Report of the Sub Committee On Development of Sustainable Habitat Parameters in the Field of Urban Planning

Town and Country Planning Organisation

Government of India

Ministry of Urban Development

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Contents (to be updated)

About this document

This report on Development of Sustainable Habitat Parameters in the field of Urban Planning has been prepared by a Sub-Committee constituted by the Ministry of Urban Development under the National Mission for Sustainable Habitat (HMSH), one of the missions of the National Action Plan for Climate Change (NAPCC). The report outlines a vision combined with a set of recommended actionable/measurable indicators for the sustainable development in the country.

This document is intended to provide a set of base recommendations for further deliberations at the implementation phase of urban planning under the NMSH.

1 Background

The National Mission on Sustainable Habitat was launched in order to draw necessary action plans to achieve sustainability of human habitats[1]. In order to kick start the process, the Mission has identified key areas that require immediate interventions. The first Meeting of the Sub- Committee for the Development of Sustainable Habitat Parameters in the field of Urban Planning was held on 14th September 2010 under the Chairmanship of the Member Secretary, National Capital Region Planning Board [NCRPB]. The Sub Committee short listed a range of issues

[1] The National Mission on Sustainable Habitat is one of the eight missions formed under the Prime Minister's National Action Plan for Climate Change (NAPCC). As one of the Four Sub-Committees under the NMSH, the Sub-Committee on Urban Planning has addressed the issue of sustainable habitats from a planning perspective. While some of the issues dealt with in this document have been addressed more in greater detail by other Sub-Committees, they have been touched upon here from an urban planning perspective and intend to be complimentary to the outcomes of the other Sub-Committees.

that need to be addressed in order to achieve and enhance sustainability of human habitats. The interventions required to achieve and enhance sustainability cut across the boundaries of knowledge areas, sectors of economy, departments of the Government, segments of the market and groups of stakeholders in society. These interventions are not only interlinked but complex.

This document attempts to present a broad approach to achieving and enhancing the sustainability of human habitats in India in four sections – defining sustainability – laying down the fundamentals; achieving and enhancing sustainability – articulating the key principles; planning for sustainability – formulating appropriate processes and measuring sustainability in terms parameters and indicators. While the term human habitat includes both urban and rural settlements, this document deals primarily with cities and their hinterland i.e. regions and serves as a framework for guiding development processes at city level and at the regional level around cities.

1.1 Definition of parameters and indicators

The parameters in this report refer to the topical issues or elements of planning specifically outlined as a key factor contributing towards sustainable development. The indicators listed under each parameter are the specific measurements that will produce a clear picture of the condition or situation of each parameter and the extent to which it has been achieved/ planned for.

2 Defining Sustainability – Fundamentals

According to the Brundtland Commission 1987, “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The Commission’s report also states that “in essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development; and institutional changes are all in harmony and

enhance both current and future potential to meet human needs and aspirations." The two main characteristics that define sustainable development are efficiency and equity: Efficiency, in functioning and equity, when distributed within the generation and between generations.

Applied to the context of urban planning and development, the most fundamental elements of sustainability are the utilization of natural resources in a city region most efficiently, most equitably across sections of society and in such a manner that the resources are conserved and renewed for future generations to meet their needs and aspirations.

3 Achieving and Enhancing Sustainability – Articulating the Key Principles

This section attempts to capture all ideas of what constitutes sustainability, under five core principles:

- Development
- Efficiency
- Equity
- Safety
- Harmony

3.1 Development

The driving force of urban development is economic and human development. Therefore sustainable development begins with clarity on 'what is development'. The important dimensions of development are a steady improvement in the material circumstances of all citizens, towards greater health, comfort and leisure, with better economic, educational and vocational opportunities; a city that moves towards greater self-reliance and provides opportunities for its citizens to enhance their capability in securing development of themselves and their human settlements.

3.2 Efficiency

For the development of a city and its region to be sustainable, the resources available for development have to be utilized with the utmost efficiency to meet, first the needs and then the aspirations of those who live in the city region and depend on it for their livelihood.

