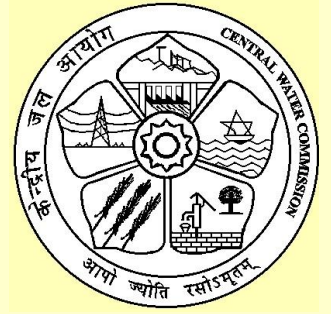




भारत में सार्वजनिक प्रणाली में जल का मूल्य निर्धारण



PRICING OF WATER IN PUBLIC SYSTEM IN INDIA

सूचना प्रणाली संगठन
जल विज्ञानीय आंकड़े निदेशालय
जल आयोजन एवं परियोजना स्कंध
केंद्रीय जल आयोग
मार्च, 2017

INFORMATION SYSTEM ORGANISATION
HYDROLOGICAL DATA DIRECTORATE
WATER PLANNING & PROJECTS WING
CENTRAL WATER COMMISSION

MARCH, 2017

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मार्च, २०१७

INFORMATION SYSTEM ORGANISATION
WATER PLANNING & PROJECTS WING
CENTRAL WATER COMMISSION
March, 2017

FOREWORD

The declining per capita availability of water for diverse uses has attracted serious concern for regulating the use of this finite but vital natural resources inter alia through a rational price structure by all those involved in water planning, development and management. The Governments' concern for a rational and pragmatic approach for levying water charges in return for the water supplied to the users made possible by the development and construction of Water Resources Projects involving huge public investment is also reflected in the National Water Policy Statements which not only convey the scarcity value of this resources to the users but also emphasizes the need to ensure realization of at least the Operation and Maintenance Charges of providing the service initially as well as part of the Capital Costs subsequently.



Irrigation being one of the key inputs for food production with agricultural sector being a major consumer of water, pricing of this input is one of the basic steps and an integral component in the process of rationalizing the totality of the price structure and raising the efficiency of water use. Rationalization of the water pricing structure is necessary in the interest of both efficiency and equity. The pricing has to be such so as to achieve full cost recovery in due course and in the process promote savings, create disincentives for wastages and thereby enable expansion of the service area and assure more reliable delivery.

Paradoxically, the States are giving due consideration including the paying capacity of the consumer in fixation of water rates to ensure sufficient revenue generation through water charges to meet the cost of irrigation water, labour rates, establishment efforts and other related recurrent costs. Operation & Maintenance costs etc but in spite of efforts made by States, the revenue realization is inadequate.

This publication is intended to provide season-wise and crop-wise data on existing Water Rates in States/UTs. This apart, the analysis in capital expenditure, working expenditure and gross receipts over the period 2001-02 to 2013-14 have also been presented in the publication. I hope this publication will be useful for all interested in the subject.

A handwritten signature in blue ink, appearing to read 'Narendra Kumar'.

(Narendra Kumar)

Chairman

Central Water Commission

New Delhi
March, 2017

PREFACE

The Water Rates play an important role in regulating the water use and in ensuring efficiency of the irrigation system and its management. The pricing of water has to be such as to earn at least the prescribed return on capital after meeting other recurring costs of maintenance. A number of irrigation systems are operating at the levels much below the capacity on account of poor maintenance and continued neglect. Despite various Finance Commissions and Official Committees having emphasised about the need to ensure that the irrigation charges paid by farmers are adequate at least to cover the operational expenses and part of capital cost, the position has been far from satisfactory.



The approach reportedly adopted by the State Governments in fixing water rates is not uniform. The present scenario is characterised by subsidised price structure, infrequent and hesitant water price revisions, no water rate for agricultural water use in vogue in some of the States, no provision in the water rates for automatic revision on account of inflation being seemingly the overriding consideration in fixation of water rates.

The basic objective of this publication is to present the basic State-wise data on existing water rates, consideration governing fixation of water rates by the States, system of water rates, system of assessment collection of revenue and financial aspects of major & medium irrigation projects covering capital expenditure, working expenditure and gross receipts.

The present issue updates data up to 2013-14. The basic data for the publication on Water Rates has been compiled from the information furnished by the State Governments. The data, however, on financial aspects are compiled from the Finance and Revenue Accounts of the Union and State Governments brought out by the Comptroller and Auditor General of India and the Accountant General of the States respectively.

A handwritten signature in black ink, appearing to read 'S. Masood Husain'.

(S. Masood Husain)
Member (WP&P)
Central Water Commission

New Delhi
March, 2017

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Executive Summary

The Water Rates play an important role in regulating the water use and in ensuring efficiency of the irrigation system and its management. The Pricing of water has to be such as to earn at least the prescribed return on capital after meeting other recurring costs of maintenance.

2. The National Water Policy Statement of 1987 specifically states, *“The Water Rates should be such as to convey the scarcity value of the resource to the users and to foster the motivation for economy in water use. They should be adequate to cover the Maintenance and Operation Charges and a part of the fixed costs of irrigation works. Efforts should be made to reach this ideal over a period of time while ensuring assured and timely supplies of irrigation water. The Water Rates for Surface Water and Ground Water should be rationalized with due regard to the interest of small and marginal farmers.”*

3. The National Water Policy Statement of 2002 also advocates for *“the water charges for various uses and should be fixed in such a way that they cover at least the Maintenance and Operation charges of providing the service initially and a part of the Capital Costs subsequently.*

4. The National Water Policy Statement of 2012 regarding Water Pricing advocates the following:

- i. Pricing of water should ensure its efficient use and reward conservation. Equitable access to water for all and its fair pricing, for drinking and other uses such as sanitation, agricultural and industrial, should be arrived at through independent statutory Water Regulatory Authority, set up by each state, after wide ranging consultation with all stakeholders.
 - ii. In order to meet equity, efficiency and economic principles, the water charges should preferably/as a rule be determined on volumetric basis. Such charges should be reviewed periodically.
 - iii. Recycle and reuse of water, after treatment to specified standards, should also be incentivized through a properly planned tariff system.
 - iv. The principle of differential pricing may be retained for the pre-emptive uses of water for drinking and sanitation; and high priority allocation for ensuring food security and supporting livelihood for the poor. Available water, after meeting the above needs, should increasingly be subjected to allocation and pricing on economic principles so that water is not wasted in unnecessary uses and could be utilized more gainfully.
 - v. Water Users Associations (WUAs) should be given statutory powers to collect and retain a portion of water charges, manage the volumetric quantum of water allocated to them and maintain the distribution system in their jurisdiction. WUAs should be given the freedom to fix the rates subject to floor rates determined by WRAs.
 - vi. The over-drawal of groundwater should be minimized by regulating the use of electricity for its extraction. Separate electric feeders for pumping ground water for agricultural use should be considered.
5. Generally the water charges imposed by governments comprises of one or more of the following elements:

- (i) Water rates depending in the kind of crop
- (ii) the area irrigated,
- (iii) number of irrigations of each crop
- (iv) the total volume of water used by the farmer

6. Various Committees / Commissions have been recommending from time to time various principles for fixing irrigation rates. Some of such recommendations are elaborated below

(i) Second Irrigation Commission (1972)

The Commission had emphasized the role and the importance of levying water charges in return for the water supplied to the users and its adequacy in meeting O&M cost for ensuring its efficient use. The Commission had stressed for levying water charges on crop basis considering (i) the adequacy and dependability of water supply, (ii) the need for common policy among the neighbouring States, (iii) the water requirement of the crops and (iv) the revision of Water Rates in every five years.

(ii) Dr. Vaidyanathan Committee (1991)

Dr. Vaidyanathan Committee (1991) recommended for an allocation of 10% of plan provision for major and medium Project for renovating the existing systems and for earmarking the recovery of accumulated arrears towards the cost of deferred maintenance/ special repairs in the projects concerned. It also recommended for enhancement of water rates to cover O&M cost and interest on capital cost with depreciation.

(iii) Eight and Ninth Finance Commissions

The Eighth Finance Commission had suggested a norm for O&M expenses per hectare of utilized potential for expenditure on regular establishment supporting the project staff, provision of maintenance of head work, distribution system and drainage work. The Ninth Finance Commission had suggested that the Receipts should cover at least the cost of maintenance. The Tenth Finance Commission had recommended that the irrigation receipts should cover not only O&M costs but also give a return of 1% per annum on the capital.

(iv) Twelfth Finance Commissions

The 12th Finance Commission recommended that “an O&M cost norm of Rs. 600 per hectare for utilised potential and Rs. 300 per hectare for unutilised potential may be considered based on normative expenditure requirements for maintenance of irrigation works of major and medium irrigation projects. This norm for minor irrigation works should be half of those for major and medium irrigation projects. For hill states 30% higher rate of O&M expenditure has been suggested on the base year estimates so worked out and 5% annual rate of growth has been suggested to generate projected levels in the forecast period.”

(v) Thirteenth Finance Commissions

- i. The current level of recovery from irrigation projects is at 23 per cent of the non-plan revenue expenditure on irrigation, which is very low and needs to be improved in order to ensure viability of irrigation projects and recommended to the enhanced receipts at 25 per

cent of non-plan revenue expenditure on irrigation in 2010-11 to 35 per cent in 2011-12, 45 per cent in 2012-13, 60 per cent in 2013-14 and 75 per cent in 2014-15.

- ii. Given the need for adequate provision for maintenance of irrigation schemes, the Commission has adopted the norm of Rs. 1175 per hectare for the utilised potential and Rs. 588 per hectare for the unutilised potential for major and medium irrigation schemes respectively. After adjustment for inflation, with an annual growth of 5 per cent thereafter, these would reach the level of Rs. 1500 per hectare for utilised and Rs. 750 per hectare for unutilised potential in the terminal year.
- iii. For minor irrigation works, the Commission has provided the norm of Rs. 588 per hectare in the base year for only the utilised potential. However, the Commission has allowed a 30 per cent step up on these norms for the special category states.

(vi) Fourteenth Finance Commissions

The 14th Finance Commission inter-alia recommended that (i) All States, irrespective of whether Water Regulatory Authorities (WRAs) are in place or not, consider full volumetric measurement of the use of irrigation water. (ii) States which have not set up WRAs, consider setting up a statutory WRA so that the pricing of water for domestic, irrigation and other uses can be determined independently and in a judicious manner. Further, WRAs already established be made fully functional.

7. The publication presents the State-wise data on existing water rates, governing principles for fixation of water rates by the States, System of assessment collection of revenue and financial aspects of major & medium irrigation projects covering Capital Expenditure, Working Expenditure and Gross Receipts.

In Chapter 1, State-wise the over-all range of water rates in respect of flow vis-à-vis lift irrigation and the dates when the rates were last revised have been presented in Table 1(i). State-wise the over-all water rates in respect of flow and lift irrigation for selected crops have also been presented in Table 1(ii) and Table 1(iii) respectively.

In Chapter 2, principles for fixation of water rates in irrigation and crop-wise water rates according to season and type of source have been presented.

In Chapter 3, mechanism of assessment and collection of revenues in different have been summarized. Besides, State-wise statistical analysis on the trend of capital outlays, working expenses and gross receipts over the period 2000-01 to 2013-14 have been presented.

In the concluding part of the publication, the view points of the National Commission for Integrated Water Resources Development (NCIWRD) as mentioned in its report 'Integrated Water Resource Development-A Plan for Action' has been elaborated.

Chapter - I

Introduction

1.1 Introduction

1.1.1 The Water Rate is levied for supply of water from a public or a private system with a view to ensure equitable water distribution, efficiency of the irrigation system and its management. It has been attracting attention of Planners, Policy makers and Researchers in view of its important role in regulating the water use within the reach and resources of the users. The declining per capita availability of water for diverse uses has generated serious concern all over. The Government's concern for a rational and pragmatic approach for levying Water Rates, in return for the water supplied to the users, made possible by development and construction of Water Resources Projects involving huge public investment. Earlier, the Second Irrigation Commission (1972) had also emphasized the role, importance and necessity of levying water charges in return for water supplied to the users and its adequacy in meeting the expenditure towards Operation & Maintenance for ensuring equitable distribution and its efficient use. The Water Rate is reflected in the Government of India's National Water Policy Statement of 1987 which specifically states, *"The Water Rates should be such as to convey the scarcity value of the resource to the users and to foster the motivation for economy in water use. They should be adequate to cover the Maintenance and Operation Charges and a part of the fixed costs of irrigation works. Efforts should be made to reach this ideal over a period of time while ensuring assured and timely supplies of irrigation water. The Water Rates for Surface Water and Ground Water should be rationalized with due regard to the interest of small and marginal farmers."* The present publication namely "Pricing of Water in Public System in India" is an attempt to bring out the present and latest status of water rates of different States.

1.1.2 The National Water Policy Statement of 2002 also advocates for *"the water charges for various uses and should be fixed in such a way that they cover at least the Maintenance and Operation charges of providing the service initially and a part of the Capital Costs subsequently."*

1.1.3 Likewise the National Water Policy Statement of 2012 regarding Water Pricing advocates the following:

- i. Pricing of water should ensure its efficient use and reward conservation. Equitable access to water for all and its fair pricing, for drinking and other uses such as sanitation, agricultural and industrial, should be arrived at through independent statutory Water Regulatory Authority, set up by each state, after wide ranging consultation with all stakeholders.

- ii. In order to meet equity, efficiency and economic principles, the water charges should preferably/as a rule be determined on volumetric basis. Such charges should be reviewed periodically.
- iii. Recycle and reuse of water, after treatment to specified standards, should also be incentivized through a properly planned tariff system.
- iv. The principle of differential pricing may be retained for the pre-emptive uses of water for drinking and sanitation; and high priority allocation for ensuring food security and supporting livelihood for the poor. Available water, after meeting the above needs, should increasingly be subjected to allocation and pricing on economic principles so that water is not wasted in unnecessary uses and could be utilized more gainfully.
- v. Water Users Associations (WUAs) should be given statutory powers to collect and retain a portion of water charges, manage the volumetric quantum of water allocated to them and maintain the distribution system in their jurisdiction. WUAs should be given the freedom to fix the rates subject to floor rates determined by WRAs.
- vi. The over-drawal of groundwater should be minimized by regulating the use of electricity for its extraction. Separate electric feeders for pumping ground water for agricultural use should be considered.

1.2 Need for Appropriate Pricing of Water

Major and medium irrigation projects are developed to benefit a large number of farmers of an irrigation command area. They are usually funded by the government. Government funding is from the taxes and other revenues raised from the public. Irrigation projects result in substantial financial benefits to the farmers of the command area. Hence it is necessary that appropriate cost recovery policies are developed by the government to recover the money spent on a project for investment in other projects which will benefit other members of the society.

1.3 Basis of Levying Irrigation Charges

Generally the water charges imposed by governments comprises of one or more of the following elements:

- (i) Water rates depending in the kind of crop
- (ii) the area irrigated,
- (iii) number of irrigations of each crop
- (iv) the total volume of water used by the farmer

Various Committees / Commissions have been recommending from time to time various principles for fixing irrigation rates. Some of such recommendations are elaborated below:

1.4 Summary recommendations of Second Irrigation Commission (1972)

It had been viewed in the Second Irrigation Commission (1972) that the user should pay for the basic agriculture input like water and the general tax payer should not be called upon to bear the burden of agriculture. The Commission had also adequately emphasized the role and the importance of levying water charges in return for the water supplied to the users and its adequacy in meeting O&M cost for ensuring its efficient use. The Commission had also stressed for levying water charges on crop basis considering (i) the adequacy and dependability of water supply, (ii) the need for common policy among the neighbouring States, (iii) the water requirement of the crops and (iv) the revision of Water Rates in every five years.

1.5 Recommendations of various Finance Commissions

1.5.1 The Eighth Finance Commission had suggested a norm for O&M expenses per hectare of utilized potential for expenditure on regular establishment supporting the project staff, provision of maintenance of head work, distribution system and drainage work. The Ninth Finance Commission had suggested that the Receipts should cover at least the cost of maintenance. The Tenth Finance Commission had recommended that the irrigation receipts should cover not only O&M costs but also give a return of 1% per annum on the capital.

1.5.2 Main recommendation of 12th Finance Commission regarding maintenance of irrigation works emphasised “an O&M cost norm of Rs. 600 per hectare for utilised potential and Rs. 300

per hectare for unutilised potential may be considered based on normative expenditure requirements for maintenance of irrigation works of major and medium irrigation projects. This norm for minor irrigation works should be half of those for major and medium irrigation projects. For hill states 30% higher rate of O&M expenditure has been suggested on the base year estimates so worked out and 5% annual rate of growth has been suggested to generate projected levels in the forecast period.”

1.5.3 The Working Group on Water Resources for the XI plan also recommended as follows:

- (i) Project Authorities should adopt an O&M cost norm of Rs. 600/- per hectare for utilised potential and Rs. 300/- per hectare for unutilised potential as per the recommendation of the 12th Finance Commission. The subsidy on water rates to the disadvantaged and poorer section of the society should be well targeted and transparent.
- (ii) Full O&M cost of irrigation system taking into account the inflation rate should be recovered in a phased manner at the earliest in XI Plan starting from 2007. Motivation policies like giving concessions and incentives can be considered by the State so as to improve the water use efficiency and recovery of water charges.
- (iii) State Governments may also initiate appropriate action to enhance the water rates to cover 1% of capital cost in addition to achieving O&M cost fully. Whenever practically possible, water should be saved to meet the rising demand for non-irrigation purposes like drinking water, industry, thermal power generation, etc. Water rates for non-agricultural use should also be carefully rationalised. For the storage requirement for non-irrigation purpose the agency demanding water for non-irrigation use should provide full funds enabling the use of such storage. For Lift Irrigation Schemes water charges need to be evolved based on non-subsidised electricity charges.
- (iv) The aspect of limiting the establishment costs in O&M needs to be studied along with the possibility of redeployment of surplus staff presently charged to O&M expenses to some other fields like local watershed development programme, etc.

1.5.4 The 13th Finance Commission recommended recovery of revenue from irrigation projects and suggested to enhance operation and maintenance cost. Detailed recommendations of the 13th Finance Commission are as follows:

- i. The current level of recovery from irrigation projects is at 23 per cent of the non-plan revenue expenditure on irrigation, which is very low and needs to be improved in order to ensure viability of irrigation projects and recommended to the enhanced receipts at 25 per cent of non-plan revenue expenditure on irrigation in 2010-11 to 35 per cent in 2011-12, 45 per cent in 2012-13, 60 per cent in 2013-14 and 75 per cent in 2014-15.

- ii. Given the need for adequate provision for maintenance of irrigation schemes, the Commission has adopted the norm of Rs. 1175 per hectare for the utilised potential and Rs. 588 per hectare for the unutilised potential for major and medium irrigation schemes respectively. After adjustment for inflation, with an annual growth of 5 per cent thereafter, these would reach the level of Rs. 1500 per hectare for utilised and Rs. 750 per hectare for unutilised potential in the terminal year.
- iii. For minor irrigation works, the Commission has provided the norm of Rs. 588 per hectare in the base year for only the utilised potential. However, the Commission has allowed a 30 per cent step up on these norms for the special category states.

1.5.5 The 14th Finance Commission recommended inter-alia the following:

- i. All States, irrespective of whether Water Regulatory Authorities (WRAs) are in place or not, consider full volumetric measurement of the use of irrigation water.
- ii. States which have not set up WRAs, consider setting up a statutory WRA so that the pricing of water for domestic, irrigation and other uses can be determined independently and in a judicious manner. Further, WRAs already established be made fully functional.

1.6 Recommendations of Dr. Vaidyanathan Committee (1991)

Dr Vaidyanathan Committee (1991) recommended for an allocation of 10% of plan provision for major and medium Project for renovating the existing systems and for earmarking the recovery of accumulated arrears towards the cost of deferred maintenance/ special repairs in the projects concerned. It also recommended for enhancement of water rates to cover O&M cost and interest on capital cost with depreciation.

1.7 Guidelines as suggested by National Commission for Integrated Water Resources Development

- 1.7.1 In the context of Legal and Institutional Framework, the National Commission for Integrated Water Resources Development (NCIWRD) in its report 'Integrated Water Resource Development-A Plan for Action (1999)' has *inter-alia* raised basic questions regarding principles of pricing of water and rights and responsibilities of governments, users, communities and individuals that arise during development. There is, thus, need for adoption of a National Water Code in this context. Economy in the use of this increasingly scarce resource has to be promoted and enforced. In sectorial planning, for big projects or small, whether for resource development or management, the full participation of the people and the NGOs need to be ensured from the earliest stages. To cover all these and other related aspects, a comprehensive National Water Code, that is, not one single law but an integrated set of water laws is needed.
- 1.7.2 NCIWRD has *inter-alia* also urged for the adoption Watershed Development. A watershed should be seen as the lowest unit for development and management. In irrigated areas, this would involve conjunctive use of canal and ground water as well as water from tanks. Maintenance, renovation of tanks and ponds may be done Water User Associations (WUAs). In order to improve efficiency of water use and system management as well as

measures for systemic pricing of water, there is need of establishment of Water Pricing Authority.

- 1.7.3 In the context of economic and financial management of the water, NCIWRD in its above report has further states that the availability of water is not equitably distributed over space or time, while the requirements are universal and perennial; efforts have to be made to include space and time utility to the natural supply of water, by investing in storage and conveyance. Thus, water partakes the characteristics of an economic good with an opportunity cost attached to it. Imbalance in the availability and requirement of water compels the methods of regulating the use of water range from pricing of water to its physical allocation for particular use. The question of 'cost recovery' is thus important in this context. If the cost of development is not recouped, long term disadvantage in terms of dwindling supplies and inadequate availability will become manifest.
- 1.7.4 Regarding pricing of water, NCIWRD in the above report stated that water used for irrigation is an economic good and its logical pricing is a key to improving water allocation and encouraging conservation. The canal water rates are still area based depending on crops and seasons etc. There is wide variation in the rates even for the same crop. The charges are also very low and have not been revised for many decades. There is no similarity in the practice followed by various States. There are some States which provide free of cost. In some others, irrigation charges are combined with land revenue. In some States, they vary only by seasons while in a few others they depend on land classification, like wet and dry lands. In some States there are different rates for water supplied by perennial and non-perennial canals. Some States differentiate between classes of projects for charging water rates.

It is thus noted that the main reasons *inter-alia* for low receipts of revenue are

- Very low water tariff and reluctance of State Governments to review and increase the rates periodically to keep pace with rising capital and O&M costs.
- Present method of charging water on area crop basis instead of volumetric basis resulting in substantial wastage. Lack of incentives to farmers for saving water which can be utilized to serve larger areas.
- High level of working expenses
- Physical and operational inadequacies of created facilities resulting in low and uncertain utility and consequent low collection of water charges
- Inefficiency in revenue collection organizations and inadequacy of the collection system giving rise to larger arrears.

- 1.7.5 The returns can be increased expanding the benefited area by saving water. The working expenses can be reduced by modernizing the system, better water management, organizational reforms and improved infrastructure. There is great scope of reducing O&M costs by curtailing overstaffing by redeployment, providing better communication facilities and establishing participatory management. Water rates are so low that they need to be increased substantially, but one of the important ways to overcome resistance would be to increase reliability and efficiency through these means. Increase in water tariff could be resorted to only along with restructuring measures.

As for the rates themselves, there are three basic approaches to setting charges. Rates can be related to the cost of providing irrigation or to the benefits to be derived from irrigation or to some value judgment on the beneficiaries' ability to pay the rates.

- 1.7.6 Various Committees on Commissions examined the issue from time to time and have given their recommendations. The Irrigation Commission, 1972 recommended that the water rates should be five percent to twelve percent of the total value of farm produce, the lower percentage being applicable to fodder and food crops and the higher for cash crops.

Several Finance Commissions have been recommending rates linking them to annual O&M costs and some percentage of capital cost. Dr. Vaidyanathan Committee recommended a two part tariff, in the first phase, comprising a fixed charge of Rs. 50/- applicable to entire command area as a membership charge and a variable charge per ha of irrigation to recover annual O&M cost and one percent interest on capital cost. The objective is to move towards full-cost recovery. The change was to be brought about in three phases, ultimately leading to rates on volumetric basis with improvement of existing systems, creation of autonomous, financially self-reliant entities at the system level with participatory management by users.

The Group of Officers appointed by the Government of India to examine Vaidyanathan Committee's report generally endorsed the recommendations, but did not favour the fixed charge part as most the State Governments did not agree to such a two part tariff.

- 1.7.7 The logic followed for the recommendations about water rates made by various Committees and Commissions is as follows:

- The irrigation systems in the country should move systematically towards supplying irrigation water volumetrically in the ultimate stage. This will not help conservation of water but will also improve assessment and collection of the water dues.
- Until physical structural changes and operational procedures are finalized and implemented, the present method of area based tariff will have to be continued though (i) it is complicated due to differentiation in rate structure resulting from varying agro-climatic conditions, (ii) it is not related to supply cost or scarcity value of water; and (iii) it does not provide any incentive to farmers for economical use of water.

With this background, especially those detailed ones made by Dr. Viadyanathan Committee, the general principles recommended by NCIWRD are as:

- There should be rationalization of basic principles of fixing the water tariffs in all the States.
- The irrigation Commission (1972) had recommended rate structure linked with value of gross product of irrigated hectare irrespective of the working expenses. Dr. Vaidyanathan Committee had tied up the rates with O&M cost and a part of the capital cost without reference to value of the product.
- The water rates should accordingly cover the entire annual O&M cost plus one percent of the gross value of the produce /ha in respect of cereal crops and a higher percentage in case of cash crops.

- These rates should be levied as single part variable tariff for the present. However, the scheme of charging a basic fixed rate alongwith a variable part is quite logical and should be followed up with the State Governments.
- Some States have supplementary levies like betterment charges, Mandi-charges etc. The States may continue these additional charges.
- The revised water pricing structure should be such that the rates are substantially lower for those who accept group volumetric supply than for individual farmers. Also, the Water User Associations (WUAs) should be allowed to collect a little over and above the prescribed water rates to encourage them to improve the system under their charge.
- Though area, crop and season based tariffs are in force in various States at present, they require inter-se rationalization to reflect varying degrees of water consumption by various crops and their economic values.
- Realistic O&M costs/ha should be worked out by each State on pilot representative systems by allotting adequate funds. These figures should be used for fixing of rates. However, in working out the cost, the ceiling rates on establishment charges should be invariably followed.
- There should be two distinct components of irrigation water charges, one for O&M and other related to the value of the product. The O&M component should be fully utilized for the operation and maintenance of the respective portions of the system. The second part should be used to modernize the system with supplementation, from budget allocations. Each State will have to decide the natural proportion of the two components based on its figures of O&M and the productivity of the crops. The financial procedure should be modified to make this possible, so that the farmers are encouraged to pay the enhanced rates.
- The rate structure should differentiate between the seasons and also the crops in such a way that production or benefits are optimized per unit of water or at least indicate the intention. Thus the rates should be so rationalized that the water intensive crops are charged proportionately more as compared to less water consuming crops.
- On the basis of hydrological records, the existing surface irrigation projects should be classified into those with performance reliability of (a) 75 percent or above and (b) less than 75 percent. Considering a minimum reliability of 50 percent, the water rates for the latter should be two thirds of the full rates fixed for the former.
- The objective should be to achieve volumetric measurement ultimately, though gradually, and this should be kept in mind at every stage.
- The change should encourage user group formation and given adequate incentive to group consumers, who can be supplied water on volumetric basis, over individual consumers who have to be charged on crop area basis.
- The pricing for water of lift irrigation scheme should be worked out on the basis of the capital and O&M costs of these schemes. As this water will be easily measurable, the tariff should be fixed on volumetric basis. The schemes can be categorized according to lift ranges and rates be fixed for different categories. As the conveyance losses will be very low in case of lift schemes, the gross irrigation requirement will be much less. The capital costs would also be low. Even then, because of high operational costs, the rates/ha may work out to be somewhat higher than those for gravity flow irrigation.

- An important issue in fixing the basis for tariff for irrigation water is equity consideration. It is argued that increasing water charges will adversely affect small and marginal farmers. It is therefore, proposed that farmers with large holdings, say, exceeding 10 ha may be levied a suitable surcharge. While the point is well taken, it may also be argued that small and marginal farmers' interest is taken care of by separate measures under which subsidized inputs and credit at concessional rates are provided to them. It is not feasible nor is there need to provide each and every input at subsidized rates, specially irrigation water which is the scarcest of all inputs. Moreover, there are only a very limited number of large farmers. Any surcharge will, therefore, not yield significant amounts.

