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INFRASTRUCTURE PLANNING PROBLEMS IN SMALL AND MEDIUM TOWNS

by

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ABSTRACT

This paper is addressed to the problems of infrastructure planning in small and medium towns in India. The paper is based on experiences, case studies, reported by primary researchers including the author. The paper is focussed mainly on the processes of decision making and organization, through special programmes, and regular ones.

Among the salients, the low level of investment and quality of urban infrastructure, the centralized decision making systems, the rigidly normative aspects of plans/programmes, the disabling of the local governments in securing the mechanisms of response to community needs, the historic-morphological problems, and the pressures of population density on the natural and human ecological conditions are discussed.

The paper concludes with a proposition on the possible strategies in securing a process of decentralization in favour of the local government.

I. INTRODUCTION

In general, the status of infrastructure, in urban India requires a lot of improvement and development. The term infrastructure includes a variety of utilities, and services, such as, water supply, sanitation, drainage of rain water, disposal of garbage, roads and transportation systems, information channels and communication systems, electric supply, power and prime movers of various kinds, etc. We usually seem to think of only those items which cause acute problems, all of a sudden, such as, bad sanitary systems, shut down of lighting, shortage of cooking fuel, traffic congestions/breakdowns, and flash flooding.

Urban Communities in India, regardless of size, suffer from contingencies/breakdowns in all these items, rather frequently. Every monsoon has been a witness to these problems of flash flooding, contamination of water supply, resulting epidemics/diseases, breakdown in power supply, the supply of essential commodities/services, communication, and transportation of different modes.

In this paper I propose to discuss the perspective of infrastructure planning in towns and cities in India, and the specific problems faced by the local governments and communities in the current phase of development. The paper is divided into five major sections, addressed to the following : I. The generally low level of infrastructure development, II. The organizational and physical/spatial conditions in small and medium towns, III. An overview of case examples reported from different regions, IV. The factors of success and failure as reported in the case examples, and accepted in general, and V. The strategies and options we may have in formulating the planning process for the future.

Some disclaimers, may be in order in regard to the scope and coverage. Though, this paper is based on experiences (cases) reported by primary researchers, including myself, the observations do not cover every aspect of infrastructure planning. They are limited to certain aspects being planned and implemented in the current times, through special programmes, and regular ones. Secondly, the focus of this paper is weighted heavily in favour of processes and approaches of the organizations and role players, and does not include an in-depth review of the

technical capabilities of the state cadre's, such as, in engineering competence, technical efficiency of the supply and maintenance aspects, and the like.

The intention, here, is to take a rational and meaningful look at the process of decentralization in planning and administration, in the light of objective problems faced by local communities, and their aspirations about the future. The issues of who can handle what items with competence, have to be moderated and modified, with the aspects who can handle the same, with sensitivity, comprehension and meaningfulness to the client populations.

This first section is addressed to the (1) low quality conditions of urban infrastructure, (2) the main role-player organizations, such as, the state agencies and the local governments, and (3) the limited and still partially understood role of planning and implementation, in the development of small and medium towns.

The "general low" in urban infrastructure

The city or town as a corporate or community physical plant has not been able come to grips with these problems of provision of the foundations of the good life, promised or idealized by urbanism.

Among the various reasons, many are historical, and lay squarely in the different stages of development. For instance, even the handful of metropolitan corporations developed the facilities of underground sewerage systems only in the late 'forties and early 'fifties. Bangalore itself implemented its plans, in this regard, only in 1954 in a major way. By comparison most of the towns/cities of the American frontier West, had underground sewerage systems as early as the 1890's.

As late as 1986, the Comprehensive Development Plan (CDP) of Bangalore observed that,

> Nearly 90% of the city area and 75% of cantonment are are covered by the sewers.[1]

These, obviously meant only the populated areas of the city and cantonment, respectively. In terms of the urban area as a whole, the total served by sewers covered only 230 sq.kms. out of the aggregate conurbation land area of 449 sq.kms., excluding the green belt.[2] Thus, it may be seen that, the pace of implementation (i.e. coverage) is not keeping up with the impending growth, even as anticipated, officially.

Similarly, shortcomings may be observed in other dimensions of infrastructure, such as, the water supply systems, roads and transportation services.[3] Given these conditions in a fair sized metropolitan city of Bangalore, acknowledged widely as one providing a, relatively, better quality of life and environment, one could imagine what the conditions would be in the lower order cities and towns.

State agencies and weak local governments

The metropolitan cities had a lead in their efforts developing the infrastructure with the creation of the development authorities, and the various special function boards, such as, the water supply and sewerage board, the slum clearance/improvement boards, the housing boards, and the like, during the '60's. Later, similar boards were created on a state-wide basis to cater to the needs of the non-metropolitan urban communities. By and large, the medium and small sized towns depend on these and other agencies of the state for the provision of infrastructure.[4]

The local government of the town or city continues in its traditional form, while these super-ordinate state agencies have been promoted with strong bureaucracies, both administrative and technical. Researchers have observed that the proliferation of the development authorities, and the specialist/functional boards, have taken the initiative, onus, and sense of participation of the local governments (municipalities) away from the development process.[5]

Another set of evaluators observed in regard to the Integrated Development of Small and Medium Towns (IDSMT) projects, that the "proposals were to be prepared by the civic bodies, but ... this task was entrusted to the state level planning agencies".[6]

In evaluating the low-cost sanitation and scavenger eradication projects in Rajasthan and Bihar, Sinha and Ghosh had also reported similar findings, that the "municipal organization seemed to be the weakest link" though it was the main focus of the projects.[7]

Planning is limited & unimplemented

Urban planning is bi-modal in terms of both thought process and evolution of the operational idiom. One mode stresses goal orientation and achievements as to the kind of urban environment, a community would want to achieve, in order to pursue certain qualities of life, objectively. The other mode often stresses the assessment of objective/ materialistic conditions as existent in the environment in

order to formulate a plan of improving the same suitable to life-style pursuits. Ultimately, both modes may achieve the same; but the emphases in the processes are placed on the goals (ends) in the former mode, and the materialistic conditions (means) in the latter mode.

Communities, the world over, have placed a greater operational emphasis on the latter mode of the "means-state" in their urbanistic quests. This is partly due to historical reasons which traditionally have emphasized physical planning, through the disciplines of architecture, civic design, and engineering, in preference to social planning and welfare programming, which were handled by the 'state' (more the 'nation state') and perceived through the disciplines of applied social sciences, statistics, public health, public medicine, education, and the like.

The dichotomy has contributed to the evolution and survival of less than comprehensive efforts in urban community planning. The short comings may be perceived in most cities and towns in India, by an absence of 'system-state" definition and resolution of the planning context in terms of (1) urban morphology, (2) human ecology (3) natural/environmental ecology, and (4) the conditions of the ambient (human-made) structures.

Instances of these may be perceived in several items, such as, in borewells and underground water resources being exploited for use without the compensatory recharging of the aquifers, in above ground water reservoirs being de-silted and spruced up without corresponding and complementary efforts on watershed/catchment area development, in large scale buildings and civic structures being developed without ameliorating their consequences on the local topography and drainage pattern of the surrounding lands, traffic generation potentials, parking facilities, and the like, in building permits/licences being issued without looking into their impact consequences on water supply, drainage of surface water, sewerage and other environmental conditions, and in a myriad other interventions which alter the structural and formative conditions of the urban community, its resources, and functional systems.

