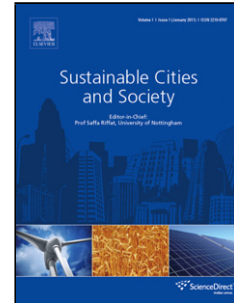


Accepted Manuscript

Title: Greening the Economy: A Review of Urban Sustainability Measures for Developing New Cities

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PII: S2210-6707(16)30446-2
DOI: <http://dx.doi.org/doi:10.1016/j.scs.2017.03.009>
Reference: SCS 605



To appear in:

Received date: 30-9-2016
Revised date: 13-3-2017
Accepted date: 13-3-2017

Please cite this article as: Addanki Sai Charan, Hrishikesh Venkataraman, Greening the Economy: A Review of Urban Sustainability Measures for Developing New Cities, *Sustainable Cities and Society* (2017), <http://dx.doi.org/10.1016/j.scs.2017.03.009>

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Greening the Economy: A Review of Urban Sustainability Measures for Developing New Cities

Abstract—With the advent of 21st century, over last 16-18 years, there has been an exodus of people moving to urban towns and cities, a phenomenon observed globally. This makes the cities not only extremely congested, but also very polluted and resource-scarce. With 50+ new cities and 100+ smart cities set to come up in South East Asia by 2030, it is extremely essential to plan the development of a city in such a way so as to be sustainable, accessible and eco-friendly. This paper presents a detailed survey and analysis of how the development of a city, particularly in India can be planned in the context of *sustainable urban transformation, climate change and future urban vision*. A detailed survey is provided on all three mentioned aspects by providing a comparison on different aspects with planned developments carried out globally. Further, the suitability of the existing solutions are analysed; along with a proposal on how to develop new cities. Finally, the paper addresses some of the challenges that need to be addressed in order to develop new sustainable, accessible, well-connected cities of future.

Keywords: *Climate, Governance, Energy-efficiency, Future Urban Vision, Sustainability*

I. INTRODUCTION

Over the last 100 years, there has been a regular movement of people to urban areas. One of the main reason for movement is the increased opportunity. However, it is not the only reason. This movement/migration is also because of many other amenities and avenues; which include - good education, health services, higher wages, entertainment and better standard of living available in cities also pull the rural people towards them. The turning point has been around 2007 when nearly 33% of world's population was accounted to be living in cities [1]. As per the report of 2015, nearly 50% of world's population lives in cities [2]. This urbanization [3] is expected to continue and more than 80% of population is expected to live in cities by 2050. The conditions for city dwellers depend not only on how urbanization is planned and managed but also how cities source, process and significantly, use their resources. Sustainable development [4] is the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs. The development of cities represent both a challenge and an opportunity regarding sustainable development [5]. Typically, though the movement to cities has been widely acknowledged for economic uplift, it puts enormous pressure on access to important services such as - housing, sanitation, education, traffic, fresh air and water, etc. [6]

Although all socio-economic classes are reflected in migration to cities, migrants from rural areas are not necessarily poor. It is an inadequate planning, often resulting from weak

political and much weaker knowledge on how to counter them and use that as an opportunity for growth [7]. An extremely important point to be noted is that if this migration is administered and executed appropriately with development of new planned and sustainable cities taking care of future growth, this could result in considerable increase in both the quality of life in these cities and also in the countries' economy.

A Green Economy can be defined as an economy that results in improved human well-being and reduced inequalities over the long term, while not exposing future generations to significant environmental risks and ecological scarcities [8]. The critical aspects of '*Green Urban Economy*' [9] is to:

- Support the locally appropriate development, promotion and deployment of green technologies and innovations.
- Provide strategies and tools to explore, identify and apply green business and governance models in practice.
- Support the identification and permeation of green business opportunities to the market.

Greening the urban economy requires a broad, all-encompassing socio-technical change. In this regard, the framework for sustainable urban transformation is a factor of both sustainable urban structures and the drivers of change. The sustainable structure is represented in Fig. 1

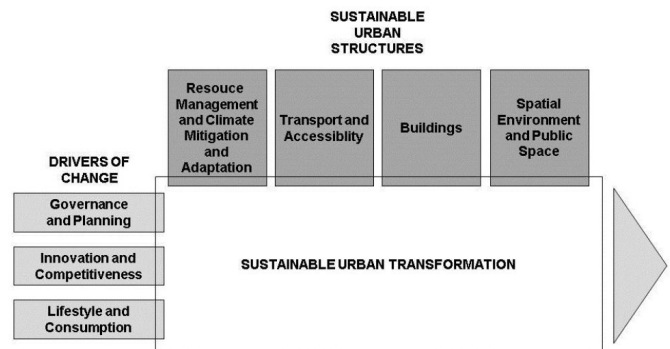


Fig. 1. Framework for Sustainable Urban Structure

Notably, planned urban cities need to be and importantly, can be planned to be more environmentally sustainable than rural or suburban living [10]. In this regard, the major focus of sustainable cities would be on sustainable transportation. This would include access to transportation by all levels of society. Due to the fact that car and fuel cost are often too expensive and results in unnecessary waste in the energy consumption, this requires efficient and accessible public

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