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**F. No. 15/18/2013-PP  
Government of India  
Ministry of Water Resources,  
River Development & Ganga Rejuvenation**

Shram Shakti Bhawan, Rafi Marg,  
New Delhi, Dated, 31<sup>st</sup> July, 2015

To

Principal Secretaries/Secretaries of Water Resources/ Irrigation  
Departments of fourteen States (As per list enclosed)

**Sub: Incentivization of States for undertaking water sector reforms-  
Evolving Benchmarks for State specific Water Sector Reforms and  
Methodology for Assessment of States "Performance based on  
Suitable Framework"-reg.**

Sir,

I am directed to say that the Central Government intends to introduce a  
Scheme/Programme for incentivization of States for undertaking water sector  
reforms.

2. For this purpose, Ministry of Water Resources, River Development and  
Ganga Rejuvenation is in the process of preparing the Guidelines which would  
inter alia include Benchmarks for State specific Water Sector Reforms and  
Methodology for Assessment of States Performance based on Suitable  
Framework.

3. In order to involve the State Governments/UTs in the preparation of these  
Guidelines, a Base Papers and a Questionnaire for obtaining  
comments/information from the States/UTs have been prepared a copy each  
of which is forwarded herewith.

4. It is requested that comments in the matter and the duly filled in  
Questionnaire may kindly be forwarded to this Ministry latest by 5<sup>th</sup> August,  
2015 or may be brought during the meeting of the Principal Secretaries of  
Water Resources/Irrigation of States to be held on 6<sup>th</sup> August, 2015 (copy of  
Meeting Notice enclosed for ready reference) to discuss the implementation of  
Pradhan Mantri Krishi Sinchai Yojna.

Yours faithfully,

*S.K. Sharma*  
31.7.15

(S.K. Sharma)

Sr. Joint Commissioner (PP)

Tele: 011-23719503

15/18/2013-PP  
*LSW*  
31/7/2015

**Encl: As stated**



Government of India  
Central Water Commission

## INCENTIVIZING STATES FOR WATER SECTOR REFORMS

### 1. Introduction

India has the twin challenges of meeting its water needs along with sustaining pace of development. It has more than 18 percent of the world's population and 15% of livestock, but has only 4% of world's renewable water resources with 2.4% of world's land area. India receives on average annual precipitation of about 4000 Billion Cubic Meter (BCM), which is its basic water resource. Out of this, after considering the natural evaporation- transpiration, only about 1869 Billion Cubic Meter (BCM) is average annual natural flow through rivers and aquifers. Due to topographical constraints and spatio-temporal variations in resources, it is estimated that only about 1,123 BCM, (690 BCM from surface water and 433 BCM from groundwater) is utilizable. There are further limits on utilizable quantities of water owing to uneven distribution over time and space, which may increase substantially due to climate changes, leading to water crisis and possible water related disasters, i.e., floods, increased erosion and increased frequency of droughts, etc. Further, competing demands for this limited resource for various uses – drinking water, sanitation, irrigation, industry, to name a few- necessitates that emphasis be laid on cooperation between sectors in promoting its efficient use as also in building resilience of communities for disaster mitigation.

Rapid growth in demand of water due to population growth, increasing urbanization and changing lifestyle pose serious challenge to water security, food security and sustainable livelihood for all in an equitable manner. Injudicious inter-sectoral and intra-sectoral distribution of water amongst various categories of water users, low water use efficiency, fragmented approach to water resources planning and development, low water user charges and meagre recovery are some of the major problems associated with the management of water resources in the country.

Water is primarily a State subject, and therefore, proactive efforts by State Governments are very essential for reforms in water sector. The National Water Policy (2012) inter-alia recommends that States should be encouraged and incentivized to undertake reforms and progressive measures for innovations, conservation and efficient utilization of water resources (para 12.7 of NWP, 2012). Thirteenth Finance Commission Report, National Water Mission Document, National Water Policy (2012), Twelfth Five Year Plan (2012-17) Document and draft National Water Framework Law propose a number of reforms in water sector. These are in terms of policy/governance issues, achieving water use efficiency, financial management, capacity building/training, participatory (community) management and convergence between various schemes/programmes at Panchayat/ Municipality level.