Plans are made by the state agencies and technical departments in charge of planning efforts, (e.g. Department of Town & Country Planning, the State Urban Water Supply and Sewerage Board, and the like), and supposedly implemented in collaboration with the local government. The standards, norms, and specifications of the plans are set by these state agencies on a universal basis. Often these plans are found unimplementable due to local conditions, left unassessed by the planners, the non-availability of universally assumed resources, and means of various kinds.

As a result of these, local implementation takes place in a skewed and haphazard manner, with reduced ends, reduced norms, or unsuitable and inadvertant specifications. Frequent examples are found in new-layouts and sub-divisions of residential land uses being sanctioned and developed without adherence to basic standards regarding water supply, drainage, and sewerage systems, neighbourhood amenities, or even paved streets with lighting and other public utilities.[8] Other examples, such as the borewells programme are implemented for drinking water supply in semi-urban communities without customary precautions about contamination and without the development of the water resources below-ground. These are implemented as exclusive, projects-with-specific-numerical-targets by agencies, which are charged with these tasks as per planned investment under the Annual or Five Year Plans.

A comprehensive effort in planning by the local government for its own environment will be able to confront these problems with greater regard, to local resources, needs, means, and consequences. Longer term interests may be secured, and technical assistance may be provided by the state agencies, towards improving normative standards, as against possible negatively, parochial interests and tendencies of the local community.

Recent projects claimed to be innovative, such as, the IDSMT also suffer from similar kinds of shortcomings listed above. Prasad et al observe, that the IDSMT projects in Andhra Pradesh and Kerala fell short of fulfilling the requirements that (1) they must reflect the objectives of stimulating town growth (read urbanization) through better infrastructural facilities, (2) they ought to reflect the felt needs of the town-region, and (3) they must achieve proper integration of projects selected, with the other development projects in the town.[9]

In summary, one may observe that in the post 1960 years, the small and medium towns' urbanism has witnessed the following characteristics :

(1) the planned development phases of the Five year (and Annual) plans have produced a centralization of the planning process, partly with the union government, and otherwise with the state governments. The former controls a major part of the funding, while the latter controls the technical and executive agencies. The local governments have been plagued by a diminishing series of initiatives, and capabilities.

(2) structurally, the cores of town and cities have suffered from the problems of intensification, in regard to demands on land utilization, transportation systems/traffic

capacities, public facilities and utilities, and general amenities like parks, playfields and open spaces, as well as natural resources within the town, such as, surface water reservoirs, underground water, and even fresh air, and quiet environments.

(3) to compound this problem, the fringe settlements have grown at a fast rate, in rather inadvertant processes, and, with inadequate infrastructure. To a large extent, public incapacity, public apathy, and private caprice have contributed to these developments. Many of these fringe settlements are likely to be no better than the slums of yester year, in the near future. They also draw heavily on the meager natural resources, often at a premium price.

(4) regulatory measures, attitudes and processes are rather limited, poorly organized and exhibit little evolutionary rationale'. As a result they are less acceptable as control items; therefore, often coercive power (police power of the state) is exercised, and in turn perceived or vice versa as arbitrary and capricious, rather than rational and benevolent.

Summary

The shortcomings in the infrastructure development of towns and cities in India, is rather acute and problematic. The reasons are historical, in the sense that modernization and urbanization occured rather late, and in a laggard fashion; other reasons, include those of the pressure of population and consequent rise in demands on utilities and services of an unprecedented nature; thirdly, technological dispersion and applications have been retarded in comparison to the rise in demand for the same, even in very small towns, and rural communities. Thus, the awakening, awareness and aspirations are ahead of the pace of technology and organizational efforts.

These three dimensions, namely, historical sequencing, the population pressures, and the time lag in technological fulfilment or provision, seem to cause the most acute problems of infrastructure in the towns.

II. CONDITIONS IN SMALL AND MEDIUM TOWNS

Introduction

Local communities, and organizations in India are in the position of "crying infants"; they possess all the needs of an emerging, fast growing life, but without any powers, facilities, resources to provide for themselves. As such, the loco-parenti role is played by the state government, and to some extent even by the district administration.

In this section, (1) the limited capabilities of the local government, the dependency on the state government, (2) the problems of town morphology, the organizational aspects, (3) the rhythms and reciprocity in the relationship between local and the state governments are highlighted. They seem to cause the main problems in the development of planning process, regarding, infrastructure.

Local government capabilities

Conditions of governmental ability in small and medium towns are professionally and technically limited, and administratively inhibited. The local legislative bodies, that is, the municipal councils are not strong; though they are elected, they depend on the state agencies for execution and regulation of most of their own projects, plans and programmes. In theory, the police power of the state, and the eminent domain powers are bestowed on the local government constitutionally. But local governments in India do not have a police force to enforce coercive regulations, nor a fire service to extend protection against hazards and accidents. Thus, the protection of health, safety and morals/welfare, the canons of the police power, are not implementable by the local government without the active support of the state's police force, fire services, and other agencies. Similar problems arise, in regard, to other developmental programmes and administration.

Dependency on the state

This dependency on the state, and the superior civil and technical service cadres of the state and the district has perpetuated a diarchy similar to that of the pre-independence days.

The financial resources of the local governments are rather limited. The only revenue raising measure is the property tax. Other licence fee, such as, those on cartage, daily and periodic markets, and the like are nominal. Even the property tax rates are fixed by the state, on a standard across a class of municipalities.

Development projects are formulated and funded by the state government, out of state and/or union funds. The IDSMT, UBSP, and the NRY constitute such programmes. In addition, some wealthier municipalities are able to plan and implement improvement projects on their own; these may include the opening of new schools (by social contribution), tree planting, and social forestry (non-state), the improvement of services, such as, water supply, sanitation, common lighting in slum areas, improvement of slum houses and environment, and renewal of streets, sidewalks, municipal bus stand, and extension of roads and streets to new layouts.[10]

Local initiative and voluntarism

Many of these locally initiated items happen only in a few towns where a certain level of social cohesion may be available due to efforts of the citizens' voluntarism. More often these efforts may be seen happening in district headquarter towns due to the presence of the official elite, such as, the District Judge, the Collector/Deputy Commissioner, and other heads of District Administration, and technical departments.

Town Morphology

Early municipal services in these headquarter towns were provided mainly to the administrative elite, in the "civil lines" which formed a major part of the town morphology and its evolution during the first half the 20th century, in India. These headquarter towns have come into age mostly as medium size towns.

Their morphological continuum is well established beginning with the early bazaar and traditional settlement of the early 19th century, followed by the headquarter institutions and "civil lines" of the late 19th and early 20th century, a rail road station and colony added on to by a possible university, college, or high school complex and the educational community, followed by the post World War II new extensions and layouts, surrounded and intensified by unplanned, haphazard, fringe settlements on lands without municipal services. These major morphological divisions would be interspersed today with a number of dense, blighted, settlements without services and utilities, even in the central localities of towns.[11]

Each of these phases, above, was caused by a combination of factors and forces, which may be termed the prime-mover of development in that historical phase. While the headquarter towns of medium size were pioneered in their development phases by prime-movers, such as, the colonial revenue/law and order administration, the trade of the bazaar spine, the railroad terminal and settlement, the university and educational institutions, the improvement trust boards, and the real estate enterprises, the smaller towns did not possess any such clearly definable sequences in history. Even in the present times, the roles are fudged and the prime-movers are not easily discernible.

Formation, on the other hand, takes place for a variety of negative influences, such as, an excess of population pressure, intensification of land uses, amorphous utilization of space, congestion of traffic and demand for services, and bottlenecks of various kinds, made more complex by a dearth of resources, inability to deal with the

shortages, the blighting of the environment, and a general trend towards ecological disaster.

