



During the colonial era, when irrigation systems were managed as quasi-commercial enterprises, irrigation departments collected up to a quarter the value of the irrigated output as Irrigation Service Fee (ISF). For maximizing government revenue from irrigation, therefore, irrigation departments also ensured that maximum areas and maximum number of farmers were served irrigation. After Independence, in the name of benefiting farmers, the ISF was reduced to a token; its collection declined to a tenth or less of demand.

For millions of farmers, however, this 'free' irrigation meant 'no' irrigation, poor service, deteriorating infrastructure and unaccountable irrigation department staff. To reverse this, the 12th Five Year Plan has proposed a National Irrigation Management Fund (NIMF), which will incentivize state irrigation agencies to set a rational ISF and maximize the ratio of ISF collection to demand, promote water user associations (WUAs) and volumetric water supply. The assumption is that NIMF will improve canal irrigation performance not only by rewarding agencies for improving the provision of irrigation services to larger areas and more farmers but also by making available more resources in the hands of irrigation system managers to maintain systems better. Will this assumption work?

Water Policy Research

HIGHLIGHT

Incentivizing Irrigation Departments to Collect Irrigation Service Fee

Will the 12th Plan Proposal for National Irrigation Management Fund (NIMF) Work?

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INCENTIVIZING IRRIGATION DEPARTMENTS TO COLLECT IRRIGATION SERVICE FEE WILL THE 12TH PLAN PROPOSAL FOR NATIONAL IRRIGATION MANAGEMENT FUND (NIMF) WORK?

Research highlight based on a paper with the same title²

Financial and economic sustainability of infrastructure projects critically depends on a relationship of mutuality between service providers and customers. Charges paid by customers for the services and the need to collect fees create pressure to provide quality service. When customers are relieved from the obligation to pay service fees, this mutuality suffers erosion. The position of customers as a demand group for quality service weakens and agency staff make light of their obligation to provide service. In time, the infrastructure project settles into low-level performance equilibrium and, instead of being of benefit, customers are left worse off. With this premise in mind, efforts have been made to develop an understanding of the impact that the 12th Five Year Plan proposal for a NIMF could have in shifting the focus of the irrigation sector policy from one of construction and expansion of irrigation infrastructure to improved maintenance of systems, better service provision and recovery of water charges (Planning Commission 2011).

THE NATIONAL IRRIGATION MANAGEMENT FUND

The proposal in the 12th Five Year Plan for a NIMF seeks to incentivize states to improve the management of major and medium irrigation (MMI) systems. It is a non-lapsable fund of around Rs 6800 crores³ and aims at:

- a) Enhancing the non-plan funds available to state irrigation departments for improving the management and repair of irrigation systems by incentivizing states to increase their collection of ISF from farmers.
- b) Promoting Participatory Irrigation Management (PIM) vigorously at the local level by WUAs.
- c) Encouraging volumetric water delivery to WUAs.

The primary mechanism for disbursement of this fund is as follows. Through the NIMF, the central government shall reimburse each state irrigation department a

contribution that matches its own ISF collection from irrigators on a 1:1 ratio. These funds will be a bonus, in addition to the existing allocation for operation and maintenance (O&M) expenditure to state irrigation departments. States shall allocate the central grant to MMI systems in proportion to their ISF collection; this will incentivize ISF collection among MMI staff and generate competition in augmenting the incentive. Further, in order to promote PIM and the volumetric delivery of water, the central government will provide an additional 30 percent and 20 percent grant, respectively, on that portion of the ISF collected through the above mechanisms. The proposal recommends - but does not require - the establishment of a state-level Independent Water Regulatory Authority (IWRA) in order to verify the ISF collection statement provided by the states.

With proper implementation, the NIMF, which incentivizes ISF collection, is expected to produce myriad beneficial impacts. In particular, it will: [a] improve the ISF collection ratio; [b] generate more accurate data on the irrigation potential utilized; [c] give a strong fillip to PIM; [d] speed up Command Area Development and Management (CAD&M); [e] encourage rationalization of ISF levels; [f] encourage volumetric water supply and pricing; [g] foster partnership between irrigation agencies and WUAs; and, [h] help reduce the gap between Irrigation Potential Created (IPC) and Irrigation Potential Utilized (IPU).

EXPERT OPINIONS ON NIMF

In order to assess whether NIMF will be able to achieve its objectives, a range of experts in the irrigation sector - academics, NGOs, policy makers and government officials - were consulted. The experts whose opinion was sought are listed in Table 1.

¹This IWMI-Tata Highlight is based on research carried out with support from the International Water Management Institute (IWMI), Colombo. It is not externally peer-reviewed and the views expressed are of the author/s alone and not of IWMI or its funding partners.

