

PRIVATE PARTICIPATION IN WATER SECTOR

By

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ABSTRACT

With increasing population and limited per capita water availability, there is a need to develop and manage the water resources of India in a more efficient, cost effective and time bound manner. Private participation in water sector should be encouraged due to limited financial capacity of the government. Opinions of several responsible bodies regarding private participation have been discussed. Needs, benefits and constraints of private participation have been critically examined. Advantages of public-private partnership (PPP) in areas related to water have been outlined. Role of consultancy services in water sector – both public and private - in bridging the gap between private initiative and public responsibility have been emphasized.

Key Words : Water, management, private sector, ppp, consultancy,

INTRODUCTION

With the glooming scenario prevailing in water sector, largely controlled by the central and state governments, it is extremely important to critically examine the role that private sector can play in the development and management of the vast water resources of our country. Before discussing the benefits and drawbacks of private participation in water sector, it is worthwhile to summarize the opinions of some responsible bodies in regard to water management in India..

National water Policy of the Ministry of Water Resources

Private sector participation has been encouraged by the ministry of water resources (MOWR), Govt. of India. In section 12 and 13 of the national water policy (2002), It is stated, "private sector participation in planning, development and management of water resources may help in introducing innovative ideas, generating financial resources and introducing corporate management and improving service efficiency and accountability to users."

Water Summit 2004

In the water summit-2004 on "Public-Private Partnership (PPP) for water conservation and management" organized jointly by FICCI (2004) and MOWR, the then Hon. minister of water resources and other eminent persons - both from public and private organizations - spoke about the desirability of PPP in water sector. Some salient points which emerged out of the conference are:

- Global experience suggests that inadequate policy coupled with institutional and managerial shortcomings has led to failure in provision of adequate basic services by public sector.
- PPP in financing, construction and operation of infrastructure facilities has emerged as a new paradigm in the provision of civic services including water supply and sanitation.
- The objective of PPP, as opposed to privatization, is to improve the performance within the existing realm of public sector responsibility of ensuring that the citizens enjoy clean water at affordable costs for drinking, irrigation, industrial and other uses.
- PPP arrangement, especially in a developing country like India, is very important to strengthen the role of consumers and local utility through

partnership with community organisations and NGOs, particularly in areas like internal distribution of water, O&M, metering and billing, collection of revenues, etc.

- Privatization and differential water rating system will bring relief to poor since their consumption is less and they will have to pay less. This has been demonstrated successfully after privatization of power sector. In fact, as against common perception, PPP will lead to improved supply and services to the poor.

Planning Commission Report on Irrigation Management

The Planning Commission, Govt. of India, in section VIII (infrastructure) of its 10th five-year plan (2002-07) document, mentioned about the various issues involved in irrigation sector which consumes about 80% of the utilizable water resources of India. The plan document critically examines the various aspects related to command area development program (CADP), flood management and flood protection, drinking water supply and sanitation, surface and ground water pollution, water logging and water use efficiency, current pricing structure for irrigation water, Institutional and legal framework and *private sector participation*.

The commission recommended involvement of NGOs in setting up of water users association (WUA) for (i) creating interest and awareness amongst farmers, (ii) undertaking action research program (iii) providing services of experts, social scientists and experienced engineers to the Govt. (iv) preparing manuals needed for the training of farmers for participatory irrigation management (PIM) (v) undertaking joint inspections etc.

As per the commission report, a sum of Rs.7,097.48 crore was spent by the Govt. till 2000-2001 in major, medium and minor irrigation schemes under CADP for

development of field channels and drains, land leveling and land shaping, reclamation of waterlogged areas, Introduction of rotational delivery of irrigation water, realignment of field boundaries and consolidation of land holdings, development of ground water for irrigation, development and management of main and intermediate drains. The commission recommended financial support to the NGOs/WUAS by the Govt. through the various Govt. programs e.g. AIBP, NREGP, JRP etc. A sum of Rs.4,962.5 crores was earmarked for the 10th plan period..

The planning commission also examined various issues related to private participation in irrigation sector. The commission observed, “Despite massive investments and impressive achievements, a lot more investment is needed to fully harness the available potential. The unit cost of irrigation development is nearly 1 lakh per ha of CCA. This is so high that even recovery of interest on capital from the service is difficult, unlike many other services which are able to pay for themselves with or without some incentives or subsidies. Due to decreasing investments in the irrigation sector, it may be difficult to complete even the ongoing projects. It is desirable to mobilize financial resources from the private sector which will ensure better irrigation efficiency and better service.”