The Planning Commission Steering Committee on Water Resources and Sanitation and the Thirteenth Finance Commission had recommended that the central assistance should be linked to outcomes in terms of water sector performance and impacts. There is a need to have substantial fund to incentivize States in taking up an aggressive administrative, financial reform agenda. The Finance Commission formula of allocating the incentive grants in proportion to Gross Receipts recovered and Irrigation Potential Utilised of different States may appear to be narrow in perspective and may not address much needed reforms in water resources sector. The States need to make substantial investment in operation & maintenance of infrastructure, because it is very much desirable to fully renovate the systems before handing them over to the local bodies such as Water Users' Associations or the Panchayati Raj Institutions. Therefore, the Twelfth Five Year Plan Document, approved by the National Development Council, has recommended setting up of "Irrigation Management Fund" to provide additional central assistance as incentive to the States.

## 2. Objectives

The objective is to incentivize States in taking up an aggressive administrative and financial reform agenda in the water resources sector, some of which could be as follows;

- (a) Preparation of River Basin Master Plan for optimum planning, development and management of water resources adopting principles of Integrated Water Resources Management with river basin/sub-basin as a unit of planning;
- (b) Sustainable ground water management with active participation of communities;
- (c) Regular assessment of availability and utilization of water resources through a system of water budgeting and accounting;
- (d) Increasing availability of utilizable water through creation of storages, water conservation measures, etc;
- (e) Improving water use efficiency from current level;
- (f) Reducing the gap between Irrigation Potential Created (IPC) and Irrigation Potential Utilized (IPU) through CAD and micro irrigation systems etc;
- (g) Deployment of adequate Operation & Maintenance fund for full utilization of water resources infrastructure;
- (h) Establishment of Regulatory Mechanism and rationalization of water user charges;
- (i) Comprehensive capacity building for project management personnel including field workers/farmers, representatives of Water Users Associations/Panchayati Raj Institutions/Local Governing Bodies, etc;
- (j) Empowering Water Users Associations to collect and retain a part of water charges and maintain the field distribution system;
- (k) Promoting volumetric water supply to ensure optimum and efficient use of water resources;
- (l) Establishment of River Regulation Zoning Mechanism, etc.

## 3. Existing incentivization measures

The need to incentivize States in the water resources sector was recognized by the Thirteenth Finance Commission. It noted that injudicious inter-sectoral and intra-sectoral distribution of water amongst various categories of water users, low water use efficiency, fragmented approach to water resources planning and development, low water user charges and meagre recovery are some of the major problems associated with the management of water resources in the country. A statutory autonomous institution at the state level could



help in addressing these issues. The Thirteenth Finance Commission recommended setting up of a Water Regulatory Authority in each state and specification of a minimum level of recovery of water charges and stipulated an incentive grant of Rs. 5000 crore, subject to the following conditionalities:

- (a) States should set up the Water Regulatory Authority by 31 March 2012. However, north-eastern states, except Assam, are exempted.
- (b) States are required to achieve the projected recovery rates to become eligible for grants.
- (c) The incentive grants for water sector are an addition to normal maintenance expenditure to be incurred by the states.
- (d) Where the State Water Regulatory Authority mandates recovery rates, those would replace the recovery rates prescribed. A state shall be eligible for grants if it recovers at least 50 per cent of the water charges mandated by the Authority.

The Guidelines for Accelerated Irrigation Benefit Programme for Twelfth Five Year Plan (2012-17) stipulates enhancement of Central Assistance from 25% to 50% as incentive for new projects subject to the condition that the States actually carry out water sector reforms as per the reform benchmarks to be laid down by the Ministry of Water Resources in due course. Till finalization of reform benchmarks, following measures are being considered as water reforms:

- 1) Measurement on volumetric basis,
- 2) Participatory Irrigation Management,
- 3) Active working of Water User Association,
- 4) Micro Irrigation,
- 5) Collection at water cess by Water User Association, and
- 6) Maintenance by Water User Association.

