

MANAGEMENT OF SMALL RIVERS AFTER IMPLEMENTING PANCHYATI RAJ ACT - KERALA SCENARIO

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ABSTRACT

River is a critical common property resource for both existence and sustenance of life on earth. Sharing of resources, be it water, sand or fish there had been disputes from time immemorial. Rivers flow along geographically aligned courses in a watershed whereas the political boundaries are drawn on paper. If gravity is the driving force for rivers to flow, in many cases, it is the gravity of situation that marks political boundaries of States, Districts etc.

Leaving aside the river-disputes among countries around the world and among States within countries, taking the case of a State like Kerala, it can be seen that things are identical even at grassroots levels, literally. This is more evident after implementing *Panchayati Raj Act* in the State. In Kerala many streams flow as tributaries to the main rivers. Often, these small rivers are boundaries of *panchayats*. Even Wards in a *grampanchayat* are separated by rivulets or streams.

This paper compares the administrative and technical procedures for taking up river interventions prior to and after implementing the Act. It tries to highlight the absence of level playing field when departments and LSG institutions take up works in rivers, especially small rivers. Kerala Protection of River Banks and Regulation of Removal of Sand Act, 2001 stipulates a share of revenue from sale of sand for the *grampanchayat* or municipal corporation. The share is equal for the LSG institution and the revenue department. The portion of revenue with Revenue Department is River Management Fund which is solely used for river protection works whereas that allotted to LSGs need not be exclusively for river related works.

Many departments with different style of functioning and procedures manage rivers. This creates lot of confusion and ends up in duplication of efforts, disputes between departments etc. Integrated approach in implementing a development work cannot be achieved until there is uniform procedure for managing common property resource like rivers.

This paper tries to suggest changes necessary in the areas of *control, investigation, procedures, evaluation, maintenance*, and toss a question *on the need of specialisation in various fields of engineering* in the context of managing small rivers in the decentralised planning/governing process in Kerala.

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KERALA SCENARIO

Kerala, though a slow starter in implementing Panchayati Raj Act, has been moving leaps and bounds when it started it. The implementation commenced in the State in 1996. The three-tier system consisting of District, Block and Gram Panchayats have established their dynamic presence in the State's polity.

Kerala has forty-one west flowing rivers. In addition to these rivers innumerable streams flows in the State as tributaries to these rivers. As the State's land width is comparatively small, the rivers discharge into sea within forty eight hours from the western ghats, from where most of them originate. The two bountiful monsoons create havoc as the rivers flow with heavy storm water. As a fall out of the use pattern change in the catchment, deforestation, and conversion of agricultural land in the midlands and plains into residential plots, the flow behaviour of the rivers in monsoon season has become unpredictable. Dumping of wastes into natural streams, clogging drainage channel by plastic wastes also contribute their share to this menace. The entry of *Panchayati Raj* institutions into the field of managing rivers make the situation more complex.

The small rivers have different names at different locations. These several local names is the inherent way by which people show that the river belongs to them. The river that flows along a place is so dear to the inhabitants of that area because of the direct and indirect benefits they enjoy due to the river. Hence they assign a local name to it.

The Irrigation Department which was solely responsible for protection and/or intervention works in rivers. But now that the LSG institutions can also manage the rivers in their boundaries, the management process has become complex. As a fall out of implementing *Panchayati Raj* Act, river- the most vital common property resource- is politically managed now.

It is interesting to note that previously the government departments were at the receiving end of criticism by political leaders that one department does not know what the other department does. The attitude of the departments was not conducive to the logical and synergic implementation of integrated projects – as they acted as separate compartments. It was partly correct. Now, in the case of small rivers the situation is such that a number of departments concentrate on managing rivers- Irrigation Department for constructing water

harnessing structures for irrigation purposes, Water Authority with intake structures for drinking water, *Panchayati Raj* Institutions with sand mining and *kadavu* related activities, and sometimes directly venturing into constructing interventions, Revenue Department for collection of revenue from sale of sand and for survey works, Geology Department for cess, and the Police for enforcement. The flowing river does not know that so many departments get aligned on its banks for managing it! Thus, in managing rivers the departmental *compartmentalisation* turns to *wagon tragedy!*

PROCEDURE FOR TAKING UP RIVER INTERVENTIONS

▪ PRIOR TO IMPLEMENTING PANCHAYATIRAJ ACT

In the context of Kerala, previously, it was irrigation department which constructed water-harnessing structures across rivers. For other departments to take up works across rivers, consensus is made on the location and type of structure by a high-level technical committee. A lot of time is spent on investigation, design, and discussion before an intervention is built. This procedure ensured sufficient quantity of water for any new project designed to derive water from a river. It also ensured status quo in quantity requirement for other purposes which are already installed. Even for individual farmers to pump water from rivers, a certificate to the effect that the pumping from the river would not hamper the functioning of Lift Irrigation projects installed along the banks of the river is necessary.