3.2.1 Land

Land is the most finite resource available for development and therefore its efficient use is fundamental to the efficiency of the human habitats at large. Efficient use of land has dimensions of putting land to the most suitable use based on its location, physical and ecological characteristics, conserving ecologically sensitive areas. It includes managing the nature and intensity of use keeping in mind aspects such as compactness, reducing travel demands, etc.

3.2.2 Water

The water balance in the city region is required to be understood and efficiently managed. Though the larger water cycle is primarily a natural process, human intervention cannot just minimize negative impacts on the water system; it can also have positive effects and even reverse the steady deterioration of water systems, which is the current status of most city regions. Efficient use of water resources involves optimizing the use of water and minimizing external energy inputs into the water management system.

3.2.3 Energy

Cities are ‘engines’ of growth and one of the consequences is that they are energy guzzlers. The planning, development and management of cities and their regions offers innumerable opportunities for reducing the consumption of energy as well as resorting to changing the source of energy that is consumed. Efficient use of energy in a city involves reducing the overall energy demand through increasing efficiency,

promoting low energy options, etc and above all promoting the use of alternative sources of energy in both the public and private domain.

3.3 Equity

The definition of sustainability requires that the distribution of resources to be equitable across sections of society at a given point in time as well as across the current and future generations. The latter case can be assured only through the efficient use of resources and limitation of aspirations of the current generation. The focus here, therefore, is on ensuring equity across sections of society today. Equitable development manifests primarily as inclusive development. The planning, development and management of cities and regions should be such as to include all sections of society. Ensuring equitable development would focus on issues such as access to housing, health, transport and education facilities for all, especially the poor.

3.4 Safety

Urban development, by virtue of its very nature of concentrating human population and activity, creates risks for itself and the environment. These risks, when unmitigated, result in disasters involving significant loss to life and property, not to mention the environment. It is important therefore to integrate risk mitigation into all urban development practices. Ensuring safety in an urban area involves planning for urban development in low risk areas, developing norms to integrate measures to reduce vulnerability, creating mechanisms to absorb the impacts of disasters (financial), management of the law and order situation in a city, etc

3.5 Harmony

Harmony is an element of sustainability that has not yet received its full due recognition. This includes harmony between manmade developments and the natural elements and more importantly harmony within the development fabric. Creating harmony in urban development ranges from issues pertaining to land use

planning, development control regulations and building byelaws to create a coherent urban form, reducing pollution, etc

4 Planning for Sustainability

Planning processes exist in one form or another in all States and cities of India. All these processes need to be revisited to integrate sustainability principles. The principles enunciated in the previous sections need to be captured in an effective planning process to ensure that the outcome is sustainable habitat.

4.1 The Planning Process

Urban planning involves creating live able places in a city by managing competing interests for location and balancing social, economic and environmental changes. Urban planning practice operates at various levels of city activity, affecting almost everyone, involving policy-making and influencing decision-makers on matters ranging from physical and social infrastructure, employment, development, natural resource management, maintaining the best of the past, while encouraging innovation in design and development of future spaces to meet future needs. The planning process is a cyclic process that goes much beyond the plan document itself. In general planning processes can be divided into two key stages, following basic conceptual steps as following:

1. Pre plan processes:
    a. Defining goals and objectives
    b. Initiating inputs based on the goals and objectives, data, resources.
    c. Following a process of data collation, analysis, review of results, consultation, discussion, assessment, etc., through various planning studies.
    d. Coming up with hard outputs, a plan document, guidelines, associated policy and budget outlines.

2. Post Plan processes:
    a. Outcomes such as land use changes, investments, resettlement etc.

b. Influencing decision making, guiding new projects, handling hazardous industries etc.
c. Impacts, direct and indirect like lower crime, better city environment, better city economy, higher tourism, less energy consumption, better housing, etc.)