With implementation of any three of the above, the State Government will become eligible for enhanced central assistance.

**4. Proposed incentivization indicators**

The incentivization framework need to be comprehensive and the same time focussed to achieve much needed administrative, physical and financial reforms. States' performance can be assessed using certain indicators, which can be grouped under following themes;

**(a) Policy and Governance**

Reforms in policy and governance issues are most important as other reforms would follow these, which could be in the forms of State Water Policy, Water Acts, Participatory Management, Co-ordination mechanisms at District / Panchayat level, etc. Indicators could be

- (i) Formulation of State Water Policy or adoption of National Water Policy
- (ii) Formulation of Action Plans for implementation of State/National Water Policy

- (iii) Review of Water Acts of States and aligning those as per Water Policy
- (iv) Review of Participatory Management Acts/Rules and empowerment of Water User Associations
- (v) Establishment of coordination mechanism at District/Panchayat level for synergy between water resources and other sector schemes, etc.

(b) **Equitable and Efficient Use of Water Resources**

This theme forms the core of water sector reforms. Indicators could be;

- (i) Preparation of River Basin/Sub-basin Master Plan
- (ii) Proportion of utilization of available water
- (iii) Maximum utilization of available irrigation infrastructure, that is, reduction in gap between Irrigation Potential Created & Irrigation Potential Utilized
- (iv) Live storage created,
- (v) Water application efficiency in terms of Hectare/cubic meter,
- (vi) Weighted average crop-productivity,
- (vii) Weighted Water Use Efficiency in major/medium projects

(c) **Economic Sustainability**

This theme is necessary for sustainability of water sector reforms. Indicators could be;

- (i) Adequacy of Water Tariff to meet O&M expenditure
- (ii) Collection of water charges
- (iii) Proportion of water charges authorized to be retained by Water Users Associations

(d) **Management Information System**

This theme is necessary for optimum management of water resources in addition to empowering citizens with water resources information systems. Indicators could be;

- (i) Annual water accounts and water budgeting
- (ii) Water Resources Information (other than classified) System in public domain integration with IndiaWRIS,
- (iii) Preparation of Disaster Management Plan on account of floods/dam breaks

(e) **Capacity Building**

No reform would be meaningful without associated capacity building of Water Users Associations, Panchayats, Municipalities and general public. Indicators could be;

- (i) Availability of Training Centre, such as Water and Land Management and Training Institutes
- (ii) Number of On-farm & Off-farm trainings and number of people trained
- (iii) Establishment of system of innovation promotion



## 5. Suggested Approach

Incentivization methodology must evolve on broader consensus amongst States and be based on present status and agreed pace for reforms in water resources sector in each State. Therefore, following approach to evolve incentivization methodology is proposed

- (i) To request all State Governments to compile information related to water resources as per the Questionnaire (Annexure)
- (ii) All State Governments should submit a Report on present status of water resources sector as per the Questionnaire and roadmap for achieving reforms as per the National/ State Water Policy, etc.
- (iii) To hold regional consultations with States to finalize indicators and weights to be assigned to the identified indicators and annual milestones.
- (iv) Finalising Action Plan based on agreed milestones for next 5 years or so for each State and enter into agreed memorandum of roadmap for reforms along with fund required for achieving the same
- (v) Assessing performance of each State for the preceding year based on the indicators and roadmap already agreed upon
- (vi) Releasing incentivization amount as per agreed memorandum

The State Governments may hire the services of retired State Engineer(s) for the same. A Committee of Officers from MoWR, RD & GR, CWC and CGWB could be set up to review the progress and guide the State Governments from time to time.