1.7.8 The above are broad guidelines and the details have to be worked out and operationalised in each state, perhaps separately for regions in large states or even for projects. It is believed that suggesting a uniform formula for the entire country would have no practical value. However, a Water Pricing Authority may be constituted in each state by statute, on the analogy of the energy pricing authorities and the general principles, with suitable local modifications, incorporated as guidelines for the Pricing Authority. The pricing structure suggested by the Authority, after hearing all the parties concerned, should be binding on all concerned. Any subsidy proposed to be given by the State Government for any particular use would be transparent and given as such as a subsidy for such time as the government decides. The subsidy should not affect the funds for the water sector.

1.8 Overall and Crop-specific Water Rates in respect of Flow and Lift Irrigation

As per data on water rates received from the concerned departments/authorities of State/UT Governments, the overall water rates along-with crop-specific rates have been summarized in various tables (viz. Table 1(ii) and Table 1(iii)) described as below.

The following Table 1.(i) presents State-wise the overall range of water rates in respect of flow vis-a-vis lift irrigation and the dates when the rates were last revised.

Table: 1(i) State/UT-wise Water Rates for Flow and Lift irrigation

Unit in Rs/ ha

State / UT	Flow Irrigation Range		Lift Irrigation Range		Date since applicable
	Max	Min	Max	Min	
1	2	3	4	5	6
Andhra Pradesh	864.50	148.20	NA		01-07-1996
Arunachal Pradesh	No water rates				29-12-2008
Assam	751.00	150.00	751.00	150.00	30-03-2000
Bihar	370.50	74.10	NA		Nov-2011
Chhattisgarh	741.00	123.50	741.00	123.50	15-06-1999
Delhi	148.20	34.03	148.20	33.35	2009
Goa	360.00	72.00	720.00	144.00	01-04-2013
Gujarat	300.00	160.00	100.00	53.33	01-01-2007
Haryana	197.60	24.70	98.80	12.35	27-07-2000
Himachal Pradesh	49.92	49.92	99.81	99.81	01-04-2015
Jammu & Kashmir	298.87	121.03	2998.58	298.87	01-04-2015
Jharkhand	370.50	74.10	370.50	74.10	26-11-2001
Karnataka	988.40	37.00	1976.80	74.00	13-07-2000
Kerala	99.00	37.00	148.50	93.00	18-09-1974
Madhya Pradesh	960.00	50.00	960.00	50.00	31-12-2005
Maharashtra	6297.00	119.00	5405.00	20.00	01-07-2003
Manipur	602.00	184.00	602.00	184.00	24-08-2013
Meghalaya	No water rates				
Mizoram	No water rates				
Nagaland	No water rates				
Orissa	930.00	60.00	NA		05-04-2002
Punjab	123.50	123.50	123.50	123.50	12-11-2014
Rajasthan	286.52	29.64	573.04	14.82	24-05-1999
Sikkim	250.00	10.00	NA		2002
Tamil Nadu	61.78	2.77	NA		06-11-1987
Tripura	312.50	312.50	312.50	312.50	01-10-2003
Uttarakhand	474.00	30.00	237.00	15.00	18-09-1995
Uttar Pradesh	474.00	30.00	237.00	15.00	18-09-1995
West Bengal	123.50	37.06	2015.52	251.94	01-07-2003
A & N Islands	No water rates				
Chandigarh *	NA				
Dadra & Nagar Haveli	830.00	110.00	275.00	75.00	29-01-1996
Daman & Diu	286.00	286.00	286.00	286.00	2007
Lakshadweep	No water rates				
Puducherry	NA				

*In rural areas of Chandigarh, the water rates for irrigation purpose is Rs 23/- per hour with effect from 01.01.2010.

NA : Not Available

Similarly, the following Table 1(ii) presents State-wise crop-specific water rates in respect of Flow Irrigation.

Table: 1(ii) Water Rate for Paddy, Wheat, Sugarcane, Cotton, Oilseeds and Pulses utilising Flow Irrigation

Unit in Rs / ha

State/UT	Paddy		Wheat		Sugarcane		Cotton		Oilseeds		Pulses	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	494.00	370.50	NA	NA	864.50	864.50	864.50	864.50	247.00	148.20	NA	NA
Arunachal Pradesh	No water rates											
Assam	751.00	281.24	562.50	562.50	222.00	222.00	NA	NA	562.50	562.50	562.50	562.50
Bihar	247.00	108.40	185.25	138.32	370.50	370.50	NA	NA	98.80	74.10	98.80	74.10
Chhattisgar	494.00	200.07	NA	NA	741.00	741.00	NA	NA	247.00	123.50	247.00	123.50
Delhi	148.20	148.20	66.63	66.63	NA	NA	NA	NA	44.46	44.46	NA	NA
Goa	180.00	180.00	NA	NA	360.00	360.00	NA	NA	120.00	120.00	NA	NA
Gujarat	160.00	160.00	160.00	160.00	300.00	300.00	160.00	160.00	160.00	160.00	160.00	160.00
Haryana	148.20	123.50	123.50	111.15	197.60	172.90	123.50	111.15	123.50	111.15	98.80	86.45
Himachal Pradesh	49.92	49.92	49.92	49.92	49.92	49.92	49.92	49.92	49.92	49.92	49.92	49.92
Jammu & Kashmir	298.87	298.87	150.67	150.67	298.87	298.87	NA	NA	150.67	150.67	121.03	121.03
Jharkhand	217.36	108.68	185.25	138.32	370.50	370.50	NA	NA	98.80	74.10	98.80	74.10
Karnataka	247.10	247.10	148.25	148.25	988.40	988.40	148.25	148.25	148.25	148.25	86.50	86.50
Kerala	99.00	37.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	155.00	85.00	125.00	75.00	960.00	960.00	70.00	70.00	75.00	50.00	75.00	50.00
Maharashtra	476.00	119.00	476.00	476.00	6297.00	6297.00	1924.00	724.00	1438.00	476.00	357.00	357.00
Manipur	602.00	305.00	305.00	305.00	NA	NA	NA	NA	184.00	184.00	184.00	184.00
Meghalaya	No water rates											
Mizoram	No water rates											
Nagaland	No water rates											
Orissa	NA	NA	170.00	170.00	500.00	500.00	280.00	280.00	170.00	60.00	170.00	60.00
Punjab	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50
Rajasthan	197.60	49.40	148.20	64.22	286.52	103.74	177.84	88.92	113.62	64.22	79.04	49.40
Sikkim	100.00	60.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tamil Nadu	49.42	5.56	NA	NA	55.60	5.56	61.78	16.86	8.35	2.77	8.35	2.77
Tripura	312.50	312.50	312.50	312.50	NA	NA	312.50	312.50	312.50	312.50	312.50	312.50
Uttarakhand	287.00	40.00	287.00	128.00	474.00	99.00	114.00	35.00	NA	NA	NA	NA
Uttar Pradesh	287.00	40.00	287.00	40.00	474.00	99.00	114.00	35.00	NA	NA	NA	NA
West Bengal	123.50	37.06	49.40	49.40	NA	NA	NA	NA	NA	NA	NA	NA
A & N Islands	No water rates											
Chandigarh*	NA											
Dadra & Nagar	140.00	140.00	NA	NA	830.00	830.00	NA	NA	NA	NA	NA	NA
Daman & Diu	286.00	286.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lakshadweep	No water rates											
Puducherry	NA											

*In rural areas of Chandigarh, the water rates for irrigation purpose is Rs 23/- per hour with effect from 01.01.2010.

NA : Not available

Likewise, the following Table 1(iii) presents State wise crop-specific water rates in respect of Lift Irrigation.

Table: 1(iii) Water Rate for Paddy, Wheat, Sugarcane, Cotton, Oilseeds and Pulses Utilising Lift Irrigation

Unit in Rs / ha

State/UT	Paddy		Wheat		Sugarcane		Cotton		Oilseeds		Pulses	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	2	3	4	5	6	7	8	9	10	11	12	13
Andhra Pradesh	NA											
Arunachal Pradesh	No water rates											
Assam	751.00	281.24	562.50	562.50	222.00	222.00	NA	NA	562.50	562.50	562.50	562.50
Bihar	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chhattisgarh	494.00	200.07	NA	NA	741.00	741.00	NA	NA	247.00	123.50	247.00	123.50
Delhi	148.20	148.20	66.69	66.69	NA	NA	NA	NA	44.46	44.46	NA	NA
Goa	360.00	360.00	NA	NA	720.00	720.00	NA	NA	240.00	240.00	NA	NA
Gujarat	53.33	53.33	53.33	53.33	100.00	100.00	53.33	53.33	53.33	53.33	53.33	53.33
Haryana	74.10	74.10	61.75	55.58	98.80	86.45	61.75	55.58	61.75	43.23	49.40	43.23
Himachal Pradesh	99.81	99.81	99.81	99.81	99.81	99.81	99.81	99.81	99.81	99.81	99.81	99.81
Jammu & Kashmir	1499.96	1499.96	748.41	748.41	2998.58	2998.58	NA	NA	449.54	449.54	298.87	298.87
Jharkhand	217.36	108.68	185.75	138.32	370.50	370.50	NA	NA	98.80	74.10	98.80	74.10
Karnataka	494.20	494.20	296.50	296.50	1976.80	1976.80	296.50	296.50	296.50	296.50	173.00	173.00
Kerala	148.50	93.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Madhya Pradesh	155.00	85.00	125.00	75.00	960.00	960.00	70.00	70.00	75.00	50.00	75.00	50.00
Maharashtra	357.00	357.00	535.00	535.00	5405.00	3600.00	843.00	20.00	1200.00	20.00	476.00	476.00
Manipur	602.00	305.00	305.00	305.00	NA	NA	NA	NA	184.00	184.00	184.00	184.00
Meghalaya	No water rates											
Mizoram	No water rates											
Nagaland	No water rates											
Orissa	NA											
Punjab	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50	123.50
Rajasthan	395.20	24.70	296.40	32.11	573.04	51.87	355.68	44.46	177.84	32.11	158.08	24.70
Sikkim	NA											
Tamil Nadu	NA											
Tripura	312.50	312.50	312.50	312.50	NA	NA	312.50	312.50	312.50	312.50	312.50	312.50
Uttarakhand	143.00	20.00	143.00	20.00	237.00	49.00	57.00	18.00	NA	NA	NA	NA
Uttar Pradesh	143.00	20.00	143.00	20.00	237.00	49.00	57.00	18.00	NA	NA	NA	NA
West Bengal	2015.52	503.88	503.88	503.88	1259.70	1259.70	NA	NA	503.88	251.94	NA	NA
A & N Islands	No water rates											
Chandigarh*	NA											
Dadra & Nagar Haveli	275.00	75.00	275.00	275.00	100.00	75.00	NA	NA	NA	NA	275.00	275.00
Daman & Diu	286.00	286.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lakshadweep	No water rates											
Puducherry	NA											

*In rural areas of Chandigarh, the water rates for irrigation purpose is Rs 23/- per hour with effect from 01.01.2010.

NA : Not Available

1.8 Scope of the publication

1.8.1 Since water is a State subject in India, the water rates are fixed by the State Governments. As a result, the water rates vary among States. There is, therefore, no uniformity for fixation of water rates in States and UTs. There is also considerable delay in revision of water rates by the States. The presently existing system of water charges in the States/UTs are delineated in this Publication. The latest available information of Capital Outlay, Working Expenses, Gross Receipts, Revenue assessed and Revenue realized up to the year 2013-14 are included in the Publication.

1.8.2 The Publication contains three chapters. The Chapter-1 "Introduction" presents inter-alia introduction on water pricing, recommendations of various Commissions and Committees along with overall range of water rates in respect of Flow vis-a-vis Lift Irrigation in States/UTs. Besides, it provides State-wise crop-specific water rates for some of important crops (viz. paddy, wheat, sugarcane, cotton, oilseeds and pulses) in respect of flow as well as lift irrigation. Chapter-2 "Governing Principles for Fixation of Water Rates in States/UTs for Irrigation" deals with the considerations governing the fixation of water rates in States and UTs. It further provides for each State and UT details on season-wise/source-wise water rates for each crop being grown therein in respect of flow as well as lift irrigation. Chapter-3 "System of Assessment and Collection of Revenue" describes mechanism of system of assessment and collection of water revenue prevailing in different States and UTs. This apart, an analysis in respect of capital expenditure, working expenditure along with gross receipts over the period 2000-01 to 2013-14 in major & medium projects have been provided. Finally, it gives detail on the gap in revenue assessed and realized for the same period for all States and UTs.

Chapter – II

Governing Principles for Fixation of Water Rates/Charges in States/UTs for Irrigation

2.1 Principles for Fixation of Water Rates/Charges:

2.1.1 Since the irrigation requirements vary not only from crop to crop but also for the same crop grown in different seasons, such as the first, second or third paddy crop, and the quantity of water supplied, adequacy and dependability of supply should play a dominating role in fixing water rates. For fixing water rates, the basic tenets of both the quantity and timeliness of supply of water deserve to be duly considered. In addition other factors like crop water requirement, extent of meeting O&M cost, prevailing water rates in neighbouring States/UTs etc. also play an important role and have to be given due consideration in fixation of water rates.

2.1.2 The general level of water rates in a State should be such that, if taken as a whole, the irrigation schemes do not impose any burden on the general revenues.

2.1.3 In canal commands where the State has to supply water by lifting it, water rates charged have to be kept higher than the rates for gravity flow to take into account additional cost of lifting.

2.1.4 In the absence of requisite uniformity, water rates vary from one canal system to another canal system in the same State. Haryana has separate rates for water used from Western Yamuna Canal and Bhakra Canal systems. Similarly the Government of Gujarat has fixed separate set of water rates for North Gujarat and South Gujarat regions within the State. There is also additional differentiation in the water charges on the basis of source/type of irrigation. For instance, Government of Andhra Pradesh has fixed separate set of water rates for crops grown in the State depending upon the category of irrigation source being Category-I or Category-II. In Bihar, the water rates for Flow irrigation schemes are distinguishable on the basis of whether the source is perennial or non-perennial.

2.1.5 The wide variety of systems and norms being followed at present in the fixation of the water rates by the States has led to sharp variation in the water charges. The approach adopted by the State Governments and Union Territories for fixing the water rates/ charges is not uniform. By and large due consideration is being given by the States/UTs in fixation of water rates/ charges to ensure that they provide revenue sufficient to cover cost of creation of irrigation potential, hike in labour rates, establishment & other related recurrent costs of Operation & Maintenance of the system and take into account the Crop Water requirement, availability of water, support price of agriculture products, net benefit to the farmers from the produce thereof and the water rates being charged by the neighbouring States besides the paying capacity of the irrigators/ farmers.

2.2 Principles for Fixation of Water Rates/Charges in States/UTs:

Arunachal Pradesh, Andaman & Nicobar Island, Nagaland, Meghalaya, Mizoram, Puducherry and Lakshadweep have not levied any water charges for using water for irrigation

purposes. Multiplicity of factors contribute to the process of fixation of water rates in States/UTs and their common as well as diverging considerations forming the basis of the fixation of overall water rates along with the system of water rates prevailing therein are as under :

2.2.1 Andhra Pradesh

2.2.1.1 The water charges are fixed to ensure that they provide revenue sufficient to cover:

- i) The desirable level of maintenance works which is required so that the irrigation systems may operate at the optimum level.
- ii) The establishment cost and other recurrent costs (e.g. fuel, electricity and overheads), required for operating and maintaining the systems in a reliable, economical, equitable and predictable manner.
- iii) Phased introduction of an affordable percentage addendum to water charges, to be placed in a reserved fund for future contingencies and renewal of the infrastructure.

2.2.1.2 In this State, Rice, Sugarcane, Cotton, Pulses, Sunflower, Jowar and Castor are the principal crops, which are grown by the farmers. The cropping seasons in the State are generally from July to November (Kharif) and from November to February (Rabi).

2.2.1.3 The State Government has revised the water rates for irrigation purposes with effect from 01.07.1996. Separate water rates are specified for crops under irrigation sources categorized as Category-I and Category-II. For both the categories, distinct water rates are in vogue for various crops, namely First or Single wet crop, second and Third wet crops, First irrigated dry crop, Second and Third irrigated dry crops.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha
Category-I source	First and single wet crop	494.00
	Second and third wet crop	370.50
	First irrigated dry crop & Second and third irrigated dry crop	247.00
	Long duration crop	864.50
Category-II source	First and single wet crop & Second and third wet crop	247.00
	First irrigated dry crop & Second and third irrigated dry crop	148.20
	Long duration crop	864.50

Category I: Any source of irrigation under Major and Medium Irrigation Projects.

Category II: Any source of irrigation under other than Major and Medium Irrigation Projects

Wet Crop: Paddy

Dry Crop: Sunflower, Groundnut, Jowar etc.

Long duration crop: Sugar cane

2.2.2 Arunachal Pradesh

No water charges for irrigation purposes are being charged in the State.

2.2.3 Assam

2.2.3.1 In Assam, the water rates are fixed in conformity with the Fiscal Reforms Programme (Reforms in the Non-Tax Revenue) of the State Government. The charges are realized by Irrigation Department through Beneficiary Committees of the Irrigation schemes.

2.2.3.2 The rates of service charges were refixed vide Notification No. IGN(W)3/2000/pt/28 dated 30.03.2000 with immediate effect.

2.2.3.3 Principal crops of the state are Paddy i.e. Sali, Sali (HYV), Bao, Ahu, Boro, Jute and Wheat. The Agriculture Seasons of the state are Kharif (July to Sept.), Rabi (Oct. To March) and Summer (April to June).

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha
Rabi	Early Ahu, Ahu HYV	751.00
	Wheat, Boro Paddy, Oil seeds, Pulses& others	562.50
	Sugarcane	222.00
Kharif	Regular Ahu	751.00
	Sali Traditional, Sali HYV, Bao Paddy & Others	281.24
	Jute	150.00
	Sugarcane	222.00

2.2.4 Bihar

2.2.4.1 Water rates in Bihar are fixed keeping in view of the following inputs:

- i) Cost of maintenance and repair.
- ii) Abnormal rise in labour rate.
- iii) Cost of creation of irrigation potential.
- iv) Support price of agricultural products.
- v) Comparison of water rates vis-à-vis those in other Departments viz., Minor Irrigation Department of the State and the Irrigation Departments of other neighbouring States.
- vi) Paying capacity of the farmers.

2.2.4.2 Water from Major and Medium Projects is utilised for Flow irrigation through perennial and non-perennial canals. Cropping seasons span from 26th October to 25th March for Rabi crops, 25th June to 25th October for Kharif crops and 25th February to 25th June for hot weather crops according to which the irrigation water is required to be regulated in the State. The principal crops grown in the State are Paddy (mid-May to November), Maize (end of May to July), Millet (June to October/November), Wheat (November to April), Barley (November to March/April), Kharif pulses (May/June to March/April) and Rabi pulses (October/mid-November

to March/April), Oilseeds (mid-September/October to December/January) and Sugarcane (October/November to when pods turn red).

2.2.4.3 Crop-wise water rates in the State are specified for irrigation through perennial and non-perennial canals separately.

2.2.4.4 These water rates for irrigation purpose revised in Nov. 2011.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Perennial	Non Perennial
Rabi	Wheat	185.25	138.32
	Barley, Potato, Onion	148.20	111.15
	Dalhan, Tilhan, Peas, Gram	98.80	74.10
Kharif	Paddy	217.36	108.68
Other	Sugarcane	370.50	-
	Jute	98.80	-
Hot Season	Litchi, Mango, Banana, Vegetables		296.40
	Paddy, Maize, Sun flower		247.00
	Chillies		98.80

2.2.5 Chhattisgarh

2.2.5.1 The State of Chhattisgarh has been carved out of the earlier unified State of Madhya Pradesh and joined the Union of India as the newly formed State along with Uttaranchal and Jharkhand. There exists a well-established system of water rates which has been adopted from Madhya Pradesh. The system of assessment and collection of Irrigation Revenue in Chhattisgarh is governed by Madhya Pradesh Irrigation Act 1931 and Madhya Pradesh Irrigation Act 1974.

2.2.5.2 The principal crops grown in the State are paddy (Kharif), tur, vegetables and banana. The current rates towards water charges for irrigation purposes have come into force w.e.f. 15.06.1999.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha
Rabi	Paddy, Brinjal & Carrot	494.00
	Groundnut, Sunflower, Soya bean, Gram, Moong, Coriander, Mustard, Kusum & Arhar	247.00
	Sugarcane, Banana, Betel Leaf & Rubber	741.00
Kharif	Paddy	200.07
	Groundnut, Soya bean, Jowar, moong, Green crops, Arhar, Urad & Tilli	123.50
Perennial Vegetable	Brinjal, Carrot, Cabbage, Chilli, Cucumber, Colocasia Root, Ginger, Garlic & Fenugreek	494.00

2.2.6 Delhi

2.2.6.1 Wheat, Barley, Rice, Bajra, Jowar, Maize, Mustard and Vegetables are the principal crops grown by the farmers in the National Capital Territory (NCT) of Delhi. Irrigation & Flood Control Department of the NCT of Delhi deals with the water rates fixed for various crops. The water rates for most of the crops for both Flow and Lift irrigation are effective from 1951 except for revision of water rates for grass in the year 1979. The latest water rates were notified since 2009.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Rabi	Vegetables	133.38	133.38
	Wheat & Barley	66.63	66.69
	Fodder grass	34.03	33.35
	Mustard	44.46	44.46
Kharif	Rice	148.20	148.20
	Vegetables	133.38	133.38
	Jowar, Maize, & Bajara	44.46	44.46

2.2.7 Goa

2.2.7.1 The Irrigation Department in Goa deals with the crop-wise water rates. The canal water is supplied to the irrigators from the irrigation projects constructed and maintained by State Government.

2.2.7.2 The cropping season of the state are Kharif (June to December), Rabi (November to March) and Summer (March to May). The principal crops of the season are Paddy, Sugarcane, Vegetables, Coconuts, Areca nuts, Betelnuts, Plantations, Nasni, Jowar, Maize, Hill millets, Groundnuts, Onion and Chillies.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Government Canals	Paddy& Garden Crops	180.00	360.00
	Sugarcane	360.00	720.00
	Nasni, hill millet, Jowar& Maize	72.00	144.00
	Groundnut, Chilli, Onion & Vegetables	120.00	240.00

2.2.8 Gujarat

2.2.8.1 Following considerations are taken into account while fixing the water rates in the State:

- i) Geological Units
- ii) System and Type of Irrigation
- iii) Seasons and Crops
- iv) Concessional Water Rates
- v) Location of the project
- vi) Agreement Rate

2.2.8.2 The present structure of water rates in the State has come into force with effect from 01.01.2007. The Agricultural year in the State commences from 16th June. Season-wise, region-wise and crop-wise rates have been specified by the State Government.

2.2.8.3 The cropping seasons of the state are:

- i) Kharif Season (from 16th June to 15th October)
- ii) Rabi season (from 16th October to 15th February)
- iii) Hot Weather Season (from 16th February to 15th June)

2.2.8.4 The principal crops in the State are:

- i) Kharif: Paddy, Bajari, Bavta, Jowar, Kodri, Maize, Vegetables, Grass, Groundnut, Cotton
- ii) Rabi: Wheat, Raydo, Chana, val, Jeeru, Variali, Isabgul, Vegetable.
- iii) Hot Weather: Paddy, Groundnut, Vegetable, Grass
- iv) Two Seasonal: Cotton, Bidi, Tobacco, Seed spray, Onion, Transplant Onion.
- v) Perennial: Sugarcane, Banana, Rajko

The crop-wise water rates in the State are given below:

Season/Type of Source		Name of Crops	Water Rates in Rs/ha	
			Flow Irrigation	Lift Irrigation
Single Seasonal Crops	Rabi	Wheat, Raydo, Gram, Val, Cheno, Cumin Seed, Fennel Seed, Isabgul, Other food Crops, Vegetables, Grass and other rabi Crops not mentioned above	160.00	53.33
	Kharif	Paddy, Bajri, Bavta, Juwar (Late Kharif, Desi Kharif for Ukai Kakarapar area), Kodri, Maize, Vegetables, Grass & other food crops pulses not mentioned above, Groundnut, Cotton & Kharif crops other than those mentioned above	160.00	53.33
	Summer	Hot weather Paddy, Other food crops Vegetables & grass, Hot weather Ground nut & Other hot weather crop not mentioned above	160.00	53.33

Season/Type of Source		Name of Crops	Water Rates in Rs/ha	
			Flow Irrigation	Lift Irrigation
Two Seasonal Crops	Rabi	Cotton, Black Onion, Transplant Onion,	160.00	53.33
	Kharif	Bidi Tobacco, All other varieties of Tobacco except Bidi Tobacco	160.00	53.33
Perennial Crops	Rabi	Sugarcane, Banana, Rajko & Other	300.00	100.00
	Kharif	perennial crops not mentioned above	300.00	100.00
	Hot weather		300.00	100.00

2.2.9 Haryana

2.2.9.1 The criterion adopted for fixing water rates broadly depends upon the quantum of water consumed by a particular crop from the time of sowing to maturity and the paying capacity of the irrigator with a view to cover maintenance cost of running of channels. The capacity and assuredness of irrigation are also kept in view while fixing water rates in Haryana.

2.2.9.2 Requirement of water for drinking, agricultural and commercial purposes in the State is met mainly from Bhakra Canal and Yamuna Canal. The State has specified water rates for irrigation crop-wise for each of these canal systems. Hemp, Indigo, Gaura, Jantar and Arhar ploughed in as green manure before 15th September are not assessable for charging of water rates.

2.2.9.3 The water rates for various crops grown in Haryana have been revised in 2000 with the promulgation of the State Government Gazette No. 1/15/93-IW dated 27.07.2000. The water rates for the purpose of irrigation from all canals and drains are notified separately for crops grouped in categories "A" to "F". Category 'A' encompasses green manure crops for which no water rates are charged.

2.2.9.4 The water rates charges are 50% of the normal water rates on using water saving devices like drip and sprinkler irrigation by the irrigator on the lift outlets and also for lift maintained and operated by the cultivators (Jallars).

The crop-wise water rates in the State are given below:

Season/Type of Source		Name of Crops	Water Rates in Rs/ha	
			Flow Irrigation	Lift Irrigation
Bhakra Command				
Category 'B'	Groundnut, Bajra, Maize, Jowar, Arhar, Grass with more than one watering, Fodder crops,		86.45	43.23
Category 'C'	Urd, Moong, Gram, Guara, Til, Masoor, Soya bean, Pulses, Peas		98.80	49.40
Category 'D'	Wheat, Cotton, Barley, Mustard (Oil Seed), Melon. Fibres		123.50	61.75

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Category 'E'	Paddy (Rice), Oat, Potato, Onion, Arvi, Chillies, Barseem, Water nuts, Vegetables, Tobacco, Poppy, Spices, Dyes, Medicinal & aromatic plants	148.20	74.10
Category 'E-1'	Sugarcane	197.60	98.80
Category 'F'	Garden & Orchards, Floriculture & plantation	148.20	74.10
	Single watering for followed by crop, Single watering for grass	24.70	12.35
Yamuna Command			
Category 'B'	Groundnut, Bajra, Maize, Jowar, Arhar, Grass with more than one watering, Fodder crops, Turnip,	86.45	43.23
Category 'C'	Urd , Moong, Guara, Til, Masur, Soya bean, Pulses, Peas, Gram	98.80	49.40
Category 'D'	Wheat , Cotton, Barley, Mustard (Oil Seeds), Melon, Fibers	111.15	55.58
Category 'E'	Paddy (Rice), Oat, Potato, Onion, Arvi, Chillies, Bar seem, Water nuts, Vegetables, Tobacco, Poppy, Spices, Dyes, Medicinal & aromatic plants	123.50	74.10
Category 'E-I'	Sugarcane	172.90	86.45
Category 'F'	Garden & Orchards, Floriculture & plantation	148.20	74.10
	Single watering for followed by crop, Single watering for grass	24.70	12.35

2.2.10 Himachal Pradesh

2.2.10.1 The basis of fixation of water rates is type of irrigation schemes i.e. whether Lift irrigation or Flow irrigation. The following factors were taken into account by the State for arriving at revised water rates:

1. O&M costs of the irrigation schemes.
2. Cost of material, labour and Energy charges.

2.2.10.2 In the State, there are mainly two cropping seasons namely, Rabi and Kharif but as per advancement made in agriculture methods, improved seeds and use of fertilizers, the farmers of this hilly-area-dominated State have started growing Zaid crops in the period between Rabi and Kharif on lands, where assured irrigation facilities are available. The principal crops grown in the State during Kharif season include maize, paddy, sugarcane, Cotton, Watermelon, Opium, Oilseed, orchards and vegetables. The principal crops grown during the Rabi season are wheat, oilseeds, grams, pulses, barley, Bajra, Masoor, vegetables and fodder crops. Crops like toria, potato and peas are cultivated during Zaid season.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Rabi	Sugarcane (except on kharif channel), Barley, Oat (except on kharif channel), All Rabi crops (except wheat and gram), Wheat & Gram, Wheat & Grams (except on kharif channel), Bajra, Masoor, Pulses, Jowar, Cheena, Grass & fodder crop, Grams, Grass single watering, Indigo, Dyes, Tobacco, Poppy, Not followed by crops	49.92	99.81
Kharif	Sugarcane (on kharif channel), Water Nuts, Rice, Melon, Fibres, Maize, Oil seeds, Garden & Orchards, Any number of watering in kharif, Two or more watering in Rabi or Kharif, Cotton, Opium	49.92	99.81
Zaid	Toria, Potato, Peas	49.92	99.81

2.2.11 Jammu & Kashmir

2.2.11.1 In the State, the area being irrigated through Government owned canals/khuls/lifts/tube-wells/tanks etc. is recorded by the Patwaries of the department. Assessment water rate is made by way of charging Abiana as fixed by the Government. The Abiana rates in the State stand revised with effect from 01.04.2015. Separate rates have been specified for Gravity schemes as well as Lift irrigation schemes.

