CHAPTER 8

RECOMMENDATIONS

(8.0) Recommendations:

- Ecological awareness will help people of Vadodara city to understand their place in nature, responsibility for the environment, and help them to change their consumption behavior and enhance their ability to contribute to maintaining high quality urban ecosystems and to reduce their ecological footprint.
- Public participation is main objective of eco-city planning. Citizens of Vadodara city must get involved in formulating and implementing new land use and transportation policies and practices, preserving agricultural lands and open space, and reclaiming natural habitat.
- The area buzzing with vehicles round the clock which are currently nightmare for pedestrians and residents should be converted to vehicle-free zone. The stretch between Nyay mandir court complex and Fire Brigade building can be made vehicle-free zone. The stretch can be initially made vehicle-free on weekends. Similarly, the stretch can be made vehicle-free during evenings. This will reduce the traffic related problem.
- City authorities should pass a regulation that makes mandatory to include solar heaters and rain water harvesting strategies for every new construction.
- Encourage mass transit rather than personal transport by providing easy means of public transportation. Ensure that citizens are using fuel-efficient and cleaner fuel vehicles.
- Many of the roads in the city are dugged-up and left as such after laying pipelines and cables. This leads to traffic problems in the city. Therefore, care should be taken to cover roads immediately after completion of any repairing work.

- The corporation had planted some banyan trees near Kalabhavan but due to lack of maintenance these trees has to be trimmed every year so that they do not fall on the roads. Instead of carrying out this unfruitful exercise, proper areas have to be selected to grow specific trees with proper planning.
- Many areas of the city are facing parking related problems. Multi-story parking should be built in city to control the traffic.
- Preserve existing green and water elements and create additional green and water elements within the city: trees, lawn, green facades and green roofs, fountains, water courses and surfaces, bioswales, green-infrastructure, etc. to increase the greenery.
- The city should be engaged in a comprehensive effort to deliver new public transportation options while upgrading and enhancing the efficiency of existing services.
- The city authorities should regularly update the information on the change and current levels of ground water, average level and fluctuation of river water, amount and variation of annual water fall, usable amount of ground water for drinking and precipitation purposes. This will help in generating the sustainable future planning.
- Special attention should be paid to renovation of existing buildings and the technical conditions of the buildings. Only buildings with adequate technical conditions should be renovated, and houses in poor condition dismantled and recycled for new construction.

- Provide all citizens - regardless of age, income, race or ability - with safe, accessible, efficient, and affordable transportation options. Prioritize walking, biking, and public transit in order to discourage single-occupancy vehicles.
- The corporation should reduce the environmental footprint of travelling by introducing, designing and encouraging sustainable methods of transport and infrastructure.
- The campus of the M.S.University and one of the largest gardens of city, Kamatibaug are situated very close to each other. Both of these should be connected with each other through a green corridor in order to establish a green zone within the city.
- The authorities should try to minimize sealed surfaces by implementing permeable pavements along the roadsides and pathways.
- The corporation should try to produce energy locally and sustainably, through installation and promotion of the use of renewable and efficient energy technologies, like solar power, wind power, etc.
- Integration of green building and sustainability standards into all private and public development, including historic preservation, renovation, and new construction.
- Encourage the preservation and adaptive reuse of existing buildings, and promote the reuse and recycling of building materials in all development.
- Maximize mental well-being and community feeling: health and recreation, cultural identity.

- There is a need of balance between residential, employment and educational uses as well as distribution, supply and recreational facilities.
- Instead of resorting to landfills for solid waste disposal system, re-cycling of solid waste must be resorted to, in order to avoid contamination of ground water, soil, stoppage of flooding due to rain water, etc. to ensure quality of water.
- Watershed management plan should be prepared for the whole city to avoid water shortage during summer season. Scientific method should be adopted for maintaining good quality of ground water.
- New areas should be developed on neighbourhood principle providing all the facilities and amenities according to their priority. All housing should be designed to be within few minute walk of public transport and easy access to social infrastructure such as hospitals, schools and work.
- Government officials should prepare annual environmental status report of the city considering various aspects. This will help in setting annual targets of environment improvement for the city and evaluation of the same at the end of the year.
- Vadodara Municipal Seva Sadan (VMSS) should prioritize the issues to be addressed and formulate strategies through city consultation process for effective implementation.
- VMSS should try to improve access to affordable land and low cost housing finance to achieve goals of shelter for all and slum free city.
- Various departments of VMSS should maximize the use of Geographical information systems (GIS) for decision making.

