

Comparitive Analysis Of Different Urban Sustainability Practices

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Abstract : Cuttack Urbanization has assumed serious proportions with 67% of the world population expected to live in cities by 2050. Many international , national and city level initiatives have been launched to evaluate ,monitor and report the urban sustainable development. Sustainability Indicators are evidence based tools to indicate the effectiveness of policy making in urban planning .The different practices use different methods to select the indicators according to their own objectives and purpose. However the experience gained from each practice has not been comparatively studied to improve the decision making process in the selection of indicators. This paper examines four different frameworks namely the Habitat Agenda Indicators(UNCHS), Millennium Development Goals(UN- Habitat),City Data Book(Asian Development Bank) and Global City Indicators(World Bank) for identifying the driving forces behind the selection of indicators .Discussions on the comparative analysis has been made on the parameters like approach, city profile ,objectives , issues , number and methodology of selection of indicators. The study summarises the best practices used and the evolving trends and emerging issues which may help India in forming its own framework for urban sustainable development in line with its national sustainable strategy.

1. INTRODUCTION

The earliest definition of urbanization is given as the movement of people from rural to urban areas(UN 2004)^[1]. UN Habitat (2004) defines sustainable urbanization as a dynamic process that combines environmental ,social, economic and institutional sustainability. It brings together urban and rural areas, encompassing the full range of human settlements from village to town to city to metropolis with links at national and global levels^[2].

HISTORICAL SIGNIFICANCE

The Bruntland Commission report in 1987 drew world attention to sustainable development. The earth summit at Rio de Janeiro in 1992,attended by the government of 178 countries gave the Agenda 21, and subsequently based on the Agenda 21,the UN Commission for Sustainable Development (UNCSD) gave the CSD framework of 134 indicators which was tested in 22 countries.

1.1 PURPOSE AND CRITERIA FOR SELECTION OF INDICATORS

Sustainable indicators are pointers which give a diagnostic evidence based tool to inform and empower the policy makers, citizens, researchers and activists. It is used for measuring and monitoring sustainable development and determining effective investment by prioritizing budget allocation between various sectors. It helps in capacity building of the local government in terms of policy making, transparency and accountability. It monitors the efficiency of service delivery and bridges the gap between academic understanding of sustainability indicators and municipal organizations who have traditionally concerned themselves with land-use, infrastructure and transport, social planning, recreation and cultural programming.

To monitor the execution of Agenda 21,the criteria given by UNCSD for selection of indicators is that it should be measurable(show the magnitude of the issue),consistent and comprehensive(give broad overview of the economic, social and environmental health , policy relevant, understood by the stakeholders(simple and reliable), user priority (related to interests of stakeholders), cost effective and timely, and should be independent (separate indicators to measure different outcomes)^[3].

1.2 PURPOSE AND CRITERIA FOR COMPARISON OF DIFFERENT FRAMEWORKS

The aim of the study is to critically examine and compare different urban sustainability frameworks across a set of parameters like

- a) Time-frame -to study the evolving trends and emerging issues
- b) Approach of the program- top-down vs bottom up or policy based vs thematic.
- c) Profile of cities in terms of economy, location ,size and population
- d) Implication of the purpose of the program and issues dealt with in the selection of indicators.
- e) How the indicators have been used.

There are a wide range of international indicator initiatives from UNDP(Human Development Index), UN Habitat(GUID), Asian Development Bank (CDB) , World Bank(Global City Indicators),European Foundation, European commission on science ,research and development and European Commission on energy, environment and sustainable development, to name a few , besides several national and local level initiatives.The first four practices have been examined in detail to understand what and how indicators are adopted in practice.

The ultimate application of the comparison is to derive a holistic urban sustainable framework which can be applied in India to be in tune with its national sustainable strategy.

While comparing the different frameworks the objective is to understand

- i. What different indicator systems under different themes measure and its implication on policy
- ii. Whether its objectives are achieved in the final selection of indicators
- iii. How to translate broad themes into indicators to see if it leads to the ultimate goal i.e comparison ,capacity building and investment in cities.
- iv. Understand the trends of sustainability definition from Agenda 21 to date –see where it is heading and what are the emerging issues.