The above are the morphological problems in the small and medium towns, which call for a considerable amount of organized effort at planning and development.

Organizational Problems

Organizational problems in town development may be summarized as falling within three major dimensions, namely, (1) that of inter-agency coordination, (2) that of participatory evolution of demands and planning process, and (3) that of providing the integration of (1) and (2), above, at the scale and jurisdiction of the municipal government.

Many observers have reported on these dimensions and the shortcomings in the performance of each. Broadly, their findings conclude that the states are creating new agencies and boards which take away the legitimate and traditional functions of the municipal government.[12] This causes a reduction in the capabilities of the municipality, and consequently a reduction in the justification it can offer for a demand on resources. Secondly, the functions given to the new agency cause non-congruent decision-making structures, such as, in diarchy, or forms of polyarchy, especially when the new agencies are held accountable to authorities higher than or different from that of the municipal council. Thirdly, the development of participatory response, social cohesion, and integration in the local community are inhibited by these divisions of responsibility, and roles.

The new programmes of the government also cause the same kind of problems. The IDSMT, the UBSP, the NRY, the Low Cost sanitation programme, and the like are cast in the same mould of state administered, "centrally" funded projects, with standardized norms, specifications, targets, and operational planning modes.

Thus local priorities, needs, adjustments and innovations are relegated to a limited range of roles. Integration at the municipal scale of formation is impossible when numerical targets of the state agencies become the items of priority. Other factors, automatically, become downgraded, or suppressed altogether.

Rhythms & reciprocity

The capital improvement programmes and plans are not regular and evenly paced. Though they are a part of the five year planning system of the nation, and the annual plans/budgets of the state, the grants to the various

agencies, and the municipal government arrive at random; therefore, the financial enablement happens in fits and starts. The present budgeting and information systems exhibit many wide gaps; as a result of this, and other reasons, the local government officials are unable to forecast and anticipate the allotment and rhythm of resources for their project/plan requests.

This has been a problem of both professional and communication/organization dimensions. These problems may be overcome, considerably if there is a merger of communication, information, professional and financial skills with the executive and citizen organizational efforts. The same needs to be achieved between the state technical and finance departments, and the local municipal recipients of grants-in-aid.

In a second phase, similar communication ought to be established between the executives of the municipality and its citizens. These efforts should complete the cybernatic cycles, starting from the demand rationale' of the citizens through the plan/project implementation rationale' of the administration process, and the final evaluation, absorption, and adaptation by the beneficiaries.

These processes will pave the way eventually, for the evolution of comprehensive reciprocalisms, required of a planning society. The seeds of such processes and potentials are available within the fundamental frameworks of operation and constitutionalisms of our local governments. However, functional weakness, cultural inhibitions and organizational shortcomings by way of attitudes, skills, reciprocal systems, and professional expertise, knowledge and perspectives, commensurate with these problems, seem to exist and perpetuate.

Summary

The local governments possess the powers of the "state" in theory; however, these legal constitutional powers are exercisable only with the cooperation and participation of the state agencies and the district administration. Provisions of personnel, organization, facilities and equipment are weighted, heavily, in favour of the state agencies and district administration. The local government cannot provide even security, and fire protection, within the community, not to speak of welfare.

The superior civil and technical services of the state and the district, the financial resources and process of allocation by the state, and the decision, organization structure on special programmes, such as, IDSMT, UBSP, NRY, and LCS, perpetuate a form of diarchy or polyarchy in the local jurisdiction.

The morphological development of towns were also favoured by the pioneering and dominant efforts of the administration headquarters culture. The prime-movers of the latter day phases of development have continued to promote amorphous structural evolution of towns and fringes.

Organizational problems seem to be focussed on inter-agency coordination, participatory planning, and integration of efforts in the scale of the municipal jurisdiction. Local priorities, needs and roles, are relegated to the background, in the arena state led, and dominated, programmes of development.

Rhythms of resource allocation, and capital improvement are also plagued by similar biases in working relationship. All the inadvertancies and contingencies are passed on to the local governments. With a chain of "hand-me-downs" the municipality is perpetually at the receiving end.

In the following, section we shall examine a few case examples, of infrastructure planning experiences in several small and medium towns in India.

III. AN OVERVIEW OF EXPERIENCES REPORTED

Introduction

In this section some four case examples are reviewed. They relate to infrastructure planning experiences and contexts. Two of these case example are borrowed from reports made by Sinha and Ghosh, who studied the contexts and operation of Low-Cost Sanitation projects in Rajasthan and Bihar. The other two cases were studied by myself, in addition to earlier reports made by Harry Mengers et.al., in regard to Chintamani, Karnataka.

Though the case examples, may highlight the experiences of one project, such as, the LCSP more than that of others, the contexts and the processes are similar for all infra-structure programmes. Thus, this paper treats the LCSP, or any other special programme, as a prototype, and prime-mover in infrastructure development, albeit a limited one.

Interesting lessons may be drawn from these examples, if we pursue the nature and operational modes of the prime-movers, the organization and role players, the interfaces and issues of participatory decision-making, and the consequences to the development of infrastructure conditions in typical context. These items reveals, the shortcoming and efficacy of the processes and what may be evolved as the possible strategic dimensions in future operations.

Case Example [1] Bhilwara, Rajasthan

The case of Bhilwara, Rajasthan, was reported by Sinha and Ghosh, after a primary study.[12] They observed that the utilization of the pour-flush latrines fell short by 34.5%; the households were not using them for the following reasons :

> ...the superstructure per agreement was to be built by the beneficiaries.

Thus, many (i.e. 34.5 per cent of the households) were not able to build the superstructure and the project did not follow up on the problem either.[13]

Other problems were also observed, (in addition, to that of the choice of non-viable beneficiaries;)

1) people, especially children still preferred to use open fields.

2) A large number of households (about 23%) found the functioning of latrines to be problematic. Choking, leaking pipes, overflowing, and damaged pits were reported.

3) Many continued to use the dry latrines beside the new PF latrines.[14]

Case Examples [2] Gaya & Daltongunj, Bihar

In their study of Gaya and Daltongunj, Bihar, Sinha and Ghosh reported that (a) there was a general lack of information about PF latrines projects and their functioning, (b) many houses were themselves built in stages, fits and starts, and therefore not providing for PF latrines, (c) presence of rocky and other hostile land surfaces posed problems of construction, (d) there was serious dissatisfaction with the operating agency (Sulabh International) (e) there was a lack of adequate space, and (f) the fear of water contamination in the drinking water wells inhibited many from opting forthe PFLs.[15]

The programmes/projects were reported to be focussed on "achieving target numbers" rather than looking at the programme comprehensively.

Night soil collection was regulated under the traditional systems and disposed in appropriate, designated dumping places by the municipalities. After the PFL projects, and the so-called "scavenger eradication" by the municipalities night soil is reported to be collected by independent scavengers and thrown about indiscriminately,

into "open drains, rivers, pits, fields" and the like. It was reported that the drains often got choked, due to this.[16]

Bad contamination was reported to happen during the rains, by the overflow of sullage. The dry latrines which still remain, seem to be cleaned privately and secretly, by "some of the liberated scavengers" who are now regular employees of the municipality.

As a result, traditional organizations and operational routines were upset, and destroyed, but new routines were not fully and properly implemented either.

In addition, it was reported that the municipal community latrines, revealed an absence of water supply, regular cleaning, and were filled with dirt and filth". Some of them were not used by the public.[17] Common examples of this kind of deterioration may be witnessed also in most bus terminals in the various towns all over India.