²This paper is available on request from p.reghu@cgiar.org

³One crore = 10 million

Table 1 List of experts who participated in Delphi Technique for the assessment of the NIMF

Name	Designation
S.T. Patil	Director, Water and Land Management Institute (WALMI), Dharwad
R. Doraiswamy	JalaSpandana, Bangalore
Dinesh Kumar	Institute for Resource Analysis and Policy, Hyderabad
K.J. Joy	Society for Promoting Participatory Ecosystem Management (SOPPECOM), Pune
G. Shekhawat	Superintending Engineer, Department of Irrigation, Hanumangarh, Rajasthan
K.P. Gupta	Retd. Joint Director (Agri), Irrigation Management and Training Institute (IMTI), Kota
H.C. Raol	Dy. Executive Engineer (Maint.), WALMI, Anand
Sanjay Belsare	Associate Professor, Maharashtra Engineering Training Academy (META), Nashik
Sonal Bhatt	Assistant Professor, Sardar Patel University, Vallabh Vidyanagar
N.A. Narayanamoorthy	Director, Centre for Rural Development, Alagappa University
Apoorva Oza	Chief Executive, Aga Khan Rural Support Program, Ahmedabad
B.N. Navalawala	Advisor, Water Resources, Hon. Chief Minister, Gujarat
M.A. Mansoori	Superintending Engineer, Water Resources Department, Jaipur
Manoj Thomas	Faculty, Xavier Labour Research Institute, Jamshedpur
Chetan Pandit	Former Member, Water Planning and Projects, Central Water Commission (CWC), Pune

The experts assessed the potential of the NIMF proposal on a range of aspects - the possible effect on O&M expenditure and activities, ISF rates and collection, information generation and monitoring of irrigation systems, establishment of a link between ISF collection and quality of service, and the institutional pre-conditions required for the effective use of NIMF. The experts also provided their opinion on the possible impact that NIMF could have and suggested alterations to the existing proposal that might make it more effective.

O & M activities and expenditure

Whereas most of the experts welcomed the proposal of matching the ISF collection one-to-one with bonus O&M funds and believed it would be very useful, they did suggest certain actions that could be taken to ensure the effective use of the funds. Some experts thought that it is very important to ensure that the central grant is used for actual maintenance of systems rather than paying staff salary, which is currently about 90 percent of O&M expenditure. Further, the disbursement of funds from the

centre to the states should not be a time consuming procedure and officials of the irrigation department in the field office should have the freedom to spend without a long approval procedure. WUAs have been observed to use O&M funds effectively; therefore, there could be provisions to allow farmers and WUAs access this fund.

There was concern about whether such a proposal would increase the gap between well performing and poorly performing states. Further, the poorer performing states with low levels of ISF collection may not be interested in taking advantage of this fund because the bonus funds available will not make a significant difference to O&M activities. The incentive may be effective if the grant were provided at a ratio greater than 1:1; or, rather than being bonus funds, if the current allocation for O&M activities were linked to ISF collection levels.

ISF collection and rates

What kind of an effect will NIMF have on actual ISF collection levels and the rates charged? Some experts

deemed that whereas a revision of water charges is important, it was a move that was much too politically charged to be implemented by most states. Others cautioned that it is important to maintain a healthy balance between an increase in collection levels through an increase in rates and an increase through an improvement in the spread of the irrigation system and the farmers' willingness to pay. Further, in states where collection levels are low, emphasis must be laid on streamlining the collection mechanism rather than on increasing service fees. Several interesting suggestions were made regarding a modification of the collection mechanism in order to increase collection levels. The collection mechanism could be simplified to a system where water is delivered and charged for, according to the land owned by a farmer, or one where the water charges are deducted from the payment farmers receive upon selling their produce. One interesting observation was that low collection levels are primarily due to outstanding previous arrears rather than only non-payment of current assessment. Forgiving a percentage of the arrears (say, 50 percent) may improve payment behaviour. Also, if an increase in ISF needs to be brought about, it may be advisable to begin with relatively newer irrigation systems, where resistance may be less.

Information generation and monitoring

Apart from trying to enhance farmers' willingness to pay for irrigation services, it is also important to motivate irrigation department officials to collect water charges (Doraiswamy et al. 2009). Thus NIMF attempts to increase ISF collection levels by providing an incentive of bonus funds for O&M activities. In order to avail of these bonus funds, states are required to present a certified audited statement of their ISF collection for each major, medium and minor irrigation system. This certified statement may provide some indication of the performance of irrigation systems in a state.

Whereas experts acknowledged the value of reliable information in monitoring irrigation systems, they believed that several steps need to be taken in order to ensure its generation. The implementation of NIMF may indeed motivate irrigation departments to engage in the creation of relevant information; however, as mentioned earlier, it is important to ensure that this motivation is strong in all the states. The important role played by volumetric measurement in monitoring systems was also acknowledged. The technology for volumetric measurement must be standardized at the national level and guidelines for this provided. Even if there is enough information on the number of irrigations provided, it

could be a basis for assessing the quality of irrigation. It is also important to educate farmers and make them participants in the process.

A few experts cited examples of initiatives in this direction at the state level that could be scaled up to the national level. However, an increased drive towards system-wise information generation might face resistance from the influential local cultivators, who draw more water than they are allowed.

