

Prerequisites for a healthy living environment in housing complexes

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The present outbreak of Dengue Fever has generated an interest in healthy living in Colombo. Annually Dengue serves as a reminder to arouse concern among the citizens of the need of a healthy living environment in Colombo. The Housing Ministry and the allied Departments, Authorities and the Boards play an important role in shaping the physical environment in the city and creating healthy communities. The Colombo Municipal Council promotes healthy living, green environment and sustainable development. Creation of Healthy Settings is our latest initiative under the Healthy city of Colombo Programme which functions under the leadership of the Mayor.

Prevention is better than cure is an adage which continues to be meaningful. Creation of sustainable healthy and environmentally friendly housing estates through course corrections is a key area that we should concentrate on.

The run down housing estates in Colombo are an eyesore and needs urgent attention. The preventive measures have to be put in place even at the earlier stages of planning and designing if we wish to have sustainable healthy communities in public housing.

It is essential to have sustainable communities as maintenance work in common areas has to be carried out by the community itself once the houses are sold. We tend to put aside the preventive measures in our struggle to cut costs when building housing estates and the value of sustainable designs is undermined, and the ensuing constraints and challenges are not thought of at that moment.

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Partnerships with academic institutions to carry out environmental studies and assist in staff training and development is essential in this regard. When one looks at the places where housing complexes have sprung up in Colombo one wonders whether such demands have been met with by the authorities when decisions were taken in the past.

Today the dengue menace has surfaced the need for a healthy housing complexes and healthy living by the dwellers and made

it a priority concern of the government, society, doctors and other professionals such as architects. Healthy building design issues like natural ventilation, healthy water supply, fire-escapes, healthy drainage systems, timely solid waste disposal, beautification and maintenance of common spaces have become issues of prime importance. These health related matters coincide with many of the key sustainable housing planning and design issues, particularly those related to environmental sustainability. A task ahead is to supplement the many areas of sustainability with reinforced healthy building design considerations that are essential to prevent the possible spread of communicable disease and induce conditions promoting health.

The public are concerned mostly about the physical aspects of healthy living. In a holistic sense, however, healthy living involves not just physical health but also mental and social well-being. The World Health Organization (WHO) defines health as, 'a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity.'

Housing provides the scenario for family life, recreation, and social interaction. A

healthy living environment does more than merely limit the occurrence and spread of physical diseases and infections, but also promotes mental and social well being of the residents. Sustainable development has been recognized as a key principle for the development of environmental health. Colombo too has joined the Sustainable Cities Programme (SCP) in order to promote that concept. On the other hand health contributes to integrating the social, economic and environmental dimensions of sustainable development. Sustainable community, friendly environment and healthy living are inseparable. They could be viewed and addressed together. Such understanding is an important means to broaden commitment and to give impetus to

creating sustainable communities and healthy living.

To create such healthy Communities we must optimize site potentials, respond to site characteristics, further improve the building's structural efficiency, and enhance cost effectiveness. We should improve natural ventilation and daylighting, pollution dispersion, healthy drainage design, thermal comfort, wind environments, landscaping, and energy efficiency of our buildings. We also have to enhance community building, home comfort, nature for community and accessibility. These elements are inter-related and collectively contribute to the physical, mental and social realm of healthy living.

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Good environmental performance enhances physical and mental health as well as sustainability of the community. Improved natural ventilation and daylight also achieve energy saving by reducing the reliance on air conditioning and artificial lighting. In a housing context, environmental performance is related to both indoor environmental qualities and external community spaces. A good wind environment improves natural ventilation of building and communal spaces.

It disperses pollutants and heat from household and enhances healthy living. This reduces the chances of spreading diseases like TB, viral infections of the respiratory systems and communicable diseases. Orientating building blocks and major facades towards prevailing wind direction greatly improves natural ventilation. A building has the best ventilation performance when its long face is fronting the wind. If a block at one end of the linear site blocks the wind from the southwest and all remaining blocks are in wind shadow like at Man-

ning Town or Maligawatte. Permeability of buildings improves natural ventilation. Permeability is increased by window openings in corridors, lobby and by adopting cross ventilated re-entrant.

With increased permeability, stagnant wind zones and natural ventilation for flats in the downwind side of the building are much improved. This arrangement avoids the possible spread of communicable disease to adjacent flats.

An important consideration is orientation of the blocks and flats to decrease the solar heat gain to improve thermal comfort. In high density housing, sometimes it is impractical to have no flats facing east or west, especially where there are natural views in these directions but attempts should be made at shading them.

In such cases, we can reduce solar heat gain by orientating the main facade away from direct east or direct west and by shading of adjacent blocks, wings or facades. White or light colours for external walls must be

used to reflect and reduce solar heat gain.

Increased thermal comfort will reduce the reliance on air conditioning and save electricity cost. Shading of open spaces from sun must be provided as far as possible either by shading from

increases the comfort level of space.

Healthy drainage design is of prime importance. Immediate and comprehensive inspection and repair of the existing drainage systems should be available and at the new projects.

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blocks, by shelters or by the planting of trees. Planting of trees, although important must not create conditions for mosquito breeding or resting. Activities of open spaces are planned accordingly to their thermal comfort and wind speed. For example, areas designed for morning or evening exercise and walks are to be located at areas with shading from the sun. Daylight has psychological effects and

Academic institutions should be invited to carry out a proper drainage design of established standard. Rear space should be designed is reviewed to allow easy inspection of the drainage pipes and maintenance access from the common corridors achieve a healthy drainage system throughout the life cycle of the buildings. Maintenance units should be placed at large housing complexes as there many

complaints at present. Properly designed housing complexes enhance the social well being of people. The four key elements that should be considered in our housing planning and design are community building, comfortable home, nature for commu-

motes social cohesion and social inclusion and is essential for social well being. In our landscape design, comfortable communal spaces should be designed to encourage people to gather, chat and interact. Different types of spaces are created for dif-

enhance community participation and bonding of the residents.

A comfortable home contributes to the physical and mental health of the residents. It is achieved by enhancing thermal comfort, usability of space and facilitating household activities like cloth drying. Flexibility of tenants to partition their home according to their own needs is enhanced by structural free internal layout. If necessary, homes should use screens made out of netting on windows to keep out flies and mosquitoes away. Rats, flies, stray dogs and cats can be eliminated only with proper practices of solid waste disposal.

We have to provide the people of a community with effective and convenient access to transportation, shopping and other community facilities to assure them that they can secure adequate support from the community. Accessibility also increases mobility, particularly of the elderly people who are practically caged in their apartments otherwise, and encourage activities like morning exercises and social interaction which

benefit both the physical and social aspects of the community as a whole.

The Challenges we face are proper solid waste disposal, non maintenance of the roofs and gutters, stairways, lifts, backyards, drains, open spaces, and unauthorized structures in these communities. Dengue mosquito breeding could be prevented only when these challenges are met with. The issues like natural ventilation and daylight that are fundamental and essential to achieve a sustainable and healthy living and every effort is made to strike the difficult balance between a lower cost and a higher value. In some cases we may achieve this balance by innovative design that given increased performance levels as well as increased cost effectiveness. In a hot and humid city like ours it is necessary to increase the size of the bedrooms at least. In other cases where a higher cost is inevitable and where there is irreversible environmental and health impact, decisions have to be made whether we are prepared to pay a bit more now or leave it for tomorrow.