The crop-wise water rates in the State are given below:

Name of Crops	Water Rates in Rs/ha	
	Flow Irrigation	Lift Irrigation
Sugarcane	298.87	2998.58
Paddy	298.87	1499.96
Pulses	121.03	298.87
Wheat	150.67	748.41
Oilseeds	150.67	449.54
Maize	150.67	380.38
Vegetables	200.07	899.08
Orchards	298.87	1148.55
Bar seem/Shatala	200.07	748.41

2.2.12 Jharkhand

2.2.12.1 After the creation of Jharkhand in 2000, water rates for irrigation use, as effective in unified Bihar, have been adopted by the State. Revision /re-fixation of water rates were made operational w.e.f. 26.11.2001. The Irrigation water rates for Wheat, Paddy and Sugarcane under perennial and Paddy and Wheat under non-perennial sources has also been fixed.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Perennial	Wheat, Barley, Potato, Onion	185.25	185.25
	Pulses, Peas, Grams, Oilseeds, Jute	98.80	98.80
	Paddy	217.36	217.36
	Sugarcane	370.50	370.50
Non-Perennial	Paddy	108.68	108.68
	Wheat, Barley, Potato	138.32	138.32
	Peas, Gram, Pulses, Oilseeds	74.10	74.10
	Vegetables, Banana, Litchi, Mango	296.46	296.46

2.2.13 Karnataka

2.2.13.1 Water rates are fixed based upon the type of crops grown, whether wet or semi-dry, duration of the crops, number of watering required till crop maturity etc., keeping in view the requirement of water for each crop. The water rates for all seasons viz; Kharif, Rabi is the same. For new irrigation works, no water rates are levied for the first two years, after completion and commissioning. In the third year 50% of the water rates are levied and from the fourth year onwards full water rates as specified are charged.

2.2.13.2 In the State, Paddy, Sugarcane and semi-dry crops, Ragi, Wheat, Jowar, Pulses, Oilseeds and Tobacco are the principal crops. Besides, there are garden crops like Banana, Coconut, Pepper, Turmeric etc., which are also grown subject to availability of water and climatic conditions. The principal cropping seasons are Kharif (June to October) followed by Rabi (November to February). Depending upon water availability, sometimes the hot weather crops are also grown during February to June.

2.2.13.3 The State Government has revised the water rates with effect from 13.07.2000. Previous revision of water rates was made during 1985, which came into effect from 01.07.1985.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Kharif & Rabi	Wheat , Other Rabi Crops, Groundnut, Cotton& Garden Crops	148.25	296.50
	Sugarcane	988.40	1976.80
	Paddy	247.10	494.20
	Jowar, Tobacco, Maize, Ragi, Sajje, Navane, Green gram, Sweet Potato, Gingely, Onion, Coriander, Pulses & Others	86.50	173.00
	Manurial Crops	37.00	74.00

2.2.14 Kerala

2.2.14.1 Water rates are levied mainly on the basis of type of land, area of land and the number of crops getting benefit from an irrigation work. The State Government introduced revision in the water rates with effect from 18.09.1974 on the basis of classification of land as (a) benefited by an irrigation work irrigating or useful for the drainage of over 81 hectares, (b) benefited by a Lift irrigation work, i.e., an irrigation work by which water for irrigation purposes is supplied with the aid of pump-sets and other mechanical devices, and (c) benefited by other Lift irrigation works (not covered in b), irrigating or useful for the drainage of more than 2 hectares but less than 81 hectares.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Regd. single wet crop land and Other regd. Wet land	Two paddy crops	62.00	93.00
	More than two paddy crops	99.00	148.50
Land made fit for cultivation	Only one Paddy crop	37.00	93.00
	Two paddy crops	62.00	148.50
	More than two paddy crops	99.00	93.00
Others	Other land benefitted	62.00	93.00

2.2.15 Madhya Pradesh

2.2.15.1 The basis for fixing water rate is the net additional income earned by the farmers on account of their crops being irrigated subject to the stipulation that it should be limited to the paying capacity of the farmers.

The water rates fixed are based upon:

- (1) Geographical unit
- (2) System and type of irrigation
- (3) Seasons and crops
- (4) Confessional water rates
- (5) Location of the project
- (6) Agreement rates

2.2.15.2 The State Government has revised the water rates for agricultural purposes with effect from 01.11.2005, through amendment vide Notification No. CR-9-92-Med-XXXI-1931(No. 3 of 1931) dated 31.12.2005. Uniform crop-wise water rates are adopted in the State both for Flow and Lift irrigation schemes.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Rabi	Paddy	155.00	155.00
	Groundnut , Moong , Soya bean , Tur	75.00	75.00
Kharif	Paddy	85.00	85.00
	Groundnut, Moong, Soyabean, Tur	50.00	50.00
Others	Wheat 3 watering with palewa	125.00	125.00
	Wheat each extra watering Coriander, Gram, Mustard, Sat flower & Sunflower	75.00	75.00
	Sugarcane, Rubber plant, Banana, Betel, Garden Crops	960.00	960.00
	Til, Urd, Jowar	50.00	50.00
	Cotton ordinary	70.00	70.00
	Green veg., Barley, Brinjal, Cauliflower, Pea, Pumpkin, Tobacco, Carrot, Gwarphali, Ladyfinger, Chillies, Cucumber, Ginger, Potato, Radish, Tomato, Spinach, Watermelon, Garlic, Turmeric. For lift Irrigation only(Alocasia, Fem Greek, Mulberry, Poppyseeds)	630.00	630.00
	Bar seem grass (fodder crop)	480.00	480.00

2.2.16 Maharashtra

2.2.16.1 The fixation of the water rates in the State is governed by:

- Volume of water supplied and capacity of farmer to pay water charges.
- Total recoveries to be at least equal to the annual cost incurred in providing services.
- Tapping of full potential, and
- The level of the average gross income obtained from the crop under the usual conditions and productivity.

2.2.16.2 The rates for Flow irrigation in respect of non-cash crops are fixed roughly at 6% of the gross income from these crops and about 12% of the gross income from cash crops, as recommended by the Maharashtra State Irrigation Commission. The water rates are fixed to meet the expenditure on maintenance and repairs of irrigation projects and also to ensure 1% return on Capital cost on 01.07.2003.

The crop-wise water rates in the State in respect of Flow Irrigation are given below:

Season/Type of Source		Name of Crops	Water Rates in Rs/ha
Rabi		Cotton, Groundnut	724.00
		Wheat	476.00
		Others(Excluding Wheat and Groundnut)	357.00
		Paddy(Advance Watering for Rabi Season)	119.00
Kharif		Groundnut & Paddy(On Demand)	476.00
		Paddy	238.00
		Vegetable	724.00
Others	Two seasonal	Potato (Rabi & Kharif) & Tur (Rabi & Kharif)	357.00
		crops (Rabi & hot weather)	605.00
	Perennial	Sugarcane and Banana	6297.00
		Other perennial (maximum rate)	2876.00
		Other perennial (minimum rate)	724.00
	Hot Weather Season	Cotton	1924.00
		Groundnut	1438.00
		Other	724.00
		Vegetable	2697.00

The crop-wise water rates in the State in respect of Lift Irrigation are given below:

Season/Type of Source		Name of Crops	Water Rates in Rs/ha
Rabi		Cotton (other cash crops), Groundnut (other cash crop)&Vegetables	843.00
		Wheat	535.00
Kharif		Groundnut (other cash crop)	416.00
		Rice	357.00
		Other food grain and fodder crops	297.00
		Vegetables	535.00
Perennial (flow)		Sugarcane & Banana	5405.00
Perennial (drip)		Sugarcane & Banana	3600.00
Hot Weather		Food grain & Jowar	724.00
		Groundnut (cash crop)	1200.00
		Vegetables	1200.00
Two seasonal crops		Tur	476.00
		Turmeric/Chillies	664.00
Rabi		Cotton (minimum rate), Groundnut (minimum rate)	20.00
		Cotton (maximum rate), Groundnut (maximum rate) & Wheat	120.00
Kharif		Groundnut (Kharif), Paddy, Paddy on demand	85.00
Perennial		Sugarcane (minimum rate)	150.00
		Sugarcane (maximum rate)	1810.00
Hot Weather		Cotton, Groundnut & Others	240.00

2.2.17 Manipur

2.2.17.1 No elaborate system for fixing irrigation water rates has been in vogue in the State. The rates for different crops were fixed in 24.08.2013, considering the rates collected by other States like Orissa, Andhra Pradesh, and Karnataka etc having irrigation facilities. For Major and Medium irrigation, flat rates were adopted for Flow and Lift irrigation irrespective of location of the project.

2.2.17.2 Paddy (paddy I & Kharif paddy II), moong, wheat, peas, mustard, potato and cabbage are the principal crops. The principal cropping seasons in the State are Rabi (November to February), Paddy-I (Early Paddy) and Paddy-II (Kharif) which span the periods from February to June and June to October respectively.

2.2.17.3 Presently, uniform water rates are charged for Flow and Lift irrigation schemes. The Irrigation & Flood Control Department in the State supplies irrigation water to farmers and raw water to the State Public Health Engineering Department (SPHED) from completed projects.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Rabi	Wheat	305.00	305.00
	Peas, Mustard, Moong etc.	184.00	184.00
	Paddy (paddy I)	602.00	602.00
Kharif	Paddy II	305.00	305.00
	Others	184.00	184.00

2.2.18 Meghalaya

2.2.18.1 No water rates/ charges for irrigation purposes are in vogue in the State.

2.2.19 Mizoram

2.2.19.1 In the State, no water rates/ charges are levied for irrigation purposes.

2.2.20 Nagaland

2.2.20.1 No water rates/ charges for irrigation purposes in the State.

2.2.21 Orissa

2.2.21.1 In the State, Water Services Wing deals with the Major & Medium Irrigation Projects of Water Resources Department, beside collection of water charges/fees. The water rates for Flow irrigation from Irrigation schemes have been revised vide notification No.494 dated 05-04-2002.

2.2.21.2 The principal crop grown in the state is paddy. Cropping seasons in the state are:

- (1) Kharif (July to December)
- (2) Rabi (January to March)
- (3) Summer (April to June)

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha (Flow Irrigation)
Rabi	Dalua	450.00
	Tobacco	420.00
	Potato, Onion & Cotton	280.00
	Peas & Vegetables	230.00
	Wheat, Groundnut, Fodder, Arhar & Chillies	170.00
	Maize	140.00
	Orchards	334.00
	Sugarcane	500.00
	Jute	84.00
	Pulses, Oilseeds & Mustard	60.00
	Betel leaf & Saru	840.00
	Sun hemp	200.00
	Ragi	70.00
	Ganja	930.00

2.2.22 Punjab

2.2.22.1 New water rates were introduced with effect from 12.11.2014 to charge water rates for irrigation purposes.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Rabi	All Crops	123.50	123.50
Kharif	All Crops	123.50	123.50

2.2.23 Rajasthan

2.2.23.1 The benefit of irrigation reaches the cultivators of Rajasthan through the following irrigation schemes/projects:

- Ganga Canal, Bhakra, Ghagger Rajasthan and Chambal Canal (irrigation under perennial channels).
- Irrigation works constructed or improved after 01.01.1952 and all works in the former estates of Banswara, Dungarpur and Pratapgarh.
- Pre-1952 irrigation works except inundation irrigation works.
- Inundation irrigation works.

2.2.23.2 The State Government has revised the crop-wise water rates vide Notification No. F.13 (4) Irg/79 dated 24.05.1999, by amending 'The Rajasthan Irrigation and Drainage Rules, 1955'.

2.2.23.3 The principal crops of the state are Bajra, Jowar, Kharif pulses, Till, Groundnut etc. in Kharif season and Wheat, Mustard, gram, barley and Onion in Rabi season. The Principal

Seasons of the state are Kharif (May to September), Rabi (October to April) and Zaid (February to June).

The crop-wise water rates in the State are given below:

Name of Crops	Water Rates in Rs/ha								
	Pre1952 Non inundation Schemes			Perennial & post 1 st January 1952 improved schemes			Pre1952 inundation schemes		
	Flow Irrigation	Lift Irrigation (Central Govt.)	Lift Irrigation (State Govt.)	Flow Irrigation	Lift Irrigation (Central Govt.)	Lift Irrigation (State Govt.)	Flow Irrigation	Lift Irrigation (Central Govt.)	Lift Irrigation (State Govt.)
Sugarcane	247.00	494.00	123.52	286.52	573.04	143.26	103.74	207.48	51.87
Rice(Paddy)	113.62	227.24	56.81	197.60	395.20	98.80	49.40	98.80	24.70
Cotton	143.26	286.52	71.63	177.84	355.68	88.92	88.92	177.84	44.46
Maize,Bajra, Jowar	37.05	74.10	18.53	66.69	133.38	33.35	29.64	59.28	14.82
Pulses	66.69	133.38	33.35	79.04	158.08	39.52	49.40	98.80	24.70
Guwar	66.69	133.38	33.35	79.04	158.08	39.52	37.05	74.10	18.53
Simmhemp and grass	66.69	133.38	33.35	66.69	133.38	33.35	49.40	98.80	24.70
Vegetables	74.10	148.20	37.05	108.68	217.36	54.34	41.99	83.98	21.00
Other Kharif crops	88.92	177.84	44.46	113.62	227.24	56.81	64.22	128.44	32.11
Wheat	103.74	207.48	51.87	148.20	296.40	74.10	64.22	128.44	32.11
Barley	56.81	113.62	28.41	79.04	158.08	39.52	37.05	74.10	18.53
Gochani and Bajra	79.04	158.08	39.52	108.68	217.36	54.34	56.81	113.62	28.41
Gram first watering	66.69	133.38	33.35	74.10	148.20	37.05	66.69	133.38	33.35
Gram second or more watering	93.86	187.72	46.93	103.68	207.36	51.84	46.93	93.86	23.47
Fodder	88.92	177.84	44.46	88.92	44.46	44.46	49.40	98.80	24.70
Oilseeds	88.92	177.84	44.46	113.62	44.46	56.81	64.22	128.44	32.11
Water nuts	123.50	247.00	61.75	177.84	355.68	88.92	64.22	128.44	32.11
Indigo & other dyes	88.92	177.84	44.46	177.84	355.68	88.92	64.22	128.44	32.11
Tobacco	116.09	232.18	58.05	177.84	355.68	88.92	64.22	128.44	32.11
Lucame and Poppy	103.74	207.48	51.87	177.84	355.68	88.92	54.34	108.68	27.17
Zeera (cumin)	93.86	187.72	46.93	177.84	355.68	88.92	53.34	108.68	26.67
Other crops of Rabi	64.22	128.44	32.11	123.44	246.88	61.72	64.22	128.44	32.11

2.2.24 Sikkim

2.2.24.1 The Department of Irrigation and Flood control deals with irrigation, cultivable land and surface Flow irrigation channel for water rates in the State. There are three types of land in this State namely Paddy field, Cardamom field and dry field. Similarly, the crops are classified in Class I, Class II and Class III and the water rates are minimum Rs.10/- per hectare and Maximum Rs.250/- per hectare.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha
Paddy field	(a) Class I	100.00
	(b) Class –II	80.00
	(c) Class III	60.00
Cardamom field	(a) Class I	250.00
	(b) Class II	200.00
	(c) Class III	150.00
	(d) Class IV	100.00
Dry Field	(a) Class I	30.00
	(b) Class II	20.00
	(c) Class III	10.00

2.2.25 Tamil Nadu

2.2.25.1 Following systems are taken into account while fixing the water rates for irrigation in the State:

1. Wet Assessment
2. Dry Assessment
3. Special Rates of Water Cess
4. Standard Scales of Water Cess

2.2.25.2 The system of water rates for irrigation prevalent in the State encompasses Wet Assessment, Dry Assessment, Special Rates of Water Cess and Standard Scales of Water Cess. Wet lands are those, which receive irrigation from a recognized source. The sources of irrigation are classified as class I, II, III, IV and V as per their capacity to irrigate the lands. The basic wet assessment of these lands ranges from Rs.7.41 to Rs.54.36 per hectare. The lands do not have any assured irrigation from Government source are classified as dry lands. The basic assessment ranges from Rs.1.24 to Rs.19.77 per hectare for the dry lands, not getting irrigation from recognized Government sources. Wet lands normally getting assured supply of water from Government sources of irrigation for two crops are registered as double crop-wet lands. The second crop is charged generally at half the rate as that of the first crop assessment. In the case of single crop wet lands, if a second crop is raised, an extra charge is levied which is ordinarily half the assessment.

2.2.25.3 To augment the revenue from irrigation, the State Government has introduced additional wet assessment with effect from 01.07.1962 as under:

Details of Additional Wet Assessment

(i) Irrigation from Class I and II sources :		
a)	Single Crop Wet Lands	45% of the assessment. Total of wet assessment plus additional assessment not to exceed Rs. 44.48 per ha. per crop.
b)	Double Crop Wet Lands	45% of the assessment. Total of wet assessment plus additional assessment not to exceed Rs. 66.72 per ha. per crop.
(ii) Irrigation from Class III, IV and V sources :		
a)	Single Crop Wet Lands	30% of the assessment. Total of wet assessment plus additional assessment not to exceed Rs. 29.65 per ha. per crop.
b)	Double Crop Wet Lands	30% of the assessment. Total of wet assessment plus additional assessment not to exceed Rs. 42 per ha. per crop.

2.2.25.4 When dry lands are irrigated with water from Government sources of irrigation, water cess is levied in addition to the dry assessment. For normal extension of irrigation to dry lands under the registered sources, standard water rates are levied. The standard water rates have been fixed by dividing the irrigation sources into two categories. The irrigation sources placed in class I and II fall in the first category and the sources in the III, IV and V classes in the second category. The standard water rates range from Rs. 3.71 to Rs. 9.88 per hectare for first crop, half of it for second crop and one-fourth for third and subsequent crops. For Double Crops, the rates are Rs. 11.12 or Rs. 14.83 per hectare if the irrigation is from the source in the second category or from the first category. An additional water cess is levied on the above dry lands, at the following rates w.e.f. 06.11.1987.

Details of Additional Dry Land Assessment

Sources of Irrigation		Cess Levied
a)	Irrigation from I and II class sources.	75% of the water cess. Where more than one crop is grown, for the first crop the aggregate of land revenue, water cess and additional water cess should not exceed Rs. 37.07 per hectare and in the case of second and subsequent crops water cess and additional water cess at 75% is levied.
b)	Irrigation from III, IV and V class sources	37.5% of the water cess. Where more than one crop is grown, for the first crop the aggregate of land revenue, water cess and additional water cess should not exceed Rs.37.07 per hectare and in the case of second and subsequent crops water cess and additional water cess at 37.5% is levied.

2.2.25.5 In respect of new irrigation sources taken up as Major or Medium Irrigation Projects, or Minor Irrigation Works catering to new areas, special rates for levying the water cess are

prescribed. The usual rates of water cess in respect of new tanks taken up under the S.M.I.P. are Rs. 37.07 per ha for first crop, Rs. 18.53 per ha for II or III crop and Rs. 55.60 per ha for double crops

2.2.25.6 The revenue due to irrigation is settled at the time of Jamabandhi and collected along with Land Revenue. Following are the standard scale of water cess with effect from 6.11.1987 on dry lands getting irrigation from Government sources for which no special water cess are issued:

Description of crop			Rate of levy for lands under different classes of sources (Rs./ha.).			
I.	Long term crops		I Class			
	a) Crops on ground for more than six months but less than ten months.		59.30			
	b) Crops on ground for more than ten months.		69.19			
II.	a) Crops on ground for more than ten months.		II Class	III Class	IV Class	V Class
			51.89	37.07	29.65	22.42
	b) Other Crops	I Class	II Class	III Class	IV Class	V Class
	I. Crop	39.54	34.60	24.71	19.77	14.83
	II. Crop	19.77	17.30	12.36	9.88	7.41
	III. Crop	9.88	-	-	-	-

2.2.25.7 Besides the above system, crop-wise water rates are levied in respect of lands benefitted by certain projects like Lower Bhawani, Mettur Canal Scheme, Chittar Patankal, Amravathy, Neyyar Irrigation, Villa Thurai irrigation, for which additional water cess is also levied, in addition to the water rates, at the following rates:

I & II Class :	75% of water cess (the levy is subject to aggregate amount of Rs.37.07 per hectare per crop for land revenue, water cess and additional water cess).
III, IV and V Class :	37.5% of water cess (the levy is subject to aggregate amount of Rs.37.07 per hectare per crop for land revenue, water cess and additional water cess).

2.2.25.8 There is also a provision of special water rates for Flow irrigation for some of the irrigation projects viz. Araniar, Sathanur, Tholudur and Cauvery Mettur varying with the type of land and crop.

The crop-wise water rates in the State in respect of Flow Irrigation are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha
Lower Bhawani Project	Rice & Tobacco	37.07
	Millet	18.53
	Cotton	49.42
Mettur Canal Scheme	Vegetables & Rice	37.07
	Fruit Trees	40.42
	Millets	18.53
Chittar Pattankal Project	Cotton	48.42
	Tobacco	37.07
	Rice & Tobacco	49.42
	Millets	42.71
	Cotton	61.78
Amaravathi Project	Vegetables & Sugarcane	49.42
	Fruit Trees	61.78
	Rice & Tobacco	37.07
	Millets	18.53
Neyyar Irrigation Project Stage-II	Vegetables, Tobacco & Rice	37.07
	Fruit Trees	40.42
	Millets	18.53
	Sugarcane	49.42
Araniar	Vegetables	37.07
	Fruit Trees	40.42
	Dry land : I crop (wet)	11.12
	Dry land : I crop (dry)	8.35
	Dry land : II crop (wet), Dry land :II crop (dry), Dry land : III crop (wet)	5.56
	Dry land : III crop (dry)	2.77
Sathanur (north south Arcot)	Duffasal crop	16.86
	Dry land : I crop	37.07
	Dry land : II crop	18.53
	Dry land : III crop	9.27
	Duffasal crop	55.60
Willington Reservoir (Arcot)	Dry land : I crop	37.07
	Dry land : II crop	18.53
	Dry land : III crop	9.27
	Duffasal crop	55.60
Cauvery Mettur	Dry land : I crop	24.71
	Dry land : II crop	12.36
	Dry land : III crop	6.18
	Duffasal crop	37.07

Dry land : 1 Crop (wet) = Paddy, Sugarcane etc.

Dry land : 1 Crop (dry) = Groundnut, Pulses

Duffasal crop = This generally means cash crops such as sugarcane, cotton etc.

2.2.26 Tripura

2.2.26.1 In the State, paddy i.e. Aman (June to October) and Aush (March to August) are the principal crops. The benefit of irrigation reaches the irrigators through lift and diversion schemes. The State charges at the rate of Rs. 312.50 per hectare per crop as the water charges w.e.f October 2003.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha
Rabi	Wheat, Pulses, Rapeseed, Mustard, Turmeric, Ginger, Orange & Vegetables	312.50
Kharif	Paddy, Maize, Groundnut, Cotton, vegetables, Jute, Cashew nut	
Other Season	Paddy, Groundnut, Jute, Vegetable, Lichi, Mango, Pineapple, Guava	

2.2.27 Uttar Pradesh

2.2.27.1 In the State, the water rates for irrigation purposes have been fixed on the basis of availability of water. On these considerations, the canal system has been classified into four Schedules. The canal system which is fed by perennial rivers having no scarcity of water, has been kept in Schedule-I, while Schedule-II includes the canal system which is fed by non-perennial rivers. The Schedule-III comprises of the canal system of rain-fed reservoirs, lakes or ponds having less assured availability of water while the canal system in hilly terrain or in tarai region has been kept in Schedule-IV.

2.2.27.2 The benefit of irrigation reaches the cultivators through a number of canal systems. Schedule-wise coverage of canal systems in the State is as under:

- Schedule-I: Upper Ganga Canal, Lower Ganga Canal, Eastern Yamuna Canal, Madhya Ganga Canal, Eastern Ganga Canal, Agra Canal, Sharda Canal, Sharda Sahayak Canal, Gandak Canal and all such pump canals on which permanent pump houses have been constructed and all those pump canals which augment water in the other canals included in this Schedule.
- Schedule-II: Doon Canal, Ramganga Canal, Afzalgarh Canal, Tumaria Canal, Pili Canal (Lalitpur), Betwa Canal, Urmil Dam Canal, Maudha Dam Canal, Balmiki Canal (Chen Dam), Ken Canal (Paddy only), Gursarai Canal, Bhandar Canal, Jamini Canal, Banganga Canal,

Ghaghra Canal, Rohini Canal, Danda Canal, Belan Canal, Gularia Canal, Rest pump canals excepting pump canals of Schedule-I, Bhagwanpur Sarovar (Gonda), Kalluwala Bundhi (Bijnore), Jamalpur Tal and Buchera Tal (Lalitpur)

- iii. Schedule-III: Bijnor Canal, Kosi, Behalla, Ghunghra and Ganga Nand Canals, Rohilkhand Canals, Lalitpur Canals, Dhasan Canal, Pahuji and Garmau Canal, Barwar Canal, Arjun Canal, Kabrai Canal, Ranipur Canal, Ken Canal (except paddy), Keolari Canal, Barwa Canal, Kamal Kheri and Pindari Canal, Ghori Canal, Garai and Jirgo Canal, Karmnasa and Ghaghar Canals, Nikoya Canal, Patharwa Canal, Begunganj, Canal, Sukhra Tal Canal, Siawari Canal, all other canals fed by rivers, tanks, reservoirs and lakes, except those specifically mentioned in schedules I, II and IV, Himaya Bundhi, Bhoka Bundhi, Majhgawan Reservoir (Hamirpur), Jagner Bundhi, Beeder Reservoir, Damoban Reservoir, Rajkkhour Reservoir, Barwatola Reservoir, Piparadih Reservoir, Khatauli Reservoir, Madwa Reservoir, Semrj Margadha Reservoir, Kota Reservoir, Phulwar Reservoir, Badwadih Reservoir, Dharti Dolwa Reservoir, Sagar Reservoir (Shevpati Sagar), Siswa Reservoir, Betwa Reservoir, Majhuli Reservoir, Mekra Nala system, Bajha Reservoir, Kosi Jheel Reservoir (Moti Sagar Reservoir), Mali Reservoir, Masi Reservoir, Semra Reservoir, Marathi Reservoir, Kohargaddi Reservoir, Basehwa Reservoir, Ganeshpur Reservoir, Motipur Reservoir, Srinagar Tal Cadal System, Sanwaha Tank, Melani Ludhiara Tal, Bar Tal, Dhawa Tal, Gundorapur Tal, Arjun Kheria Tal, Samoghar Tal, Pabalgaon Tank, Niao Tal, Sar Tal, Nihona Tal, Barwapur Tal, Manpur Tal, Rampura Manhanur Tal, Baghaura Tal, Murari Tal, Gangoni Tal, Karila Tal, Panari Tal, Jhakhaura Tal, Gitauli Tal, PuraKalan Tal, Bunt Tal, Bijroutha Tal, Gajera Tal, Kalapahar Tal, Kailwara Tal, Kakrai Tal, Bijakhet Tal, Binaka Mafi Tank, Sagoli Tal, Sarol Bisanpura Tal, Sekhra Dhawn Tal, Pulra Tal, Ghurat Tal, Katera Tal, Phutera Tal, Kachneo Jheel, Magarpur Jheel, Arjar Tal, Itaura Bundhi, Dora Bundhi, Pandawaha Bundhi, Gursarai Bundhi, Bhandarawara Bundhi No.1, Bhandarwara Bundhi No.2, Bhandara Bundhi, Bakhara Bundhi, Marha Bundhi, All lakes, reservoirs and tanks excepting those specifically mentioned in Schedule-II.
- iv. Schedule-IV: Rohilkhand Canal not fed by Sarda Canal or Reservoir, Rampur Canals excepting Kosi Bahails, Ghunghra and Gangan Canals, all Gravity Canals in hilly and tarai region excepting (i) Doon Canals, (ii) Canal systems controlled, by Komaun Water Rules, (iii) Specifically mentioned canals system in Schedule-I, II, II and IV. Bundhies in Districts Allahabad, Varanasi, Mirzapur, Jhansi, Lalitpur, Hamirpur, Jalaun and Banda, excepting those specifically mentioned in Schedule-II and III.

