pressure in Third World Cities

Source: *Urban Environment Matters; Third world Cities*; David Drakakis-Smith, Second Edition; 2001, pp-85

The chart describes how the poverty and its associated problems burden the city to unsustainability. Now the Question arises what are the components of actions for a sustainable city. Within a commitment to sustainable development, there are five broad categories of environmental actions within which the performance of all cities should be assessed. There are according to Satherwaite (2001)

1. Controlling infectious and parasitic diseases and the health burden they take on city populations, including reducing city populations; vulnerability to them. This is often termed as Brown Agenda or the Sanitary Agenda as it includes the need to ensure adequate provision for safe drinking water, sanitation, drainage and garbage collection for all city dwellers and businesses
2. Reducing Chemical and physical Hazards within the home, workplace and wider city,
3. Achieving a higher quality city environment for all city inhabitants-for instance, in terms of the amount and quality of open space per person (Parks, Public squares/plazas, provision for sport and children's play) and the protection of the natural and cultural heritage
4. Minimizing the transfer of environmental costs to the inhabitants and ecosystems surrounding the city
5. Ensuring progress towards what is often termed as 'sustainable consumption', i.e. ensuring that the goods and services required to meet everyone's consumption needs are delivered without undermining the environmental capitals and Nations of the World. This implies use of resources, a consumption of goods imported into the city and a generation and disposal of wastes by city enterprises and city dwellers that are compatible with the limits of natural capital and are not transferring environmental costs on to other people (including future generations).

These issues can be tackled within a framework considering the global, National and local issues and effective new governance system that helps us recognize the problems of cities in a new way. We find a related framework which provides the component of sustainable urban health interlinking the environment, health and economics of sustainability.