2. COMPARISON ACROSS THE DIFFERENT FRAMEWORKS.

Referring to Table 1 the lessons learnt after comparison are as follows

2.1 APPROACH

Top down approach has been unsuccessful because there is little commitment from the city administration. Once the funding stops there is little effort for data collection. Hence it is more effective where the cities define their own goals For e.g Melbourne has developed its own set of indicators under headings like human city, sustainable city, innovative city etc.

Policy based approach enables a comprehensive set of indicators which are directly related to policy concerns. Index/Thematic approach gives broad themes without any strategy. A mix of Index and Policy based programs is desirable as effective indicators are policy linked and indexes help in comparison across the cities.

ORGANISATION FRAMEWORK	UNITED NATIONS COMMISSION ON HUMAN SETTLEMENT GLOBAL URBAN INDICATORS DATABASE(GUID)	UN-HABITAT MILLENIUM DEVELOPMENT GOALS(MDG)	ASIAN DEVELOPMENT BANK CITY DATA BOOK(CDB)	WORLD BANK GLOBAL CITY INDICATORS (GCI)
TIME PERIOD	GUID(I) was started in 1993 and launched in 1996 at the Habitat II conference GUID(II) was started in 1998 and presented in 2001 at the Istanbul + 5 Conference	Started in 2000 and targets are set against each goal and updated every year.	2001	Started in 2008
APPROACH	i.Policy Related ii.Top Down approach initially (GUID) but now local urban observatories set up to report their own indicators	i.Policy Related ii.Top down approach but now MDG started at national ,local level too	i.Policy Related ii.Top Down approach	i.Policy Related ii.Bottom Up approach Method for calculating the indicators has been standardized through ISO
NO OF CITIES PARTICIPATING	237 cities in GUID(I) 232 cities in GUID(II) in Africa, Arab States ,Asia Pacific, highly industrialized cities of Europe, America, Latin American and Carribean countries and transitional developed countries	World-wide	18 cities in Asian and Pacific region	9 cities
CITY PROFILE AND AREA FOR REFERENCE	i.A combination of developing and developed economies ii.Urban Agglomeration (if not available) then Metropolitan areas to make international comparison	i.A combination of developing and developed economies. Developing economies are regionally grouped based on UN geographical divisions ii.Urban Agglomeration	i.4 highly developed cities ii.4 medium developed iii.4 transition economies iv.6 low developed cities ii.Urban Agglomeration	In partnership with 9 cities in Brazil,Canada,Columbia & US- 1.Bogota 2.Cali 3.Montreal 4.Puerto Allegro 5.Sao Paulo 6.Toronto 7.Vancouver 8.King County 9.Bello Horizonte ii. population greater than 1lac
INDEX (If any)	Now they have developed the City Development Index based on the Asian Development Bank's work on City Development Index	No composite score	i. City Development Index ii. Congestion Index iii. Connectivity Index	Subjective well-being Index developed by Prof. Cummins Which is tested in Australia and applied in Bogota
PURPOSE OF	For monitoring urban	Broad goals for the	Correlation of	ISO standardization of