As per the report of a working committee of experts, appointed by the commission, the need for private sector participation in irrigation sector arises due to the following facts:

- Because of its overall resource crunch, govt. alone can not bear the responsibility of providing food security for the rising population (from 1100 million in 2008 to about 1500 million in 2050) by means of assured water supply essentially required for improving agricultural productivity. Private sector participation will definitely bring relief to the govt.

- The cost of development and proper utilization of irrigation water has been increased more than two times, because of the Govt. decision to revise the policy of distribution of water from the earlier norm of 200-500 ha blocks to blocks of 5 -8 ha for better control and management of irrigation water.
- Because of rising pressure from environment lobby supported by NGOs and international financing bodies, the project costs have increased further to cover costs of rehabilitation of project affected people, land acquisition, control of water pollution, protection of environment, preservation of eco-systems etc.
- Govt. allocation is inadequate to meet the expenditures even for the ongoing projects resulting in spillover of the projects with consequent time and cost over-run. In many a cases, the entire investments made by the Govt. are lying idle due to their incompleteness.
- In case of completed projects too, fund allocation is extremely inadequate to meet the expenditures of O&M, operation, modernization etc resulting in poor irrigation efficiency (about 35% in India compared to about 75% in Japan and 55% in China) and huge wastage of water in transportation and field application.
- Govt. allocation in irrigation sector has reduced over the years because of the increasing demand of fund for the development of other infrastructures.
- Privatization is needed to bring in professional management skills and to provide better and efficient services, introduce latest technology, fast development and optimal utilization of the limited water resources..

Observations of a High Power Committee Constituted by Govt. of India

A high power committee , appointed by the Govt. of India under the chairmanship of Sh. Rangayya Naidu, (former union minister of state for water resources), however, recommended private participation in water for some pilot projects on a selective basis. The committee pointed out the following constraints of private participation:

(i)Water sector development has distinct and far reaching socio-economic and political implications which need very thorough study to avoid future unforeseen consequences.

(ii)There is a lot of risks involved in water sector and most of the private organizations are reluctant to invest in water sector unless these risks are clearly understood.

(iii) It is almost impossible for private sector to address complicated problems like land acquisition, relief and rehabilitation, conflicts and disputes in water allocation.

(iv) Because of the prevailing practice of supplying irrigation water almost free of cost by the Govt., farmers may not be readily agreeable to recognize irrigation as a commercial service

(v)There are a large number of stake holders in water sector due to varying uses. of water flowing in the same channel/duct..

(vii) Private investors are generally interested in undertaking only such works which give a quick return in a short period.

(vii) Unlike roads, power,health etc where there are legal and institutional framework for private participation, there is no such guidelines for private sector participation in water sector at present.

Considering the above constraints, the committee recommended private contribution in major and medium ongoing irrigation projects up to a maximum of 20% of the total costs of the main and branch canals and 50% of distribution cost at VSA level. For

such ongoing projects which are lingering and the govt. investments are lying idle without any return, the committee suggested private investment to the extent of 20% of the total cost of the project for early completion and immediate return.

For existing and completed projects, the committee recommended formation of irrigation companies/co-operatives/water users associations on BOLT (borrow, operate, lease and transfer) basis. The committee suggested 12 important guidelines for the success of the scheme and recommended that every state should select some pilot projects (with cost ranging between 50 to 200 crores) for private funding under the following conditions:

- Govt. must exercise its full control as regulator- financial and environmental
- Private participation should be encouraged to invest only in limited areas like O&M, operation, metering, billing, collection of revenue etc at farm level.
- Suitable institutional and legal framework has to be developed to control exploitive tendency and excessive profiteering by the private companies.
- Govt. will be socially and constitutionally responsible for resolving disputes/conflicts between private agencies and other stake holders and for the protection of farmers' rights on land and water.
- Similar to power sector, a differential pricing mechanism will be developed to ensure adequate water supply to poor and marginal farmers and those who are socially deprived,
- Water conservation and environment protection will be given due regard.
- The basic objective of private participation in water sector is to increase agricultural productivity through assured supply of water in right quantity,

at right time and at right frequency. If the above objective of private sector participation is not fulfilled after a reasonable period of time, the Govt. will have the right to cancel the agreement.