Case Example [3] Tiruppattur, Tamilnadu

Tiruppattur, Tamilnadu, is a Grade I Municipality, and houses the Taluk headquarter offices. With an area of 4.65 sq.kms. and a population of about 66,000, it has about 10,250 households with 67 percent of the same without any latrines at all. The Municipality, in addition "maintains" some twenty community latrines; of these five were of the dry type.

The town employed (in 1991) some 52 scavengers for providing services to the dry latrines in the towns. The programmes and projects focussed, essentially on converting the existing dry latrines, both private and public, into pour-flush latrines (PFLs).

These projects were studied by me after a primary visit and observations at Tiruppattur, and interaction with the officials, householders, beneficiaries and others in the town. I found the execution, follow-up, and the coordination between the official agencies and the Non-Governmental Organizations (NGO) who were involved in the implementation, quite smooth and effective.

The NGOs were given full responsibility to canvas and convince the potential beneficiaries of the project. The NGOs acted as the builders, covering all aspects, from the precast concreting of components, to assembling the same and finishing according to plans at the site. The city engineers and administrators expressed satisfaction while monitoring the pre-casting and curing operations, as well as

construction and follow-up operations at site. The owner-beneficiaries also expressed their satisfaction with the work of the NGOs, and the municipal officials.

However, several other items and linkages were left untouched. These by themselves, and in association with the PFL project may cause problems in future.

Among the major problems, I may cite, was the fact that some 33 per cent of the households were still left with no latrines at all. This would give rise to a continuing situation, where over 40 per cent of the people will be using the open lands, open drains and any common corner, which remained unprotected.

Secondly, the supply of water continues to be limited, severely, that it affects the functioning of many pour flush latrines, thus encouraging the use of dry latrines and open fields.

Thirdly, the financing and sharing of costs for the PFL posed many limitations. Loans are given under the programme only to identifiable tax-payers and property holders. The minimum tax payable on property is Rs.36 per year. If the rate assessed is below this, then no tax is payable, per state law in Tamil Nadu.

In order to bring some more beneficiaries into the net, their taxes were raised nominally to be above Rs.36, say between Rs.40 and Rs.50 per year. In addition, the interest on the loan amount per PFL unit alone worked out to Rs.160.00 per annum on a loan amount of Rs.1900.00, approximately, about four times the tax paid. This plus the tax paid were additional disincentives, or costs to the beneficiary.

Fourth, was the problem of the external environment in the town which provided the overall qualities of sanitation. There were no contour maps with the Municipality, from which the drainage basins and channel ways in the town could be evolved/figured.

There were no drainage arrangements for rain water except some old street drains on either side. As a result, many open sites and undeveloped lands became flooded during the rains, resulting in the washing of waste water, night soil and other filth. These in turn contaminated the wells in town, possibly even the bore wells and all the streets and walk ways in town. An appropriate drainage system suitable to the land form, contours and buildings can separate rain water from waste and filth, as well as reduce the occurrence of floods.

Fifthly, the maintenance and regulation of community latrines is so stark, and little, that more people use the open yards, grounds outside these latrines, than the latrines themselves. The result is an abject filthification of these areas. In fact these are becoming nodes of intensive filth, from where all kinds of diseases may spread potentially. Such locations are found near the town (Municipal) bus stand, the truck stops and freight yards, the railway station, the cinema houses, especially, the temporary ones, the lower priced schools and other places of gathering, such as the, market centers, daily or the periodic ones.

Summarily, one might infer that the efforts in Tiruppattur suffer from the following shortcomings :

(1) An improper appraisal of the client population, and a narrow view focussed only on the targeted beneficiaries. The planning and the administration of the project seemed less oriented to the third of the total households, who will never be able to participate in these projects. Thus, by operational attitudes and outcome in the present perspective of planning, the goals of scavenger eradication and low-cost sanitation would become reduced as applicable only those employed by the Municipality, and the citizens who could afford to participate, respectively.

(2) Integrated planning and the tracking of linkages, especially, in regard to resources, such as, water supply, needed for the proper functioning of the project, land/ lagoons for disposal of street sewage, and other collateral consequences, such as those regarding personnel for cleaning the open yards of filth and the like, were left untouched by the project. After the PFL projects, "Municipally organized scavenging" was expected to come to an end. What would happen to the part-time scavengers, to the ones who would migrate into town, to the disorganized emergence of private scavenging, to which about 40 per cent of the population would still contribute were issues which still remain to be resolved.

(3) The financing methods were reasonable from the supply side. However, the property owners/tax payers in the town did not fall into a single class of economic well-being. Thus, basing the eligibility to participate, on the amount of property tax paid produced a distorted, and possibly a non-relevant criterion of priority.

(4) The institutional and professional aids to decision-making were confined to the project. Problems of rain lashing and flooding, and the mixing up of sewage and filth from waste dumps were not addressed. This was due to the absence (a) of any town wide effort at drainage

planning, (b) separation of flood plains and floodways from sewer systems, and (c) separation of waste dumps from usable lands. The absence of knowledge of drainage basins and contours, posed additional problems of indiscriminate building location, and blocking of rain water channels; those who issued the building permits, had inadequate information and details on which way the land drained, which way the rain water flowed across properties, private and public.

Local engineers, though educated formally in these subjects in civil engineering academies, were pre-occupied with routine work. And planning efforts of this kind described above, are directed from the state headquarters through the respective, technical departments. Thus, approval as well as operational planning were handled by these technical directorates, such as, Department of Town and Country Planning, Department of Local Administration, the Department of Public Works, and the various state boards dealing with utilities and services. Local initiative continues to be a circumscribed item.

(5) Work-load and rhythm of work of the local institutions seems to be cued on state government initiatives; this may be due to the fact that finance, technical plans, and operational efforts are tied-in to the states annual plans and budgets. They are not responsive and interactive to the demand rationale' of the local community; thus local demands have not evolved into a systemic process or pattern of decision-making.

The local government seems to implement project by project, as sanctioned by the state. Expertise to systemize these state-level grants and integrate them into a planning, budgeting process, such as, in PPBS or PBS is also not available with the local government institutions.

Case Example [4] Chintamani, Karnataka

This town of about 53,000 population, is located some 70 km from Bangalore to the east. It houses the taluk and block headquarters, and serves as a market center, for agricultural products, sericulture activities, and the like. The town seems to have experienced some accelerated growth in business and industry during the 'eighties, accompanied by the development of better roads, bus services and the like.[19]

Other infrastructure developments have been contemplated, planned and partially executed by way of improvements to civic amenities, such as, parks, market places, municipal bus stand, water supply systems, underground sewerage systems, water resources bore wells and rainfed, dammed reservoirs and the like. Other items of improvement include

those pertaining to slum environment, slum dwelling units, and the like. These improvements are being planned and carried out at the initiative of the local government. Chintamani is blessed with the advantage of an elite citizenry which pursues these development orientations with earnestness, assisted by a competent municipal bureaucracy. However, the annual budget is only Rs.1 crore, less than Rs.200 per capita revenue/expenditure.

Additionally, projects are being undertaken in tandem with and funded by the state annual plans (five-year plans). These relate to, IDSMT, UBSP and the NRY title programmes and projects. Under the low-cost sanitation programme, some pour-flush latrines were constructed. They were confined, however, to beneficiaries in SC/ST communities. Other dry latrines and scavenging continue in the traditional manner. The low-cost sanitation programme was subsidized, fully by the state government and did not involve a matching participation/contribution, or even a partial recovery costs from the beneficiaries through additional taxes or levies. It was a one time project and was oriented to selected beneficiaries. It is not being repeated, nor extended to other parts of the community, now. Other initiatives of a private/cooperative nature have been taken to achieve the development of a school with 1500 students, tree planting, nursery activities, the development of weavers cooperatives and the like.