Prerequisites for Formulating a Project

- **Resolution**

The *panchayats* appealed to irrigation department to take up intervention works on river and its tributary in their *panchayats*. The appeal in the form of a resolution from the *panchayat* board was one of the important documents, and essential prerequisites without which no minor irrigation works could be taken up.

- **Ayacut**

Any structure constructed for irrigation purpose shall have an *ayacut* it commands. The structures are classified into class I, Class II depending on whether the *ayacut* area commanded by the structure is more than 50 hectares or between 15 and 50 hectares. *Structures commanding less than 15 ha can be constructed by local bodies.*

Irrigation offices keep the documented records of the *ayacut* area received from the village office. After commissioning a project, joint verification of *ayacut* is done by the

irrigation engineer and the revenue official to assess the exact land extent in the *ayacut* benefitted by the structure. This procedure, conducted during cropping season ensured just assessment of areas which required payment of cess. Now there is no cess for irrigation water.

Table 1 *Ayacut* area details of Minor Irrigation Structures in Kozhikode Dt¹

Category	Number of Structures	Area in hectares
Class I	54	4007.32
Class II	257	5128.51
Total		9135.83

- ***Benefit-Cost(B-C) Ratio***

The *ayacut* area and the incremental production from that *ayacut* area after commissioning a project decide the B-C ratio. The ratio should be more than or equal to 1.5 to get a project sanctioned. In addition to B-C ratio requirement, department specifies *cost per hectare* to facilitate easy screening of projects.

Administrative and Technical Sanction Process

Irrigation Design and Research Board (IDRB) is a separate wing in Irrigation department exclusively for designing hydraulic structures. A Chief Engineer heads this wing with many engineers, experienced in design of hydraulic structures under him/her at various levels in IDRB. Minor Irrigation Investigation wing used to take up detailed field investigation works including conducting exploratory boring along the proposed alignment of an intervention. Catchment studies, seasonal discharge studies, collection of local information from all stake holders, observations on similar structures in the vicinity etc are also done. Hydrology wing maintains rain gauges and documents flow measurements through river gauges. Data collected through investigations were transferred to IDRB to proceed with the design.

Power to accord Administrative and Technical sanctions are assigned to different levels of engineers or with government, based on the estimate amount. The works are carried out at section and subdivision level.

¹ Source: *Minor Irrigation Division, Kozhikode; Details up to March,2009*

PROCEDURE FOR TAKING UP RIVER INTERVENTIONS

▪ AFTER IMPLEMENTING PANCHAYATHIRAJ ACT

In Kerala, the Decentralised Planning or People's Planning Campaign commenced in 1996. The three tiers of *panchayaths* are district, block and *Grama Panchayaths*. The *District Panchayath* having geographical area and limits same as that of the revenue district would comprise of many *Block panchayaths*. The block *panchayath* would comprise of many *grama panchayaths*. District and block have no land under their control and hence no own revenue. Their sources of income are plan funds from State and through centrally sponsored schemes from Centre. These two *panchayaths* function more in a managerial/administrative nature. Geographical boundaries in many cases are rivers or thodus.

The block and district *panchayaths* get separate funds, larger than that for a single *panchayath*, and the elected representatives should utilise the fund for developmental and welfare projects in the constituent *panchayaths*. The existing community blocks as part of the planning exercise in our country, have excellent infrastructures such as permanent buildings, and vehicles. Various projects formulated by *grama panchayaths* and block *panchayath* get the nod for submitting it to District Planning Committee (DPC) from Block Level Technical Advisory Group (BLTAG). BLTAG vets the projects of *grama panchayaths* and that of the block *panchayath* to ensure minimum requirements for a project to be taken up. Block *Panchayath* also convenes the Block Level Technical Committee.

The Chairman of the DPC is the President of the *Diistrict Panchayath* and the District Collector is the convener. As in the case of *Block panchayaths*, the *District Panchayath* also has advisory and technical committees at district level. All development works are carried out through section offices headed by *Grama Panchayath* engineer.

Since any type of intervention across a river involves two banks, usually in different *grama panchayaths*, higher level *panchayaths* such as Block or District *panchayath* takes up such works. When it connects two *panchayaths* the *block panchayath* takes up the work and when it is between two block *panchayaths* the *district panchayath*. As the estimate for an intervention across river would be more than that a *grama panchayath* could afford to singlehandedly, it is often the block or *district panchayath* which takes the initiative to formulate project of this type.