## 6. Source of funding

The cost of hiring retired State Engineer(s) as individual consultants by the State Governments, limited to a fixed amount, say Rs. 10 lakhs, may be considered for reimbursement by the MoWR, RD & GR as pre-investigation expenses for which Secretary (WR, RD & GR) has the powers upto Rs. 50 crore. An advance of Rs. 5 lakh to each State may be issued for the same.

The Planning Commission has indicated Rs. 6000 crore as outlay towards setting up of Irrigation Management Fund, which would be used for incentivizing States. In addition, fund available under the State sector schemes, such as Accelerated Irrigation Benefit Programme, Command Area Development & Water Management, Repair, Restoration and Renovation of Water Bodies, Flood Management Programme could be pooled for this Scheme.

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Government of India  
Ministry of Water Resources

**QUESTIONNAIRE FOR EVOLVING BENCHMARK FOR STATE SPECIFIC WATER  
SECTOR REFORMS AND METHODOLOGY FOR ASSESSMENT OF STATES'  
PERFORMANCE BASED ON A SUITABLE FRAMEWORK**

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**THEMATIC AREA 1: POLICY AND GOVERNANCE**

**1.1 Whether the State has any State Water Policy?**

**YES/NO**

If **YES**, please attach a copy of the latest State Water Policy.

If **NO**, please state

- (i) Whether the State Water Policy is under formulation, and
- (ii) If so, by what time it is expected to be adopted, or
- (iii) Whether the National Water Policy (2012) is being adopted.

**1.2 What are the State Laws on water related issues?**

Please attach a copy of all State Laws on water related issues.

**1.3 Is there any River Basin Organization?**

Is there any River Basin Organization, by whatever name known, in the State. If so, please attach copy of such Order(s) / Notification(s).

**1.4 What are the Schemes on water?**

Please list all Plan Schemes of Central/State Governments on water under implementation during XII Five Year Plan. The brief notes on these Plan Schemes may be attached.

**1.5 What is the system of water accounting, water audit and water return?**

(a) Whether water accounts of each river basin are prepared. If so, please attach a copy of water accounts for the last five years, say from 2010-11 to 2014-15.

(b) Whether water auditing of industries, water supply and/or irrigation projects is carried out? Please attach copy(ies) of Order(s) / Notification(s) issued in this regard. Please attach a copy of water audits, if any, for the last five years, say from 2010-11 to 2014-15.

(c) Whether industry, water supply and/or irrigation projects file any water return, i.e., annual account of water withdrawn, consumed, recycled and discharged? Please attach copy(ies) of Order(s) / Notification(s) issued in this regard. Please attach a copy of water returns, if any, for the last five years, say from 2010-11 to 2014-15.

**1.6 Is there any Water Security Plan?**

Please attach Water Security Plan for each district, if any.

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**1.7 What are the roles of Panchayats/Municipalities on water?**

(a) Please attach any State Laws, directives, Government Orders, etc., defining any role for Panchayats/Municipalities on water.

(b) Please attach performance study report, if any, on the functioning of Panchayats/Municipalities in the water sector.

**1.8 What is the co-ordination mechanism at the District and State Government level on issues related to water?**

Please attach State Laws, directives, Government Orders, etc., if any, prescribing coordination mechanism at the District and State Government level on issues related to water.



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## **THEMATIC AREA 2 : WATER SUPPLY AND DEMAND MANAGEMENT**

### **2.1 Index Plan of the State ?**

Please attach an index plan of the State showing district boundaries, rivers with major tributary, lakes / water bodies, each river basin, ground water blocks, surface water and ground water observation sites, major/medium irrigation projects with canal network, etc.

### **2.2 What are the available water resources?**

Indicate rainfall pattern, source wise (surface/ground water) availability of water resources for each river sub-basin for surface water and block wise for ground water. Attach annual/seasonal flow series at least since water year 2010-11.

### **2.2 What is the storage capacity?**

Indicate project wise storage capacity built, under construction and planned.

Storage available under minor irrigation schemes, tanks, check dams, water bodies, etc., may also be indicated to the extent possible.

