

# Addressing Water Supply and Sanitation Issues by Participatory Planning: Case Study of Draft Development Plans (2007-12) of Urban Local Bodies in Kolkata Metropolitan Area

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## Introduction

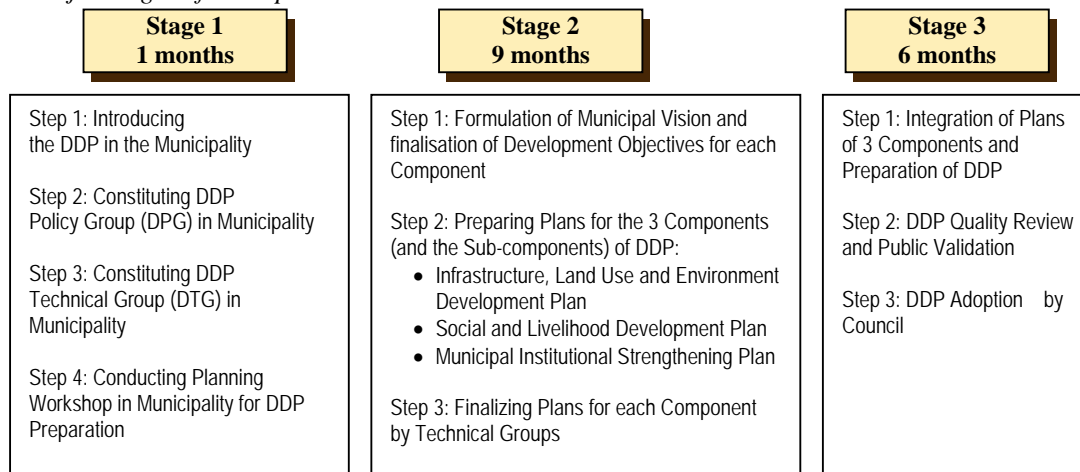
Water and sanitation are permanent challenges to address in urban areas. Supply of quality drinking water is closely related with the quality of sanitation and public health. Cities in developing countries like India have been suffering from this from long. Almost 25-30 % of population stays in slums and don't have minimum sanitation facility. Piecemeal approach in interventions based on various government funding could not solve it in a holistic manner. Initiative for comprehensive planning and development started from 74<sup>th</sup> Constitutional Amendment Act 1992 and consecutive frame up of state acts in various states. Recently JNNURM has emphasized a mandatory preparation of City Development Plan (CDP) in a participatory approach. In states like West Bengal preparation of DDP Has been mandatory as per WBM act 1993. But very few ULBs prepared DDPs. This is due to archaic practice of adhocism in public works, lack of awareness and willingness, lack of trained manpower and overall deficiency of capacity to undertake these initiatives. Recently DFID funded KUSP programme has been successful getting the government support and implementing DDP as a mandatory action. As a matter of fact focus has been given largely in the sanitation issues especially in slums.

## The process of DDP

The West Bengal Municipal Act 1993 (hereafter referred to as “Act”) requires municipalities and municipal corporations in the state to prepare Draft Development Plans (DDP) covering a period of five years and that addresses a range of municipal functions as laid down in the Act. The DDP Guidelines recommends 2 important groups to be constituted at municipality level for the DDP preparation process. These are:

- DDP Policy Group (DPG): The DPG will provide policy guidance and strategic support for the preparation and implementation of the DDP and will also coordinate with higher levels of government.
- DDP Technical Groups (DTGs): The DTGs will be responsible for preparing the project proposals and plans for each of the sub-components of the DDP, with the overall guidance from the DPG. Three DTGs should be formed for the 3 main components of the DDP.

*The major stages of DDP process*



*The important features in the process include:*

- Participation by and consultation with the widest range of stakeholders, building on existing grass root structures such as Ward Committees, NHG, NHC and CDS
- Explicit attempts to assess socio-economic needs, especially of the poorest groups living in formal and informal settlements
- Transparent system for prioritization of issues
- Matching plans to projected resources. Financial projections must be realistic and affordable, from predictable funding streams.

*Preparation of Plans for each Component will involve*

- development of project proposals for each Sub-component
- prioritising and sequencing project proposals within each Sub-component to form a plan for each Sub-component
- putting together Sub-component plans to form a Component level plan.