Views of Indian National Academy of Engineering

Indian National Academy of Engineering (INAE-2008) organized a seminar on 'Water Resources Management – Role of Water Sector in India', during 21 – 22 Feb., 2008 at IIT, Delhi. The conference was sponsored by the Ministry of Water Resources, Govt. of India, National Hydroelectric Power Corporation (NHPC)., Jindal Power Ltd. and Consulting Engineering Services (India) Pvt. Ltd. INAE invited about 150 top water resources engineers and research scientists from all over the country belonging to both public and private sectors to deliberate on the subject in eight different sessions where 8 theme papers and 22 response papers were presented by eminent personalities in water sector. After every session, there was in-depth floor discussions by the experts.

Details of the papers are available in the proceeding published by INAE (2008). Out of the several recommendations made by the experts in the concluding session of the 2-day seminar, one important recommendation is regarding desirability of public-private- partnership (PPP) in water sector for efficient .management of water

NEED FOR PRIVATIZATION

From the above discussions, it is apparent that there is a necessity of private participation in water sector. Some of the principal reasons for which limited private participation will be desirable are summarized below

(i)With its limited financial resources, govt. alone can not bear the responsibility to guarantee water supply to meet the increasing demand of water for irrigation and other uses.

(ii) To partially meet the excessive cost of development of water resources of the country (Iyer1989).

(iii) To achieve efficient management of water with a view to reduce losses by improving water use efficiency (Mazumder,2002).

(iv) In many a projects, govt. departments have failed to ensure timely supply of water due to lack of proper co-ordination between the govt owning water. and the farmers making use of water.

(v) There is a tremendous cost over run and time over-run in almost all major and medium projects where extensive irrigation of a vast command is envisaged by the govt. with very little control at farm level

(vi).There is hardly any maintenance of completed projects principally due to very poor cost recovery. The existing water rate is so low that only about 15% of O&M costs (as against 80% during British period) can now be met from the irrigation water revenue (Mohile, 2000).

(vii).Large establishments created by the govt. .for water resources projects remain virtually idle after the completion of the projects. Unlike private owners, govt. can not suddenly terminate or divert the services of such persons who are unproductive and lie mostly idle.

(viii) Govt. schemes like CADP, CADM, WALMI etc. have not been found to be successful due to their bureaucratic set up and high establishment costs.

BENEFITS OF PRIVATE SECTOR PARTICIPATION

Various benefits which can be derived from private participation are :

- Accelerating development and efficient utilization of water resources.
- Cost effective solution, higher productivity, accelerated delivery, customer focused innovative solution, skill development, value addition, more

employment opportunity, capacity improvement, technology up-gradation and better management of resources and manpower.

- Unlike govt. departments, pay, perks and other incentives in a private organization are determined by quality, capability and productivity of an employee.
- Due to keen competition amongst the private organizations, private sector has an inherent tendency to improve and excel which is absent in govt. sector enjoying monopoly in water sector at present.
- Private sectors have better access to financial institutions/investors, as they return the loan with interest in time which in turn result in timely completion of the projects through improved management for overall economic gain.
- Capital built up by private investors are usually re-invested for capacity building which will help not only in the development of water resources but also other water related areas e.g. pollution control, water conservation, recycling of waste water etc.
- Private participation will help in introducing the principle 'pay for use, misuse and abuse of water'- preventing wastage and proper use of water.
- Private organizations will have better interaction with NGOs, WUA, farmers' associations, pani-panchayats and other local bodies/communities who have deep knowledge in the local problems and utilities - essentially needed to resolve disputes/conflicts.

CONSTRAINTS OF PRIVATIZATION

Even though there are a number of benefits of private participation in water sector, there are several constraints too, as already mentioned in the report of the high

power committee. Water is far more basic than any other commodity. Control and ownership of water is a very sensitive issue. Private companies will be interested in investment only when they own it and sell it to realize costs from consumers. Unlike other commodities which can be supplied as per demand, there is a lot of uncertainty and risk in water supply due to unpredictable nature of rainfall which is the principal source of water in India – both surface and sub-surface. Unless the risk involved is shared by the Govt. by introducing schemes like crop insurance, private sector may not at all be willing to invest. No guarantee of water supply, as and when needed, can be given by a private body unless Govt. provides for adequate storage, diversion, transportation and distribution systems - all of which require very large investments. Moreover, benefits from water come after a long time after investment. Most of the private organizations want a quick return of their investment, which is not possible in water sector, especially in major and medium river-valley projects. Except a few, most of the private organizations in India are accustomed to perform only routine type jobs in a haste. They are reluctant to invest enough money and time for quality up-gradation of the employee (Mazumder, 2008). R&D, which act as nucleus in all developmental activities to acquire a new height and capability for solving complex and challenging problems of the society (including water), is usually not paid due attention by private bodies, except a few. Water resources development projects involve land acquisition, relief and rehabilitation of project affected people, resolution of intra-state and interstate disputes, complex problems of distribution of water to large numbers of farmers and share croppers. All private companies may not be willing to resolve these complex issues, especially when a large numbers of NGOs, political parties, environmentalists, media persons and social workers are there to protect public interests.

