

# Sustainable Cities - An Approach

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**ABSTRACT:** The global economies are city driven. These cities are to be made sustainable with a decreasing trend of ecological footprint besides rapid urbanization. The cities must be driven by a democratic debate driven sustainable local governance. The paper explains various aspects of sustainability in urban lifestyle.

**Keywords:** city, biological clock, ICT, tax

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## I. INTRODUCTION:

Albeit cities are congested, polluting, with poor housing, collapsing infrastructure, crime and poverty, cities innovate to drive global economies and produce output[1]. By 2030, sixty percent population lives in cities besides ninety percent growth in urbanization of developing countries, in the next thirty years[1]. Twenty two of the twenty six mega cities are in developing countries and several of these cities have a population range of twenty to thirty million[1].

## II. LITERATURE SURVEY:

According to United Nations, a democratic debate driven sustainable local governance in urban management play a determining role in educating, mobilizing and responding to the public to promote sustainable development [2]. More than an ecological footprint, cities-the heart of our civilization, are the primary source of wealth and enterprise, places of inspiring architecture and the great centers of learning, culture and politics, the locus of change and innovation [2]. Governance is a flexible pattern of public decision-making based on loose networks of individuals, for responsible consumption of natural common goods, plan and design better mobility, local action for health, sustainable local economy, social equity and justice [2]. Environmental sustainability achieved by the use of renewable energy, increased energy efficiency, recycle and reuse materials, food production within cities, local economy for ecological footprint[3]. Human activity rapidly warmed the globe over the last fifty years and carbon-di-oxide accounts for around two thirds of the global warming effect[3]. The solar city concept is an attempt to reduce the level of greenhouse gas emissions, by 2050[3]. Each person has an annual emission allowance of 3.3 tons, in-order to allow oceans and forests to neutralize excessive carbon emissions[3]. Modeling urban processes on ecological principles of form and function make cities sustainable [4]. According to Bossel, sustainable ecosystems are: healthy(effective), zero waste, self-regulating, resilient and self-renewing, flexible [4]. Additional characteristics of sustainable socio-ecological systems are: ethics based on strong emotional connections, psychological fulfillment, co-operative co-existence[4]. Public Spaces- the spaces between buildings and facilities: streets and pedestrian access, open and green spaces including parks, plazas, waterbodies, libraries, community centers and municipal markets[5]. Streets are expensive real estate, with average city speeds car driver consumes a surface area of 67 square meters per commuter [5]. High quality public spaces improve city livability and competitiveness by improving public safety, citizen inclusion and health outcomes[5].

## III. METHODOLOGY AND DISCUSSION:

1. Among all the three global religions viz. Christianity, Islam and Hinduism, every religion has a language of Gods and a language of humans. The languages of Gods are Latin, Arabic and Sanskrit respectively. Thus, the various languages of homo- sapiens must be analyzed in these respective languages of Gods, for speedy synthesis.
  2. People to pray to GOD before bedtime. Thus, the biological clock keeps enchanting GODNAME while in sleep.
  3. ICT: increased use of information and communication technology in education viz step-by-step animated videos of diagrams, in engineering, sciences and medicine.
  4. Increased city-student workhours with the aid of technology.
  5. Real Estate technology, solar energy and LPG pipelines.
  6. Bonsai plantation, ecological footprint and indoor aesthetics
  7. Recycle used paper tea cups from street vendors
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8. Reduced material usage: The urban living is mostly apartments. Thus, the entire apartment building could have a single over-the-terrace dish antenna receiving and transmitting signals.
9. Reuse material: Today's news paper could be used as homemade bags for waste disposal. This forms an auto supply chain for newspaper recycle.
10. City dwellers to use news channel apps in their smart phones, leading to reduced print news.
11. To encourage Work-from-Home culture, especially for banks probationary officers
12. Banking technology: urban branches to have one lakh savings accounts in each branch. increased usage of technology by customers.
13. Gmail-to-Gmail video enabled google meet. It eases online interviews.
14. Marriage certificates, birth certificates and student transfer certificates from schools, only in soft copy.
15. Saturday Baby Vaccinations Day
16. Reverse-urbanisation: certificate courses to go online to rural students.
17. Rural business hubs
18. Satellite towns.
19. Barren lands and desert lands.
20. Electric cremations instead of graveyards
21. Homes of the aged.