### **Coverage of DDP**

Entire DDP process has been divided into three components

#### **Component 1**

*Slum Infrastructure:* Water Supply, Sanitation, Solid Waste Management, Local drainage, Access Roads, with adequate street lighting, Social Infrastructure (e.g. for health, community spaces)

*Intra-municipal Infrastructure:* Water Supply, Sanitation, Solid Waste Management, Area level storm water drainage, Roads, bridges and traffic management, Social Infrastructure (e.g. health, education, parks & gardens), Markets, Public conveniences

*Trans-municipal Infrastructure:* Water treatment and transmission, Treatment of sewerage, and area drainage, Solid waste disposal, Roads, bridges and traffic management Social Infrastructure (e.g. health, education, sports, recreation)

*Environment:* Ambient Air Quality including Noise, Land contamination, Water quality of sources like streams, rivers, ponds and lakes , Biological Diversity – Flora and Fauna, Green cover, Built and Cultural Heritage

*Land Use Development :* Zoning and development , Land required for healthcare, education, recreation and public utilities, Schemes for development and use of land, Resettlement and rehabilitation of potential evictees from informal settlements

#### **Component 2**

*Livelihood and Poverty:* Schemes and programmes related to poverty alleviation and livelihoods improvement,

*Local Economic Development:* Regulations related to licensing, taxes and levies on business establishments, Support to local trade and business associations, Infrastructure (e.g. markets)

*Healthcare:* Delivery of primary healthcare services, Delivery of preventive healthcare, disease prevention and public health programmes

*Education:* Primary education, Literacy

#### **Component 3**

*Organisation Development:* Organization Structure , Staffing pattern and job descriptions, Training and capacity building

*Process and Systems Improvement:* Accounting Systems and Processes, Procurement Systems and Processes, Personnel Systems and Processes

*Citizen Interface:* Grievance redressal system, Citizens charter, Information dissemination and transparency

*Financial:* Revenue improvement, including cost recovery , Expenditure and asset management, Long-term financial planning – capital and revenue incomes and expenditures, Public-private partnerships

## **Background and Selection of Case Study**

As a part of DDP process internal appraisal and by third party and hand holding was a important part. Urban Management Centre of Administrative Training Institute did this exercise for ten urban local bodies and out of that only four have been taken as case study areas. Budge Budge municipality is an older urban settlement having a industrial predominance. Khardah Municipality is a predominantly residential use and having a cultural and heritage background. Serampore has been selected since it is among older urban settlements and having European influence in early development. Pujali has been taken as a case study to see its approach of a newly formed ULB.

### **Case study 1. Budge Budge Municipality**

Filtered water supply is made through Garden reach water supply Plant maintenance by KMW & SA. @ 80 lpcd (After deducting UFW from daily quantity supplied). 70% of municipal area is covered by this water supply. Pressure and duration of supply are not satisfactory in some areas.

The distribution network is old and ageing. Pipe lines have been choked due to iron silting. Objective to cover entire municipality with filter water connection has been taken.

Population 95504 (2025) to be covered by @ 135 lpcd water supply and toatal 2.839 mld water to be generated. There is no sewer system in the city. It has septic Tank with soak pit30%, septic tank without soak pit15%, pour Flush toilet25%, no latrine 20%, and others 10%. Thus 90% is covered with sanitary latrine and the rest of the households are without any appropriate sanitary facilities. STP project is in progress by GAP sector of KMDA (Rs.7.62 crores)

### **Case study 2: Khardah Municipality**

84% of total population is covered by ground water supply. 4% of the total population is covered by surface water supply from BKPT. Per capita water supply supplied is 110 lpcd (Avg.). Objectives for development are to cover 10% uncovered population with water supply, to arrange for addition / alteration of the running water supply system including its proper upkeep and maintenance, to minimize wastage of water including rainwater harvesting, create awareness about abuse and overuse of ground water.