The Chintamani case demonstrates to any visitor what a small town can achieve by its own efforts, and through public, private cooperation. At the same time it poses the limitations of doing it all, under the present constraints of resources, technical and grant-in-aid dependence on the state agencies, jurisdictional problems related to watershed development and planning, as well as, the absence of professional training, education and assistance in comprehensive planning and ecological development.

One example, is the 100 plus years old reservoir which supplies drinking water to a large part of the town. Improvement works are in progress, planned and executed by municipal engineers of Chintamani. The works include a new pumping house, an enlarged filtration tank and treatment facility, and dredging/desilting of the reservoir. These operations are in progress, now. However, the catchment area of the reservoir is not within the control or influence of the local government; as a result, no plans of conservation/ development, and watershed management are made by the municipality.

The same absence of watershed/aquifer management would also affect the extensive borewells programme, the municipality has undertaken. Kolar District used to possess

an underground water table some forty feet below the ground, about 20 years ago. Today the underground water can be reached only at depths in excess of 300 feet below surface. This recession in water needs to be arrested through watershed, irrigation, and drainage management, appropriately designed to recharge and recoupe the aquifers. Ecological planning related these items is beyond the reach of the local community, for reasons, of jurisdiction of the municipality, education/training of municipal personnel, the inducements/demands placed before then, the responsibilities with which the municipality as a whole, and its bureaucracy in particular is trusted, and the resources provided, in turn, by the state to the municipality.

A second example is that of the newly contemplated bus station. An old tank within the town is planned to be drained out and filled in order to provide the land for a new municipal bus-stand. The new bus stand would provide a terminal facility for buses within easy reach of the main street/commercial centers; besides, it would also provide revenue raising opportunities to the municipality, by way of licencees/lessees of a retail commercial nature.

However, the project will alter a potential water reservoir which can be used to conserve moisture in the local lands; it will alter, the land forms and topography of the local landscape, thus creating new, inadvertant drainage ways and flood ways. It will reduce the net open space and greenery (potential and existing) within the municipality. A drying up of this vicinity can have the effect of accelerated drying up of the neighbouring lands, acquifers in the area, and the town as a whole.

In a third example, it was found that several new layouts were being developed for residential purposes, by entrepreneurs with real estate interests. Though these are being executed with the permission (tacit or explicit) of the municipal government, they do not conform to standards expected of a modern housing layout, namely, assured-piped and protected water supply, underground drainage system with disposal fields or facilities of an appropriate nature, paved streets with rain water drainage systems, other neighbourhood amenities and the like. The layouts are merely sites for sale marked on the ground with spaces marked for street alignments. Densities would range from 18 to 48 living units per gross acre (luga), even in these new layouts. That would mean about 90 to 300 persons per acre by way of gross population density. This intensity of settlement on land is too high for the sustenance of desirable qualities of health and environment, if public common sanitation systems are not guaranteed. Individual septic tanks and soak pits for each dwelling unit would

pollute the land beyond redemption in a span of five or six years, eventually, making the new layouts, less than livable, and increasing the costs of betterment, enormously.

Other problems would arise out of linkages with associated activities and consequences of the same. As examples of this kind, one may cite the concerns of public health, veterinary health, epidemiology and other items related to the water supply and sewage and waste disposal systems. The reservoirs above ground which are being improved currently, are not protected from encroachments of various kinds. Cattle, buffaloes, and sheep, use the same reservoirs, in herds, indiscriminately.

Diseases spread by cattle, sheep, etc., such as, brucellosis, TB and other chronic illnesses, may get spread through the water supply system (though the water is treated, sterility cannot be guaranteed 100 percent, for ever), as well as through milk, dairy products and meat, as the animals drink untreated water from the reservoir. In turn, they are most likely to pollute the waters and infect one another.

Fencing and protection of reservoirs with security guards is not contemplated in the plans under execution. Similarly, the newer additions to the water supply system by way of borewells are spread all over the municipal jurisdiction, and not to any protected fields of underground reservoirs. Though the waters are tested, periodically, the testing is confined to chemical contents which cause hardness, and other mineral problems. Microbiological tests, and others for organic suspension materials are not a part of the process. In the Bangalore region and elsewhere, borewells have been known to be contaminated, now and then, due to percolation of sub-soil pollutants, and leakage in the casings.

It would be prudent to develop these preventive processes in regard to public health and safety, under the polic powers.

These shortcomings may be overcome, if the local government bureaucracy is trained, and enabled, legally and rationally to plan its expansion, growth and development in a comprehensive manner, with appropriate resources.

Similar problems in planning, implementation, participation and absorption of projects were reported from other states, with varying degrees of performance.

Overall, the following points maybe made, even as summarized by Sinha and Ghosh :

(a) Monitoring and evaluation were inadequate; System of operations need strenghthening in the town, the state, and the union governments.

(b) Priority for the programmes need to be assured by each state government.

(c) Municipal organization seemed to be the weakest link, though that was the main focus of these projects. Municipal follow up was low in most of the states.

(d) The Non-Governmental Organizations (NGOs) and other agencies need better training and supervision, on all aspects i.e. technical and organizational.

(e) Publicity material was not utilized, well, and information dessimination was low on the nature and benefits of the project.

(f) Data base was found to be weak, especially, in regard to project planning, client populations, interlinkages, and social/economic consequences of implementation schedules and policies.

(g) Integration was lacking, between the liberation, elimination, and rehabilitation of scavengers, public and private.

(h) Training facilities were not "extended"; their location was not known to many in the various projects, studied by Sinha and Ghosh. [20]

(i) Impossible targets and unrealistic plans were set in many projects due to (1) space constraints, and (2) adverse hydrological conditions. Other options in organization and technology such as, community toilets, septic tanks, small sewerage systems, lagoons etc., need to be considered.

(j) The continued use of dry latrines, and open defecation outside the targeted liberation of municipality employed scavengers were not addressed by these plans and projects, nor by any collateral programmes, which would deal with prevention of open defecation, preventing in-migration scavengers from other settlements, and general and detailed approaches to improving the quality of life, and providing alternate employment patterns to the scavenging community at large.

(k) Scavengers who were "liberated" continued in the same profession at a more organized level of sanitation in the Municipalities. However, many worked part time outside

their regular jobs in their old profession of scavenging, in order to make additional money, thus reducing the purpose and effectiveness of these projects.

The idiom of gaining an overall/comprehensive set of social benefits, at large, and by the different sets of the client population is absent. In the best of case examples, such as the ones in Tamil Nadu and Maharashtra (leading success stories, as acknowledged by the Ministry of Health, Government of India) the operational plan is an ad hoc one, whose best quality is its feasible implementation. In the other examples, even that quality was achieved barely.

Summary

The case of Bhilwara, Rajasthan, highlighted the participant/beneficiary problems of incentives and cooperation, as well as items, such as, client education, and appropriate use of facilities. Old habits die-hard, and that was a consistent problem.

Strategic project dimensions, in this case raised questions of client assessment, sensitivity, and education, inducement towards appropriate participation and functioning of the project and facilities.

In the Gaya and Daltongunj, Bihar, projects problems seemed to have arisen from all sides, namely, the promoting agency of the state, the municipality, the NGO involved in canvassing and construction, as well as, a poor comprehension and capacity to suit the project to the difficult terrain and topography of context.