In India, Urban Planning and Development are State subjects and therefore the legislation concerned is at State level. Town Planning / Urban Development Acts of States need to be revisited to ensure the following framework:

Urban Planning Framework(*Depending on area and varying from city to city)

	Who will formulate	Formulated through	Legislation	Scale*	Challenges	States where Implemented	Time period	Proposed Revision / Midterm review
1.Regional Plan **Macro Level (Inter State/State Region Plan)**	Interstate/State Region Planning Board	Interstate/State Region Planning Act	Central/State Legislation	1:250.000/ 1:50,000	States do not prioritise this initiative. So need to take up as a reform linked to release of Grants	D&N H, Mah, Gujarat, Goa, HP, Punjab	20 yrs	10yrs
Meso level (Development Plan for District and Metropolitan/City Region)	District Planning Committee and Metropolitan Plg Cmttee/City Region Development Authority/STPCD	DPC and MPC	DPC Act (State) MPC Act (State) Development Act/ST&CP Act(State)	1:50,000	Rigorous Implementation of reforms required linked to release of Grants	DPC has been constituted in 20 states and MPC has been constituted in 6 States.	10 yrs	5 Yrs

Micro level (Master Plan)	Development Authority/STCPD	Development Act/State T&CP Act	State Act	1:10,000	Ltd manpower, lack of capacity, no priority, no base map, no data collection on a periodic basis	1800 towns out of 7937 towns and cities have statutory Master Plans.	10 yrs	5yrs
2.Zonal Plan	Development Authority/STCPD	Development Authority/ST&CPD as part of the Master Plan	Development Act/ST&CP Act (State)	1:5000	Ltd manpower, lack of capacity, no priority, no base map, no data collection on a periodic basis	No inventory available on the number of Zonal Plans prepared	1 yr	5yrs
3.Local Area Plan (Ward Plan)	ULB	Stakeholder Participation	Not a statutory Plan	1:2000	Delhi has promoted this concept as proposed in MPD 2021.	No inventory	1 yr	5yrs
4.Layout Plan	Development Authority/ST&CPD ULB	Development Authority/ST&CPD /ULB as part of the Master Plan	No legislation as it is a part of Master Plan	1:1000 / 1:5000	Ltd manpower, lack of capacity, no priority, no base map, no data collection on a periodic basis	No Inventory	As reqd	5 yrs

5.Building Byelaws	At the property level by ULB. The Central Model BBL has been circulated to all States for adoption	ULB	State Legislation	N.A.	Commended to States, some have not done even after advocating as there is no priority.	About 22 States have adopted various provisions suiting local conditions		5 yrs
6.UDPFI Guidelines	To be adopted at all levels by ULB	ULB	Legislation not required	N.A.	Not a priority considered by States	No inventory		UDPFI advocates a set up of 4 inter-related plans Perspective Plan for 20-25 yrs; Development Plan, plan for projects and schemes.

Master Plans/Development Plans/ Comprehensive Development Plans for towns and cities are prepared under relevant provisions of enabling legislation for a horizon year and delineate the proposed urbanisable limits in both spatial and demographic terms. Outside these limits *i.e* in the peri-urban areas there is lack of control in terms of assignment of land uses and development control leading to mushrooming unplanned and un-organized growth along with little or no integration between land use and transport resulting in unsustainable development. A regional planning framework effectively addresses these issues in terms of a proposed hierarchy of

settlements and assignment of regional resources/land uses and development control.

It is therefore imperative to incorporate provisions for preparing a regional plan so that all master plans are formulated within a regional planning framework leading to sustainable development of both the region and the town/city concerned.

Effective planning for sustainable habitats requires regular monitoring of indentified indicators of sustainability with respect to understanding the status of each parameter, the related issues and actions required to achieve sustainability. The next section elaborates on the parameters and indicators. There is a need to establish a required infrastructure/set up for periodic data collection, analysis and publication of outputs. Informed decision making and behavioral changes amongst stakeholders can be facilitated using such outputs.