Major projects undertaken are resinking of 5 nos. 300 x 200 mm deep tubewells: Rs. 70 lakhs: funded by KUSP/ JNNURM, replacement of asbestos 80 mm pipe line: Rs. 5 lakhs: funded by KUSP/ JNNURM, integration of pipe line for distribution of water from augmented surface water source with 200 mm dia. DI pipe line: Rs. 70 lakhs funded by KUSP/ JNNURM, extensions of pipe lines to uncovered ares by 100 mm dia DI pipe line: Rs. 53 lakhs Funded by State Govt. Fund, replacement of 80 mm pipe line: Rs. 5 lakhs funded by KUSP/ JNNURM and water Supply distribution network analysis for stabilization of the system: Rs. 1.50 lakhs funded by KUSP/ JNNURM

In the sanitary system Septic tank with soak pit is 20%, Septic tank without soak pit is 60%, two pit pour flush latrine is 7% and kuncha latrine is 13%

Night soil is disposed in municipal trenching ground and the sewerage system intake the local sullage water from the drains and directly discharges to Khardah Khal through STP(capacity 3 MLD).

Major objectives undertaken are , sanitation to all including Slum Areas, Waste Water Collection & Sanitary disposal for all areas, Reduction of environmental impact of poor sanitation, Waste water discharge to river Hoogly within prescribed quality limits. Major projects taken is provision of Pay and use toilets: Rs. 13 lakhs, conversion of kutchha latrines to Pucca ones: Rs. 0.40 lakhs, provision of Two-pit pour flush latrines 60 nos.: Rs. 6 lakhs

### **Case Study 3: Serampore Municipality**

Only 69 lpcd out of 90 supplied, rest is wastage. Objective is to integrate the slum infrastructure with the entire urban area network, to provide at least one water tap per 100 slum dwellers. House hold water connection for every household @ 90lpcd to be ensured and wastage to be reduced. Conserve the water table by water harvesting and recharging techniques also in the objectives.

Sewerage connection is existing since 1980 but having faulty lines and slopes. Therefore objectives envisaged is to provide at least one sanitary toilet per 25 slum dwellers, separate toilets for the children of the slum dweller, achieving segregation of wastes by scientific and sustainable ways, provide safe and hygienic sanitation facilities and eliminate unsanitary practices such as open defecations.

### **Case study 4: Pujali Municipality**

The main sources are 143 nos municipal DWP tube wells and supply through tractor driven water tanks (Supplying @ 16 lpcd). No piped water supply is present. Reservoir of capacity 0.7 MGD is under construction. Major objectives are to improve the living condition providing housing level water connection and hygienic sanitation facilities so that entire municipal area comes under piped water supply service delivery system by the end of 2007. 16 nos. of water supply projects of Rs.136.00 to be undertaken by 2008 – 2009.

About 2000 two pit pour flush latrine for its poor citizen serves generally. The lack of practice of using sanitary latrines is there but presently the municipal area is free of katcha latrine and open defecation. The process of monitoring and controlling of open defecation is in the way for improving the environment. Constructing 840 nos. of two-pit pour flush latrine to provide hygienic sanitation facilities, which have been taken in the project proposal, can minimize the unhygienic practice of open defecation. Total project cost envisaged is Rs.42.00 lakh.

### **Overall observation and conclusion**

Due to lack of practice in thinking as a whole initially the DDP did not get enough attention from the ULBS. It started as a special 'Job' to be undertaken to get fund under KUSP. However in course of the DDP process, as it is absolutely participatory in approach and it involved a full cross section of society it started getting attention of decision makers and technicians in ULBs. In fact in the process ULBs started competing with each other to complete the task properly and to get the incentives out of that.

Inclusion of young new trained manpower like Urban Planner, Finance coordinator, IT coordinator etc the preparation process could avoid the probable delay in most of the cases. ULBs tried to comply with the process of DDP to frame it as per guidelines given by government. In some cases ULBs tried to foresee the problem in a more holistic approach. In the DDP of Budget Budget it is written, *'The supply quantity per capita per day is inadequate in comparison to the UDPI standards. Besides, the coverage of household connections is anticipated to grow over and above the present figures and supply augmentation along with network augmentation is required in the medium term.'* Thus incorporating UDPI standards in the analyzing of the planning for the water and sanitation is obviously a praiseworthy works in the ULBs.

However after the analysis and the case studies it may be concluded that DDP has been very very successful for at least making ULBs think in a holistic as well as participatory manner. As a first generation DDP it may be told that appropriate implementation of DDP in the plan period and its required implementation will change the infrastructure and overall development substantially in a sustained manner.

### **Reference**

1. DDP guidelines issued by Change Management Unit 2007
2. Draft copy of DDP of Budget Budget, Serampore, Pujaly and Khardah municipality