The word, 'Kashmir' must be analyzed in ancient languages, dating back to the times of the word origin. In an ancient language, the word MIR means peace. Thus, kash-mir says, 'Peace could have happened'. Since ancient history is mostly into spirituality and most of the Hindu religious establishments are of pre-Christian era, any spiritual rituals may restore MIR. However, it must be checked if the Sanskrit verses and hymns might be from the days of pre-Ramayana. Likewise, the yuga purusha kali has no body. the kali dwells in man-mashtishk of human beings. The goddess kali in Bengal is the feminine form of the yuga purusha. The feminine form is evident from the word kali when analysed in Sanskrit.

Hinduism says, 'students must follow brahmacharyam during studenthood'. As a part of it, let students enchant their favourite deity for ten minutes before bedtime. Then go to sleep in the thoughts of the deity. Thus, the human biological clock in the sub-conscious brain enchants the deity all night during the sleep. Thus, its again a 24X7 work culture. Also, it makes the student fraternity to absorb the positive vibes from the nature and by time, they connect themselves to the cosmic energy. Teaching community to use step-by-step animated video diagrams to explain concepts of engineering, sciences and medicine. This makes students to learn with minimal effort. Also, urban areas demand a lot of commutation. Thus, students have to make time for reading. A tablet would give them atleast four hours of additional time to read during the to and fro commutation times from homes to colleges.

The building constructions in Indian cities must adopt latest technology. Given the year round Indian weather conditions, the refrigeration needs are barely minimum. Thus, Indians must be educated about solar refrigeration. Solar refrigeration eliminates compressor, the only power consuming component and thus, saves electricity. High rise apartments should use phase-change materials to reduce the needs of air-conditioning. Phase-change materials absorb and radiate heat to change their phase. Moreover, apartments need to conserve water. An urban Indian consumes twenty five liters of water everyday, to take bath. The bathroom shower waters must be collected into a separate drain pit so that the water is absorbed into the ground. This builds urban ground water levels. Solar electricity could light the apartment corridors in the evenings and nights. Also, solar water heaters are a boon to the urban living. Solar energy reduces carbon emissions. The entire apartment building could use a single larger dish antenna to receive and transmit signals to individual television sets in apartments. This reduces the material needed to manufacture smaller DTH antennas. However, it depends upon signal deposition ratio. The Indian households should learn art and craft. Today's newspaper is tomorrow's waste paper. Let the households make paper bags from newspapers to dispose waste. This creates an auto supply chain to the municipal governing bodies to recycle newspaper. The concerned municipal body to collect and recycle single user paper tea cups from street vendors, thus, reducing the virgin paper consumption. Apartment corridors and balconies of urban areas could cultivate Bonsai plantation. These plants eat pollution and give fresh air indoors. These plants reduce indoor pollution and also reduce the ecological footprint of a megacity. Bonsai plants also improve indoor aesthetics. Liquefied Petroleum Gas pipelines should be laid all over India. These pipelines reduce the transportation mechanism currently in place. For example, the city of Bombay could have a circumferential gas pipeline in the sea, distributing LPG into inner areas of the city.

India operates 108 crore mobile phones and a one-third are smart phones. Thus, people could listen to news on radio on their mobiles and also, Indians could use news channel web applications to watch and listen to news. This reduces the need of print news and also, it creates the need for mergers among print media, electronic media and FM radio channels. Newspapers must be printed on only recycled paper and stop using virgin paper.

The increased urban population density demands new technological ways of lifestyle. Indians need to be disciplined to maintain work hours and punctuality in a system of work-from-home culture. This avoids unnecessary commutation and increases work hours besides human comfort. Government employees are yet to adopt the system of work-from-home and banks probationary officers to be encouraged to work-from-home. Bank customers to use online applications to save time. However, senior citizens must be taught to use the web applications. Indian population is divided into 45 percent children, 45 percent parents and 10 percent senior citizens. Thus, in the days to come, online banking technology would see a steep rise. Thus, every branch of the seven public sector banks could serve one lakh savings bank accounts. Moreover, the identity of immediate family to be recorded in savings bank accounts for the events of inheritance and any unseen circumstances. This also eliminates the need of number crunching for new bank accounts to adolescents.