4.1.1 Parameters and Indicators

The intention of plan making is to put in place steps that would lead to a desired outcome or result. While the end-situation will be affected by several variables, known and unknown, a scientific approach of measurement leading to review may be undertaken which will enable the plan and policy makers to gauge performance and revise the steps as required for the next planning cycle.

Indicators are measurements or values that indicate (point towards) something i.e. inform us of a condition or situation. This document identifies indicators for gathering information regarding elements of planning (parameters) for being able to measure effectiveness of the planning process. Performance measurement should be used for guidance, as an indication, rather than to provide solutions, and that all indicators of performance may need to be viewed at differentiated or unequal scales (not similarly weighted) depending on local conditions.

To measure the effectiveness of the plan document, the following indicators may be adopted.

- Indicator-i: Periodicity of plan preparation and revision (measured as average age of plans).
- Indicator-ii: Adoption of land suitability analysis, including disaster risk assessment.
- Indicator-iii: Adherence to environmental/land use zonation (Adoption of Environmental Assessment as part of plan making).
- Indicator-iv: Inclusion of features for land use transport integration, compact city planning, risk mitigation and universal access to housing.

The key elements of the planning process from a sustainability perspective are as follows:

4.2 Land use

Land use planning is used as a tool to direct development within an urban area, in an orderly way, making infrastructure and services available, efficient and affordable, protecting people and local environment from hazards and ensuring equity and providing an opportunity for better life. Land use planning focuses on the systematic, timely supply for appropriate land and identifying the appropriate nature of usage. From a sustainability perspective, land use planning should take into account factors such as compact city development to limit urban sprawl, protection of ecologically sensitive and risk prone areas, density zoning, land use- transport integration.

4.2.1 Indicators:

4.2.1.1 Suitability

- Indicator-i: Area/population experiencing natural hazard risks during the past 5 years.

- Indicator-ii: Extent of area preserved as natural resource area of the total area identified for conservation.
- Indicator-iii: Extent of land under natural resource areas (water bodies, natural drainage systems, forests areas) converted in the past 5 years as a ratio to total of such areas in the area developed during the past 5 years.
- Indicator-iv: Extent of land area released for urban development in areas that are suitable for urban uses (not covered under indicators i to iii above).

4.2.1.2 Adequacy

- Indicator- i: Land area planned for urban development as a ratio of land area required in the next 5 years.
- Indicator-ii: Extent of land area serviced which is planned for urban development in the next 5 years.
- Indicator-iii: Land area planned for residential development reserved for low income groups as a ratio of land area required in the next 5 years (including redevelopment/relocation requirements).
- Indicator-iv: Ratio of housing starts to that of average household formation.
- Indicator-v: Rate of low income housing starts to that of total requirement.

4.2.1.3 Appropriate Location

- Indicator-i: Extent of land developed outside planned area.
- Indicator-ii: Extent of land developed with development control violations.
- Indicator-iii: Ratio of total developed area to contiguously developed area.

4.2.1.4 Optimal Use of Land

- Compact City to Prevent Urban Sprawl
- Indicator-i: Extent of Sprawl: Proportion of area experiencing urban development outside the planned area to total urban area.
- Indicator-ii: Extent of planned land remaining vacant.
- Indicator-iii: Vacant land publicly owned as a percentage of total vacant land.

- Indicator-iv: Vacant land not in the market due to legislative rigidities (*e.g.*: Reserved Land).

4.2.1.5 Optimality/Intensity of Land use

- Indicator-i: Intensity of Development-Average utilisation of FAR in planned areas.
- Indicator-ii: Intensity of Development- Appropriate Densities.
- Urban Renewal
- Indicator-i: Poorly located land uses: Extent of area under incompatible and non conforming land uses (Polluting or non-transit oriented eg- Industrial land, warehouses located in central city areas).
- Indicator-ii: Conservation /Rehabilitation /Redevelopment of areas identified as cultural areas planned and actual (Loss of areas identified as cultural areas).
- Indicator-iii: Non-functional uses: Extent of areas proposed for development which are currently under non-functional uses (*e.g.*: Closed Industries).
- Indicator-iv: Recover /redevelop waste lands as natural resource areas (Extent of areas developed versus total).