Estimated maximum possible storage in the State may also be indicated.

### **2.3 What is the water use efficiency?**

Please indicate basin wise and project wise water use efficiency, if so assessed. Please attach a copy of such assessment.

Duty and delta figures adopted for various crops may be indicated.

### **2.4 What is the present and projected water utilization and demand?**

Indicate the present and projected (for the year 2025 and 2050) water utilization and demand for various uses. This may be given District wise, if possible. Industrial utilization and demands may be indicated industry sector wise and process wise.

### **2.5 What is the assessment of water loss?**

Indicate water losses due to theft, non-accounting, etc., for different uses, if so assessed. Please attach copies of latest assessment made.

### **2.6 What is the Future or Vision Plan for the State?**

Enclose the relevant Chapters on water from the Future or Vision Plan (for 2025 or 2050) or XII Five Year Plan Document (2012-17) of the State. Information about industrial growth, Special Economic/Industrial/Manufacturing Zones, urbanization, etc., may also be attached.

### **2.7 Is there any Master Plan for any river basin/sub-basin?**

Enclose the Master Plan for any river basin/sub-basin, if any, in the State. The basis and procedure adopted in preparation of Master Plan may be indicated.

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**THEMATIC AREA 3 : ECONOMIC SUSTAINABILITY**

**3.1 What is the system of water tariff determination?**

Please attach copy(ies) of Order(s) / Notification(s) issued for water tariff determination. Attach a copy of latest water tariff rates for various uses.

**3.2 What is the system of water tariff collection?**

Indicate the system of water tariff collection from different users.

The user category wise amount of bill raised and collected for last five years (2010-11 to 2014-15) may be indicated. Possible reasons may be indicated.

Indicate the system of penalty or its waiver for non payment of water charges.

**3.3 What is the system of budgeting for Operation & Maintenance of water infrastructure?**

Please attach a copy of budget requirement projected by field units, budget allotted under different heads, actual utilization, unit rates for O&M funds, etc. The data may be given from the year 2010-11 onwards.

**3.4 What is the gap between Irrigation Potential Created and that Utilized?**

Indicate the gap between Irrigation Potential Created and that Utilized for different projects in each of river basin/sub-basin for the year 2014-15. The possible reasons may be indicated.

**3.5 What is the extent of utilization of water infrastructure?**

Has there been any instance of not utilization or underutilization of the water infrastructure during any year of last five years (2010-11 to 2014-15) due to failure, non-maintenance, insurgency, etc.



**THEMATIC AREA 4 : MANAGEMENT INFORMATION SYSTEM****4.1 Is there any Water Resources Information System?**

What is the system of collection, collation and dissemination of water related data, particularly water utilization data at different points for different uses? Is it on real time or if not how much is the lag time?

**4.2 What is the system of flood/drought disaster management?**

What is the system of flood forecasting and disaster management plans in the event of floods, droughts, dam/embankment breaches, etc.

**4.3 What is the estimated loss due to floods/droughts?**

Indicate the estimated loss (district wise, if possible) of human lives, crops, etc., due to floods/droughts at least for last five years (2010-11 to 2014-15).

**THEMATIC AREA 5 :      CAPACITY BUILDING**

**5.1    Has any assessment been made on capacity building needs?**

Please attach a copy of the training needs assessment carried out, if any, for different categories of State Government employees, Panchayats/Municipalities, Water Users Association, etc.

Please attach a copy of the training plan, if any.

**5.2    What are the training or capacity building plans and measures?**

Please list the training courses conducted and the number of participants for different categories of State Government employees, Panchayats/Municipalities, Water Users Association, etc., during last five years (2010-11 to 2014-15).

**5.3    What are the awareness programs and campaigns launched?**

Please list the awareness programs and campaigns launched in the State during last five years (2010-11 to 2014-15) may be indicated.

**5.4    Is the subject matter of water conservation and management included in school curricula?**

Please attach extracts from the text books from Class I onwards containing the subject matter of water conservation and management.