2.2.27.3 Distinct water rates exist for each schedule of canal systems. The State Government revised the water rates with effect from 18.09.1995.

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha	
		Flow Irrigation	Lift Irrigation
Schedule I	Sugarcane	474.00	237.00
	Paddy, Vegetables, Garden (per crop), Water nuts & Poppy, Wheat, Barley, Mixed crop of Wheat & Barley	287.00	143.00
	Potato	356.00	178.00
	Tobacco	306.00	153.00
	Cotton	114.00	57.00
	Fodder crops	99.00	49.00
	Green manure	69.00	35.00
	Other Rabi crops	212.00	106.00
	Other Kharif crops	173.00	86.00
Schedule II	Sugarcane	474.00	237.00
	Paddy (Excluding broadcast Paddy on Doon Canal), Vegetables, Garden (per crop), Water nuts & Poppy, Wheat, Barley, Mixed crop of Wheat & Barley	173.00	86.00
	Potato	356.00	178.00
	Broadcast paddy on Doon Canal, Other Rabi crops	114.00	57.00
	Tobacco, Tea garden on Doon Canal, Orchards on Doon Canal	212.00	106.00
	Cotton	59.00	30.00
	Fodder crops	40.00	20.00
	Green manure	30.00	15.00
	Other Kharif crops	99.00	49.00
Schedule III	Sugarcane, Potato	237.00	119.00
	Paddy, Vegetables, Garden (per crop), Water nuts, Poppy, Wheat, Barley, Mixed Crop of Wheat & Barley	128.00	64.00
	Tobacco	114.00	57.00
	Cotton	40.00	20.00
	Fodder crops & Green manure	30.00	15.00
	Other Rabi crops & Other Kharif crops	69.00	35.00
Schedule IV	Sugarcane, Potato	99.00	49.00
	Paddy, Vegetables, Garden (per crop), Water nuts, Poppy, Wheat, Barley, Mixed Crop of Wheat & Barley, Other Rabi crops, Other Kharif crops	40.00	20.00
	Cotton, Fodder crops, Green manure	35.00	18.00

2.2.28 Uttarakhand

2.2.28.1 The State Government has focussed on the land type for the process of fixation of water rates in as much as the rates for hilly regions have been kept different from plain areas. In Uttarakhand, the water rates for irrigation purposes have been fixed on the basis of availability of water in consideration to U.P. Govt. Notification vide Letter No.2874/ dated 18-09-1995. The canal system has been classified into four schedules:

(i) Schedule -I: Irrigation Block, Upper Ganga canal of Hardwar, 13 canal of Khatima areas in Rudrapur and four canals in Nanakmatta and all canal system of increasing water.

(ii) Schedule -II: Dun canal and other than schedule I canal and canal of Kashipur.

(iii) Schedule - III: Canal of Kashipur canal system except in Schedule-II.

(iv) Schedule -IV: All canal of Gurutwa canal excluding Tarai Bhavar and Lift pump canal of schedule I, II, and III.

2.2.28.2 In this state, proposed water rates for irrigation purposes are also available but there is no water rate for other than irrigation purposes.

2.2.28.3 There are three cropping season namely Rabi, Kharif and Zaid in this states. The main crops of the states are Sugarcane, Paddy, Vegetables, Garden, Water nuts, Poppy, Potato, Tobacco, Wheat, Barley, Cotton, Fodder crops, Green manure and other Rabi and kharif crops.

The crop-wise water rates in the State are same as in Uttar Pradesh.

2.2.29 West Bengal

2.2.29.1 Presently distinct water rates are in vogue in the State for crops under different irrigation schemes namely, Kongsawati Reservoir Project, Mayurakshi Reservoir Project, Barrage & Irrigation System, Schemes under Purulia and Midnapur District.

2.2.29.2 Consequent upon manifold increase in the cost of operation & maintenance of all the Minor Irrigation Installation, a revised Notification vide letter No.1719-MI/9M-23/98(I)/dated 27-6-2003 has been issued from Water Investigation and Development Department with effect from 01.07.2003.

The crop-wise water rates in the State are given below:

Flow Irrigation Scheme:

Name of Crops	Water Rates in Rs/ha
Wheat, Potato & Other crops	49.40
Paddy, Jowar & Bajara	37.06
Paddy (Boro)	123.50

Lift Irrigation Scheme:

Name of Crops	Water Rates in Rs/ha
Paddy (Aus) (Transplanted)	1049.78
Paddy (Aus) Direct sown, Paddy (Amon), Jute, Wheat, Ground nut	503.88
Paddy (Boro)	2015.52
Potato, Maize (Rabi Summer), Betel vine, Vegetable including arum	839.80
Mustard, Maize (Kharif)	251.94
Sugarcane (first year cultivation)	1259.70
Ginger	461.89
Banana	1595.62

2.2.30 Andaman & Nicobar Islands

2.2.30.1 No water charges are levied in this Union Territory for irrigation.

2.2.31 Chandigarh

2.2.31.1 In rural area of Chandigarh, the revised water rates for irrigation purposes is @ Rs. 23/- per hour with effect from 01.01.2010.

2.2.32 Dadra and Nagar Haveli

2.2.32.1 The UT has fixed the uniform water rates throughout. Uniform water rates are charged for different crops grown in a season but the water rates vary from season to season. During Rabi season, wheat, vegetables, sugarcane, pulses and gram are grown in the UT. The crops of Kharif season include paddy, sugarcane and vegetables while the crops of Hot Weather season are watermelon, vegetables, paddy, sugarcane and pulses. Irrigation Department of the UT Administration looks after the work of revenue assessment and realization.

The crop-wise water rates in the State in respect of Flow Irrigation are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha
Kharif	Sugarcane in Kharif & Sugarcane in hot season	830.00
Others	Rice in hot season	140.00
	Vegetable	110.00

The crop-wise water rates in the State in respect of Lift Irrigation are given below:

Season/Type of Sources	Name of Crops	Water Rates in Rs/ha
Rabi	Sugarcane & Vegetables	100.00
Kharif	Paddy , Sugarcane & Vegetables	75.00
Hot Season	Paddy, Sugarcane, Pulses & Vegetables	275.00
Others	Water melon, Wheat, Pulses & Gram	275.00

2.2.33 Daman & Diu

2.2.33.1 Paddy and Bajra are the principal crops grown by the farmers in the Union Territory. The water rates do not vary from crop to crop and season to season

The crop-wise water rates in the State are given below:

Season/Type of Source	Name of Crops	Water Rates in Rs/ha
Kharif	Rice, Vegetables & Other crops	286.00

2.2.34 Lakshadweep

2.2.34.1 The tiniest Union Territory of India, comprises of 10 inhabited islands in the Arabian Sea. The Administration of the UT has not so far fixed any water rate in the Union Territory.

2.2.35 Puducherry

2.2.35.1 Water rates for the supply of water for irrigation from Government sources are regulated by Puducherry Irrigation Cess Regulation 1976. Basic structure of irrigation rates is akin to that of Tamil Nadu. The water rates for Puducherry, Mahe and Yaman regions were finalised based on the rates prevailing in the adjacent areas of South Arcot District, Tanjore District and Karaikal Region. The water rates levied in these regions were notified on 31.3.1979.

2.2.35.2 In this Union Territory, dual irrigation systems are adopted. In Puducherry Region, ground water is main source of irrigation whereas canal irrigation is very popular in Karaikal and Yanam region. As far as Mahe region is concerned, neither pattern of irrigation is followed since the availability of land for raising principal food crops is very meagre.

2.2.35.3 As far as Puducherry region is concerned for more than two decades, ground water has become the only main source of irrigation carried on by means of bore wells owned by the farming community with which principal food crops are cultivated for three season viz. Sornavari, Samba and Navarai during the Agricultural year (July to June). In view of inadequate availability of water in the tank and release thereof through entire crop season, no cess is levied. The main crops of the state are Paddy, Ragi, Bajara, Cholam (Millets), Black Gram, Green gram and Sugarcane.

Chapter – III

System of Assessment and Collection of Revenue

3.1 Basic Principle for Assessment

3.1.2 The basic approach for the assessment and collection of water charges is to recover the cost of supply of water by the State Governments from the irrigators. The rates are worked out on the basis of water requirements for crops and gross area under irrigation.

3.2 Mechanism of Assessment and Collection of Revenue

3.2.1 There is considerable diversity in the country in the mechanism for collection of Irrigation Water Revenue. In some States, the assessments as well as collection of the Water Revenue are handled by the Irrigation Department. Likewise, in some of states, assessment is done by Irrigation Department whereas collection is in the domain of the Revenue Department. In some other States assessment as well as collection are the responsibilities of the Revenue Department. There are also States and UTs where no irrigation water rates are levied and consequently no mechanism for collection of water revenue exists. The mechanism of revenue collection in different states are given below:

Department Responsible for Assessment/Collection.		Mechanism adopted in States/UTs
1.	Irrigation Department does assessment and collection	Assam, Bihar, Chhattisgarh, Gujarat, Goa, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Manipur, Maharashtra, Orissa (for industrial & commercial use) Rajasthan (for irrigation project irrigating more than 2500 acres), West Bengal, Union Territories of Dadra & Nagar Haveli, Daman & Diu.
2.	Irrigation Department does assessment but collection is entrusted to Revenue Department	Haryana, Himachal Pradesh, Punjab, Uttar Pradesh, Uttaranchal and Delhi.
3.	Revenue Department does both assessment and collection	Andhra Pradesh, Chandigarh, Karnataka, Kerala, Orissa (for Major & Medium Schemes). Rajasthan (for Schemes Irrigating less than 2500 acres), Tamil Nadu, Puducherry.
4.	Water Rates but no mechanism available in the State	Sikkim
5.	Panchayat/Block Advisory Committee	Tripura
6.	No Water rates and its assessment /collection in vogue	Arunachal Pradesh, Mizoram, Meghalaya, Nagaland, Andaman & Nicobar and Lakshadweep.

3.3 The revenue collection mechanism as prevailing in various States/UTs along with crop-wise water in respect of flow and lift irrigation are described in detail as under:

3.3.1 Andhra Pradesh

3.3.1.1 The irrigation water revenue collection is under the control of Revenue Department. The Commissioner (Land Revenue) at State level and District collector at District level are responsible for the collection of land revenue as well as irrigation water revenue. A Village officer in charge of a group of villages or a single big village does the assessment and collection of land revenue

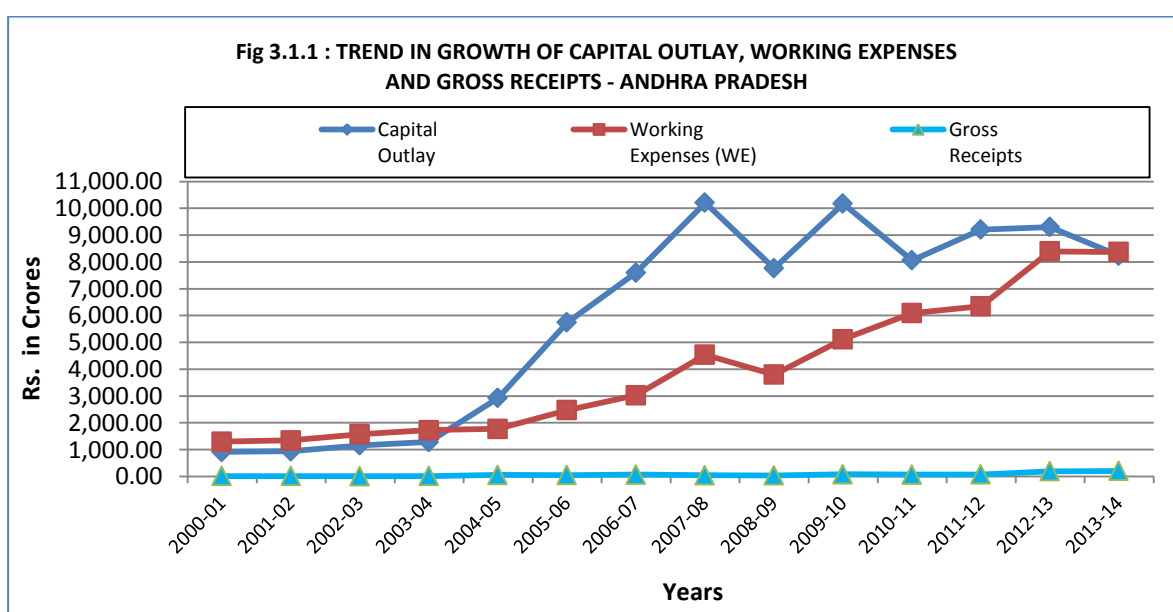
and irrigation water revenue at village level under the supervision of Mandal Revenue Officer/Revenue Divisional Officer.

3.3.1.2 For levying water rates, the irrigation sources are classified into two categories. Any source of irrigation coming under Major & Medium Irrigation Projects is designated as Category-I source. Sources of irrigation other than Major & Medium Irrigation Projects are classified under Category-II source. Further, the crops are classified as Wet crops, Dry crops and Double crops. Different water rates are charged for (a) first or single Wet crop, (b) second or third Wet crop, (c) first irrigated Dry crops, (d) second or third irrigated Dry crops and (e) Double crops. For each of these types of crops, water rates are different for category-I and category-II sources of irrigation.

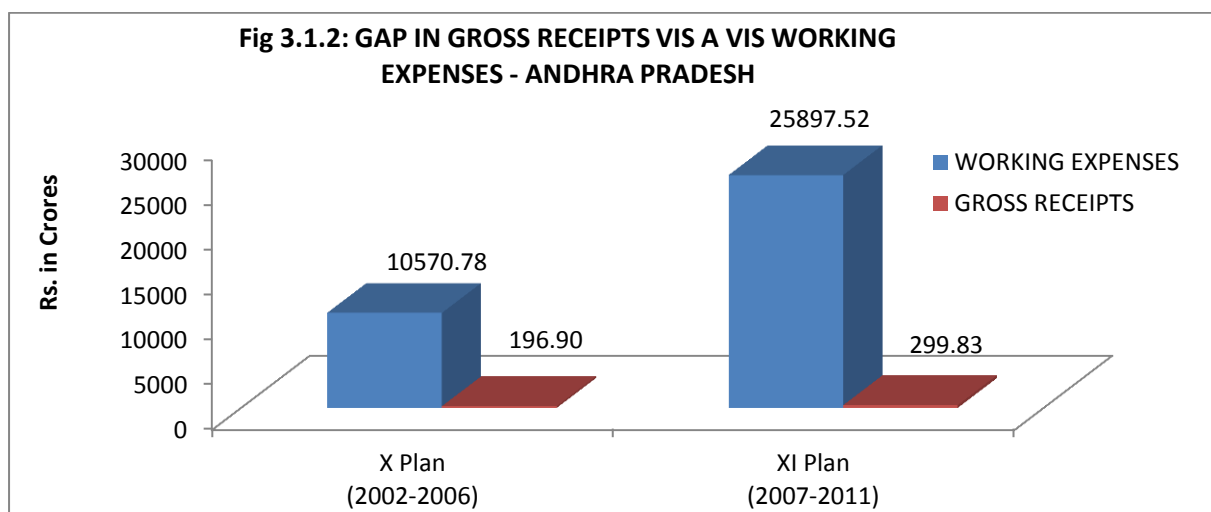
3.3.1.3 Demand and collection:

- i) The Tehsildar will fix the demand as per the area assessment furnished by the Executive Engineer (irrigation).
- ii) For raising water tax demand and (Demand Collection and Balance) DCB statement.
- iii) The Tehsildar shall furnish DCB particulars of water tax and the details of the amounts due from individual ryots (baki-jabitha) including the arrears to the water users association and Executive Engineer concerned for every quarter.
- iv) The Managing Committee of the water users association and the competent authority will assist Tehsildar in collection and remittance of the tax amount.
- v) The Competent Authority and Water Users Association will also maintain the account of water tax collection at the water users association level.
- vi) The Tehsildar will credit the water tax collections into “0029 Land Revenue” account.

3.3.1.4 There was a steady increase of Annual Capital Expenditure from Rs. 915.59 crore to Rs. 8234.85 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.3). The Annual Working Expenses increased from Rs. 1295.39 crore in 2000-01 to Rs. 8370.12 crore in 2013-14. The Working Expense is 1.41 times of the capital expenditure in 2000-01 as compared to 1.02 times in 2013-14.

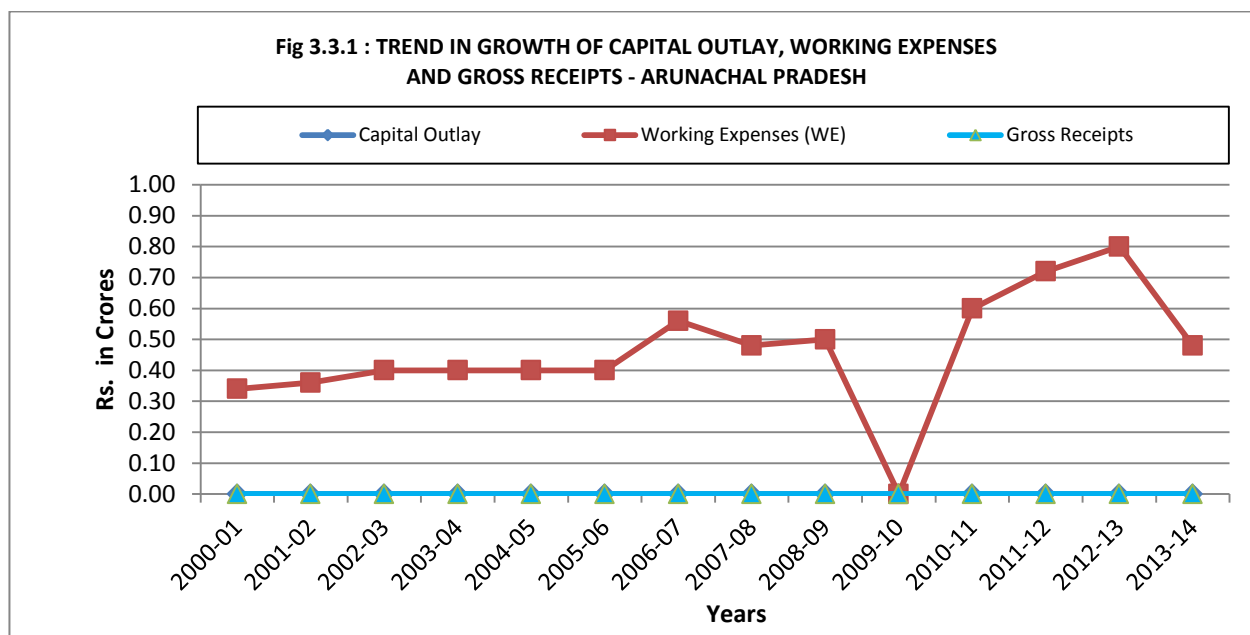


The gap between Gross Receipt on account of water charges and Working Expenses is gradually widening and the gross receipts are in the range of 0.1% to 3.2% of Working Expense during 2000-01 to 2013-14. The Gross receipts have increased from Rs. 196.90 crore in Tenth Five year Plan to Rs. 299.83 crore in Eleventh Five Year Plan.

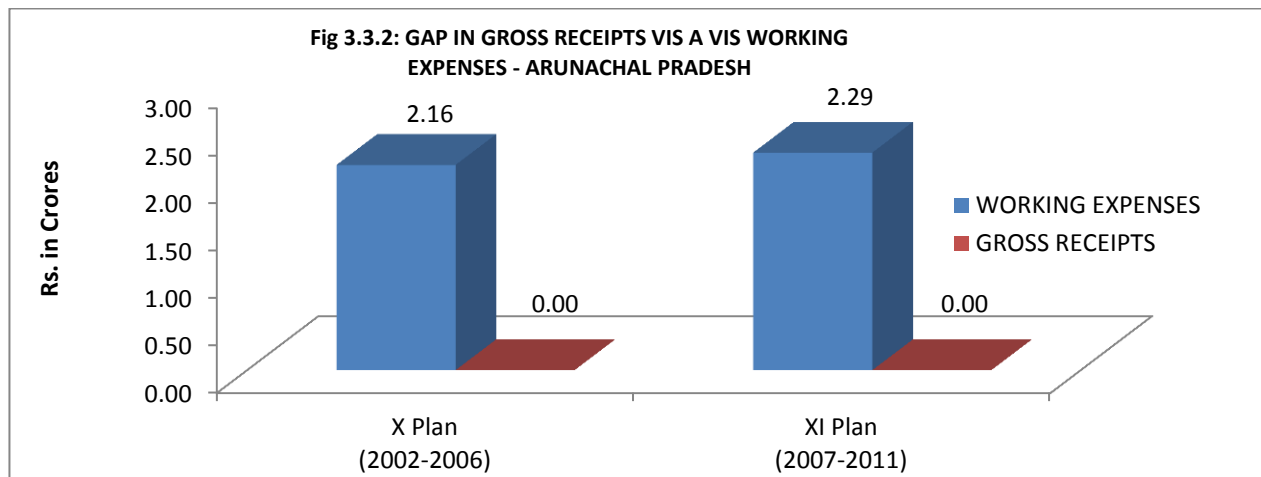


3.3.2 Arunachal Pradesh

3.3.2.1 There are no water rates in vogue. Under Major and Medium Irrigation projects, no annual Capital Expenditure has been incurred during the period from 2000-01 to 2013-14 and the cumulative Capital Expenditure was Rs. 1.82 crore till the end of 2013-14 have been repeated every year. However, there were working expenses which was only Rs. 0.34 crore in 2000-01 has increased slightly to Rs. 0.48 crore in 2013-14 in Major and Medium Irrigation projects (Table 3.4).



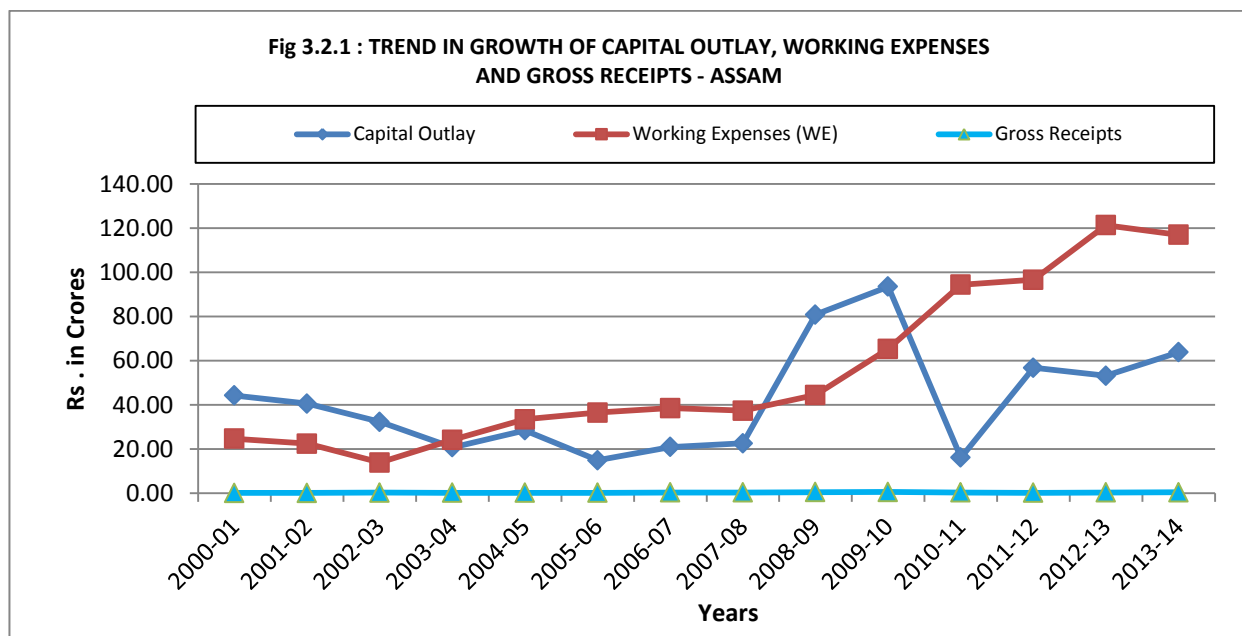
The gap between Gross Receipts on account of levy of water charges and Working Expenses are wide as depicted in the chart but no revenue has been collected during 2000-01 to 2013-14. The Working Expenses has gradually increased from Rs. 2.16 crore in the X Plan to Rs. 2.29 crore in the Eleventh Plan.



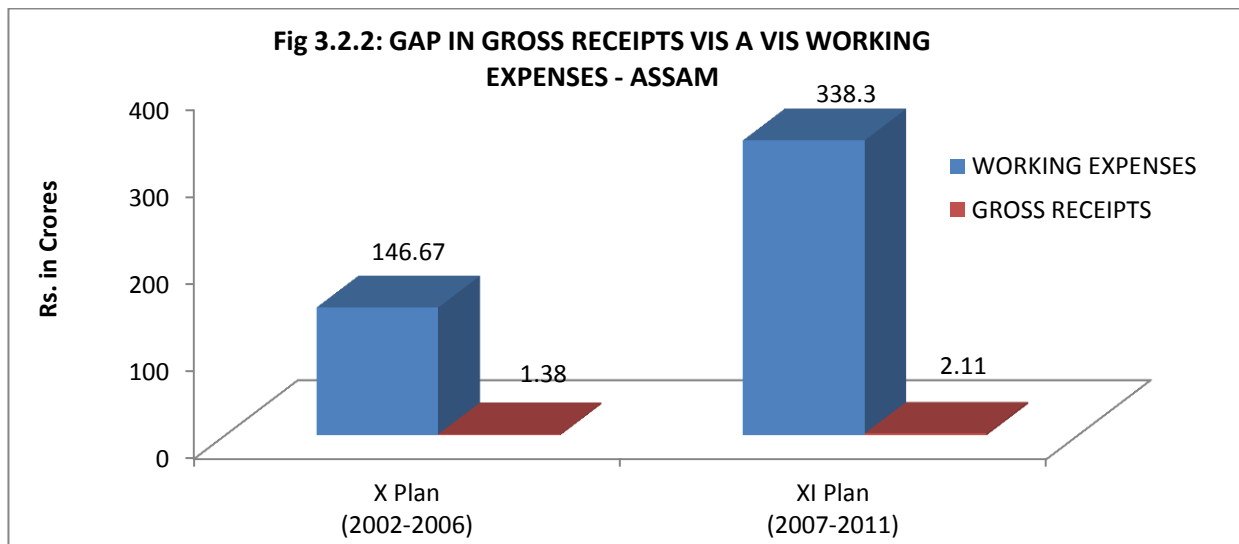
3.3.3 Assam

3.3.3.1 In the present system of collection of Irrigation service charges is that the charges are assessed on the basis of area irrigated to the individual beneficiary cultivators in terms of hectares in a particular crop as per record maintained by the respective offices in the Water Distribution register. The water charges are realized by the Irrigation Department of the State through the beneficiary Committees of the Irrigation Schemes where such committees exist.