4.2.1.6 Balanced Development/Harmony:

- Indicator-i: Mixed Landuse: Mixed landuse (Average at city versus zonal averages).
- Indicator-ii: Multi-centric City: Number of centres (relevant only for million plus & mega cities) .
- Indicator-iii: Mixed Income City: Extent of low income housing in high and middle income housing areas.
- Indicator-iv: Area of parks and green spaces per 1,000 population.
- Indicator-v: Area under/Number of wooded areas per lakh population.
- Indicator-vi: Percentage of area under green cover(14-25% depending on size of settlement).

4.2.1.7 Compliance to proposed plan

- Indicator-i: Extent of non- compliance to environmental/industrial zoning: Units outside zoned areas.
- Indicator-ii: Extent of occupied buildings which do not possess use permission (other than slums).

4.3 Mobility

Integrated land use - transportation planning is one of the most important urban functions that have a direct impact on sustainability. Mobility planning should cover aspects such as adequate support for public transport system provisions, traffic distribution patterns, land use transport integration through density zoning in alignment with public transport systems, adequate considerations for pedestrians and non-motorized transport, etc

4.3.1 Indicators:

4.3.1.1 Land use - Transport Integration

Indicator i: Density.

Indicator ii: Completeness of network.

Indicator iii: Network Density or percentage area under roads.

Indicator iv: Transit Coverage (Population /Area).

Indicator v: Average Trip Length/Travel Time.

Indicator vi: Fatalities per thousand vehicle kms.

Indicator vii: Percentage transit ridership.

Indicator ix Average travel time for work.

Indicator x: Fare per passenger km.

Indicator xi Emissions per passenger km.

Indicator xii: Integrated Ticketing.

Indicator xiii: Physical Integration.

4.3.1.2 Service Level Benchmarks Performance Indicators

The MoUD's Service Level Benchmarks for Transportation services in a city may be added to the recommended indicators:

- Public Transport facilities
- Pedestrian Infrastructure facilities
- Non Motorized Transport (NMT) facilities
- Level of usage of Integrated Transport System (ITS) facilities
- Travel speed (Motorized and Mass Transit) along major corridors
- Road Safety
- Pollution levels
- Availability of Parking Spaces
- Integrated Land Use Transport System
- Financial Sustainability of Public Transport

4.4 Clean air, land, water and energy

Improved urban environments result in better living conditions within a city (for humans as well as for urban biodiversity). Access to clean air, water, land and energy are the primary conditions for a healthy urban life.

Water and wastewater: should take into account aspects such as maintaining the overall water balance in the city-region, planning for sourcing, treatment, transportation and distribution of water in a sustainable and decentralized manner, collection of waste water, its treatment, reuse and disposal in the most suitable and decentralized manner, protection of natural water systems, and creation of green buffer zones

Waste management: waste management in a city from a sustainable planning perspective needs to take into account aspects including planning and implementation of waste reduction initiatives for industry using concepts like industrial ecology, planning and implementation of efficient and effective systems

for collection, transportation, treatment, recycling and reuse or disposal of municipal solid waste in the most sustainable and decentralized manner possible.

Energy Planning and Conservation: Energy is a key driver of a thriving urban life, and while in India, energy is typically a state subject, cities can benefit by better management of demand and supply and exploring provisions for decentralized alternatives of renewable energy.

4.4.1 Indicators:

4.4.1.1 Environmental status

- Indicator-i: Air Quality measured at various locations: percentage of Residential Areas exposed to air pollution.
- Indicator-ii: Water Quality measured at various locations: percentage of Residential Areas exposed to water pollution.
- Indicator-iii: Noise Levels measured at various locations: percentage of Residential Areas exposed to noise pollution.