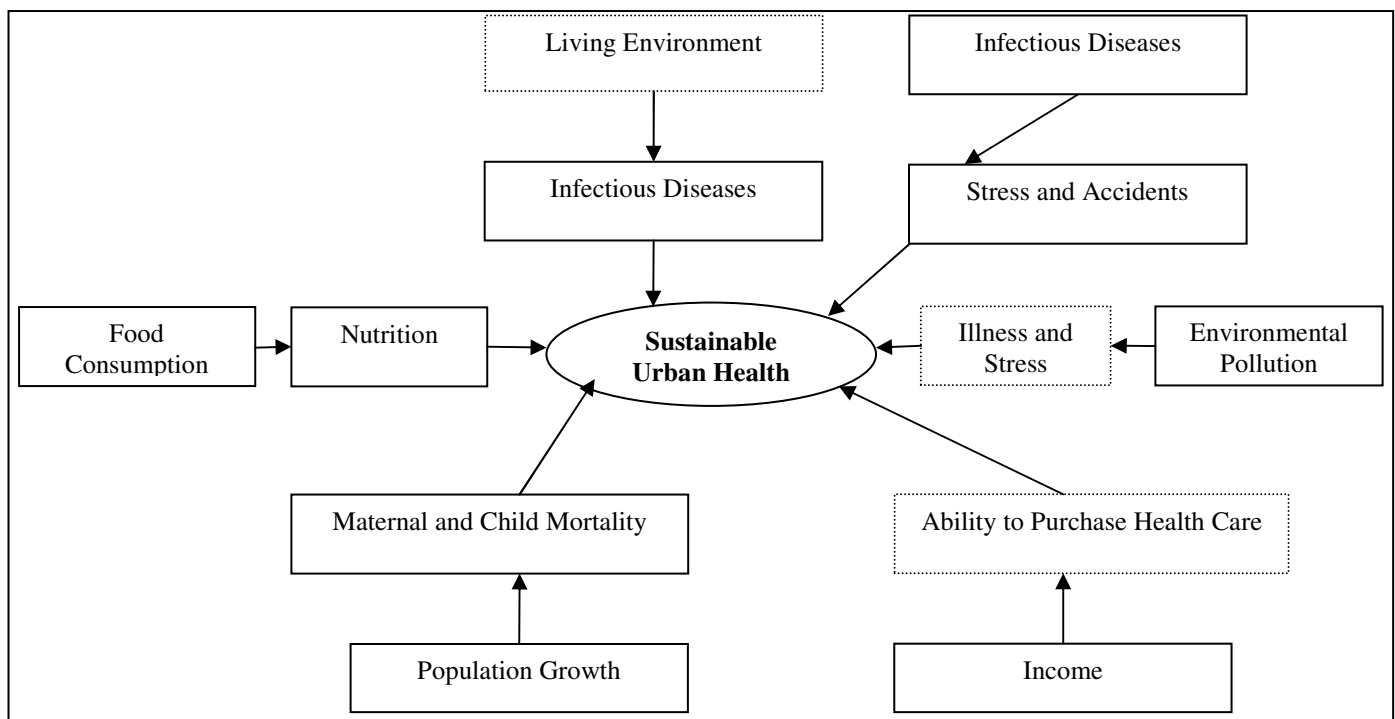


Figure 3: A Framework for the Consideration of Sustainable Urban Health

Source: T. Harphram and E. Werna (1996) 'Sustainable Urban Health in Developing Countries', *Habitat International*, 20 (3): 421-430 c.f. David Drakkis-Smith, *Third World Cities, Second Edition*, 2000: pp174

In order to be able to get this sustainable urban health framework, we must have a set of goals whereby we can evaluate the sustainability process in the cities meeting the Brundtland Commission's definition.

The following point emerges out as the points for vigorating the urban sustainability in cities of the third world countries (David Drakkis-Smith, 2000).

- Consideration of equity, social justices and human rights
- Basic human needs, such as shelter and health care
- Social and ethnic self-determination
- Environmental awareness and integrity
- Awareness of linkages across both space and time, i.e., not seeking gain at the expense of someone elsewhere in the world or of the generations to come

Sustainability also emphasizes the interlinked nature of the individual components of rapid urbanization. This means that as far as possible urban management policies need to be aware of the implications of changes in one part of the system for the remainder. It is, for example, futile to invest in improved health care facilities if those treated continue to live in squalid squatter slums and huts without access to clean water or adequate sanitary facilities. It is also true that the economic growth must bring returns to the firm or the state. Reconsidering this interrelationship of economic, social, cultural processes is essential to the management of the cities in third world countries (Smith, 2000). Therefore, urban environmental problems in the cities of the developing countries are enormous and growing. They are detrimental to health, production and social development. Many of the problems are visually evident in the conditions in squatter slums, in air pollution and in dirty rivers and reconsideration for integrating (Pugh, 2000) the given framework (Appendix-3) is essential to making them the cities that contribute to sustainable development.

2. Discussion and Conclusion

It is appropriate to take an overall view of cities in terms of the theory and practice of sustainable development for low income third world countries, given here are there following operational guidelines:

- Sustainable development of cities should be seen as environmental, economic and political, and for encouraging peoples to choose lives that they value.
- Environment health in cities is improved more probably with various other polices together: broad based stable growth of income, acceptance of occupancy rights and expansion of in situ improvement, the development of social capital among the poor, this being reflected in the leadership, organization, networking and civic association which leads to mutual trust and political experience.
- Policies for regenerating and conserving squatter slums are likely to have greater general urban health success when they are set within whole housing sector development and related to the macro-spatial development of the cities and towns. Land policy and the development of housing finance systems are especially significant, including extending access down the distribution of household income.

- It should be understood that the environmental health improvement has socio-political risk of fragmentation and contest: collective purposes are more likely where there are provisions for conflict resolution, some experience in social cooperation and the development of positive social capital, and relational contracting which sets out responsibilities among partners in a formal or informal scheme of neighbourhood improvement.
- The process of health improvement requires some technical know-how. This ranges from social development, relational contracting among partners, and the use of socio-economic surveys, contingent valuations, cost-benefit appraisals and hedonic activities. All of these improves the prospects for informed socio-political choice on the form and substances of selection among alternatives of sustainable cities. Techniques can be adjusted to incorporate various aspects of gender, age and minority groups.

Conclusively, it can be said that the fact that problem of environmental health improvement in third world countries' low income communities, is equivalent to improving the cities which have started their journey towards unsustainability and in this light the frameworks of reference will be highly beneficial.