- The VMSS should formulate the policy for exploiting and redeveloping of wasteland and other empty urban spaces (in the centre and periphery).
- The authorities should carry out the survey of the construction sites. This will help in preserving the existing vegetation wherever possible and replantation of healthy trees. For example, an attempt was made to carry out the eco-development study during the construction of new terminal building of Vadodara airport. During the study a pre-survey of the area was carried out. Based on this survey and detailed study recommendations were given for eco-friendly development. Case study has been described in Annexure II.
- A separate cell for carrying out regular energy audits and formulating the budgets so as to increase the energy efficiency. City should try to reduce energy demand by 64% and should minimize the emissions for energy production, which will save carbon dioxide emissions.
- The VMSS should formulate the policy for extracting biogas from municipal solid waste and sewage.
- The individual buildings of the city can contribute in energy savings by installing photovoltaic cells and micro wind turbines on terrace.
- The energy usage should be charged reasonably up to certain limit, beyond that limit charges should be raised by two to three folds. This type of policies will minimize the energy usage.
- A separate space should be provided to grow food producing plants using sustainable methods, such as organic cultivation. This will not only contribute to

healthy diets for local communities but also enhance biodiversity, provide jobs, and offer educational opportunities for all ages.

- Waste should be recycled to prepare organic manure and the organic manure produced here would be used in producing organic farm-fresh fruits and vegetables.
- Optimize tree plantings and other vegetative cover to facilitate the creation of favorable micro-climatic conditions. Restoration of natural vegetation is essential for reducing irrigation requirements for ornamental landscaping.
- City people should try to maximize the eco-friendly green buildings using natural resources to generate power (**Plate 53**). These houses have their own rainwater harvesting, solar panel system, and water recycling system.

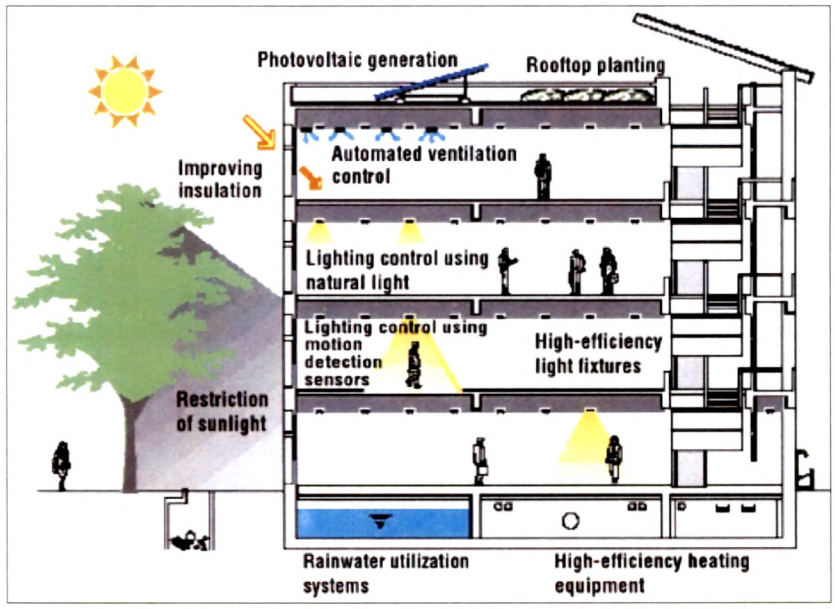

Plate 53: Conceptual drawing of Eco-friendly house