THE PROGRAM	<p>conditions world wide</p> <p>i. Ranking cities along the line of development</p> <p>i. Baseline for comparative display of indicators</p>	<p>entire world.</p> <p>Indicators developed to track global and regional progress towards 8 MDG goals and 18 targets.</p>	<p>indicators like infrastructure, waste, education ,health and city product with income.</p> <p>Statistical cluster analysis for cities with different levels of development with informal employment and Below Poverty Line %</p>	<p>methodology of collection of indicators ,comparison of cities, web based entry of data, government accountability, performance monitoring</p>
NO OF INDICATORS	<p>The 23 key indicators are important for policy making and easy to collect(e.g No of durable structures, access to safewater)</p> <p>There are 9 qualitative data subsets (e.g right to housing and urban violence)</p> <p>There are 13 extensive indicators to measure performance and trends (to complement the key and qualitative indicators e.g Housing price and Rent to income ,land price to income</p>	<p>8 MDG goals have numerical targets. 18 targets and more than 48 indicators correspond to these goals.</p> <p>Eg. MDG1- Eradicate extreme poverty and hunger</p> <p>Target- Halved between 1990 and 2015</p> <p>Indicator-</p> <p>1.Proportion of people below 1\$/day</p> <p>2.Poverty gap ratio</p> <p>3. Share of poorest quintile in national consumption</p>	<p>13 themes with 140 indicators(122 were quantitative)</p> <p>Objectives were</p> <p>1.Key indicators for monitoring and evaluating.</p> <p>2.Enabling sharing of best practices in delivery of urban services</p> <p>3.For capacity building of cities and effective investment in them</p>	<p>There are 53 indicators (27 core and 26 supporting indicators)</p> <p>There are 22 themes on city services and quality of life.</p>
ISSUES	<p>Specific themes of Habitat Agenda are</p> <p>i. Shelter</p> <p>i. Social Development and Poverty eradication</p> <p>i. Environment Management</p> <p>v. Economy</p> <p>v. Governance</p> <p>They are not associated with any strategy</p>	<p>1.Poverty Reduction</p> <p>2.Maternal Health</p> <p>3.Gender Inequality</p> <p>4.Education</p> <p>5.Environmental sustainability</p> <p>6.Child Mortality</p> <p>7.HIV/Aids Combat</p> <p>8.Global partnership for development</p>	<p>1.Population ,migration and urbanization</p> <p>2.Income disparity, Unemployment and Poverty</p> <p>3.Health and education</p> <p>4.Urban Productivity and competitiveness</p> <p>5.Technology and connectivity</p> <p>6.Housing</p> <p>7.Urban land</p> <p>8.Municipal services</p> <p>9.Urban Environment</p> <p>10. Urban Transport</p> <p>11.Cultural</p> <p>12.Local Govt Finance</p> <p>13.Urban Governance</p>	<p>It focuses on</p> <p>1. City services</p> <p>2. Quality of life</p> <p>Main issues being good governance ,urban development and poverty reduction among the 22 themes</p>

HOW INDICATORS USED	To measure progress in the implementation of Habitat Agenda	Progress towards the MDG and targets are reported through indicators.	Achieved in capacity building of cities by monitoring and evaluating the performance and sharing best practices.	Facilitates knowledge sharing and development of new improved indicators to address new issues because cities across world can feed their data in a web based resource
THOUGHTS	It was one of the earliest programs which was comprehensive ,complete and data intensive focusing on quality of life measures rather than only performance measures	It was one of the earliest attempts to link goals with targets and indicators to measure the achievement of the targets	Not too many performance indicators because they only help in ranking of cities and provide little guidance how to improve their performance. Since the stress is on relating the indicators to the urban policies more of service indicators have been covered. By doing a cluster analysis based on development levels and relation of income with different indicators it shows that poverty reduction is not just about increasing % of people about poverty line but 1.Reducing income disparity 2.Providing quality of life through health, education, reducing gender inequality, social protection and good governance	Here the emphasis is on service level indicators-the access ,coverage and cost effectiveness of the service besides its impact on quality of life and linking it to goals(showing whether it is improving or falling)

2.2 TRENDS THROUGH TIME

There has been a lot of evolution since the CSD Framework (1996) was prepared from the guidelines of Agenda 21. Initially there were three broad dimensions of social, economic and environmental sustainability .The Human

Development Index of the UNDP which was one of the earliest of its kind measured the average sustainable achievement based on 3 dimensions of long and healthy life (Health Index), Access to knowledge(Education) and decent standard of living(Income).

The Habitat Agenda turned the focus towards policy related urban indicators. No indicators without policy and no policy without indicators was the approach. Here the stress was on quality of life measurements rather than performance indicators. There was a combination of quantitative and qualitative indicators for the first time since the objective was to develop a comparative baseline of indicators for cities as well as disseminating best practices information. Ranking of cities was given importance.

The Millennium Development Goals formed from the Habitat Agenda Indicators gave numerical targets to the goals. The Habitat Agenda indicators were classified under the Millennium Development Goals. Since these goals were not specific to the city's aspirations there was lack of commitment from the side of the city administration.