The project as a prime-mover of development seems to have destroyed the traditional organization and operations, but failed to develop new and better substitutes fully, as envisaged. The spill-over, externalities of these projects, such as, new demands on water, newer organization of public dumping grounds, a lack of public sanitation squads for cleaning the remaining dry latrines, and consequent pollution dangers on public lands, and rain water drainage ways, create severe problems, which need to be tackled.

The Tiruppattur, TN., case revealed similar problems. The successful execution of the project was mainly in regard to the beneficiaries. The others, in-need, who did not participate due to various reasons were not addressed in the evaluation. In fact, the non-beneficiaries constituted a majority of the population. They did not, and would not benefit from the sanitation programme. In addition, they would continue their traditional, unsanitary methods, into the future without the amelioration by the municipality,

since the municipality will soon remove all their scavengers and place them in other kinds of employment. As a result, even though the majority of the town (or, atleast a large population in the future) will need scavenging services and organized waste disposal, the municipality will not provide the same from an impending target date in 1992.

This is reductionism based on some imagined development, state set targets, and an effort leading absurd results of public withdrawal unaccompanied by private behavioural discipline.

Chintamani, Karnataka, poses similar serious problems, though blessed with a relatively better developed infrastructure, by way of roads, sewerage systems, water supply systems public amenities and resources. The town community is pursuing an aggressive array of development efforts, in all directions. On the other hand, there is a disproportionately low municipal capacity handle these, such as, in squatter settlements, blighting of already intensive areas, and in the expansive new private layouts being developed, devoid of any public utility systems.

TABLE SHOWING PRIME MOVERS OF DEVELOPMENT IN THE FOUR CASE EXAMPLES

Case Examples	Prime Movers Prototype	Operational Mode	Participatory interfaces	Consequences to infrastructure conditions
1. Bhilwara, Rajasthan	State programme of Low Cost sanitation NGO's active involvement as promoter builder.	State agency promoted, NGO operated, Municipality's minor role/as monitoring beneficiary.	Labour input by beneficiary Lack of incentives. client-population not fully assessed.	Project insensitivity to client population caused negative externalities. Demands on resources organization and environment not met.
2. Gaya, Daltonganj, Bihar	State programme of Low-Cost-Sanitation; NGO's active involvement as promoter builder.	State agency promoted; NGO operated; Municipality minor role as monitoring beneficiary. Weakest link.	Labour inputs on superstructure by beneficiary. Lack of incentives. client population not fully assessed.	Project insensitivity to client population caused negative externalities. Concern of non-beneficiaries neglected, especially. Demands or resources, organization & environment unmet.
3. Tiruppattur, Tamil Nadu	State programme on Low Cost Sanitation and comprehensive allied efforts. NGO's involved as canvasser builder.	State assignment to Municipality as the executive agency/with state supervision. Municipal active role in contracting and execution.	Participation is through financial contribution, limited to tax payer households. Client population not fully assessed.	Project insensitivity to client-population, especially, non-beneficiaries, caused negative consequences. Demands on resources, especially water, and organization of services not met.
4. Chintamani, Karnataka	Municipal and state assisted programmes in development of infrastructure and facilities.	Public and private initiatives and execution of projects. Demand for major municipal role unmet due to limited capabilities.	Public/private cooperation in development, through citizen groups initiatives, contracting of public works, sub-urban layouts developments and state special projects.	Planning capacity is limited to specific items of infrastructure, such as, water supply, drainage system, roads and the like. Comprehensive planning and integration of these are not pursued. Local capabilities and state assistance are limited.

Note : 1. Prime-movers cause the intervention into the existing eco-morphology of the urban community. They may addressed, narrowly, to specific utilities and services, or to larger scale - complex infrastructure, as a whole.

2. Prime-movers may also be differentiated by the level of hierarchy at which they are initiated, planned/sanctioned, executed and evaluated, such as, the union, the state, the local government, or citizen cooperative of a public/private nature.

3. The operational modes may again vary as to the role of the executing agency or system of cooperation, as well as monitoring and evaluation of the same.

4. Participatory interface vary from those confined to merely project beneficiaries, to those which comprehensively involve the breadth of the client population in various capacities of role playing.

IV. FACTORS OF SUCCESS AND FAILURE

Introduction

Success and failure are not that easily, and objectively, measurable in local government. One may list a wide variety of non-achievements, achievements of low or poor quality, achievements with perverse conse-quences and negative spin-offs, in terms of general qualities of life (QOL) and qualities of environment (QOE).

However, such evaluations become less precise and less comprehensive when applied to specific projects, such as, in Low-Cost Sanitation (LCS) and other infra-structural items and networks. Many of these projects are conceived and executed ad hoc, and are specific to certain operational endeavours, time-periods, and financial outlays. As such, the consequences which occur spatially and temporally beyond the project frameworks are not addressed by the projects at all. Nor, is there a separate institutional arrangement which monitors these emerging and contingent consequences regularly, and formulates plans to tackle them.

One may assess the plans, projects and programmes in terms of (1) the institutional capabilities and functional performance, (2) technology formulated and applied, (3) sensitivity to users, and response by the community, (4) financial and human resources, their adequacy and development.

Institutional capabilities

The local government, that is, municipal administration in small and medium towns is fairly, well organized, in the southern states of Union. This may be partly because of the higher level of urbanization in these states, and the early formations and traditions of the "home-rule" and the civil service. In addition, to the elected body, in the form of a council presided by a Mayor, President or Chairman, there is a city or town administration organized in the lines of the state civil service cadres' and subordinate staff. Various technical departments are organized as divisions within the municipal administration. While, there is this much of administrative integration within the municipality, the technical command hierarchy, for each division is integrated only at the state headquarters, that is, the directorate of the technical department.

That pattern of hierarchy places all initiative at the state headquarters, in regard to planning, technical sanction, and even financial sanction in most cases. The annual plans of development, are apportioned to each

directorate by the state government, which, in turn, coordinates the technical plans projects with the financial plans. Often this results in the absence of planning for many towns because, plans are formulated only if finance is available.

Thus, there is a diminution in the volume of initiatives taken by the local governments; as a consequence, local governments continue to neglect developing any planning capabilities, either technical or temporal.

Technological capabilities

Technological items, knowledge and expertise are available within, or within easy reach, of most towns, in regard to infrastructure items. Though all of these may not be available within the municipal government, private businesses, within towns, and other sources within a day's reach are capable of providing, the items of maintenance, repair, and construction, for RCC works, terra-cotta pipes, galvanized iron or PVC pipes for water supply, valves/etc., and pumps of various kinds and power rating, such as, those for water supply, and those for sewage pumping.

Municipal Engineers and technical staff, we met, in Tiruppattur and Avadi in Tamilnadu and Kolar and Chintamani in Karnataka were knowledgeable about these items as they were formally trained in the technology of these items, and continue to get educated through refresher, or retraining programmes sponsored by the states.

What is lacking then is the substance of operational planning, and alternate initiatives on the courses of action a municipality may pursue in regard to these problems. In this regard, there is also an absence of challenge, such as, those set by newer standards, competitive provisions in public and private efforts, and the like, to which the municipal executives may be induced to respond. Thus, the potentials of knowledge and expertise become unutilized and undemanded in the long run.

One may witness that engineers and technical staff with much less formal qualifications, knowledge or expertise, in small towns in Northern America handle highly sophisticated infrastructure systems with great finesse and social sensitivity. We may look for clues, therefore, on how to make the available (existent) technology, more sensitive to the social realities and environmental conditions, through changes in the municipal organization, such as, decentralization, incentive induced performance, rewards for team work, promotion of innovation and other objective aids to commitment in development efforts.