4.4.1.2 Service Level Benchmarks

The MoUD's Service Level Benchmarks for services in a city may be added to the recommended indicators:

Water supply

- Coverage of water supply connections
- Per capita supply of water
- Extent of metering of water connections
- Extent of Non-Revenue Water
- Continuity of water supply
- Efficiency in redressal of customer complaints
- Quality of water supplied
- Cost recovery in water supply services

- Efficiency in collection of water supply related charges

Waste water

- Coverage of toilets
- Coverage of waste water network services
- Collection efficiency of waste water network
- Adequacy of waste water treatment capacity
- Quality of waste water treatment
- Extent of reuse and recycling of waste water
- Extent of cost recovery in waste water management
- Efficiency in redressal of customer complaints
- Efficiency in collection of sewerage related charges

Drainage:

- Coverage of Storm water drainage network
- Incidence of water logging / flooding
- Solid Waste Management:
- Household level coverage of Solid Waste Management services
- Efficiency of collection of municipal solid waste
- Extent of segregation of municipal solid waste
- Extent of municipal solid waste collected
- Extent of scientific disposal of municipal solid waste
- Extent of cost recovery in Solid Waste Management services
- Efficiency in redressal of customer complaints
- Efficiency of collection of municipal solid waste management charges

4.4.1.3 Environmentally Sensitive Development

- Indicator-i: Proportion of environmentally hazardous manufacturing activity within the city (percentage employment/ percentage output/ percentage Units).

- Indicator-ii: Environmentally sensitive practices -Extent of green energy use.
- Indicator-iii: Environmentally sensitive practices -Extent of Waste Treatment – Domestic.
- Indicator-iv: Environmentally sensitive practices -Extent of Waste Treatment – Industrial.

4.4.1.4 Energy

- Indicator i: Total energy consumption per capita (To be reviewed alongside per capita income and quality of life indicators – the objective is to achieve a lower energy consumption for the same level of income and quality of life).
- Indicator ii: Percentage of energy consumption derived from renewable sources.
- Indicator-iii: Provisions to encourage green building including incentive frameworks.
- Indicator-iv: Number of green and non green buildings (Percentage of buildings with energy rating of various levels).
- Indicator v: Energy consumption per square metre of built up area of buildings – categorized by use as well as by public and private (To be reviewed alongside performance criteria for buildings such as illumination levels and thermal comfort – the objective is to achieve a lower energy consumption for the same level of visual and thermal comfort).

4.4.1.5 Eco-sensitive Development

- Indicator-i: Area under water recharge zones.
- Indicator-ii: Coordination with national storm water network.
- Indicator-iii: Definition of Natural Hazards, delineation of Natural Hazards prone areas in the Master Plan/Development Plan, Development Control Regulations and Building Byelaws for Natural Hazard Prone Areas.
- Indicator-iv: Incorporation of incentive mechanisms.

4.4.1.6 Waste reduction, treatment and green spaces

- Indicator-i: Total percentage of public open spaces.
- Indicator-ii: Landfill/ open spaces- provision for full treatment.
- Indicator-iii: Provisions for promoting waste reduction and waste reuse.

4.5 Participation and decentralization

This is more a political than a planning process. The legal framework for decentralization and public participation in planning and governance are mandated in the Constitution Amendments and also in State legislations of some States. However, in most States the operationalisation at city level has not occurred. The key interventions required is adoption of the decentralized and participatory planning process.

4.5.1 Indicators:

- Indicator i: Devolution of functions to lowest levels of governance as per the provisions of the 74th Constitution Amendment.
- Indicator ii: Public representation in urban management-Formation of ward committees/Formation of Area Sabhas.
- Indicator-i: Mandatory provisions for public participation.
- Indicator-ii: Number of public consultations held and attendance at such consultations.