3.3.3.2 There was no definite trend on Capital Expenditure during the period from 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.5). It was Rs. 44.26 crore in 2000-01 and reached its peak level at Rs. 93.56 crore in 2009-10 and declined to Rs.63.84 crore in 2013-14. The Annual Working Expenses increased consistently from Rs. 24.75 crore in 2000-01 to Rs. 117 crore in 2013-14.



The gap between Gross Receipt on account of levy of water charges and Working Expenses are wide as depicted in the chart. The Gross Receipts on account of levy of water charges are in the range of 0.22 % to 2.01% of Working Expense during 2000-01 to 2013-14. The Gross Receipts have increased by 0.73 crore in Eleventh Five Year Plan as compared to the Tenth Five Year Plan.



3.3.4 Bihar

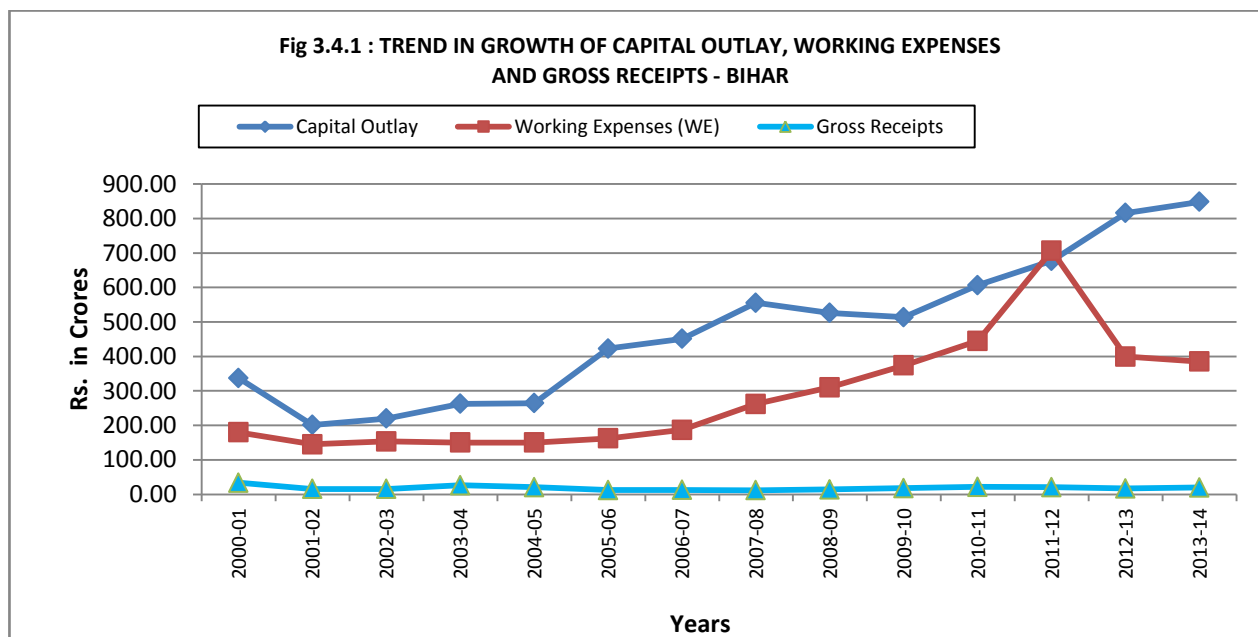
3.3.4.1 Sudhakar (measurement) for the land to which water is supplied, is taken by the Patrol of the Irrigation Department and measurement of irrigated land. The Patrol sends his weekly report to the Junior Engineer, who forwards the same to the Canal officer.

3.3.4.2 A Khatiyani for the irrigated area is prepared by the Zilledar/Junior Engineer in-charge with the help of Amin. The Khatiyani is updated every year after necessary examination of sale and transfer of land among owners.

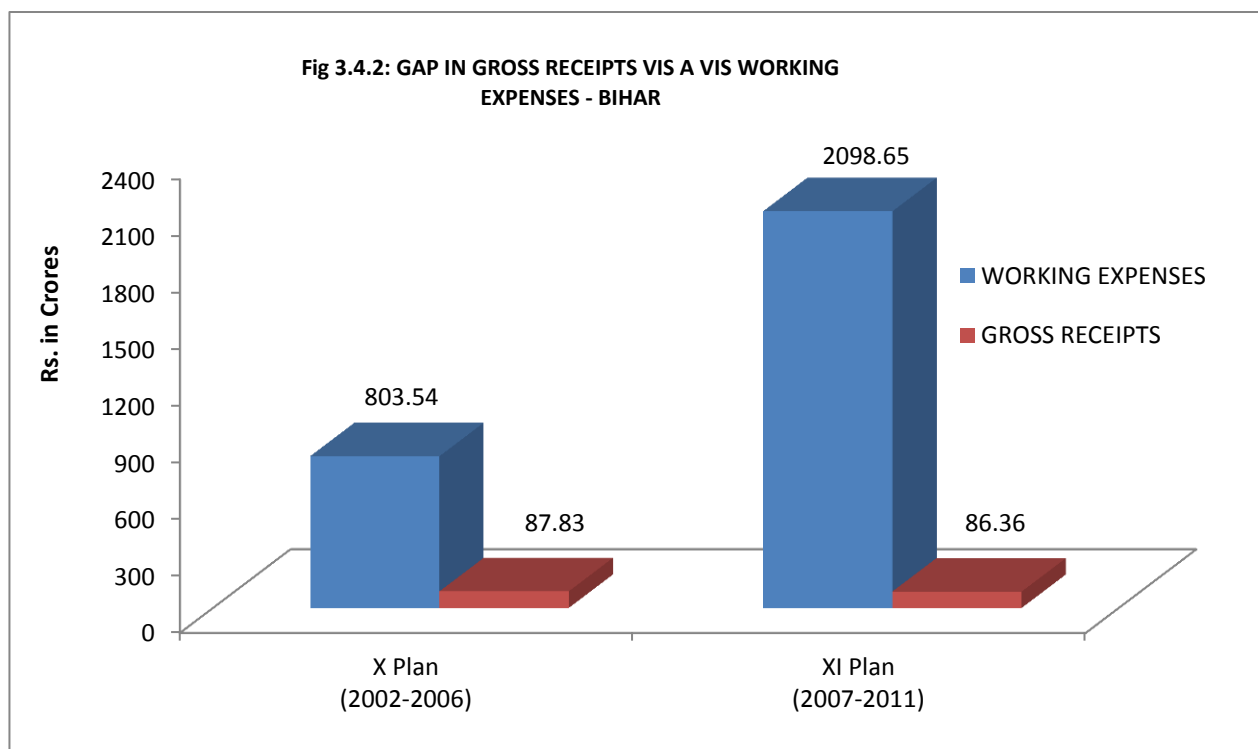
3.3.4.3 The demand is prepared on the basis of Khatiyani. The Patrol gives a certificate that all irrigated area recorded in Sudhakar, has been included in Khasra/Khatiyani. The Amin also records the Khasra details about the crop which has been cultivated, field in which it has been cultivated and the status of crop. Such Khasra prepared by the Amin forms the actual basis for the assessment of irrigation charges.

3.3.4.4 The Amin after preparing Khasra sends it to the Canal Officer, through Zilledar/Junior Engineer in-charge. The Canal Officer sends the Khatiyani to the Divisional Office. The Divisional Canal Officer forwards the same to the Deputy Collector (Revenue) for revenue collection.

3.3.4.5 There was a steady increase of Capital Expenditure from Rs. 337.57 crore to Rs. 848.70 crore during 2000-01 to 2013-14 (Table 3.6). Similarly, Annual Working Expenses is increasing consistently from Rs. 179.72 crore to Rs. 707.13 crore from 2000-01 to 2011-12 and thereafter it decreased to Rs. 385.25 crore in 2013-14.



The gap between Gross Receipt on account of levy of water charges and Working Expenses is increasing, which is depicted in chart. The Gross Receipt is in the range of 2.93 % to 18.86% of Working Expense during 2000-01 to 2013-14. The Working Expenses have more than doubled during Eleventh Five year Plan as compared to Tenth Five year Plan.



3.3.5 Chhattisgarh

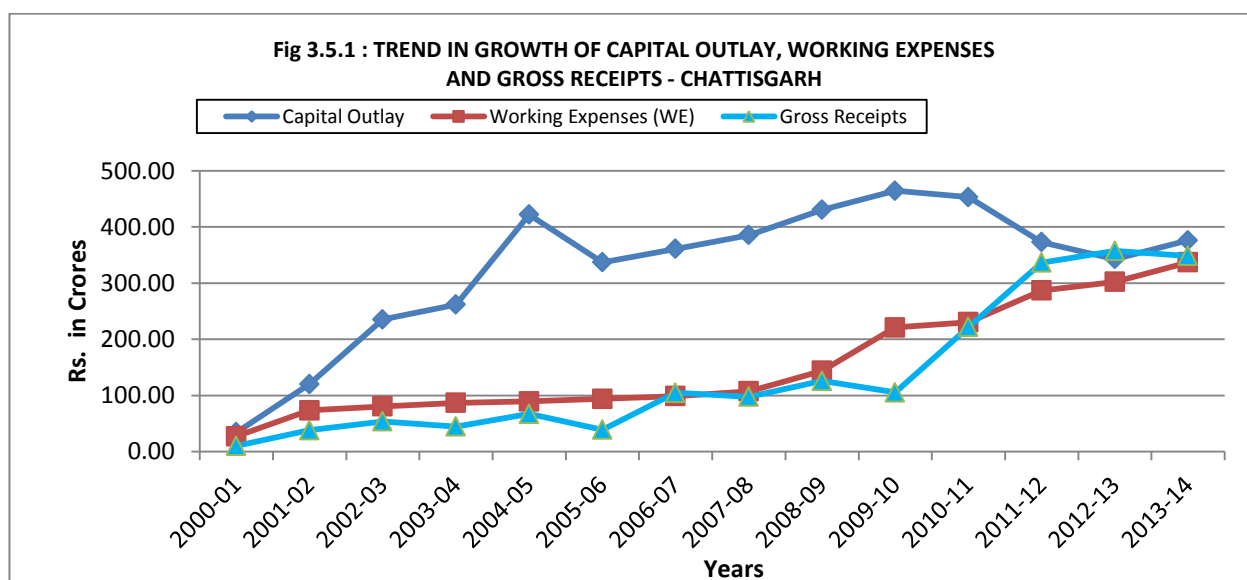
3.3.5.1 Assessment and collection of Irrigation Revenue is governed by Madhya Pradesh Irrigation Act 1931 and Madhya Pradesh Irrigation Act 1974.

3.3.5.2 System of Assessment: All entries of water supplied for irrigation are made by the Amin in Khasra Sudhakar. He records the Irrigation of each village in a separate Khasra Sudhakar, tank-wise, and enters therein all fields by making survey and portal (Investigation) of each and every fields that appear to him liable to assessment of water rates and completes the entry of Sudhakar for Kharif, Rabi and Zaid season by the 30th September, 28th February, and 14th May respectively in each year and submits the report, to his immediate officer. The Amin, on completion of the entries in the Khasra Sudhakar makes out 'Parchas' for each cultivator and then delivers the Parcha to the cultivator. With the aid of the Khasra Sudhakar and Parchas, the Amin prepares the following papers in the forms prescribed:

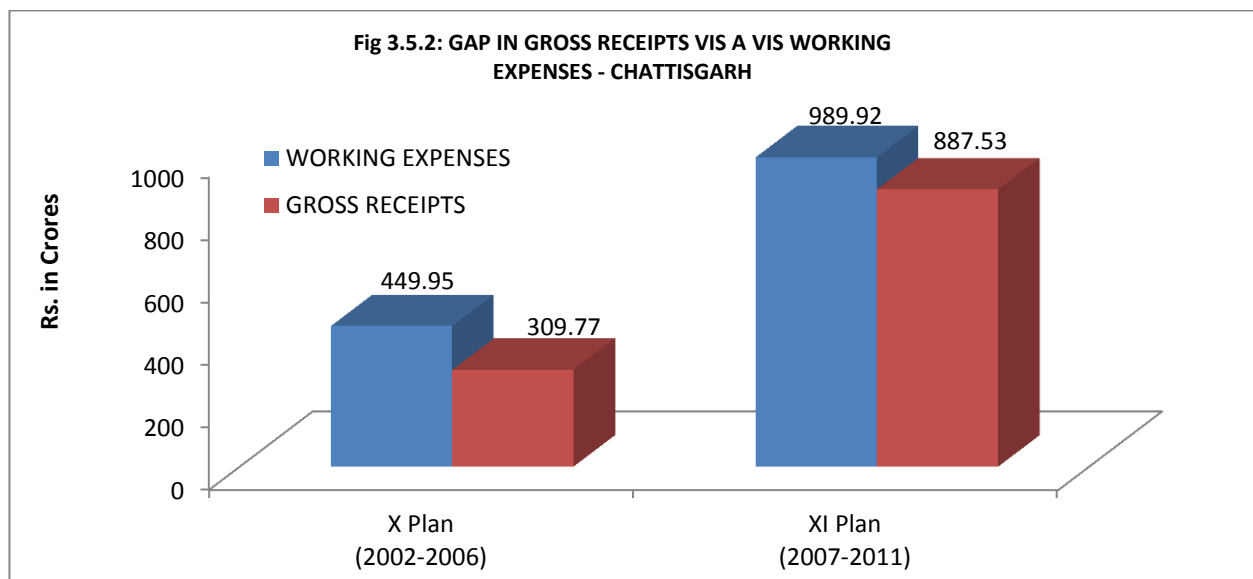
- (a) Ledger in which all entries concerning each cultivator are brought together and add total.
- (b) Kistabandi Khatoni, in which only total amount for which parchas have been delivered are entered. and
- (c) Abstract Kistabandi Khatoni in which entries in column no.1 to 5 are completed.

3.3.5.3 Collection of Revenue: The Collection of Irrigation Revenue is carried out by the Irrigation Department. From the Kistabandi Khatoni a statement is prepared and handed over to the Amin. To collect the canal revenue from occupier concerned. The Revenue collected from the cultivator is remitted to Treasury.

3.3.5.4 An amount of Rs. 211.89 crore and Rs. 1332.52 crore remain as un-apportioned Capital Expenditure between Madhya Pradesh and Chhattisgarh till the end of the year 2000-01 under Major and Medium Irrigation projects. Capital Expenditure was gradually increasing from Rs. 34.55 crore to Rs. 376.16 crore since 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.7). Similarly, Annual Working Expenses is consistently increasing from Rs. 27.33 crore to Rs. 337.7 crore from 2000-01 to 2013-14.



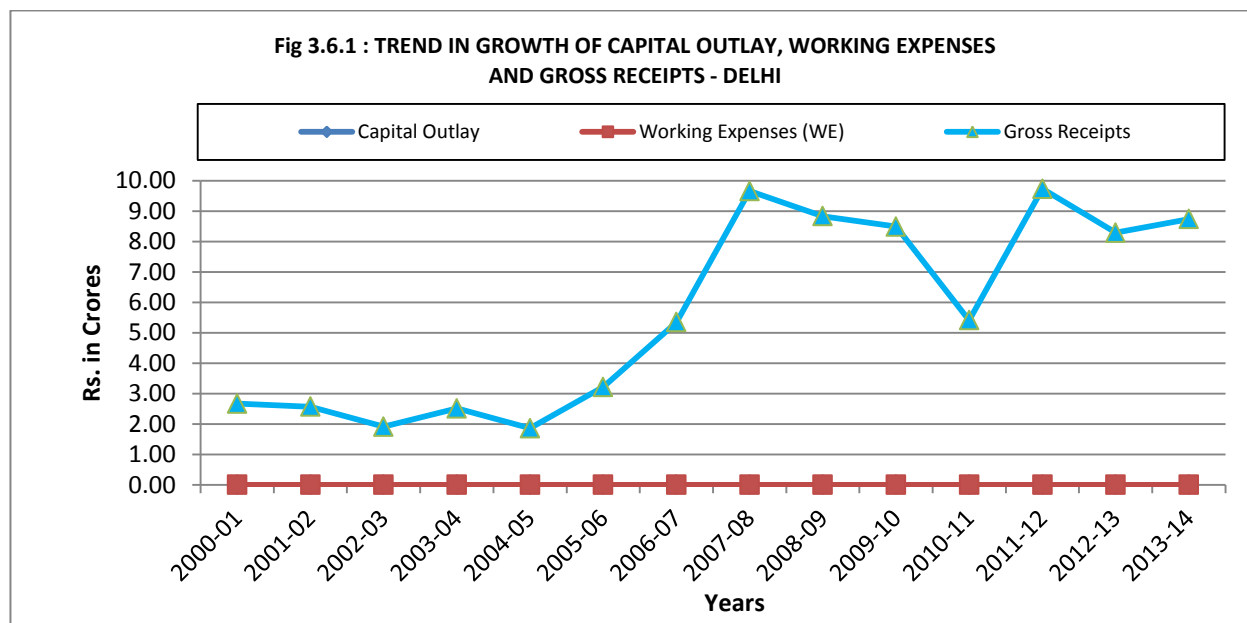
The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. Considerable amounts have been realized as Revenue Receipt from water charge and related activities, which was in the range of 37.98% - 118.14% of Working Expenses during 2000-01 to 2013-14.



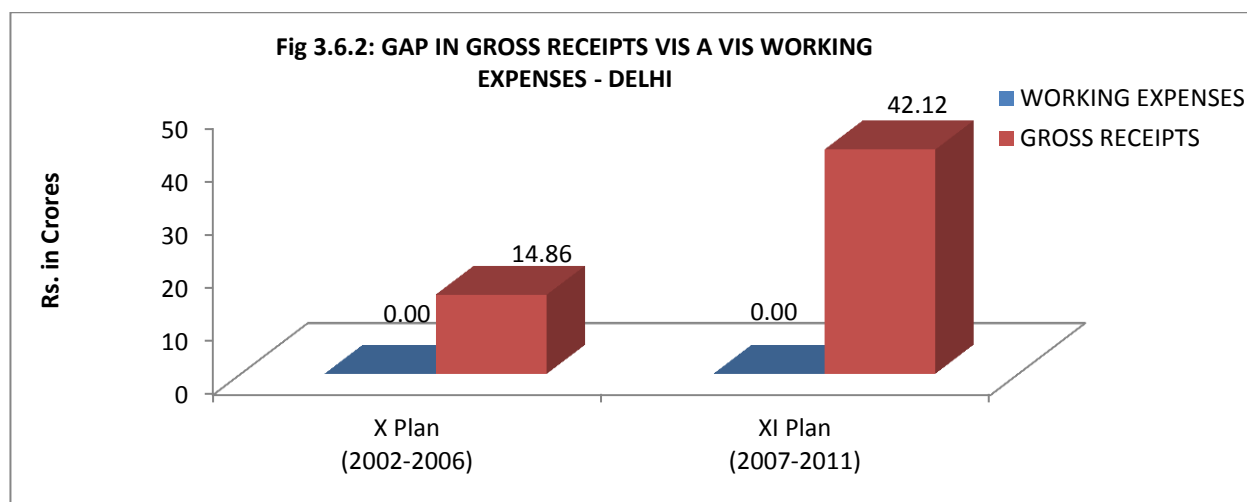
3.3.6 Delhi

3.3.6.1 The Govt. of NCT of Delhi is following the “North India Canal and Drainage Act, 1873” which is being followed by Punjab and Haryana Irrigation Departments. Under this Act, irrigation revenue is recovered from cultivators by the District Collectors. Following the same practice, the irrigation revenue has to be recovered from the cultivators of the NCT of Delhi by the Concerned Deputy Commissioners of various districts, who are working under the control of Divisional Commissioner, Delhi. Prior to the division of NCT of Delhi into various Districts and the creation of posts of Dy. Commissioners, this job was being done by ADM (Revenue), Tis Hazari.

3.3.6.2 An amount of Rs.0.65 crore appears in all Finance Accounts of Delhi, as a cumulative Capital Expenditure up to the end of each year. There was neither any annual Capital Expenditure nor corresponding Working Expenses but the increasing trend of Gross Receipts in NCT of Delhi indicated that the State is reaping the fruits of earlier Capital Expenditure under Major and Medium Irrigation projects.



The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipts have grown from Rs. 2.67 crore to Rs. 8.74 crore during the year from 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.8). The Gross Receipt on account of levy of water charges has increased to Rs. 42.12 crore during Eleventh Five Year Plan as compared to 14.86 crore in Tenth Five Year Plan.



3.3.7 Goa

3.3.7.1 There are three systems by which water is being supplied to the cultivators in the State of Goa.

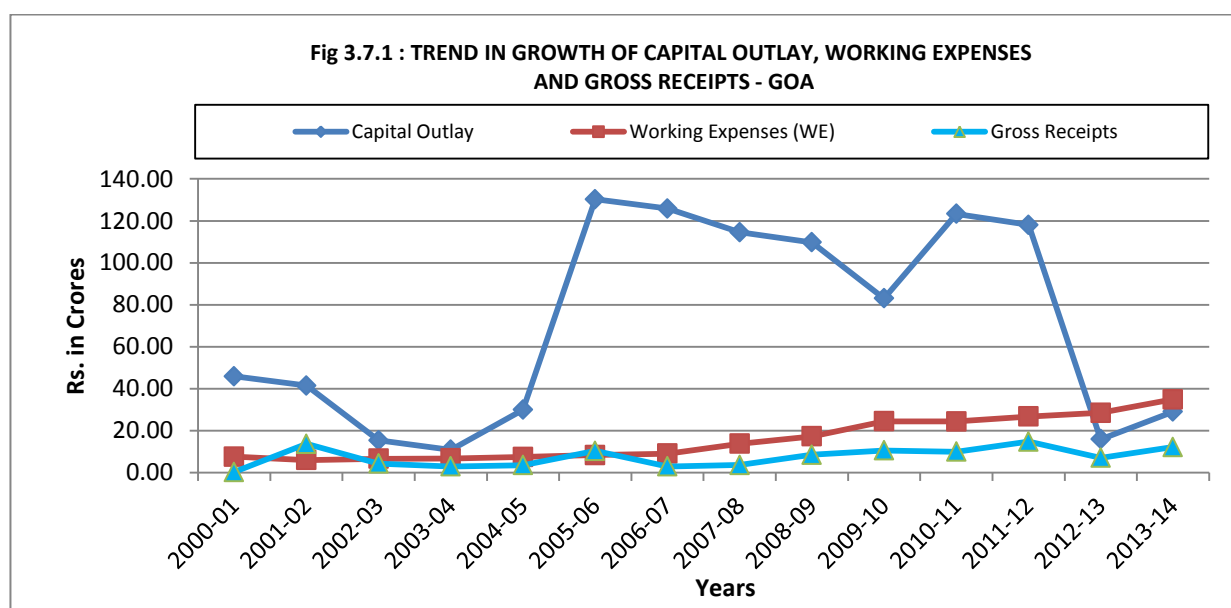
- Flow Irrigation
- Lift Irrigation
- Irrigation from canals which are not constructed and maintained by the Government.

3.3.7.2 Assessment of levy on account of supply of water from canal for irrigation or other purposes is done as per the provisions of Section 33 of the Goa, Daman and Diu Irrigation Act, 1973 and Rules 18 to 28 of the Goa, Daman and Diu Irrigation Rules, 1975.

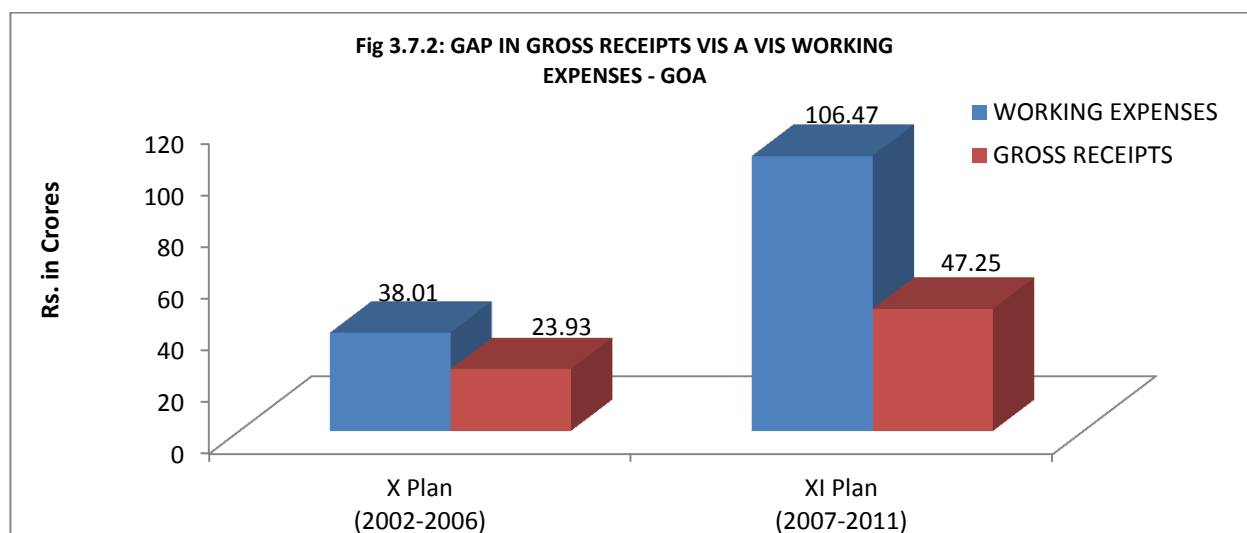
3.3.7.3 Every person desiring to have supply of water from a canal is required to submit a written application to the Canal Officer in a prescribed form on or before a pre-determined date fixed by the Canal Officer separately for each canal through a published notification. Amongst others, details of area, crop to be irrigated and the period for which water supply is required have to be clearly mentioned by the cultivator in his application.

3.3.7.4 The assessment and collection of revenue is done by the Canal Officer with the help of village Panchayat at village level and Mamlatdar at Taluka level.

3.3.7.5 The Capital Expenditure was increasing from Rs. 45.90 crore to Rs. 130.26 crore during the years 2000-01 to 2005-06 and thereafter it gradually decreased to Rs. 29.01 crore in 2013-14 for Major and Medium Irrigation projects (Table 3.9). The Annual Working Expenses has consistently increased from Rs. 7.60 crore to Rs. 34.85 crore during 2000-01 to 2013-14. The Gross receipt has increased considerably from Rs. 0.22 crore in 2000-01 to Rs. 12.11 crore in 2013-14.



The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt on account of water charge and other revenue was ranging from 2.89% to 228.71% of Working Expenses during 2000-01 to 2013-14. The Working Expenses and Gross Receipt have shown remarkable increase during Eleventh Five Year Plan and Tenth Five Year Plan.