3. References

- i. Ashton, J., 1992. *Healthy Cities*. Open University Press, Philadelphia
- ii. Bairoch, P., 1998. *Cities and Economic Development from the Dawn of the History to the Present*, Mansell Publishing, London
- iii. CEMSAP, 1997. *Calcutta Environment Management Strategy and Action Plan*, Department of Environment, Govt of West Bengal
- iv. Cohen, M., 1998. *Crystal Balls and Rear View Mirrors: Redefining Urban Practice at the Turn of the Century*, Proceedings of the 25th Anniversary Conference of DHV Amersfort, The Netherlands
- v. Dahiya, B., and Pugh, C., 2000. *The Localisation of Agenda 21 and the Sustainable Cities*. c.f. John Ashton, *Sustainable Cities in Developing Countries* (2000); Edited by Cedric Pugh, Earthscan Publishers, London
- vi. Douglass, M., Yok-shiu F. Lee and Kem Lowry, 1994. *Introduction to the Special Issue on Community Based Urban Environmental Management in Asia*: Asia Journal of Environment Management, vol. 2, No. 1, pp vii-xiv
- vii. Drakakis-Smith, D., 1995. *Third World Cities: Sustainable Urban Development*, Urban Studies, Vol. 32, pp 659-677
- viii. Flynn, P., 1992. *Measuring Health in Cities*. Healthy Cities. c.f. John Ashton, Open University Press, Philadelphia
- ix. Girardet, H., 2001. *Sustainable Cities: A Contradiction in Terms*, c.f. John Ashton *Sustainable Cities*
- x. Gordon McGranahan, Pedro Jacobi, Jacob Songore, Charles Surjadi and Marianne Kjellen, 2001. *The Citizens at Risk: From Urban Sanitation to Sustainable Cities*, Earth scan from Routledge
- xi. Hall T., 2001. *Urban Geography*, Routledge, London, 2nd Edition
- xii. Hardoy, Mitlin and Satterthwaite, 2001. *Environmental Problems in an Urbanizing world*
- xiii. Harpham, T., 1992. *The Emergence of Urban Health Policy in Developing Countries*, c.f. John Ashton, *Healthy Cities*. Open University Press, Philadelphia
- xiv. McGranahan and Satterthwaite, D., 2000. *Environmental Health or Ecological Sustainability? Reconciling the Green and Brown Agendas*. c.f. John Ashton, *Sustainable Cities in Developing Countries*, Earthscan Publishers, London
- xv. Murray, C J and Lopez; AD, 1996. *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Disease, Injuries, and Risk Factors in 1990 and projected to 2020*, Harvard School of Public health, Cambridge, Massachusetts
- xvi. Pugh, C., 2000. *Some Millennial Reflections on theory and Application*, Sustainable Urban Development. Earthscan Publishers London
- xvii. Pugh, C., 2000. *Sustainability in Squatter Slums* c.f. John Ashton, *Sustainable Cities in Developing Countries* Earthscan Publishers, London
- xviii. Pugh, C., 2000. *Sustainable Cities in Developing Countries* Earthscan Publishers, London
- xix. Rees, W., 1995. *Achieving Sustainability: Reform or Transformation (1995)*: William Rees c.f. *Journal of Planning Literature*, Vol 9(4), May 1995, pp 343-361
- xx. Rice, M. and Ramusson, E., 1992. *Healthy Cities in Developing Countries* c.f. John Ashton, *Healthy Cities*, Open University Press, Philadelphia
- xxi. Satterthwaite D., 2001. *Sustainable Cities, Health: Creating Healthy Cities in the 21st Century (1996)*: WHO Chapter 7 c.f. *Sustainable Cities (2001)* Edited by David Satterthwaite
- xxii. Satterthwaite, D., 1997. *Sustainable Cities or Cities that contribute to the Sustainable Development*, Urban Studies, Vol. 34, No. 10, 1667±1691
- xxiii. Stephens, C., Marco Akerman, Sebastian Avle, Paulo Borlina Maia, Paulo Campanario, Ben Doe and Doris Tetteh 1994. *Environment and Health in Developing Countries: An Analysis of Intra-Urban Differentials Using Existing Data, Collaborative Studies in Accra and Sao Paulo and Analysis of Urban Data of Four DHS (1994)*; LSHTM, London
- xxiv. Stockholm; Benneh, G., J. Songore, J.S. Nabila, A.T. Amuzu, K.A. Tutu, Y. Yangyuoru and G. McGranahan, 1993. *Environmental Problems and the Urban Household in the Greater Accra Metropolitan Area; (GAMA)-Ghana*, Stockholm Environment Institute, Stockholm
- xxv. Surjadi, C., 1993. *Respiratory Diseases of Mothers and Children and Environmental Factors Among Households in Jakarta; Environment and Urbanization*, Vol. 5(2): pp 78-86
- xxvi. *The World Health Report 1996: Fighting Disease, Fostering Development*, WHO Geneva
- xxvii. UNCHS., 1996. *Cities as Solutions in an Urbanizing world*, c.f. John Ashton *Sustainable Cities*, Edited by David Satterthwaite *Sustainable Cities or Cities that Contribute to Sustainable Development*