4.6 Local Economic Development

A vibrant economy is essential to make any human habitat sustainable. Planning for economic development continues to be the prerogative of State Governments. The role of the cities is often limited to service the population and activities. Cities need to take up a more promotional role through planning which provides an appropriate climate for creation of wealth, development of skills and knowledge of citizens. The action areas include aspects such as making coordinated policies at all levels to

ensure convergence of goals and facilitating development programmes for education, vocational skills, etc.

4.6.1 Indicators:

4.6.1.1 Productivity

- Indicator-i: Per capita GDP.
- Indicator-ii: Employment/Area under productive landuse (including manufacturing, service sector, etc).
- Indicator-iii: Infrastructure Service Level (Composite Index) .

4.6.1.2 Diversity

- Indicator-i:Single versus multi-sector economy (Ratio of most important activity versus next most important.

4.6.1.3 Stability of growth

- Indicator-i: Rate of business starts (establishment / registration growth)
- Indicator-ii: Rate of Industrial Growth – Factory Sector (Chief Inspector of Factories)
- Indicator-iii: Rate of Industrial Growth – Other than Factory Sector
- Indicator-iv: Extent of informal activity

4.7 Social Services

While more and more social services (health, education, banking, housing, etc) are moving predominantly into the private domain, the Government still holds the responsibility to ensure that such services are accessible to all, particularly the vulnerable sections. Planning for social services will include areas such as demand-supply assessment for various social infrastructure, leading to strategies for better managed social services mix through the government and the private sector.

4.7.1 Indicators:

- Indicator i: Extent of land made available for housing the poor.
- Indicator-ii: Extent of housing/land made available for poor.
- Indicator-iii: Tenure provision to urban poor (percentage of total).
- Indicator-iv: Percentage urban poor households with basic services.
- Indicator-v: Distribution of urban poor housing/land in high and middle income housing areas.
- Indicator vi: Access to livelihood opportunities.
- Indicator vii: Integration of informal activities with streets and other public places (Proportion in previous year – integrated /total estimated).
- Indicator viii: Programmes for enhancement of livelihoods for urban poor (coverage).

4.7.1.1 Socio-Economic indicators

- Indicator i: Health
    - Life expectancy.
    - Mortality.
    - Morbidity.
    - Infant mortality.
    - Sex ratio.
- Indicator ii: Education
    - Literacy.
    - School enrolment.
    - Dropout rate.
- Indicator iii: Economic indicators
    - Employment/ unemployment.
    - Per capita income.
    - Regional economic indicators for performance of the city as a whole.

- Percentage of investments within the city to the total investments within the State.
- Percentage of production output from city to the State GDP.
- Percentage of employment generated by investments within the city.
- Percentage share of economic sectors to state average.

- Indicator iv: Housing
  - Quality of shelter (kutcha/ pucca).
  - Legal/ illegal/ unauthorized.
  - Own/ rented.
- Indicator v: Urban services availability
  - Access to water (public/ community/ shared/ individual).
  - Per capita water supply.
  - Access to toilets (public/ community/ shared/ individual).
  - Coverage of sewerage system (area/ population/ properties connected).
  - Sewage disposal system (sewer line, septic tank, open drain, etc).

4.8 Partnerships (Public Private People)

The Government by itself or the private sector alone may not be able to respond to sustainability imperatives. It is important that as a cross cutting theme in all the planning processes, opportunities should be explored and created for the Government, the market and communities to partner with each other. More specifically it would involve building partnerships to bring investments and efficiency benefits.

4.8.1 Indicators:

- Indicator-i: Number of projects implemented through partnerships within plan period

- Indicator-ii: Total cost value of projects implemented through partnerships within a plan period
- Indicator iii: Private/ community investment in urban infrastructure.
- Indicator iv: Percentage of investment in public infrastructure by private sector.
- Indicator v: Percentage of investment in public infrastructure by communities directly.

5 Operationality of the Parameters and Indicators

To be successful and truly useful sustainable habitat parameters should be used by the city government for evaluating outcomes from the point of view of all key stakeholders involved also with an aim to share outcomes publically for assisting awareness and better participation in the planning process.