User sensitivity & community response

These may cover items, such as, user information, user needs, user aids/equipment/and assistance to user decision making. We mentioned earlier, that user needs are assessed only within the limits of the projected efforts, from time to time. Collateral needs, and linked items of incentives and disincentives, hurdles and the like (which would affect user response) are not measured or assessed by the project administrators.

User aids or equipment, such as, in user education and user participation by way of "do-it-yourself" kind of efforts are not planned or implemented in many of these projects. Such innovations, however, were practised in the early Community Development (CD) projects, in regard to rural sanitation, construction/improvement of school building, approach roads to villages, water supply, irrigation and drainage systems in the farming regions, as well as Tribal Development blocks, where village, community contribution by way of self-help labour, and other appurtenant items were induced by the provision of matching grants.

However, in the case of small\medium towns and urban infrastructure, labour participation seems to be totally absent. And many of the socially innovative participatory methods have given way to almost fee-simple contracts of the "build and sell" variety.

Under these circumstances, citizen response is also increasingly, becoming commercial, self-centred, and materialistic, (what's in it for me?) rather than that of sharing responsibilities, developmental, and evolutionary (what can we do together to improve this community?). These problems may need to be handled from two angles, namely,

(1) that of the project in regard to planning, execution, technology and control, and

(2) that of the citizen, consumer, public interest, responses of a varied nature, and alternatives available to the beneficiaries for different modes and levels of response.

Finance & human resources

Financial plans and technical plans are now made at the initiative and control of the state technical departments, such as, the Directorate of Town and Country Planning, the Directorate of Local Administration, the state utility boards of different functions, the state PWD and the like.

It may be necessary, therefore to develop professional and executive initiatives in the local municipality, in addition to the political. Such, may result in the plans made and implemented becoming less sensitive to patronage, skewed political demands, and commercial pressures, and more sensitive to the local community, its needs, resources and responses.

Financial rhythm is established by that of the state's annual plans, which are integrated within the framework of a national five year plan of development. The rhythms within and amongst of these annual plans are not regular. For example, projects sanctioned for implementation during a five-year plan may not receive funding actually for the first three years; or, they may receive some infeasible instalment to start with and may trail-off into nothing for a few years. Partial funding, and funding in fits and starts are common in these projects. The local administration has no control over these rhythms; nor, can it anticipate the allotment and make do, temporarily, with local borrowing.

Summary

The diarchy/polyarchy form of responsibilities and authority of state agencies and the local government operating in small and medium towns, has made integration difficult or impossible in the local jurisdiction. The hierarchy gravitates all authority towards the state headquarters of technical departments. Added to these are the uncertainties of financing from the state and union plans and budgets, which are centralized in the Finance Departments of the state.

While technological items and professional consultancy services are available to the municipality from the private sector, evaluating, commissioning and contracting them for local work is still carried out by the state agencies. Local technical competence and executive responsibilities are not developed, nor trusted to that extent.

Operational planning, user sensitivity, assessment of client population, and possible response mechanisms are not familiar subjects to local technical executives and state agency officials. As a result, much of these are rationalized within the operational framework of technical development projects. They are treated, merely, as political demands to be responded to by the local political leadership, and the elected councils.

In short the Municipal administration is in a bind, one way, or another, that is with a lack of funds, or with excess funds, all of a sudden.

V. STRATEGIES AND OPTIONS

Introduction

Governmental attitudes, directions and performance are at a watershed now. After some four decades of national planning and development we seem to have reached an impasse' where it seem to matter most by affecting the day to day life, and the emerging life-style aspirations of the people, namely, the local urban community.

It is not disputed that there needs to be some form of decentralization of powers, responsibilities, and means, in favour of the local government and community. However, repeated efforts in this direction, since the 1950's seem to have been defeated by stronger currents of centralization, and bureaucratic expansion in the state governments.

Newer, and continuing strategies ought to be evolved in order to strengthen the municipal organization and their efforts. These need to be addressed to problems of organization of local government, goals of the next decades/ century and aspirations of local communities, quality of personnel and other resources/means made available to local government, education of citizens in cooperation, social/ human development, concerns of public/private cooperation, processes of public design, citizen response, and innovative administration, and the like.

No singular form of decentralization may be effective in this regard. Options and alternatives need to considered in the feasible range of strategies, and choices made to suit local conditions, and phases of evolution, appropriately. Some approaches towards achieving these are suggested below.

Dimensions of strategy

Three important dimensions seem to emerge out of these case examples, as significant, strategically. These are, (1) that of inter-agency cooperation and coordination, (2) that of citizen involvement in the planning process, especially in regard to items, such as, prioritization, plan monitoring, evaluation and the development of positive response mechanisms, and (3) that of integrating the various concerns, perspectives, professional, administrative and political efforts into a policy formulation and planning process anchored in the local community and municipal government.

It is obvious that many of these goals cannot be achieved immediately. And these achievement orientations/ aspirations are inhibited presently due to the various factors discussed earlier. However, one may think in terms of the factors of finance, administration, and project/

policy planning responsibilities, and capacities; these are, presently, tied upwards into a traditionally controlled hierarchy of state departments, technical directorates, and boards. Thus, the sharing of powers and responsibilities with the local government is minimal. This sharing ought to be increased in favour of the local government. At the same time the financing of projects and other resources and means available with the local government ought to be increased, progressively and continuously.

These two directional changes would enable the local government, to improve its professional planning and administrative capabilities; this may be achieved, (a) directly by increasing the strength and quality of personnel in local government, and (b) indirectly by allotting planning and management grants to the local government in order to hire consultants who would add to the quality and range of planning and administration efforts.

Simultaneously, local government personnel, consultants, suppliers of engineering systems, citizen leaders and participants from the various segments of the community may also be trained/retrained, educated on a continuing basis through appropriate methods/modes. These may consist of (a) refresher courses, and seminars for councillors, administrators, and technical/professional staff, as well as contractors of services to the local community; (b) citizen workshops and demonstration projects to improve, participation, civic orientation, and improved modes of demand and consumption of municipal provisions and services; (c) campaigns of education and civic focus organized to increase the civic perspective of long term, ecological and life-style, safety, welfare, health concerns.

It would be necessary, too, to train and re-educate the state officials in order to achieve the above strategic changes in the local government. In addition, it would be most desirable re-educate ourselves, the trainers and other influencers of decision-making in the various governmental organizations. Periodic seminars, field visits, field workshops, and annual/semi-annual conferences in assessing approaches, techniques and innovations would also contribute to the development of an overall conceptual and research base to these strategies.

Overall, policies and plans which hitherto focussed on technical precision, norms and standards, ought to expand their scope in order to include public design in process and substance. This would help satisfy concerns of formulation, congruent to the constituency.

Secondly, the planning and other professional capabilities ought to be enlarged from the traditional project engineering blue print models, to include the abilities to perceive, analyze and incorporate citizen response and guide the same along the most beneficial lines, to the community and the individual consumer.

Thirdly, what has grown and developed as a traditional, and perfectionist administration, needs to be enlarged in attitudes and abilities into becoming an innovative administration. This would help in the formulation and operation of executive or administrative policy, to suit the anticipated responses of the citizen-consumers, and help in adjusting plans/policies to suit responses. This would increase the interaction between the dimension of public design and formulation of projects/plans, the citizen response to such plans and implementation mechanisms, and the executive/administrative modes of innovation, enforcement, and amelioration.