Prerequisites for Formulating a Project

- ***Administrative Sanction***

The advantage of *panchayaths* is that the power vested with the Board to accord Administrative Sanctions is unlimited! So, the local bodies would proceed with work with whatever amount they have at hand at the time of commencement of work on the hope that the work can be carried out as a spill over work. It is stipulated that the project should be identified through the gramasabhas and reviewed by working groups.

- ***Approval of DPC***

The projects of *panchayaths* and block are scrutinised by the BLTAG at block level before submitting to DPC. The DPC, after approving projects sends them back to grama/block *panchayaths* concerned.

- ***Technical Sanction***

Detailed estimates of projects approved by DPC are submitted before BLTC for according Technical Sanction.

The *panchayath* board approves the projects and the works are then carried out at *grama* *panchayath* level through *panchayath* engineer either through tender or through beneficiary committees as decided by the *panchayath* board. The projects of block *panchayath* are carried out by the *panchayath* engineer concerned in whose jurisdiction the majority area of a project is.

SUGGESTIONS

Involvement of LSGIs in managing rivers necessitates changes in the existing procedures of managing the rivers. The process of management of rivers prior to and after implementing the *Panchayati Raj* Act is analysed comparatively and suggestions made on various subheads.

River Authority

River demands management of its resources in such a way that a master plan should be there to take up development works. All the streams and rivulets that join the river should also be part of this plan in such a way that no unauthorised development work in the grid shall be allowed. Inland water transport is all set to develop and regain its lost glory. Many rivers and canals are assigned with the status of National and State Waterways. Hence any intervention

across the waterway, not conforming to the standard specifications of IWT will have to be demolished. It can be seen that lot of co-ordination is necessary for river development works and hence a decision making authority has become a necessity. The authority should be entrusted with the task of formulation of procedures towards achieving this objective.

Investigation

No construction work shall be allowed across the river without proper investigation and design. For this, effective utilisation of existing infrastructure such as IDRBI (Irrigation Design and Research Board) should be made use of. For smaller structures, irrigation department can accord sanction keeping in view the master plan of river system.

Uniform Procedure

In decentralised planning, the action is triggered by according AS for a work. Lack of co-ordination with other departments is at the peak as the committee to accord Technical Sanction for a river intervention work does not have a master plan to adhere to. This happens at block level where the LSG engineers take up the responsibility of according Technical Sanction. Though not existing now, DRDA was one such body which would take up any sort of work as the agency was provided with funds through central government schemes. This shows lack of a master plan for river development works. What is the use of constructing two interventions at a river mouth to prevent salinity intrusion into the river? The ease with which a project gets Administrative Sanction is of great concern because the local bodies may be implementing critical works at greater speeds than the departments which carry out mandatory and technical requirements such as investigation etc.

When department takes up a work, **cost per hectare amount** and **B-C ratio** requirements should be complied with whereas if it is local bodies these are not necessary. The *panchayaths* have asset registers where the name of irrigation structures would be there but not the extent of *ayacut*! Before according AS the *ayacut* area should be furnished in the form of map and beneficiary-list. Hence there should be *procedural homogeneity*. By enforcing the rule of limiting the command area of irrigation structures to 15 ha, which is the allowed extent for *panchayaths* to take up as per handbooks in force, duplication and thereby wasting of efforts can be averted. Hasty administrative sanctions without proper investigation for river intervention works should not be allowed

Evaluation

In the case of evaluation of a project, expenditure made during a financial year is taken as the index. Funds utilised in a year being the only criteria to get funds for next year, the *panchayath* boards would be making all out efforts to get more works done or to make more expenditure during a financial year. So the *Panchayath Board* would show undue haste to take up works so that they are not penalised in the next year for less quantum of work in the preceding year. Often it is realised towards the end of financial year and the sanctioning authority and the engineers concerned would yield under pressure from politicians. Hasty decisions to take up works, without investigations result in disasters. Financial progress being the prime index creates lot of tension and confusion in implementing officers.

Revenue from rivers

The sale of sand mined from rivers brings in revenue. Kerala Protection of River Banks and Regulation of Removal of Sand Act, 2001 earmarks a portion of the fund for protection of rivers.

The fund maintained by the district collector from which all expenses towards management of the *kadavu* or river bank shall be met is called **River Management Fund**. The local bodies contribute to the fund by remitting fifty percent of revenue collected by them from sale of sand in their *panchayath*. This would exclude levy paid and expenses for sand collection. To keep the bio-physical environment of the river banks, the district expert committee can propose a River Bank Development Plan which should be consistent with the development, if any, undertaken by the Irrigation Department. The local bodies can protect the banks of the river in their area and take up improvement works in *kadavus* with the amount from RMF. In many districts the fund is expended through Irrigation Department.