5.1 Formulation of indicators and parameters

India being such a vast and varied country, it may not be possible to use a common and generic set of indicators for measuring performance against sustainable habitat parameters in all cities. Context plays a very important role and having a standard framework may not be enough. However the approach could and should be common and may be improvised on a case to case basis for each city.

A generic and broad common basket of indicators has been identified at the national level that can be used to develop a city specific evaluation framework based on specific urban contexts. An important aspect may also be to give weightings (prioritize) to each indicator based on the local context by involving planning team, local elected representatives.

5.2 Institutionalizing the indicators

Institutionalising the sustainable habitat parameters may be done by organising peer to peer learning and exchange workshops at the Regional and National level. Cities of

similar qualities (size, location, profile, population, challenges and advantages) may come together to discuss how they are operationalising the performance evaluation framework and their challenges and achievements in the same. In the recent past, the Ministry of urban Development, Government of India has successfully organised the service level benchmarks in 28 pilot cities using a similar approach and the same has been formally institutionalised as funding linked mandatory procedure for all Indian ULBs now (MOUD, 2010).

5.3 Evaluation of indicators

At the city level, performance evaluation based on sustainable habitat parameters should be multi party. The evaluation should ideally be steered by the city authorities, the planning team in the ULB, carried out by local NGOs or citizens groups in consultation with a set of identified stakeholders. Stakeholders would mean representatives of interest groups external to city officials (including civil society institutions, media, academics, government bodies, agencies, business, NGOs, directly affected group, etc.).

The performance evaluation framework at the city level should ideally be finalized during the plan preparation stages itself, this will not only clarify the kinds of deliverables expected from the plan but also in a way link to the roles and responsibilities of the various stakeholders involved in the planning process making it realistically participatory. Information collection should be carried out annually on a cyclical basis to know the status and reported annually too. However the formal evaluation exercise should be carried out at the middle and end of the planning cycle of 5 years hence every 2.5 years.

One approach may be developing and using a system similar to the “Score Card” approach, however the score card system is a citizen based approach and due to the complexity and closed nature of planning processes, a more internalized system of

outcome reporting that involves external stakeholders like the Eco Budget (Cities Alliance 2007) approach may be useful.

Score Cards are instruments to encourage public accountability. Modeled on a private sector practice of conducting client satisfaction surveys, report cards solicit user perceptions on the quality, efficiency, and adequacy of the various public services that are funded by tax-payers. Qualitative user opinions are aggregated to create a "score card" that rates the performance of service providers. The findings present a quantitative measure of overall satisfaction and perceived levels of corruption among an array of other indicators. By systematically gathering and disseminating public feedback, report cards can serve as a "surrogate for competition" for monopolies – usually government owned – that lack the incentive to be as responsive as private enterprises to their client's needs. They are a useful medium through which citizens can credibly and collectively "signal" to agencies about their performance and provide the right pressure for change.

Source: UNCHS (Habitat), 2004

Today as civil society becomes more and more active and involved in monitoring and reacting to government actions there is increasing attention on evidence-based policy initiatives and 'rational' decision making, and hence measurement of the public services has gained importance. While it is understood that a very rationalistic approach often becomes quite technical in nature and hence has its own weaknesses as most public services operate in complex and often uncertain (non-fixed) environments, one should pragmatically realize limitations of scientific measurement based approach and use it to support politically informed judgments.

5.4 Next steps

This document on sustainable urban planning parameters for Indian cities also makes an attempt to quantify all parameters of sustainability with measurable indicators to benchmark and monitor sustainability. In order to enable effective operationalization

of these parameters and indicators, the indicators need to be defined, benchmarks need to be set so as to decide on a common Operationalization Plan and capacity building exercises need to be carried out to support the Operationalization Plan. The target audience for these capacity building initiatives would include the town planning officials of city, state and national governments and urban planning practitioners from the private sector.