PUBLIC- PRIVATE PARTNERSHIP (PPP) IN WATER SECTOR

PPP is a mode of implementing government programs/schemes e.g. Bharat Nirman,(2007), REGP, PMGSY etc. in partnership with private initiative through corporate bodies, WUAs, NGOs, co-operatives, self help groups, individual partnership farms, voluntary organizations, community development centers etc. Under the existing conditions, Govt. can not give legal ownership right and its regulatory capacity of water to the private sector due to several socio-economic and political reasons. The private sector, on the other hand, may not be interested to make any large scale investments in water development projects due to very high cost, long gestation period, uncertainty and risks involved.

PPP is a middle path solution - a joint venture of public and private sector - where each partner brings inputs like finance, technology and management practices. Together they work for achieving a common goal and in doing so share the risks and benefits jointly. PPP enables the government to retain a better control on the service than what would be possible without government's involvement. Because of the sensitivity associated with water, PPP schemes in water sector, however, are much more complex compared to other sectors.

PPP is most suitable in the development, management, conservation and preservation of small water bodies like springs and wells, tanks and ponds, nallas and small streams, drainages etc. Vasimalai (2004), executive director, DHAN foundation, has recommended the following program areas of PPP in small/micro projects for preservation of water

(i) Water literacy for all stake holders

(ii) Data base creation for conservation of water bodies and for water watch

- (iii) Organising communities around water bodies for pollution control and sustainability
- (iv) Promotion of water users associations for water management and water movement
- (v) Corporate responsibility for building social capital, endowment support and renovation
- (vi) Monitoring water quality by people based 'water watch' laboratories
- (vii) Promotion of water parks for preservation of fishes and animals, plantations etc
- (viii) Aesthetic beautification of all water bodies for health resorts, tourism and recreation
- (ix) Creation of new water bodies e.g. farm ponds, service tanks, check dams etc.
- (x) Judicious use of ground water and recharging ground water by rain water harvesting
- (xi) Prevention of water pollution by industrial wastes, urban drains & sewages, pesticides etc.
- (xii) Establishing 'Pani Pachayats' to resolve water disputes and conflicts
- (xiii) Encouraging 'Phylanthropy' including 'Shramdan' for rehabilitation, creation and management of water bodies
- (xiv) Support for water based livelihood
- (xv) Revisiting existing legal frameworks for evolving contemporary water laws, water policies, water rights, water preservation, water pollution, unauthorized encroachment etc.

Details about the different models of PPP, their relative merits and demerits etc are available in the papers by Nadeem Khalil (2004) and Chetan Pandit(2004) In his paper on "Public-Private partnership in Water Management" Sh. Deepak Dasgupta

(2004), former chairman NHAI, narrated his experience of success of PPP in road sector and has recommended PPP for water sector also.

During the recent seminar on 'water resources management' organised by INAE, some expert member suggested that 10% tax on "cold drinks and bottled mineral water" may be levied for generating revenue (like "toll tax" in the road sector) to make PPP successful. However, suitable legislative measures will be needed for transfer of such revenues to subsidize irrigation sector.

PPP has been successful in road sector, in health sector, in the development of urban infrastructures, urban water supply and sanitation, hydro-power development, PIM in agriculture, water and waste water treatment. etc. Financial support is available from Govt. as well as other financial institutions like LIC, HUDCO, HDFC, UTI, ICICI, NAABARD etc. at national level and ADB, USAID, OECF, KfW etc. at international level. There are a number of stories of both success as well as failure of PPP in India and abroad. A study of the failures indicate that fulfillment of certain essential conditions is necessary for the success of PPP.

PPP has not been very successful in the water supply and sanitation projects in India. In the irrigation sector, however, the private participation at present, is limited to distribution of canal water through water users association (WUA) beyond canal outlets, mini and micro- irrigation schemes, conservation of water, water harvesting etc. Some of the success stories of PPP in water sector are (i) Tirupur water supply & distribution in Tamilnadu (ii) Chennai metropolitan water supply and sanitation (iii) DBOT contract in Sonia Vihar, Delhi (iv) Vishakapatnam industrial water supply (v) Jain irrigation systems (vi) Water conservation works by Dhan (Development Humane Action) foundation etc.