Establishing a link between ISF Collection and Quality of Service

There was also an attempt to explore expert opinion on the gradual establishment of a link between the payment of ISF and the quality of irrigation services through an accountability mechanism. The assumption is that wherever ISF is collected regularly, the irrigation staff shows greater accountability and responsiveness to farmers. There is greater contact between the two, and greater overseeing of water distribution; farmers usually expect a minimal level of service when they pay the ISF.

Interestingly, most experts agreed with the theoretical logic of establishing an accountability loop between farmers and irrigation department officials through the ISF collection; however, they thought that in order for it to be effective, some practical pre-requisites needed to be fulfilled. For instance, in Maharashtra, prior to the reforms for restructuring the irrigation sector, water charges were high but collection levels were low. What was required was a bottom-up approach to reforms, which included water audits, water accounting, the establishment of WUAs and greater pressure on irrigation engineers to improve the water use efficiency of the system.

Further, for this accountability loop to be established, the same set of people must be involved in fee collection and service delivery. This, unfortunately, is not the case at present in most MMIs in India. Whereas this is an interesting insight, it may burden the irrigation engineer in charge of a system with too many responsibilities and may, in turn, lower performance. To prevent this, one option could be to hire irrigation managers who will supervise both activities and establish this link.

Independent verification

The proposal for NIMF recommends the establishment of an IWRA at the state level, the function of which, *inter alia*, would be to verify ISF collection statements and present them to the central government for NIMF funds. In the absence of such an authority, the central

government would need to nominate an independent institute to provide such verification.

Most experts had very interesting opinions on the need for an IWRA. Whereas all of them acknowledged the need for a verification system, to ensure the veracity of claims made by state governments and to ensure effective use of funds and smooth execution of this plan, opinions differed on the nature or particular structure of this monitoring authority. Some thought that pre-requisites of the IWRA would take too much time to fulfil, rendering several states ineligible for NIMF. They suggested that these monitoring and verification responsibilities should be embedded within existing institutions such as the Central Water Commission (CWC) or the office of the Chief Engineer. Some even suggested that instead of state-level regulatory authorities, a central agency could be formed, to verify ISF collection statements and disbursement of funds.

Some experts made suggestions on the basis of learning from existing state-level IWRAs. They stressed the need to ensure that the IWRA is only responsible for ensuring adherence to norms; the actual norms, however, should be set through a democratic political process. Also, membership to the IWRA should be representative of various stakeholders in the irrigation sector and not just former officials of the irrigation department. Some said that it is also important to simultaneously increase the staff in the irrigation department.

CONCLUSION

A wide range of academics, government officials, NGOs and other policy makers were consulted to obtain their views on the potential of NIMF. Several interesting ideas were put forth and additional insightful comments about the state and nature of MMI systems in India were also obtained.

Some systems are water abundant and, therefore, the cost of water delivery would be much lower, compared to water-deficit systems. These constraints and inherent differences need to be considered when assessing performance. These factors make volumetric water delivery even more important. An additional incentive could be the institution of national-level awards for well

performing irrigation systems, departments and WUAs. Also, equitable distribution of water should be an explicit objective of the policy - it is important to take into account tail-ender concerns.

A few strong lessons emerge. The establishment of a state-level IWRA is not central to the functioning of NIMF. Given the challenges and the institutional restructuring required in this process, it would perhaps be advisable to employ an alternative mechanism to independently verify ISF collection statements and ensure the effective use of funds. Many of the suggestions were to use the existing apparatus of the government machinery, to achieve the same objectives.

An argument that is critical to the functioning of NIMF is the successful establishment of an accountability loop between farmers and irrigation department officials. If an improvement in fee collection is not tied to a substantial improvement in quality of service, the scheme will collapse.

There is no doubt that some states will take greater advantage of this scheme than others. There were several valuable suggestions on how to make this scheme more effective and motivate states to actively participate. In the course of these discussions, interesting insights have been obtained into the state of irrigation systems in India today. Whereas policy suggestions have been given on a range of issues ailing the irrigation sector, it is important to focus on what the NIMF proposal wants to achieve and, given the various constraints and challenges facing its effective functioning, what alterations can be made to overcome them.



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About the IWMI-Tata Program and Water Policy Highlights

The IWMI-Tata Water Policy Program (ITP) was launched in 2000 as a co-equal partnership between the International Water Management Institute (IWMI), Colombo and Sir Ratan Tata Trust (SRTT), Mumbai. The program presents new perspectives and practical solutions derived from the wealth of research done in India on water resource management. Its objective is to help policy makers at the central, state and local levels address their water challenges – in areas such as sustainable groundwater management, water scarcity, and rural poverty – by translating research findings into practical policy recommendations. Through this program, IWMI collaborates with a range of partners across India to identify, analyze and document relevant water-management approaches and current practices. These practices are assessed and synthesized for maximum policy impact in the series on Water Policy Highlights and IWMI-Tata Comments.

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