It can be seen that though the share of LSGI and the RMF is the same, the RMF is expended for river related works whereas the other share is not used exclusively for this purpose. It is essential that the share of LSGI should also be made use for river protection works.

Checkdams

The word checkdam or *thatayana* in the vernacular is confusing as it can be one of the many types of interventions across a river. It can assume any shape-can be a vented weir, non-vented weir, a vented cross bar and even a subsurface structure. Checkdam committee

comprising of high level engineers from Irrigation department and Water Authority was there previously to approve the location of a checkdam. A number of sittings and site visits were necessary before a location gets the approval to proceed with investigation works! The presence of engineers from Water Authority was to make sure that the intake wells of their water supply projects are u/s side of the proposed intervention or they can plan intake wells for future projects u/s side of the checkdam. Thus it had an element of master-planning in it. But what happens quite often is unimaginable. At the same location without any investigation and without any competent design, another department constructs a checkdam. Quite often it leads to duplication of preparatory works. By the time, boring, survey, investigation works, and design from IDR is completed, some structure might have come up exactly at the place or nearer to it thanks to the hasty execution by LSGD without proper investigation. This is a situation which has to be done away with for the ultimate benefit of the society.

District Level Coordination

All the works in a district should get the approval of DPC before it is carried out. To have a comprehensive and integrated approach towards development, there should be a master plan considering district as a unit. It is only the LSG works that requires DPC approval. It, perhaps, is an instance of centralisation in the decentralisation process. Fixing of limits for funds under sectors like productive, service, and infrastructure, unmindful of the development needs of a *panchayat* is another sign of centralisation. When *panchayats* take up river intervention works, attachment is shown to the process manifested by inauguration of work etc, whereas the departmental shows detachment, which is the desired attitude. For department, the two banks are just banks of a river and for geopolitically divided *panchayats* the word bank has more abstract synonyms!

Specialisation – Is it not necessary?

All engineering works in *panchayats* are carried out by the engineering wing in Local self Government Department (LSGD) which is formed by deploying engineering personnel from various departments such as Irrigation, PWD, DRDA and Municipal Common Service and the existing *panchayat* engineering wing. The concept that an engineer can carry out any type of civil work raises some questions on specialisation. In the case of medical care and legal services minute divisions are reality. People have recognised the change and have aligned with it as it is found beneficial to the society. There existed such delineation/specialisation among

practising engineers as well in Kerala with separate wings for buildings, roads, bridges, irrigation, and water supply works. Specialisation does exist even now in PWD and Irrigation department whereas as a fallout of decentralised planning and implementation, the *panchayath* engineer is bound to carry out all sorts of engineering works be it buildings, roads, water supply, irrigation, and the social/rural engineering related to NREGP. A highway engineer working in National Highway wing shall be well versed with the technical and procedural requirements of highway construction, and an irrigation engineer on hydraulic and coastal structures. They acquire the expertise by adding experience day by day in a particular field.

Maintenance

One of the main factors contributing to the durability of a river structure is timely maintenance. During rains no maintenance work would be possible in rivers and streams. Hence routine maintenance works are necessary before southwest monsoon. The critical areas are the locks or gates in the case of regulators and wooden shutters or planks in the case of vented cross bar. The gates should be maintained to ensure easy operation during an emergency situation like flash floods. Annual maintenance works are taken up by Irrigation Department on these types of structures. Funds are allocated through specific head of accounts for maintenance works. These works are carried out systematically, annually. Before the onset of monsoon, the necessary maintenance works shall be completed and engineers would keep vigil of the situation during monsoons. Structure-specific or/and river-specific experience also essential for the proper operation and maintenance of hydraulic structures. It is especially so in the case of salinity prevention structures (SWEs) as untimely releasing of shutters may cause entry of salinity into fresh water zone. In the case of structures constructed by LSG institutions there is no systematic procedure to do the repair/maintenance works.

Conclusion

It can be seen that there are visible changes in the process of management of small rivers after the decentralised governance gained momentum in Kerala. Rivers-the most important common property resource on earth should not be spoilt with excessive exploitation and haphazard planning. There should be procedural homogeneity, integrated approach, higher degree of coordination among departments involved in managing small rivers. Rivers should be properly managed, optimally exploited, and cleanly handed over to the future generation.

References:

Implementation Handbooks for Decentralised Implementation
Kerala Protection of River Banks and Regulation of Removal of Sand Act, 2001
Ayacut Register, Minor Irrigation, Kozhikode Dt.

Source:

Discussion with department officials, local people, elected members of panchayat, NGOs etc