ROLE OF CONSULTANTS / CONSULTANCY IN WATER SECTOR

Consultants can play a very significant role in the water sector in bridging the gap between private initiative and public responsibility and in allaying the fears of both the government and the private bodies. Development of consultancy profession in India has been quite significant during the last few decades. Consultancy Development Center (CDC) under the Department of Scientific and Industrial Research (DSIR) of the Ministry of Science & Technology, Govt. of India, Engineering Council of India (ECI) Consulting Engineers Association of India (CEAI) etc. have prepared a data base of consultants/consultancy firms - both public sector undertakings and private organizations - covering areas like agriculture and rural development, banking and finance, construction and construction management, health and education etc. In the water sector, there are both public undertakings (e.g. NHPC, WAPCOS, NPCC, EIL, EPIL, MECON etc.) and private consultants (e.g. J P.Associates, TCS, L&T, CES, DHI, ICT, SPAN, SMEC, SWI, HALCROW, SVES Engg. Services, Aquagreen Engineering Management etc) who offer consultancy services in water sector in India and abroad. Consultants face steep competition amongst themselves for winning projects by projecting bio-data of their experts who act as key persons in the various disciplines to prove their capability and worthiness. They train their engineers to efficiently perform the various jobs assigned to them by the team leaders and specialists to complete the project in a time bound, cost effective and efficient manner to the satisfaction of their clients. The project reports prepared by the consultants are also subject to scrutiny by other consultants in the area. Consultancy help in value addition, quality control, timely completion of projects in a cost effective manner. To establish their credibility, they help in identification and cross fertilization of best practices, development of best strategy, analytical techniques and soft wares, technology up gradation, introducing

innovative ideas, application of latest R&D and best management practices. Many a times, a consultant associates with other consultants of repute from India and abroad or outsource a part of the job where they lack in necessary expertise and experience.

Consultants are very effective in the allocation and best utilization of available resources by providing specialist services for a limited period without obligation for permanent appointment. Knowledge transfer and training form an important aspect of consultancy. They also offer independent and impartial advice to clients on most suitable and cost effective methodology and solution to satisfy cliental need and interest. Consultancy firms add value to the projects by engaging well qualified and competent professionals to monitor and evaluate projects, enabling the client to deliver the goods to the public to their satisfaction. They provide expertise to the clients by solving many technical, economic, legal, managerial, communicative problems (or any combination of them) for cost effective and timely execution of the projects in a clear and unambiguous manner to the satisfaction of the public Raghavan (2008) made valuable observations on “Public-Private Partnership” while strongly advocating consultancy services in the health sector in India. Collaboration strategies of consultancy organizations in India have been discussed in depth by Diwan (1999) in a national workshop on “challenges in the management of water resources and environment in the next millennium”- organized by Delhi College of Engineering in association with Indian Water Resources Society (IWRS) and Indian Society for Hydraulics (ISH).

SUMMARY AND CONCLUSION

The public and private sector have a distinctive though complementary role to play in water sector. It is increasingly being felt that the Govt. alone, with its limited financial

resources and increasing demand of funds from different sectors (including water), can no more bear the full responsibility of providing food, shelter, health, education etc .for the growing population who aspire for a higher standard of life. From the government perspective, the potential gains from private sector participation- through better management, greater efficiency and improved access to finance for new investments in water and sanitation sector- are welcome as in other infrastructures development. The government, however, is reluctant to give up the ownership of water in favor of the private sector and treat water like any other economic goods because of several sensitive socio-economic and political issues associated with water. It does not want to relinquish its responsibility of ensuring that the citizens enjoy access to clean water at affordable costs as per the government policy to provide service to the poor. On the other hand, private sector is in a paradox since the water sector, no doubt, offers huge opportunity, but there are several uncertainties and risks involved due to stochastic nature of rainfall which is the principal source of water in India. Other factors discouraging private investments in water are magnitude of investments, long gestation period of major and medium irrigation projects, hydro power and flood control projects and complicated problems of land acquisition, environmental protection, relief and rehabilitation, water pricing etc.

It is in this context, there is a gradual consensus on public-private partnership (PPP) in water sector (like road and health sector) for mutually sharing the costs and the benefits, the risks and responsibilities. Several advantages and constraints of PPP have been discussed. Finally, the role of consultancy/consultants in PPP - as a bridge between private initiative and public responsibility – has been emphasized. To generate funds and provide incentives of investments for PPP schemes in water

sector, Govt. may consider a proposal of INAE for levying 10% tax on all “cold drinks and bottled mineral water”.

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