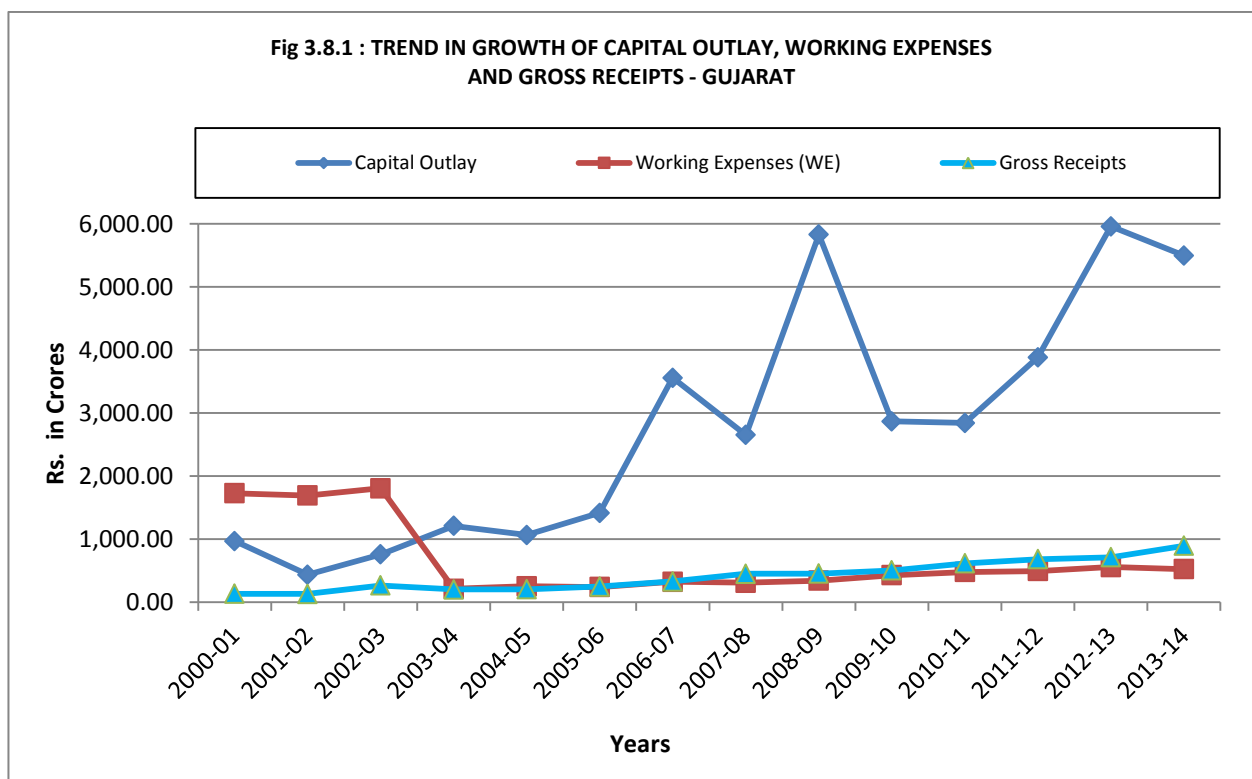


3.3.8 Gujarat

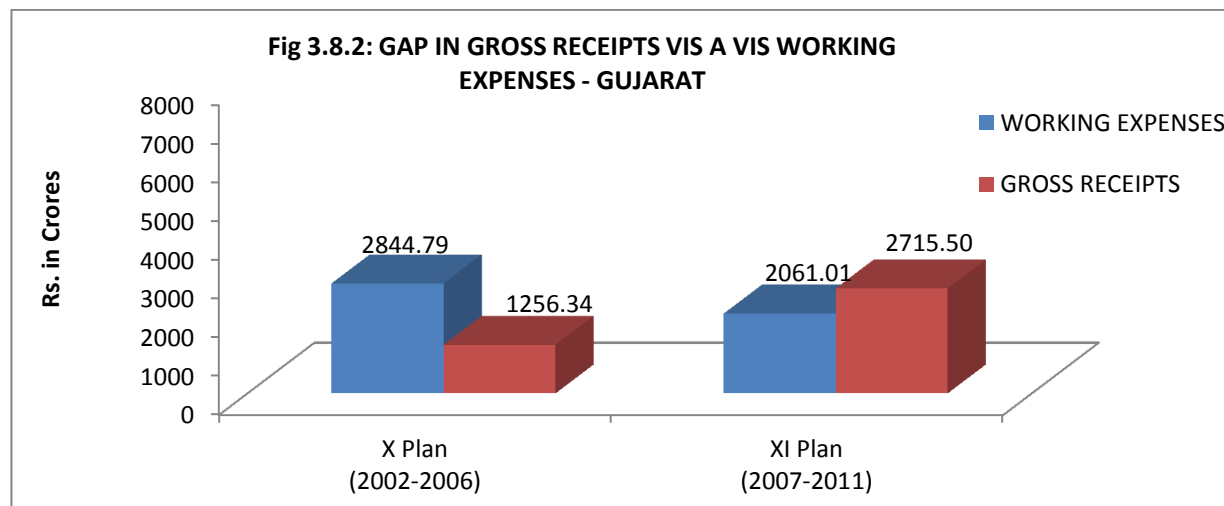
3.3.8.1 The system of assessment and collection of irrigation water revenue followed in the state are mentioned below:

- Depending upon the availability of water in the Reservoir, a notice is published for supply of irrigation water for a particular season.
- Application for the supply of water for irrigation purpose shall be submitted in the office of Deputy Executive Engineer/Section officer/Authorized officer before scheduled date.
- To facilitate irrigators, some divisional offices are having Mamlatdar for recovery of irrigation charges and Talaties are allotted to some sub-divisional offices for recovery of irrigation charges.
- Demand statements so prepared are sent to the recovery units.
- Outlet wise and crop wise registers are maintained. Based on Demand Statements, irrigators' wise bills are prepared taking into consideration the survey number, crop area, number of watering and applicable rates.

3.3.8.2 The allocation of Capital Expenditure was increasing but inconsistent during 2000-01 to 2013-14 with major spurts in the year 2008-09 (Rs. 5827.78 crore) and 2012-13 (Rs. 5956.42 crore) in Major and Medium Irrigation projects (Table 3.10). The Annual Working Expenses is consistently increasing from Rs. 202.78 crore to Rs. 897.51 crore from 2003-04 to 2013-14 and after an abnormal decline in 2003-04.



The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt on account of water charges and other revenues was ranging from 7.80% to 170.56% of Working Expenses during 2000-01 to 2013-14. Major increase in Gross Receipt is reported during 2003-04 to 2013-14. The Working Expenses during Eleventh Five Year Plan is slightly low as compared to Tenth Five Year Plans.

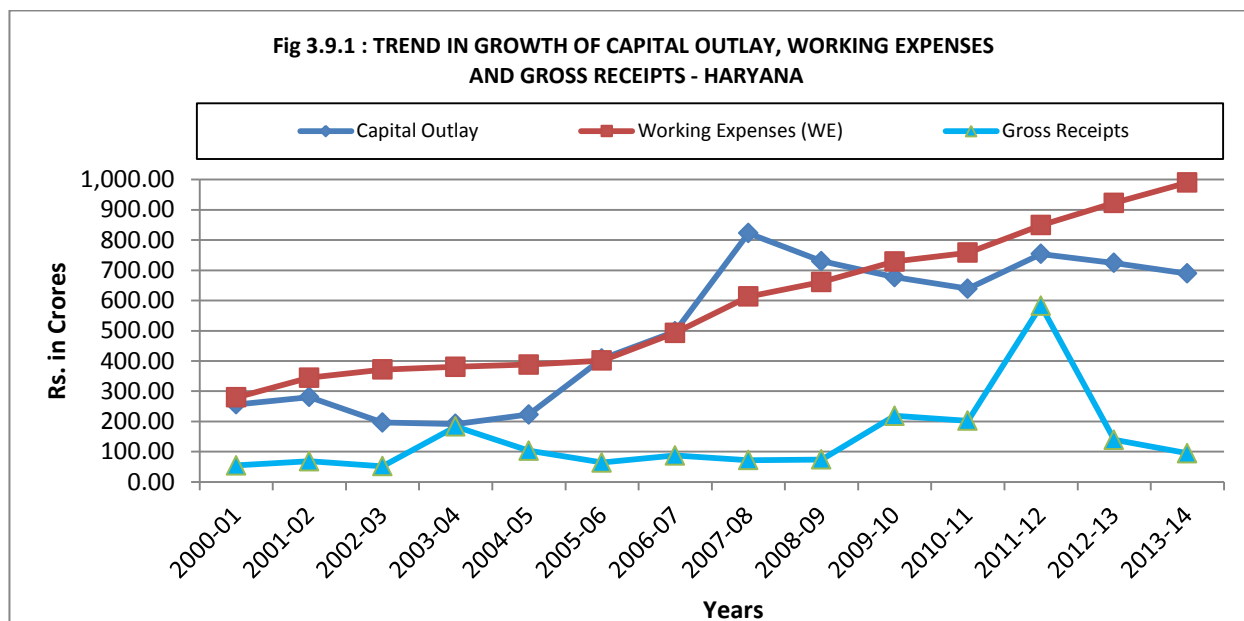


3.3.9 Haryana

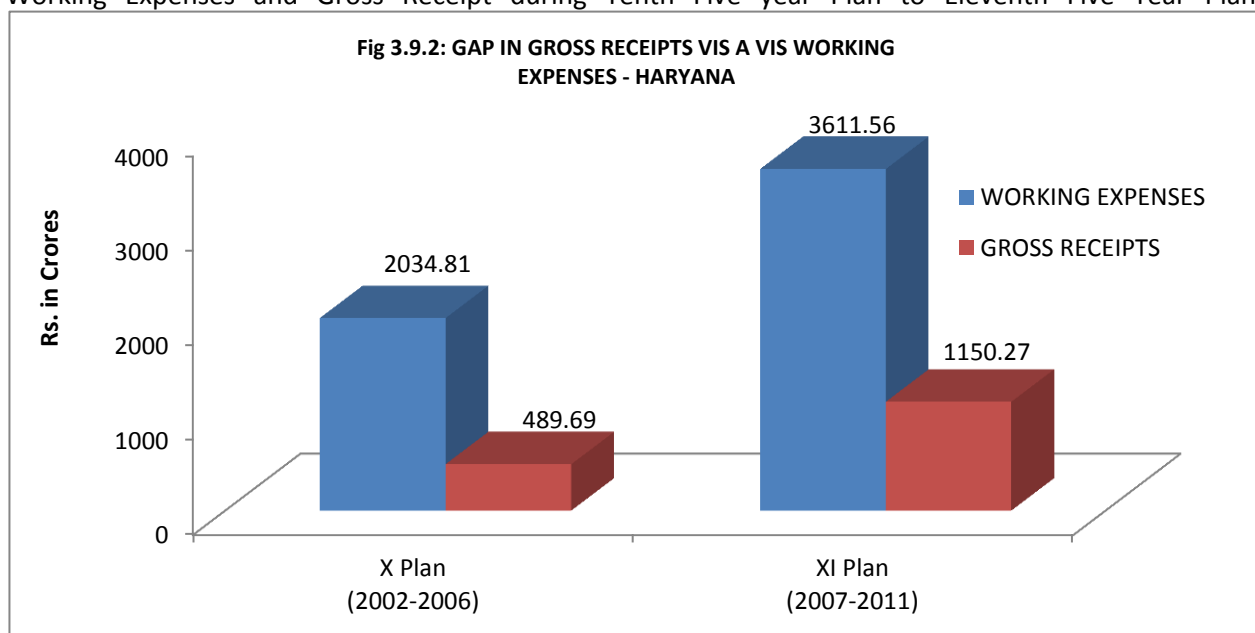
3.3.9.1 In Haryana, collection of irrigation revenue is the duty of the office of Collector/Deputy Commissioner. The Irrigation Department prepares Khatonies for each beneficiary and consolidates them District-wise. The office collects the irrigation revenue through Tehsildar. The receipts are remitted to the appropriate head of account of the State Government.

3.3.9.2 At the village level, Lambardar or other designated persons render their assistance in distribution and control of irrigation water, assessment of irrigation charges and collection of water revenue from each cultivator. The proceeds of water charges collected by the Lambardar.

3.3.9.3 There was a gradual increase in allocation of Capital Expenditure during 2000-01 to 2007-08 but nominal decline of Capital Expenditure reported from the year 2008-09 to 2013-14. The Capital Expenditure has increased from Rs. 256.46 crore to Rs. 689.20 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.11). Similarly, Annual Working Expenses has increased from Rs. 279.65 crore to Rs. 990.22 crore from 2000-01 to 2013-14.



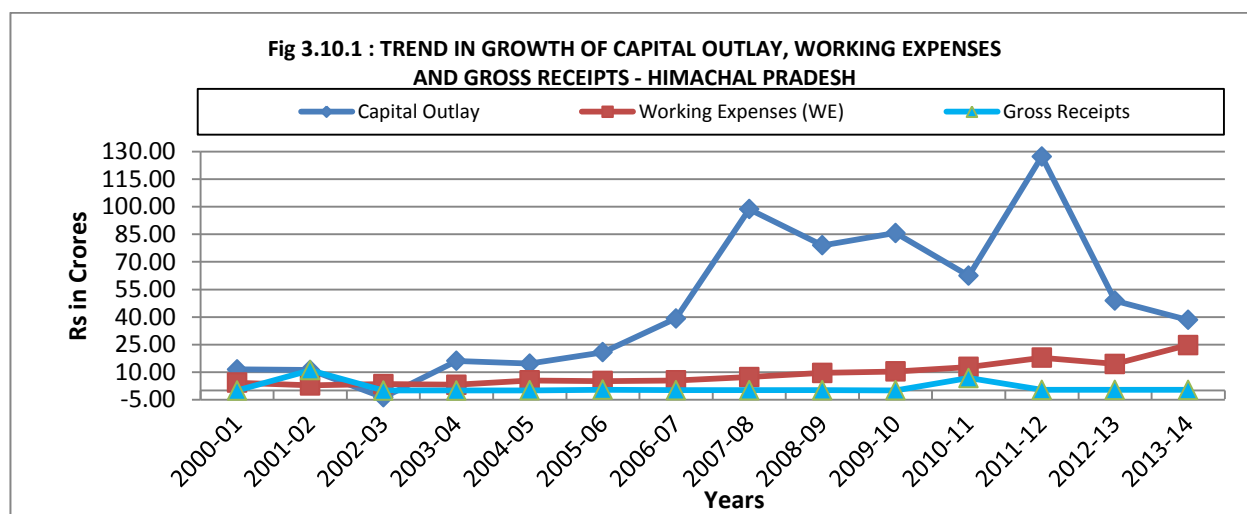
The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt on account of water charges has increased from Rs. 54.30 crore to Rs. 95.04 crore with a major increase in the years 2011-12 and 2003-04. There is an increasing trend of Working Expenses and Gross Receipt during Tenth Five year Plan to Eleventh Five Year Plan.



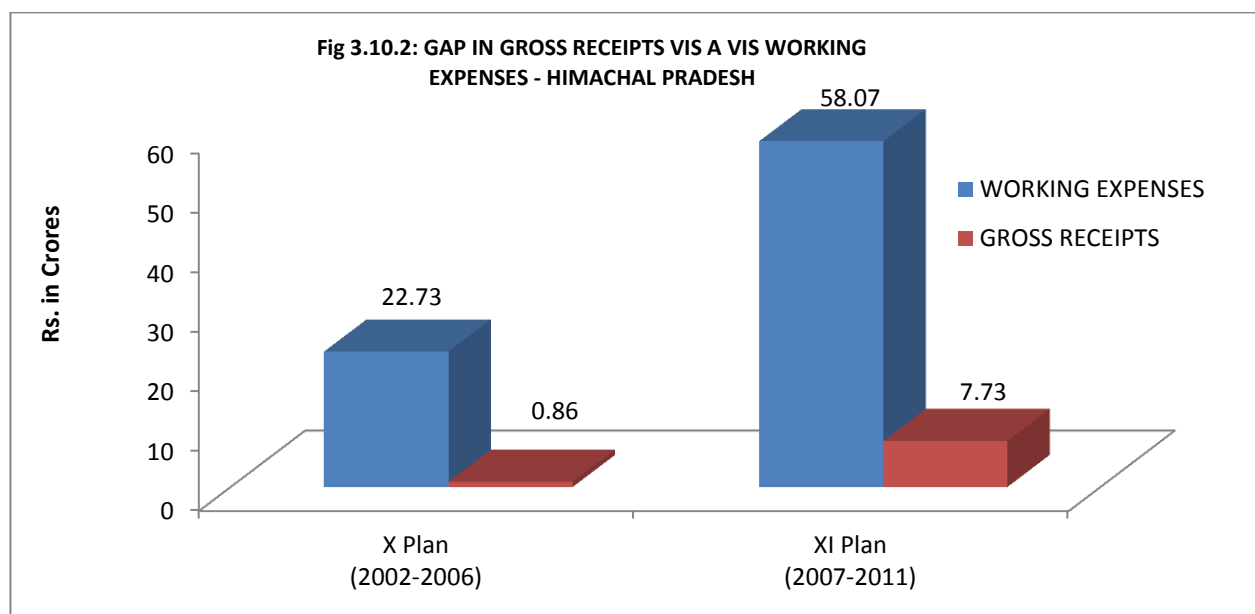
3.3.10 Himachal Pradesh

3.3.10.1 The abiana papers are prepared by the Patwari of the Irrigation and Public Health (IPH) Department on the basis of crop-wise and owner-wise irrigation measurements recorded in the Khasra/Girdawari Register. These papers are checked at the Sub-divisional level and forwarded through Division and Circle Offices to the Zilledar posted in each Administrative Zone of IPH Department. The abiana papers are again checked/verified at site by the Kanungo/Zilledar and returned to the respective Divisional Offices for realization of abiana charges. The verified abiana amount's statement is then sent to the District Collector by the Divisional Engineer for realization of abiana from the farmers.

3.3.10.2 The Capital Expenditure is increasing from Rs. 11.48 crore to Rs.38.40 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.12). Similarly, Annual Working Expenses is consistently increasing from Rs. 4.32 crore to Rs. 24.73 crore from 2000-01 to 2013-14.



The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. Although Gross Receipt is negligible but abnormal realization of Revenue Receipt has been reported in the year 2001-02 still there is an increasing trend of Working Expenses during Tenth Five year Plan to Eleventh Five Year Plan.

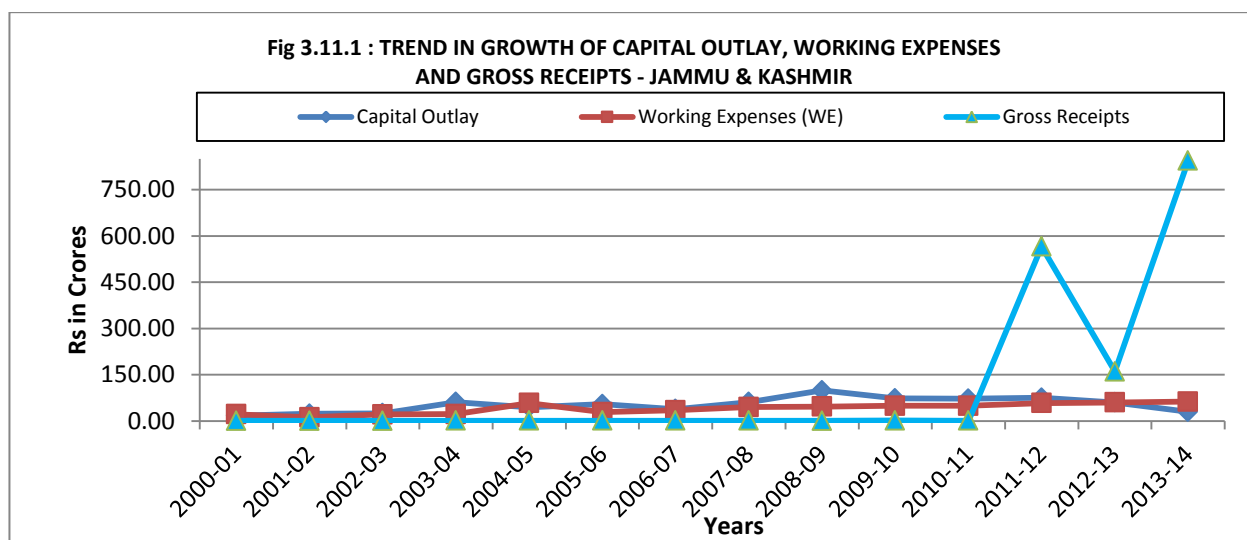


3.3.11 Jammu & Kashmir

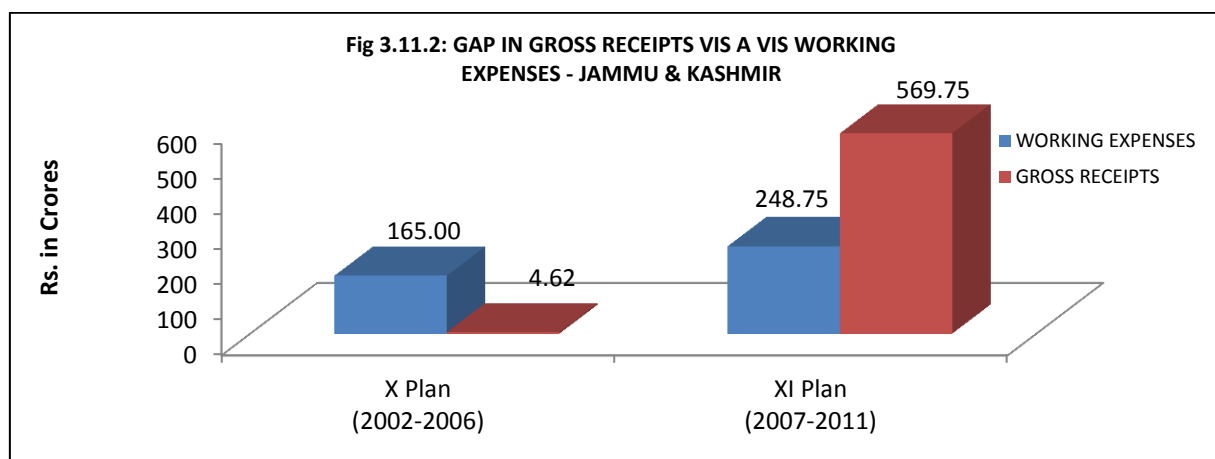
3.3.11.1 The area irrigated in the State through Government owned canals/khuls/lifts/tube-wells/tanks etc. is recorded by the Patwari. After the complete recording of irrigation figures on the prescribed revenue forms by the Patwaries, the assessment is made by way of charging the Abiana fixed by the Government. The whole work of Patwaries is supervised/checked by the Zilledars.

3.3.11.2 The recovery of the Abiana is made by the village Lambardars. The Government has also created the posts of Canal Daroga (Assistant Collector Class I) for speedy recovery of Abiana as well as other Government dues of the Canal Department. Besides this, Canal Daroga is responsible for collection of the whole revenue.

3.3.11.3 The Capital Expenditure has increased from Rs. 17.91 crore to Rs. 29.54 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.13). Similarly, the Annual Working Expenses has consistently increased from Rs. 21.70 crore to Rs. 62.89 crore from 2000-01 to 2013-14.



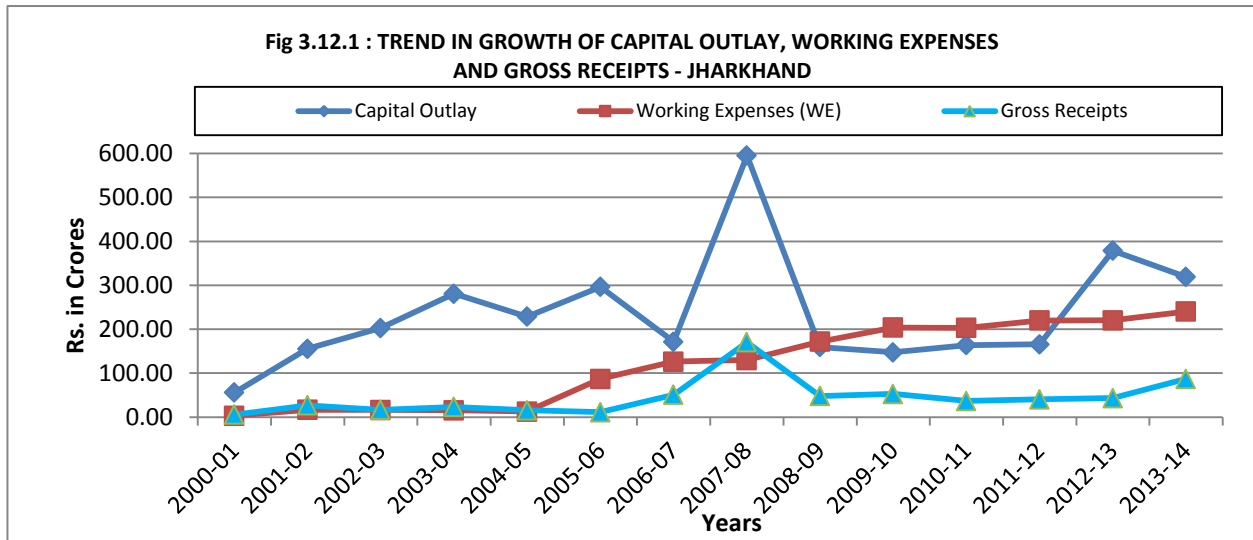
The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt was in the range of 1.44% to 1342.28% of Working Expenses during 2000-01 to 2013-14. The Gross Receipt is very negligible to Working Expenses i.e. less than 3 % during Tenth Five Year Plan, but it has increased significantly during Eleventh Five Year Plan as the ratio of Gross Receipt to Working Expenses becomes 2.29.



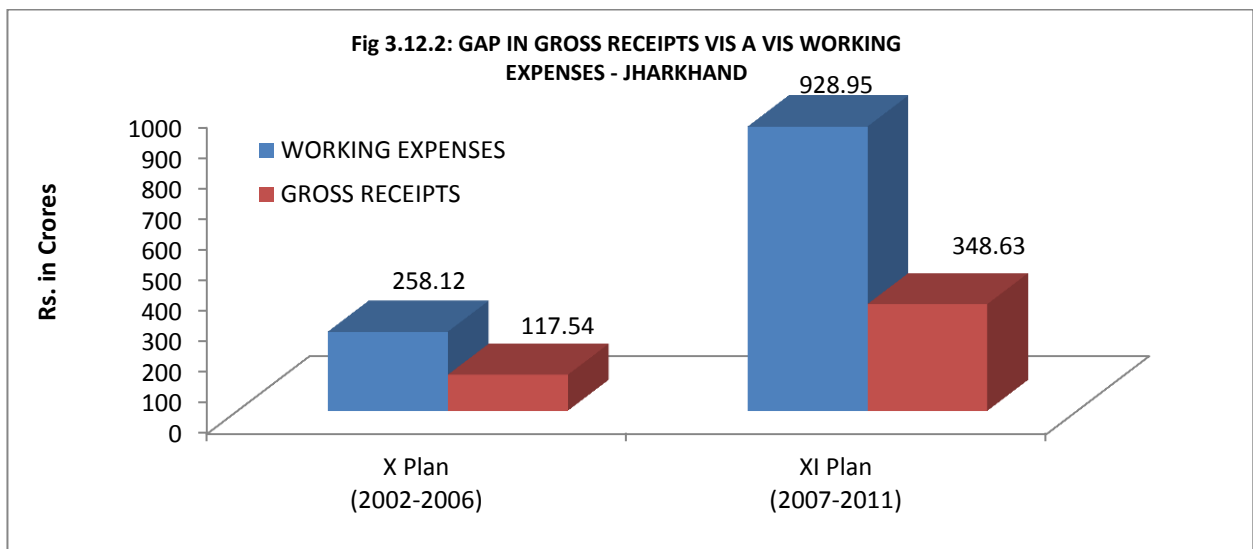
3.3.12 Jharkhand

3.3.12.1 The Canal Officer prepares an assessment of the water charges for the purposes in respect of which water was supplied, made available or used from an irrigation work and serves the same on the owner or occupier.

3.3.12.2 The Capital Expenditure has regularly increased from Rs. 56.15 crore to Rs. 318.94 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.14). Similarly, Annual Working Expenses has amplified to Rs. 240.36 crore from Rs. 3.28 crore during 2000-01 to 2013-14.



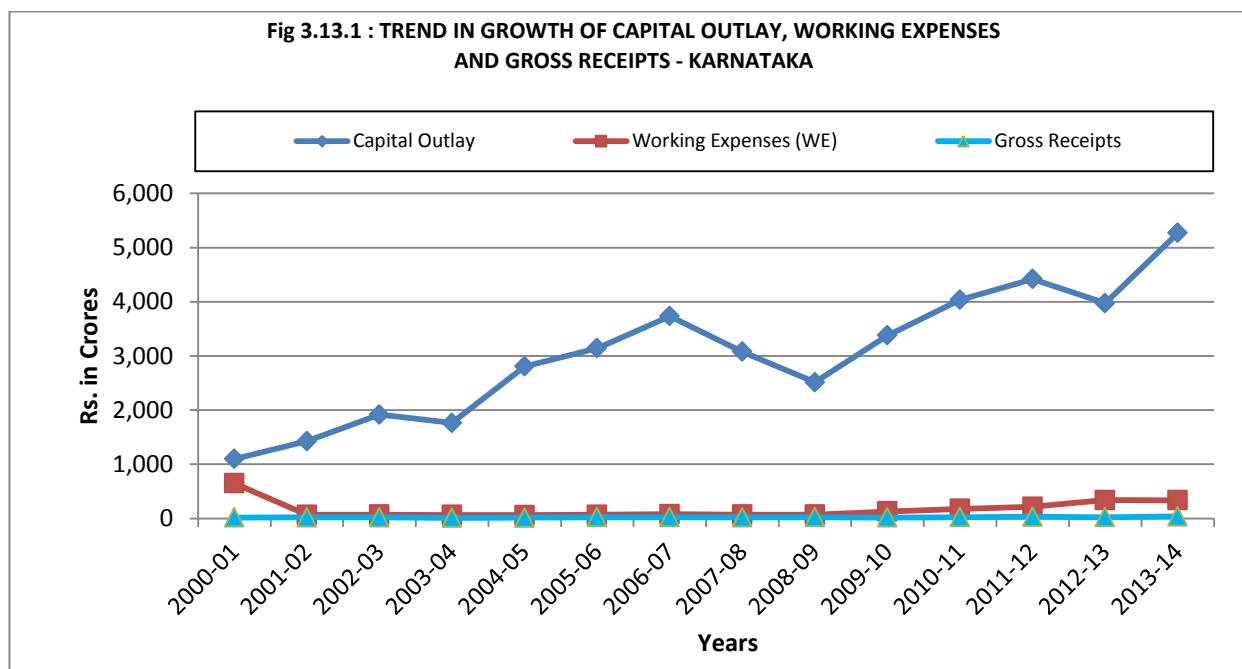
The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt on account of water charges was in the range of 12.76% to 172.56% of Working Expenses during 2000-01 to 2013-14.