Gmail could ease online interviews by facilitating free video calls over gmail identity. The video call utilizes the unused 15GB memory allocated to the gmail account. It reduces unnecessary commutation and creates greater opportunity besides saving work-man hours. All marriage certificates to be in softcopy and the fee to be paid online immediately after the wedding. A police constable could be a guest in the wedding to note the details of either of the spouse. Similarly, birth certificates. To avoid city huzzle and buzzle, all new borns should be vaccinated mostly, on Saturdays. Thus, a Saturday usually reminds parents of vaccinations.

Any school in india is welcome for bonafide students. Such bonafide students neednot be issued any transfer certificate after completion of schooling. However, only those students who change school after primary education need a softcopy transfer certificate. English is a language of opportunity. Students of schools in rural areas could do certificate courses in English to appear for a global certification. Thus, Business Process Outsourcing could go to rural areas. Rural business hubs could sell evening snacks in urban areas direct-to-home monthly once. Such hubs make villages economically sustainable.

Transportation is an everyday problem in megacities. Hyderabad is growing in regards to this problem. The solution lies in developing satellite towns. Warangal could become a satellite town being at a distance of two hours journey either by road or train. Many such satellite towns are to be identified for different purposes. In Andhra Pradesh, Vijayawada-tenali-guntur is a triangular arena for inter-city employments. Similarly, Bhopal-indore-ujjain, in Madhya Pradesh.

India has 43000 lakh hectares of barren land including deserts. The land could be used for waste disposal. For example, the waste dumping ground at okhla, new delhi, could be shifted to the deserts of rajasthan.

The urban areas have a scarcity of space. Thus, graveyards are slowly being converted into living spaces but for spirituality. Thus, all the three thousand urban level blocks to have electric crematoriums, thus reducing carbon emissions from the conventional pyres. Below poverty line population remains a question to answer except for the improvement in their financial situation. A BPL citizen takes birth in poverty but the society expects him to die rich. Thus, mostly old aged BPL population could be shifted to old age homes in panchayats. The urban senior citizens should live carefree without any burden of taxes. At the time of retirement, a senior citizen to be asked to pay onetime property tax with a religious life expectancy of one hundred years. In the event of premature demise, the remaining amount will be utilized for social causes in temples of worship, to lend alms to the poor.

#### **IV. CONCLUSION:**

The urban population must utilize technology by the day for optimized lifestyle and minimal commuting times, thus increasing their day-to-day productivity. The urban living is expected to be more dense in the near future, with more migration of the rural population. The governments should decrease urban ecological footprints with sustainable governance and a pro-poor strategy. Satellite towns make rural economies viable. Thus, a vibrant India could look forward to an economic situation with higher opportunities and stronger currency.

#### **REFERENCES:**

- [1]. Mike Jenks, Rod Burgess, 'Compact Cities: Sustainable Urban Forms for Developing Countries', Spon Press, Routledge, 2001, ISBN: 0-203-47862-2.
- [2]. Bob Evans, Marko Joas, Susan Sundback, Kate Theobald, 'Governing Sustainable Cities', Earthscan publishing, ISBN: 1-84407-169-3.
- [3]. Mike Jenks and Nicola Dempsey, 'Future forms and Design for sustainable cities', Architectural press, ISBN: 0-7506-6309-X.
- [4]. Peter Newman and Isabella Jennings, 'Cities as Sustainable Ecosystems Principles and practice', Island press, ISBN-13: 978-159726-188-3.
- [5]. Jon Kher Kaw, Hyunji Lee, Sameh Wahba, 'The Hidden Wealth of Cities creating, Financing, and Managing Public Spaces', www.worldbank.org, ISBN: 978-1-4648-1493-8.