The City Data Book process tried to involve the city participation while selecting the indicators. It was not just a tool for budget allocation but it was to help the capacity building of the cities by evaluating the performance and sharing best practices. There was refinement of needs with time like technology and connectivity assuming importance and poverty reduction was also looked at the angle of reducing income disparity (which has much relevance in developing economies). More of service indicators were added.

The City Development Indicators program used core indicators for comparative performance monitoring and ranking. The combination of core and supportive indicators was used for forming a database of best practices. There are more of service indicators than performance indicators under broad headings of city services and quality of life.

There has been changing roles of the government too. While moving away from economic definition of development to a sustainable approach, the government's role in providing social security besides giving quality life has assumed importance. The citizen's participation in the sustainability process has led to urban metaphors like Melbourne's livable city, Innovative city etc. to report indicator systems.

2.3 RELATIONSHIP BETWEEN PURPOSE OF PROGRAM AND ISSUES DEALT WITH SELECTION OF INDICATORS

The Habitat Agenda's purpose was to measure the city's progress towards implementation of Habitat Agenda and

rank them. There was no strategy to achieve any target. Hence the selection of indicators was top driven. The indicators were policy linked. It was one of the earliest efforts that was comprehensive and data intensive.

The purpose of the MDG program was to achieve the numerical target set for each goal. This top driven program had experts trying to include the Habitat Agenda indicators under each of the 8 goals and measure progress towards these goals.

The CDB process enabled comparison of cities (through its City Development Index, Congestion index and Connectivity Index) as well as having expert selected, policy linked indicators. A wide range of relevant current issues were dealt with. Cities identified their problem areas and tried to rectify it by learning from the best practice knowledge base. Benchmarking was possible.

The Global City Indicators Program has standardised the methodology for collection of indicators through ISO certification. Since its approach was to develop their own aspiration into an integrated set of indicators there are some core indicators on which every city had to report to enable comparison across cities. Since the purpose was performance monitoring for both access and coverage of city services and quality of life indicators measuring the customer satisfaction on the quality of services. The selection of indicators was by asking questions on 22 themes relating to city services and quality of life.

3. CONCLUSIONS

The preferred combination of policy based framework which are index driven works well. The policy based framework addresses the objectives of shaping the urban policies and indexes help in comparison. The ultimate objective is for capacity building of local government, for budget allocation, measurement and evaluation of sustainable growth. The city indicators are effective tools for evaluation of urban policies. There should be a combination of core and supporting indicators because only core indicators cannot tell the complete story of the city. Therefore there should be supporting indicators which would look into the qualitative aspects like customer satisfaction and service efficiency.

The stakeholder consultation approach works best because here the stakeholders prioritize the policies by brainstorming at local level and the selection of indicators is

based on their particular needs. From a comprehensive list of core and supporting indicators the stakeholders select their own indicators which will measure their progress towards each goal. Cities with similar size, location ,profile ,population and advantages may come together to discuss how they are operationalizing the performance evaluations. For a developing country like India where the main issue is about poverty reduction, the emphasis should be on reducing the income disparity besides attacking absolute poverty.

Prior to the selection of indicators, the prioritization of themes should be worked out in context of the national sustainable strategy. The steps would be to

1. Establishing the main issues and prioritize them at national, regional and city level and weights to be assigned by experts as per their importance.
2. Selection of core and supporting indicators under each theme from a comprehensive list of indicators to be done by the stakeholders in line with the city's aspirations and policy-making and weights can be given to each of them as per experts opinion on their role in policy-making.

The biggest challenge is to reach a consensus on what to monitor and how. There is no predefined scientific method for finalising the choice of indicators from the pallette of indicators under each theme. The Agenda 21 criteria for selection of indicators can be the basis for the expert's opinion. While selecting the main issues at city level the stakeholders have to take into account the profile of the city. For e.g if it is a historical city where the services and infrastructure are not so well developed, there should be adequate weightage to the development of city services.

A holistic view seems to be missing while selecting the issues and indicators. For e.g issues like urban transport, housing, energy use job near home and air quality are all interdependent on each other. A person whose home is a long distance from his workplace spends a lot of time ,money and resources(transport and energy) on commuting , thus affecting the air pollution. There are a lot of overlapping issues which have to be clearly defined in the context of sustainable development.

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