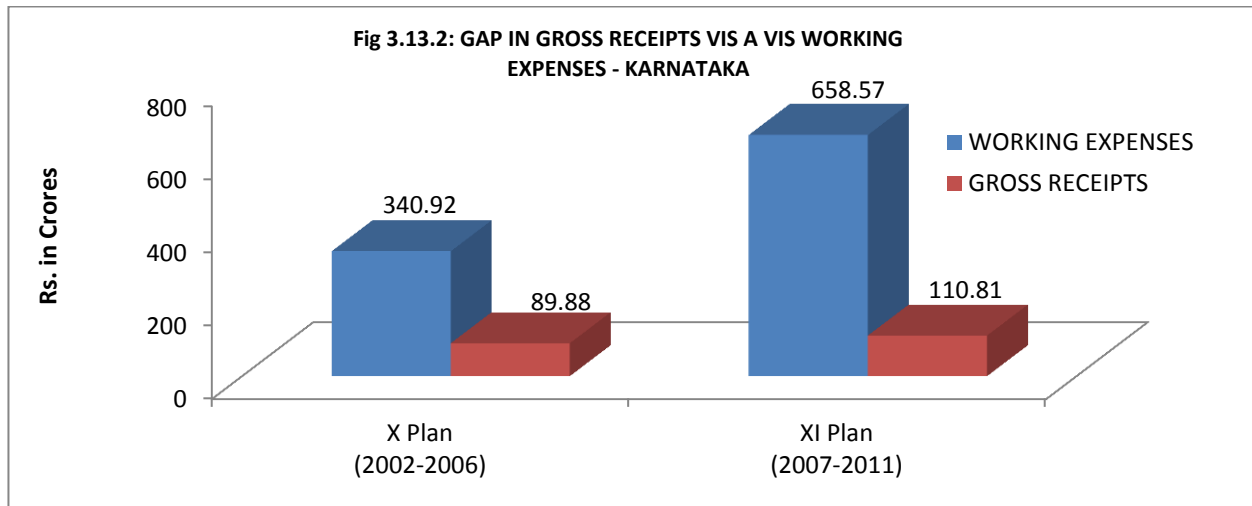
3.3.13 Karnataka

3.3.13.1 In Karnataka, the assessment of water rate is based on the joint inspection done by Irrigation and Revenue Department for the water supplied and the type of crop grown. An officer of water resources department inspects and prepares a statement of each survey number to which water was supplied, made available or used for irrigation and crop raised therein. The Assistant Executive Engineer shall prepares a statement of water rates payable by each land holder shall send the statement to the Tehsildar for collection of water rates specified therein.

3.3.13.2 The Capital Expenditure rose steadily to Rs. 5271.39 crore from Rs. 1099.62 crore during 2000-01 to 2013-14 for Major and Medium Irrigation projects (Table 3.15). Likewise, the Annual Working Expenses has consistently enlarged to Rs. 336.47 crore from Rs. 68.60 crore during 2001-02 to 2013-14, after its steep decline in the year 2001-02.



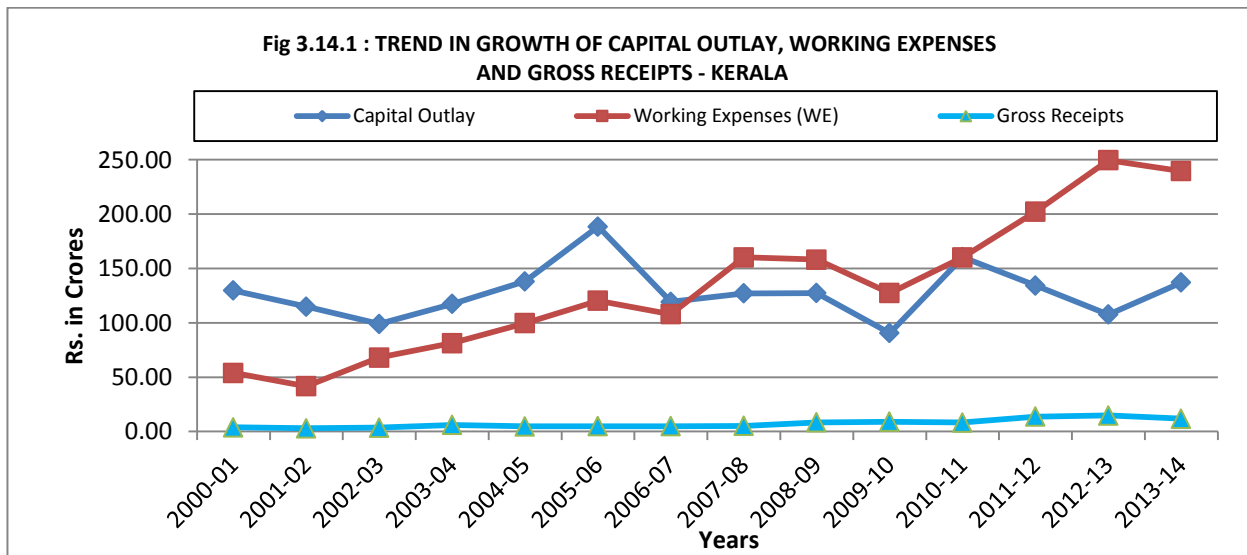
The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt on account of water charges was in the range of 2.84 % to 32.64 % of Working Expenses during 2000-01 to 2013-14. The Working Expenses during Tenth Plan has registered a sharp increase whereas Gross Receipt maintained almost the same order during Tenth Five Year Plan to Eleventh Five Year Plan.



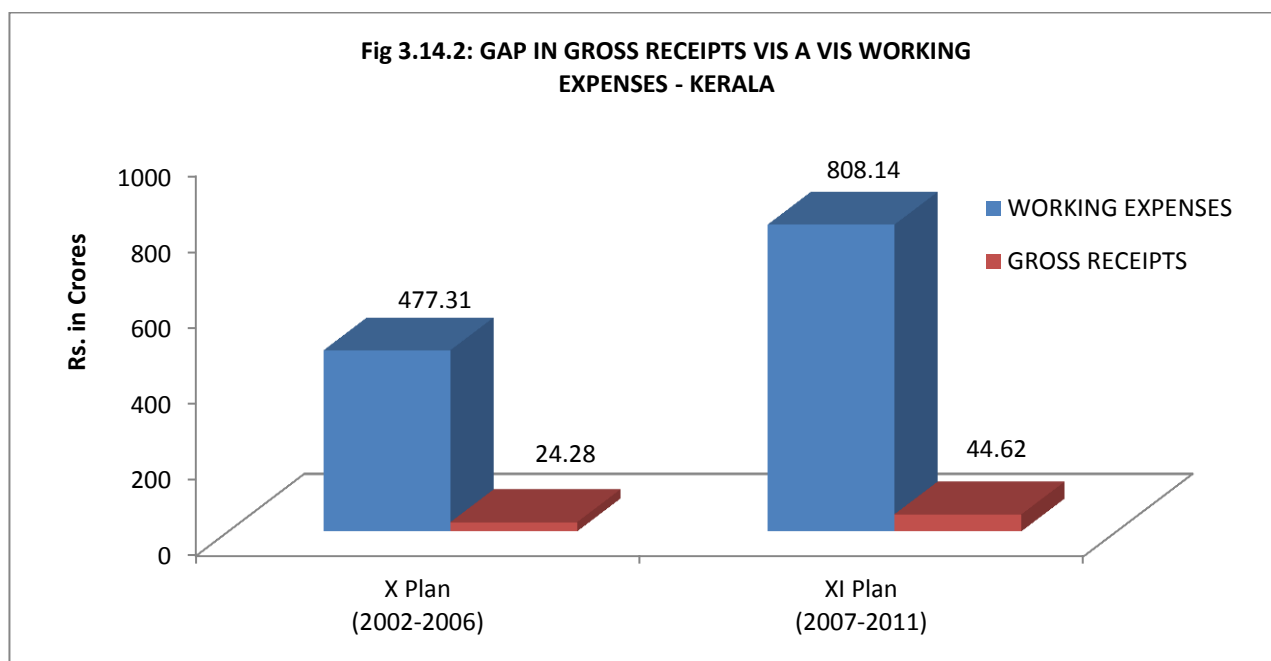
3.3.14 Kerala

3.3.14.1 In Kerala, the Government revised the irrigation water rates in the entire state uniformly with effect from 01.07.1974 by amending the acts applicable to erstwhile Travancore-Cochin area, Malabar Area and South Canara district. Irrigation revenue is collected annually on the basis of gross area irrigated during the year. After an irrigation scheme is commissioned, the area list pertaining to ayacut benefited is furnished to the Revenue Department by the Irrigation Department. The assessment and collection of irrigation water revenue are the responsibility of the Revenue Department.

3.3.14.2 The Capital Expenditure increased marginally from Rs. 129.76 crore to Rs. 137.10 crore during 2000-01 to 2013-14. On the other hand, Annual Working Expenses has increased sharply from Rs. 53.92 crore to Rs. 239.53 crore from 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.16).



The gap between Gross Receipt on account of levy of water charges and Working Expenses is widening continuously and depicted in chart. The Gross Receipt on account of water charges was in the range of 4.05% - 7.51% to Working Expenses during 2000-01 to 2013-14. It is highly remarkable that the Working Expenses is increasing significantly in each Five Year Plan (Tenth to Eleventh) while the Gross Receipt during these plan periods do not show much change.



3.3.15 Madhya Pradesh

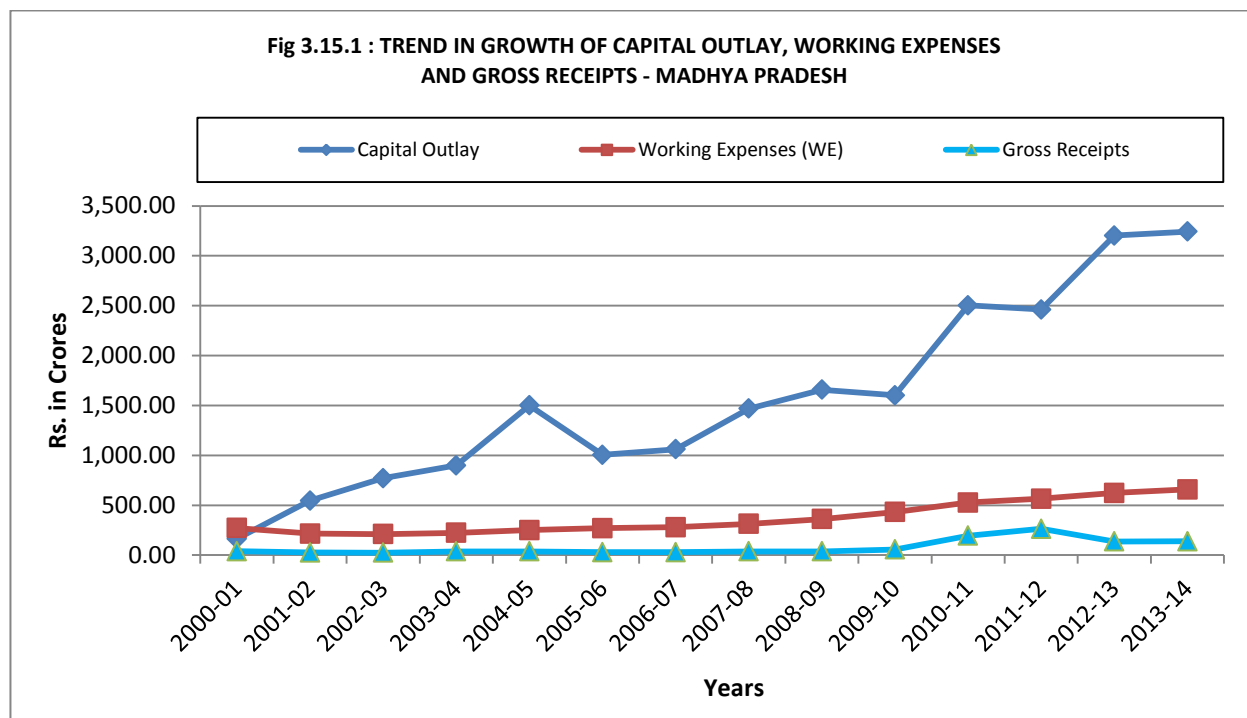
3.3.15.1 In Madhya Pradesh, there are three agencies for collection of water revenue:

- (i) Revenue Branch
- (ii) Technical Officers of the Water Resources Department
- (iii) Irrigation Panchayats

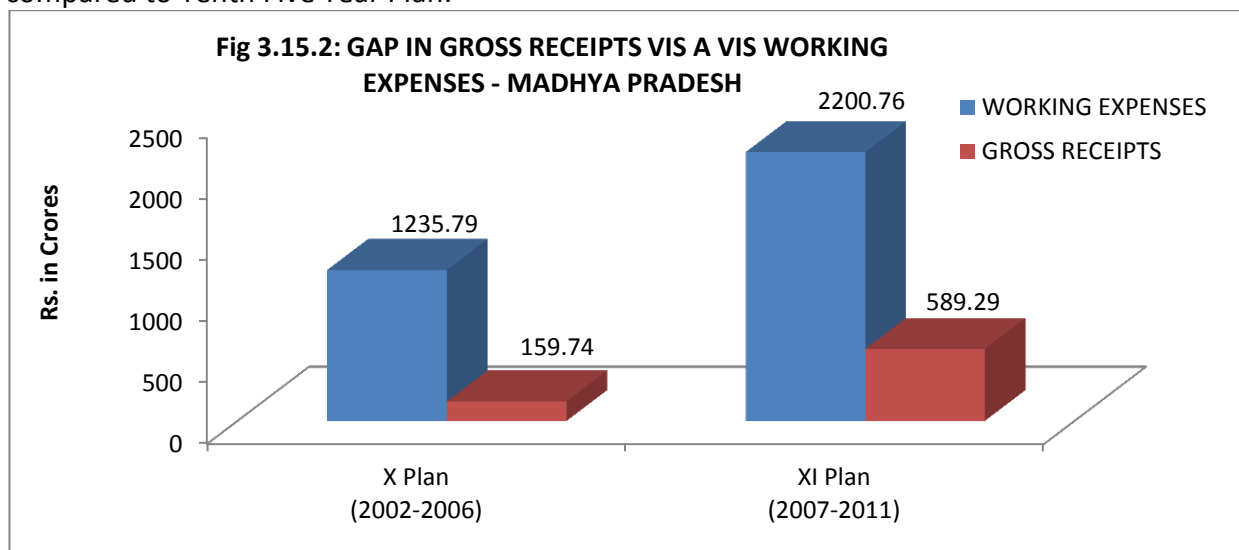
3.3.15.2 Revenue Branch of the Water Resources Department is mainly responsible for collection of water revenue. Head of revenue branch is Canal Deputy Collector and Irrigation Inspectors work under him. The last and important link of this set-up is Amin who inspects the irrigated areas under various crops during Kharif and Rabi seasons and fixes water charges accordingly. Irrigation Inspector supervises his work and Canal Deputy Collector is responsible for overall supervision work and their numbers in Division and Sub-Divisions depend on the extent of irrigated area. At the Division level, Executive Engineer is responsible for whole mechanism of revenue collection.

3.3.15.3 Wherever, there is Irrigation Panchayats, they are responsible for water distribution system and prevention of any damage and sabotage to Irrigation systems. They also co-operate with the officers of Irrigation Department for collection of water revenue. Panch of Irrigation Panchayats are duly elected and they in turn elect Sarpanch. Irrigation Panchayats collect the water charges and deposit in the state treasury and are paid honorarium at the rate of 3% for the first Rs. 1000/- and 2% for amount more than Rs. 1000/- which is distributed amongst Panch of Panchayat. The water rates are different for different crops but the rate is uniform for a particular crop throughout the State.

3.3.15.4 The Capital Expenditure was increasing consistently from Rs.163.97 crore to Rs. 3242.95 crore during 2000-01 to 2013-14. Likewise, Annual Working Expenses has rose from Rs. 271.21 crore to Rs. 659.19 crore from 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.17). The Working Expenses during 2001-02 declined due to the creation of new state Chhattisgarh.



3.3.15.5 The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipts have shown fluctuating trend and fall in the range of 10.63% - 46.50% of Working Expenses during 2000-01 to 2013-14. The Working Expenses and Gross Receipt both have amplified significantly during Eleventh Five Year Plan as compared to Tenth Five Year Plan.



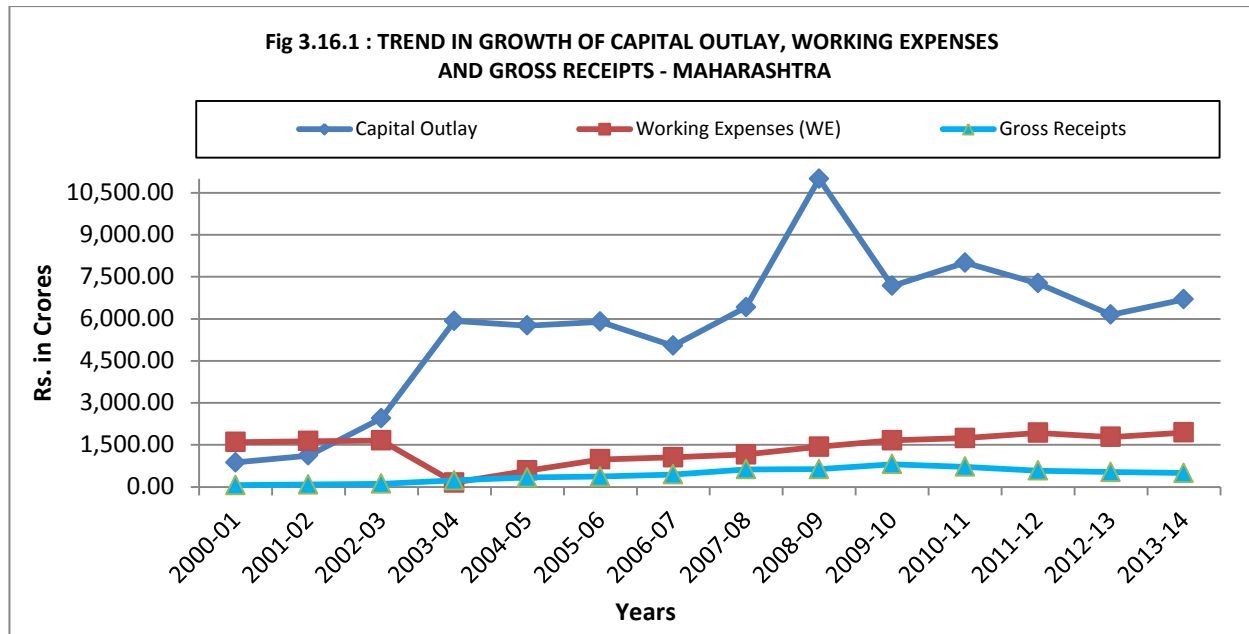
3.3.16 Maharashtra

3.3.16.1 Irrigation Department collects irrigation water revenue in the State. The demand statements are prepared after completion of the particular season for the seasonal crop i.e. by 1st February for Kharif, by 1st May for Rabi and by 1st October for Hot Weather Season.

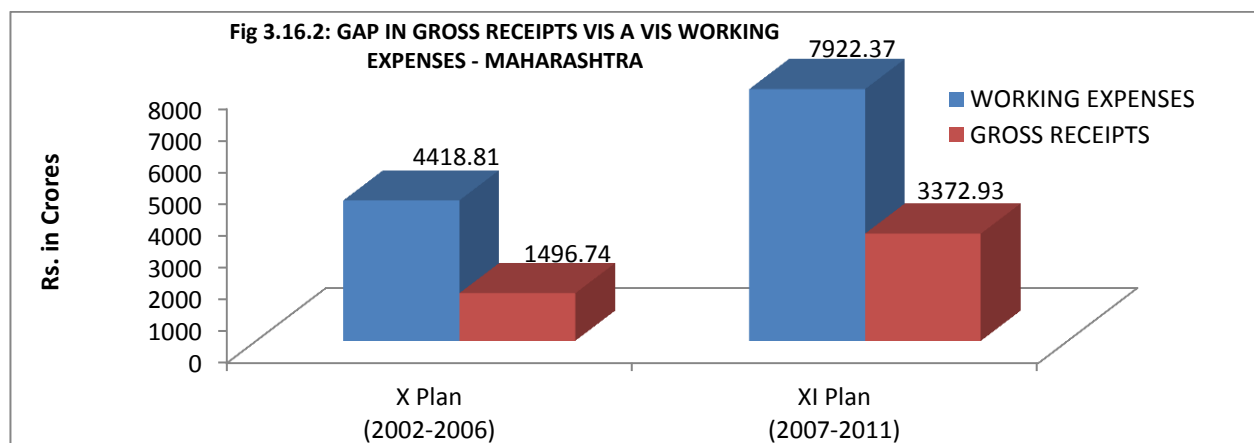
3.3.16.2 In the office of the Superintending Engineer in-charge of the irrigation management circle, there is a unit headed by an Accounts Officer who carries out inspections of irrigation

accounts maintained at the Section, Sub-Divisional and Divisional Office level. Thus the accounts of irrigation revenue recovery right from the section up to the Circle Office are linked up.

3.3.16.3 The Capital Expenditure has consistently increased from Rs. 873.60 crore to Rs. 6693.25 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.18). In the same way, Annual Working Expenses has increased from Rs. 150.66 crore to Rs. 1941.79 crore from 2003-04 to 2002-03 after sudden decline in the year 2003-04.



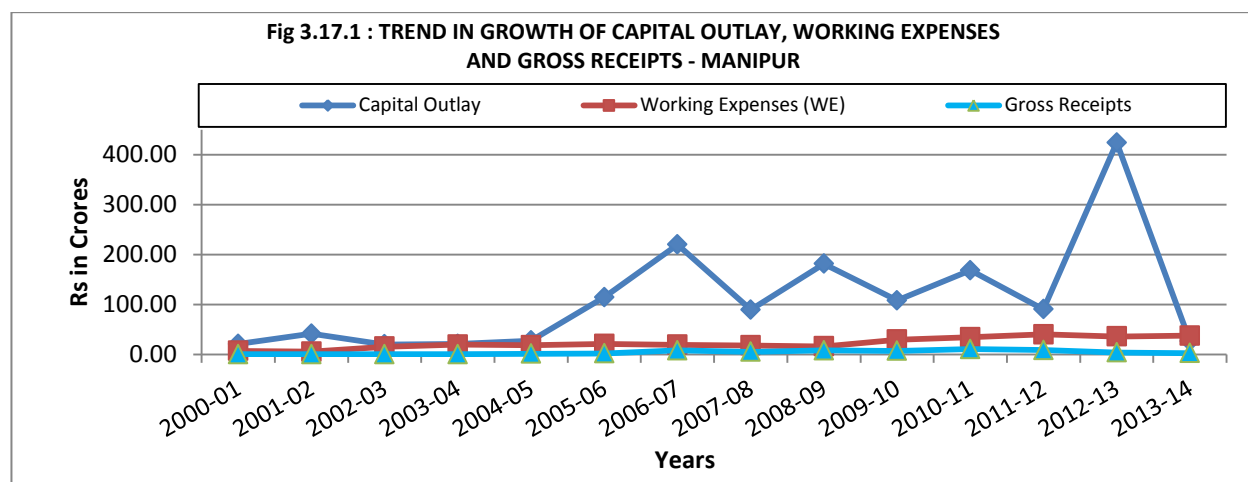
3.3.16.4 The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt on account of water charges and other economic activities was in the range of 3.90% to 153.12% of Working Expenses during 2000-01 to 2013-14. Both the Gross Receipts and Working Expenses have shown remarkable increase during Eleventh Five Year Plan as compared to Tenth Five Year Plan.



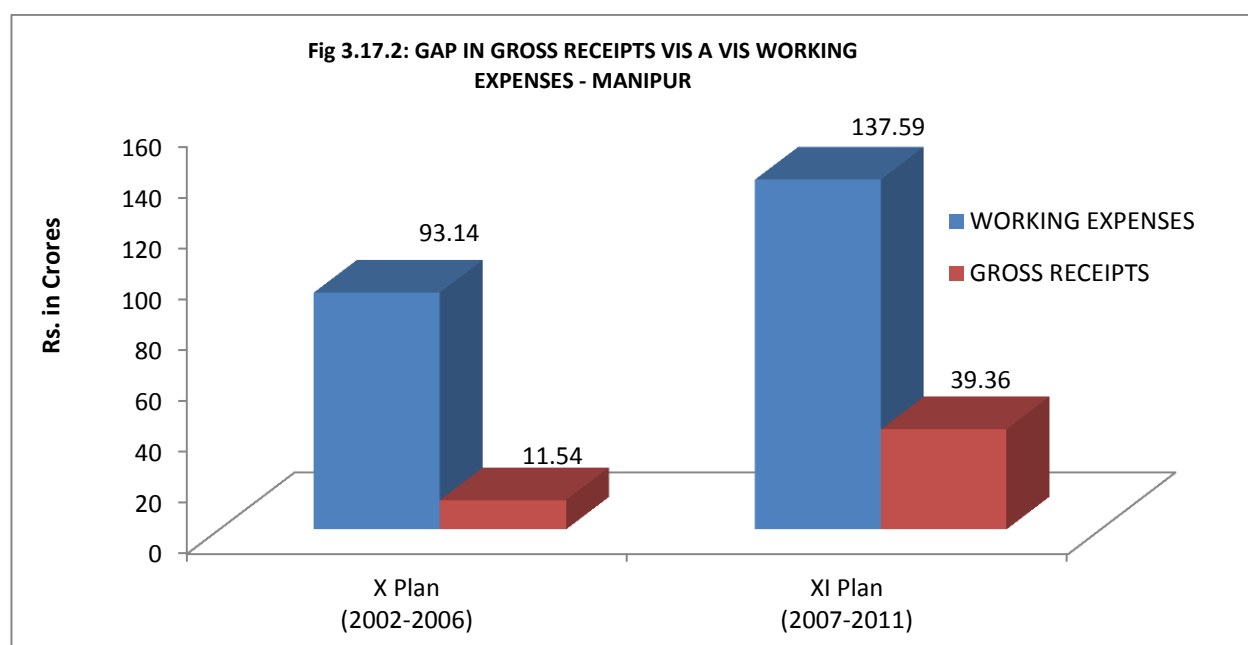
3.3.17 Manipur

3.3.17.1 Assessment of irrigation water revenue is made as per area irrigated, crop-wise and season-wise. Information on crop-wise areas to be irrigated is collected from the farmers in prescribed format prior to supply of irrigation water. Revenue is collected from the farmers after harvesting by the Irrigation & Flood Control Department of the state.

3.3.17.2 The Capital Expenditure has increased from Rs. 20.82 crore to Rs. 26.17 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.19). Likewise, Annual Working Expenses rose from Rs. 6.90 crore to Rs. 37.65 crore from 2000-01 to 2013-14.