Options & Alternatives

Several options may be considered in regard to the processes of achieving the above, though it may appear as a case for simple and massive decentralization. These efforts have to be gradual, systematic and sure footed in order to be successful in the long-run. Besides, the traditions of a state government oriented bureaucracy of executive and technical cadres' cannot be expected to be transformed in a short span of time.

Importantly, one may think in terms of (1) Planning and implementation, (2) monitoring and evaluation, (3) financing, budgetting, and technical execution, and (4) participatory decision-making and project promotion by public private cooperation, as independent and interacting functions. These need to come together at the municipal jurisdiction as an integrated process of efforts.

The operating agencies in this regard are (a) the state government, through its executive and technical agencies, (b) the municipal legislative body, its executive and technical staff, (c) the non-governmental volunteer organizations (NGO's), and private contractors, businesses, who supply services and equipment to the municipality or in its behalf, and (d) the citizenry in its public interest role, and its consumer interest role.

The functional modes (1) to (4), operated upon by the role players (a) through (d) would give rise to a 16 cell matrix of typical functional roles. Strategically, several options may be generated and chosen out of this matrix, which may suit the conditions of one or a class of municipalities.

Selectively, we may approach decentralizing the planning and implementation functions, and place them congruent to the consistency. At the same time, the monitoring and evaluation functions may be handled independent of the local government. The state departments and technical agencies may do these effectively, commensurate with their traditional and perfectionist skills. This independent evaluation may also assist the state in its judgements regarding financial allocation, incentives and the like for local government grants-in-aid and sharing of responsibilities.

Financial resources raising is unlikely to be decentralized in the short run. Devolution of financial powers may happen faster in the case Zilla Parishads, than in the case of municipal governments in the near future, due to the traditionally strong organization of District Administration.

Participatory decision-making and project promotion roles may be anchored most appropriately in the municipal community. Formal and non-official organizations may come together in order to promote these roles. Partially, project promotion and other developmental roles may be played also by the state agencies who may assist the local community, the municipal government, as well as private businesses in this regard.

Matrix of strategic dimensions in Agencies & Functions

The functional modes	Operating Agencies (a) State Agencies	(b) Municipality	(c) NGO's & private business	(d) Citizen consumers.
(1) Planning & Implementation	Minor role	Prime role	Minor role	Associate role
(2) Monitoring & Evaluation	Prime role	Minor role	Minor role	Associate role
(3) Finance, budgetting, & tech. Execution	Associate role	Prime role	Minor role	-
(4) Participatory Decision making & Project Promotion		Associate role	Minor role	Prime role

* 'Prime role' agency will promote the activity assuming full onus.

* 'Associate role' agency/group will play the equalizer role or matching role.

* 'Minor role' agency/group will play a secondary role to assist the process.

Note : The above is an example of strategic options in decentralization process. The pattern above may represent one phase in the process. Several alternative patterns of strategy may be developed by assigning prime, associate and minor roles, to the different cells in the sixteen cell matrix. Each cell represents a combination of the operating agency's role and the functional effort needed in the local community. Notice also that the functional groups (1), (2), (3), (4) may be divided further into more specific efforts, technically, administratively and conceptually.

Summary

The goals of structural-functional decentralization are to be achieved through the enhanced performance and qualities of the local government. Ultimately, these ought to result in fulfilling the life-style items of quest in the local community in regard to the quality of the environment, and municipal services offered.

Towards this end, all forms of technical, technological, financial, administrative and planning capabilities will have to be developed in the municipal government, and in the local community, through private business, and citizen/consumer participation. Some of these may be achieved in early phases of reform, if similar functions now performed by the state-agencies are transferred, as such or as modified to the local government. This should bring about two major directional changes, by increasing the strength and quality of personnel in local government directly, and by the allotment of planning and management grants to local governments, thus, spurting such activities.

Simultaneously, educational programmes may be administered to train, refresh, a variety and hierarchy of officials, as well as, citizen/consumers and private business participants in local development efforts. Traditional administrations, characterized by precision of standards, norms, control systems and hierarchies, ought to be expanded to include innovative efforts towards induction of new initiatives, adaptation of new technologies, ways and means of bettering existing conditions.

Ultimately, the citizens and the local government ought to be able to make congruent decisions and policies, in regard to their constituencies. Thus, prime and associate roles may be played by them; the state agencies would become less overpowering, more facilitating; and confine their roles to financial and technical assistance, (grants) for improvement of technology, planning, administration, and resources, in the local government.

FOOT NOTES

[1] --- Comprehensive Development Plan Report, Bangalore Development Authority, 1986, p.21.

[2] Op.Cit. p.23.

[3] Op.Cit., p.21 and p.17.

[4] The Karnataka Act No.11 of 1963 and the Karnataka Town & Country Planning Act, 1961 provided the initial enabling powers to the Government of the state, in order to constitute and provide for "local planning areas", and "local planning authorities".
Later modifications and additions include, the Karnataka Improvement Boards Act, 1976, and subsequent amendments which enable the formation, and functioning special function agencies for development activities. See Karnataka Town & Country Planning Act, 1961, Act No.11, of 1963, Government of Karnataka, Department of Law & Parliamentary Affairs, Majestic Printers, Bangalore, 1985.

[5] Dubey, V.P. Urban Development Administration, Deep & Deep Pub., New Delhi, 1990. p.77.

[6] Ravindra Prasad, D et.al., IDSMT in Andhra Pradesh & Kerala an EValuation, for Ministry of Urban Development, GOI, New Delhi, 1991, p.299.

[7] Sinha & Ghosh, Evaluation of Low Cost Sanitation, Arnold Pub. Home, New Delhi, 1990.

[8] The Karnataka Town & Country Planning Act, actually does not include the requirements of the sewerage systems within the purview of the Overall Development Plan (ODP) or the Comprehensive Development Plan (CDP). On the other hand sewerage needs, and other measures addressed to cleanliness of swamps, the environment, etc., are listed under the provision of "Town Planning/ Improvement Schemes" and placed in the special-function category. Op.Cit. Chapter V. pp.34-36.

Note, too, that the CDP of 1983-86, which is the current one, includes extensive regulations on zoning and sub-divisions of new-layouts. However, these do not include the regulations, minimum requirements, and performance standards or specifications, in regard to, sewerage systems, disposal of sullage, waste water, solid wastes, and other pollutants. Comprehensive Development Plan Report, 1983, BDA, Chapter 10, pp.28-53.

[9] Ravindra Prasad, D. et al Op.Cit. p.299.

[10] These observations are summarized from several case-studies of towns; reported by the author and others.

[11] KAVAL Towns.....

[12] Dubey V.P. Op.Cit. pp.77-79

[13] Sinha and Ghosh, Op.Cit., Chapter I

[14] Loc.Cit., p.

[15] Loc.Cit., p.

[16] Loc.Cit., p.

[17] Loc.Cit., p.

[18] Loc.Cit., p.

[19] This town was reported upon by Davidson, Mengers and Krishnamurthy after a visit in June, 1992, in a report, "Chintamani Case-study : District Kolar", IHSP, Decentralized Training Programme, Karnataka.

In addition, I had occasion to visit,hold discussions, and assess local conditions in Chintamani, with the Deputy Commissioner & officials of the Block during August/September 1992, and again with Mr.Mengers of IHSP in December 1992. This report, above, is a result of both.

[20] Projects in Tamil Nadu, case examples, left the selling of PFL concept to the citizens, completely, to the NGO's operating in the project.

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