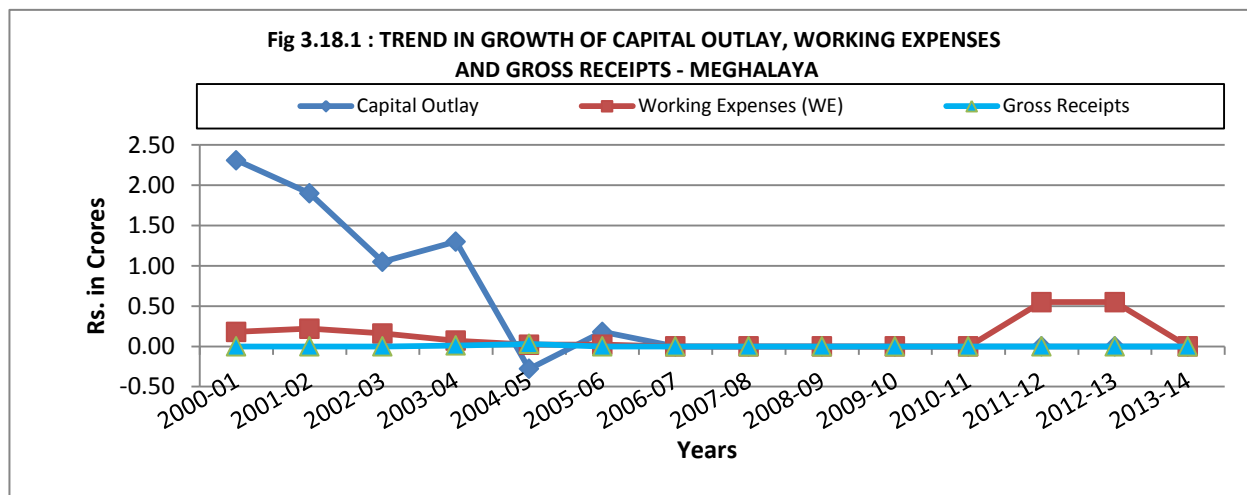
3.3.17.3 The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt on account of water charges and other economic activities were in the range of 1.58% to 49.57% of Working Expenses during 2000-01 to 2013-14. There is moderate increase in Gross Receipts and Working Expenses in the Eleventh Five Year Plan as compared to the Tenth Five Year Plan.



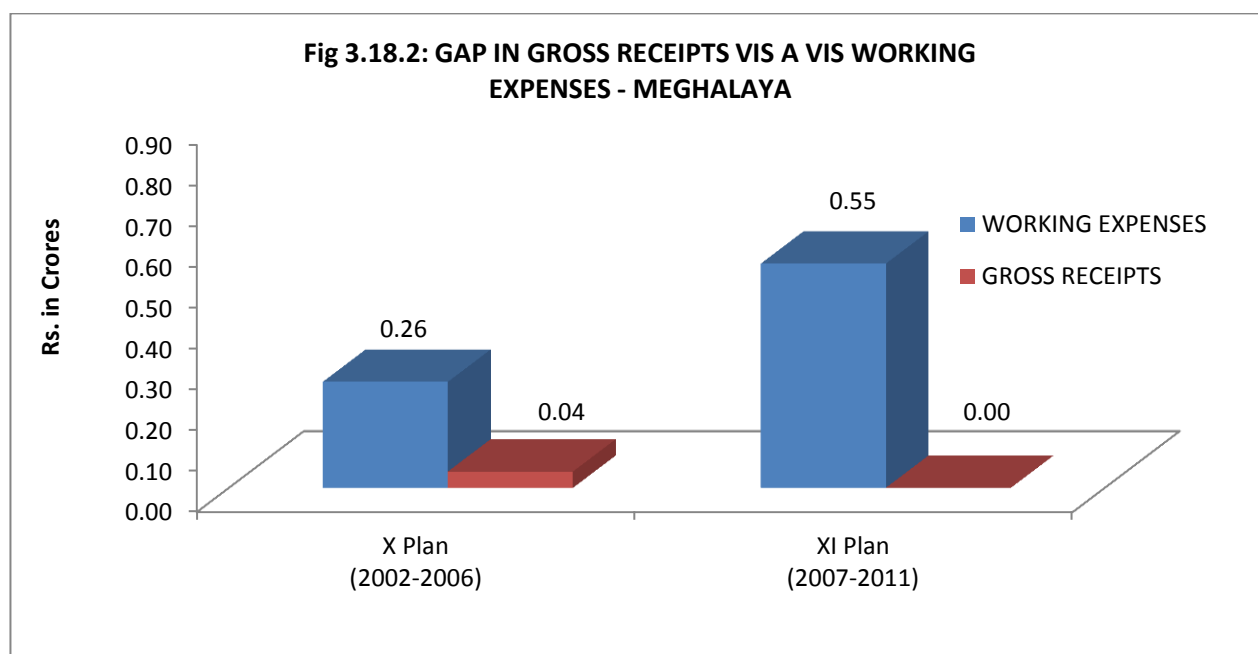
3.3.18 Meghalaya

3.3.18.1 There are no water rates in vogue in respect of irrigation.

3.3.18.2 The Capital Expenditure has consistently decreased from Rs. 2.31 crore to Rs. 0.18 crore during 2000-01 to 2005-06 and thereafter no expenditure has been incurred till 2013-14 in Major and Medium Irrigation projects (Table 3.20). Likewise, Annual Working Expenses has consistently increased from Rs. 0.18 crore to Rs. 0.55 crore from 2000-01 to 2012-13.



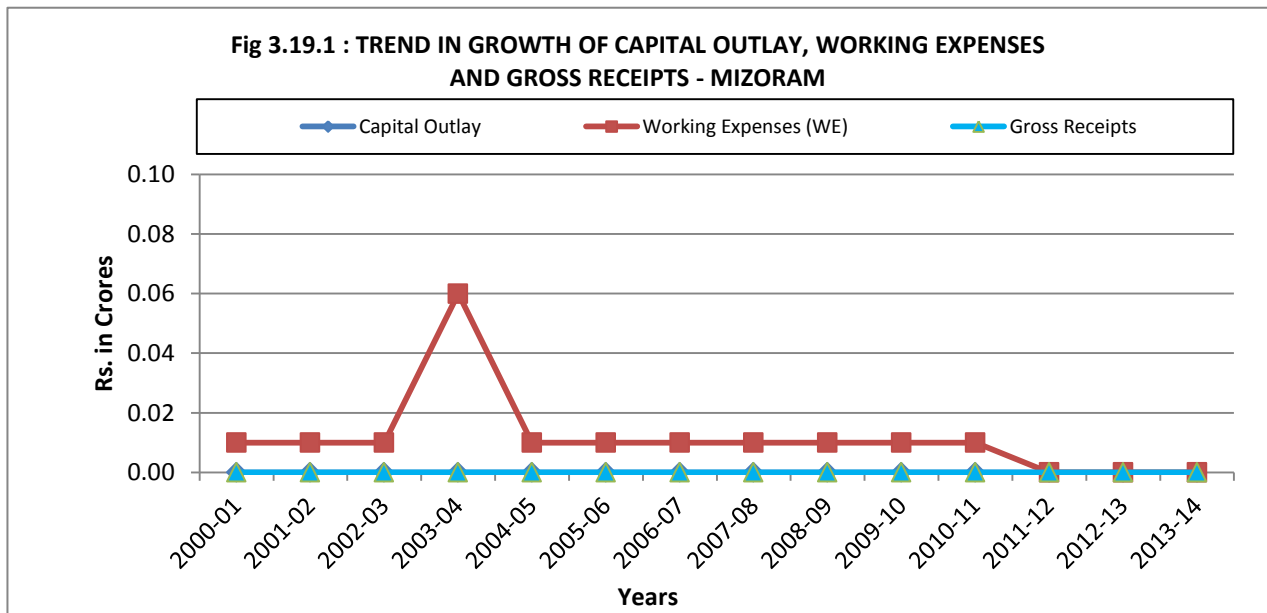
3.3.18.3 The gap between Gross Receipts on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipts have been realized through Major and Medium Irrigation projects only for the years 2003-04 and 2004-5 but it was not very significant.



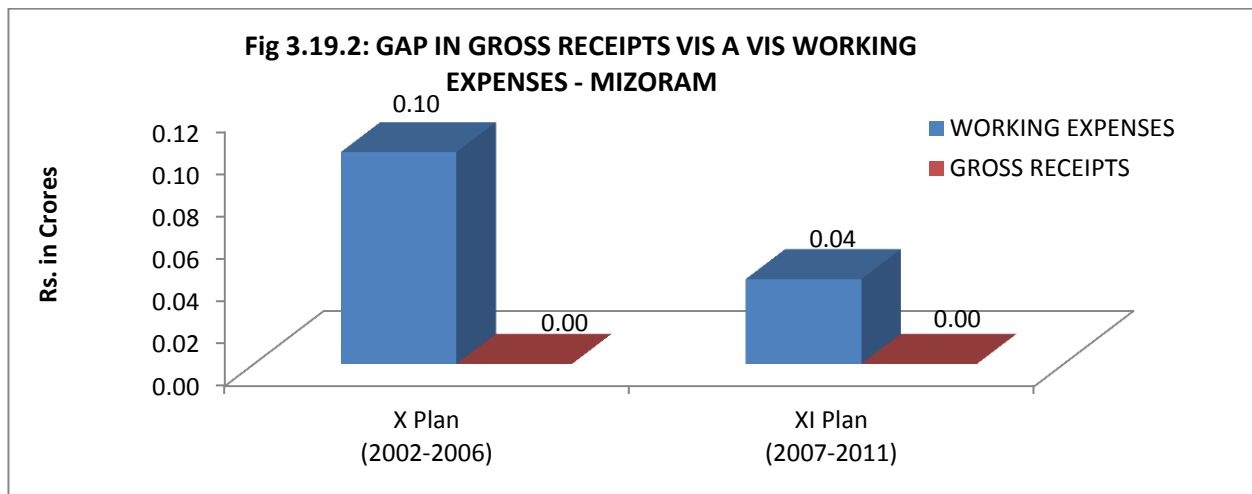
3.3.19 Mizoram

3.3.19.1 There are no water rates in vogue.

3.3.19.2 No Capital Expenditure has been incurred during 2000-01 to 2013-14. Similarly, Annual Working Expenses was also quite low and intermittently fluctuated during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.21).



3.3.19.3 The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. There is a drastic decrease in working expenditure from Tenth Five Year Plan to Eleventh Five Year Plan and there was no Gross Receipts during that period.

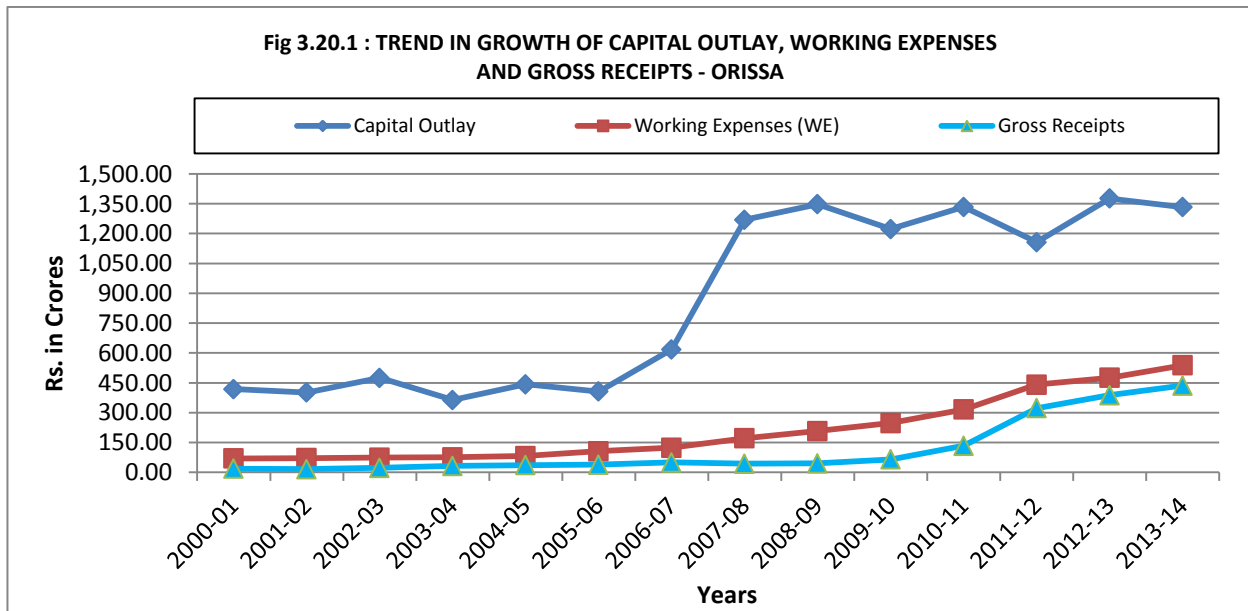


3.3.20 Orissa

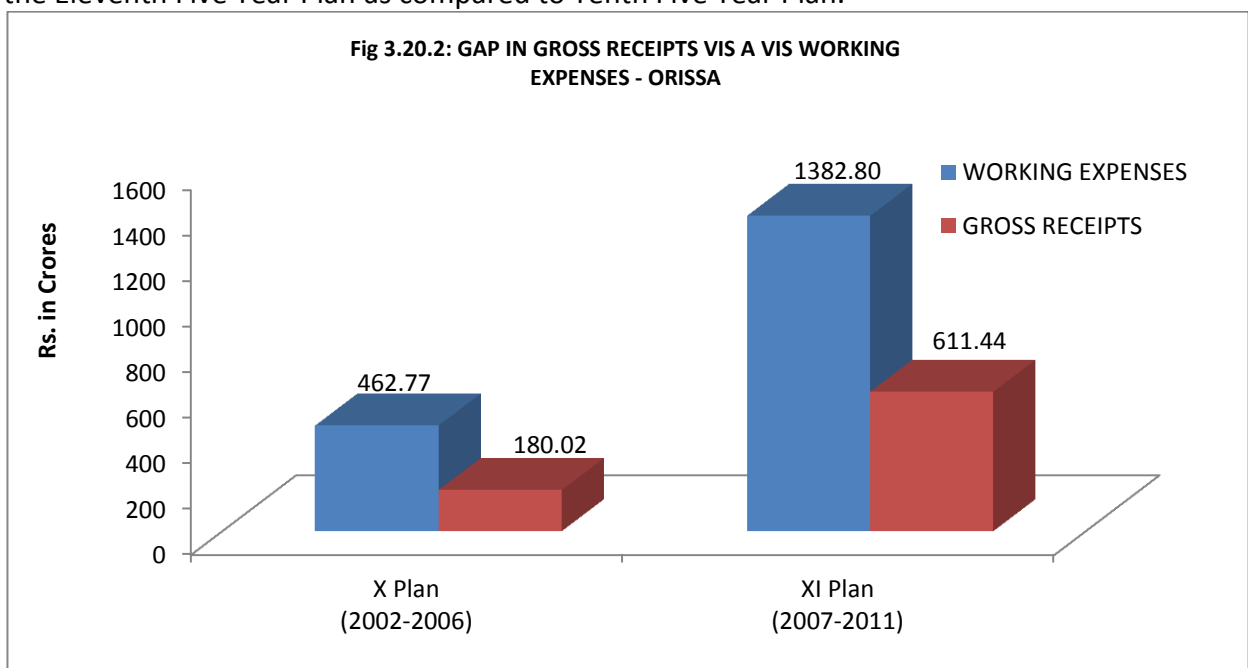
3.3.20.1 The work of assessment and collection of water revenue was earlier used to be done by the revenue department. As per the revenue and excise department notification dated 29-9-1999 and 11-10-1999 published in Orissa Gazette No. 1423 dated 30-9-1999 and No. 1466 dated 13-10-1999 respectively, the Government of Orissa has empowered the Executive Engineer of Water Resources Department for collection of water revenue for industrial/commercial use only. For kharif season, the rates are based on the classification of irrigation work. The

classification is made on the basis of the depth of supply of irrigation. For Rabi season, the rate is based on the type of crop.

3.3.20.2 The Capital Expenditure has consistently increased from Rs. 418.30 crore to Rs. 1332.55 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.22). Also, Annual Working Expenses has steadily improved from Rs. 70.12 crore to Rs. 538.18 crore from 2000-01 to 2013-14.



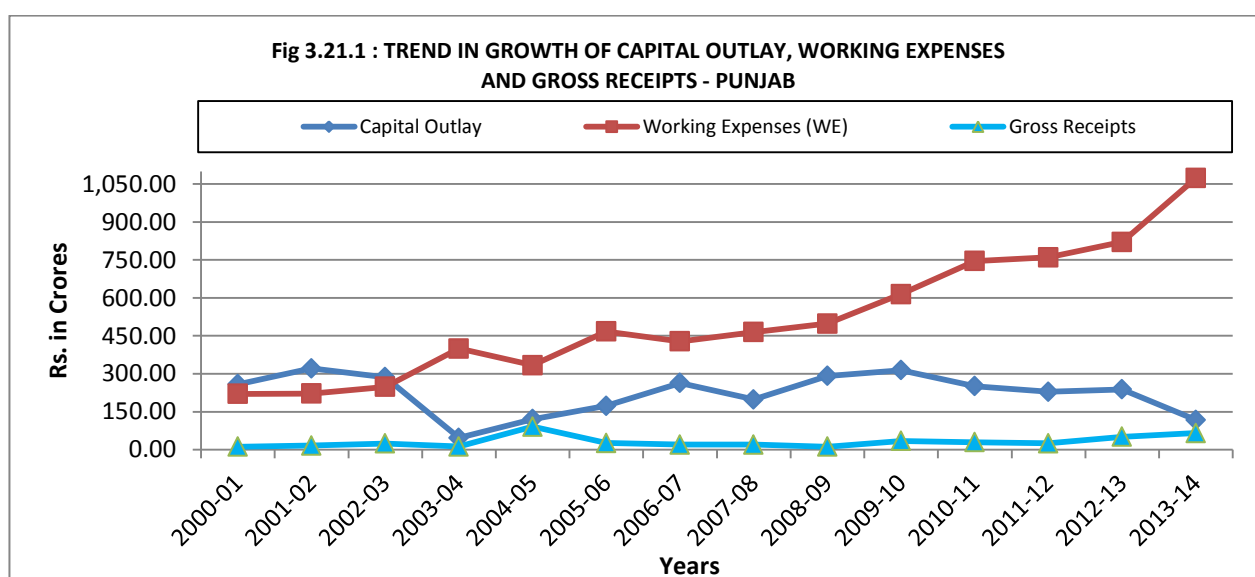
3.3.20.3 The gap between Gross Receipts on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipts on account of water charges and other economic activities are in the range of 21.98 % – 81.48 % of Working Expenses during 2000-01 to 2013-14. There is a significant increase in the Gross Receipts and Working Expenses during the Eleventh Five Year Plan as compared to Tenth Five Year Plan.



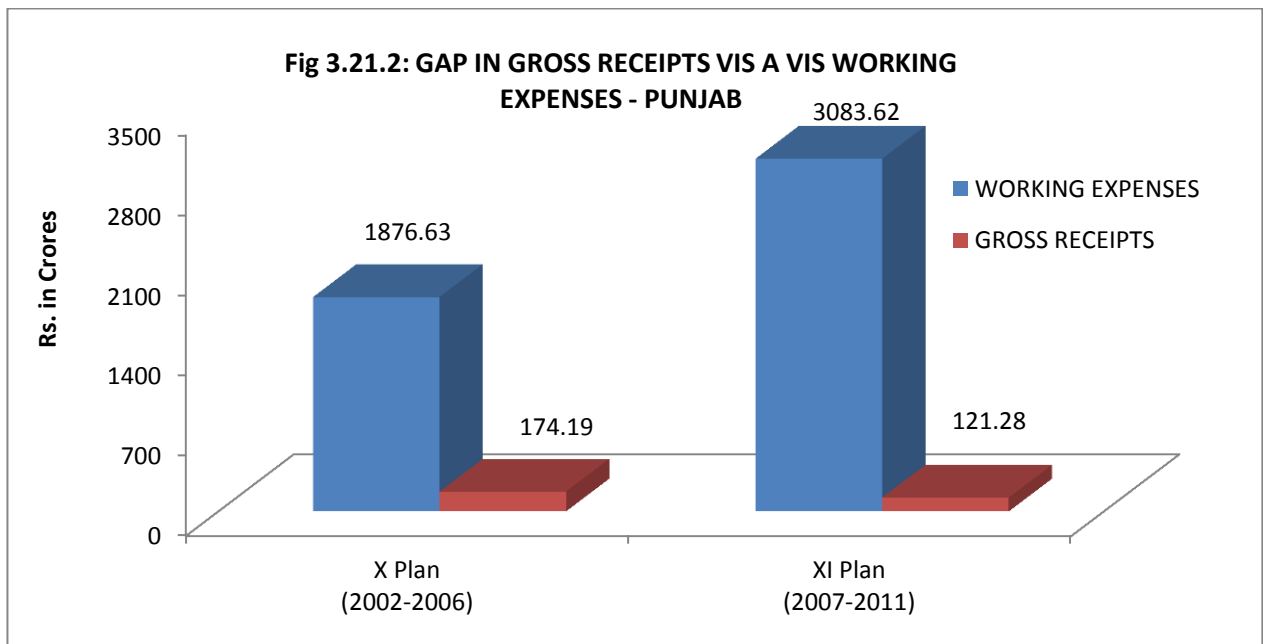
3.3.21 Punjab

3.3.21.1 Water rates for agricultural use were abolished by the Government of Punjab on 14-2-1997. Again on 12-11-2002, water rates for agriculture use were introduced. The rate for supply of canal water shall be Rs. 10 per canal year payable by all the shareholders of the chak of the canal outlet, applicable on the culturable command area of the outlet chak recoverable in two equal six monthly instalments payable by 31st May and 30th November respectively every year. A new water rates has been adopted since 28-01-2010 vide Notification no.14/22/94-IW(2)/264/dated 28-1-2010. The new water rates shall be applicable to chak of command or Lift irrigation scheme of the government and area irrigated by the farmers by making their own arrangements for lifting water from rivers, drains, chaks etc. The water charges so levied shall be collected through the Department of Revenue (i.e. District Collector).

3.3.21.2 The Capital Expenditure during the year has been declining continuously from Rs. 258.41 crore to Rs. 117.67 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.23). On the other hand, the Annual Working Expenses has consistently increased from Rs. 220.66 crore to Rs. 1073.53 crore from 2000-01 to 2013-14.



3.3.21.3 The gap between Gross Receipts on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipts on account of water charges and other economic activities are in the range of 3.11 % to 27.23 % of Working Expenses during 2000-01 to 2013-14. The percentage of recovery of Working Expenses through Gross Receipts is less than 10% during Tenth and Eleventh Plans.



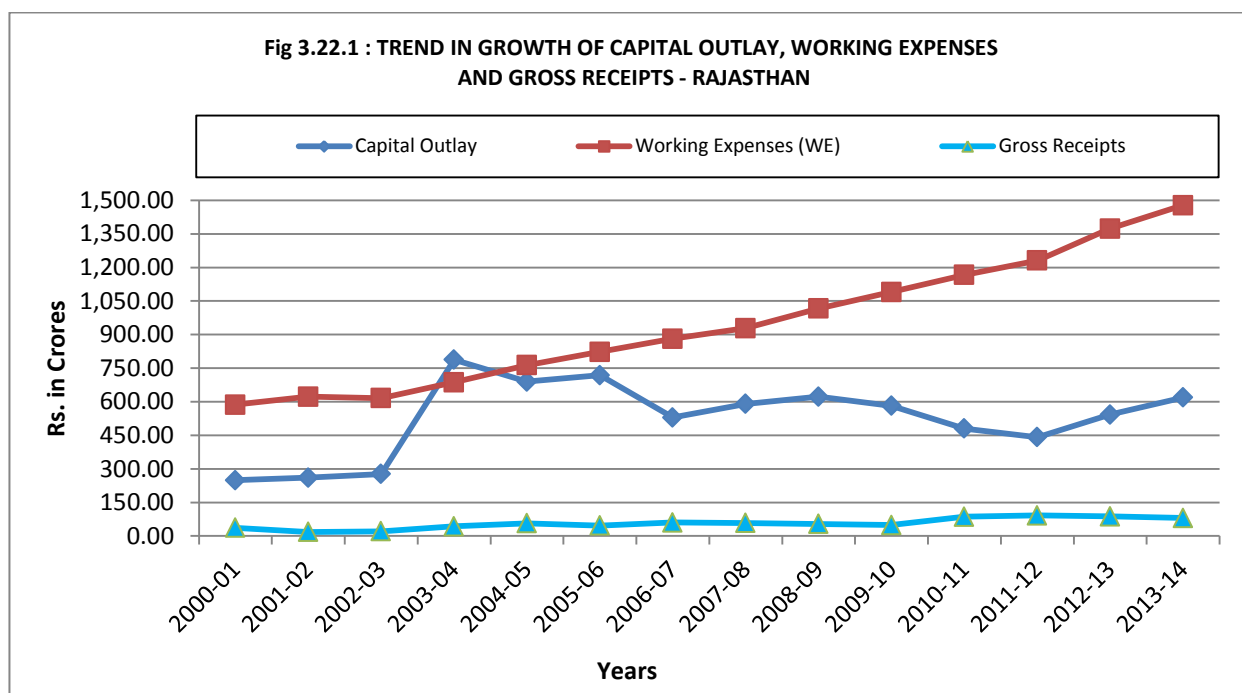
3.3.22 Rajasthan

3.3.22.1 Assessment and collection of water revenue for Major and Medium Projects for irrigating more than 2,500 acres (1011.72 hectare) of land is being done by the Irrigation Department and that of Minor Irrigation Schemes for irrigating less than 2500 acres of land is being done by the Revenue Department.

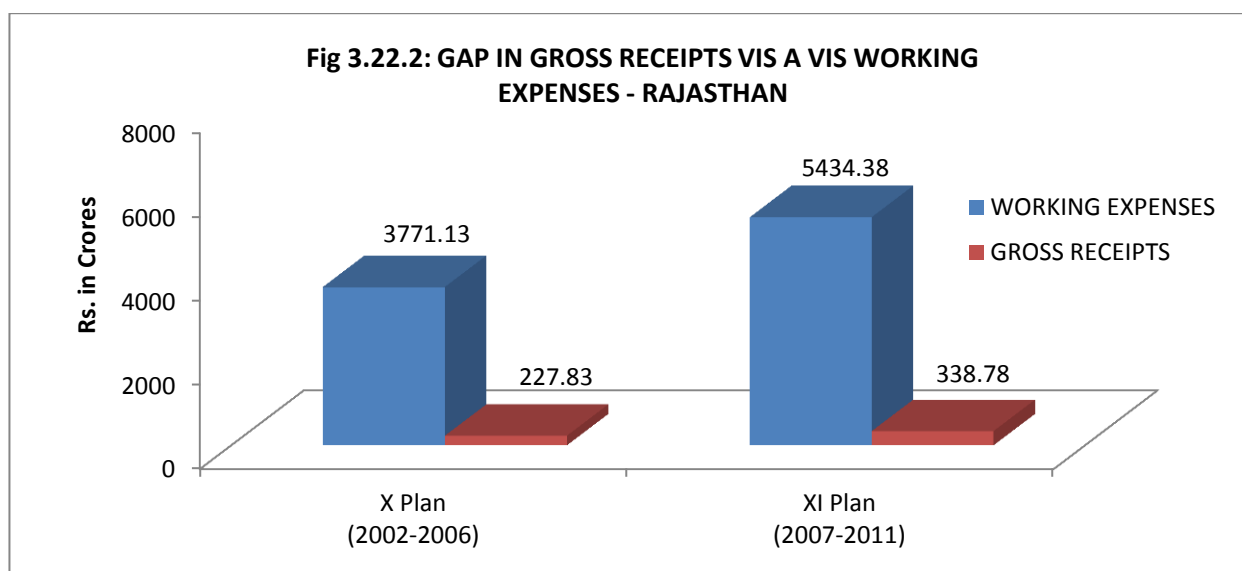
3.3.22.2 Revenue establishment of the Irrigation Department comprising Patwaries, Zilledars and Deputy Collectors does the work of assessment and recovery of water revenue. Patwari covers canal command area of about 4,000 acres (1618.74 hectare) in perennial channels and about 3,000 acres (1214.06 hectare) in non-perennial channels. One Zilledar supervises all revenue work of about 10 Patwaries and one Deputy Collector exercises control over about five Zilledars.

3.3.22.3 The work of irrigation booking, assessment and recoveries is checked by the Zilledar, Deputy Collector, Assistant Engineer and Executive Engineer as per norms.

3.3.22.4 The Capital Expenditure has steadily improved from Rs. 249.33 crore to Rs. 618.95 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.24). Likewise, Annual Working Expenses has shown an increasing trend as it rose from Rs. 586.67 crore to Rs. 1477.73 crore during 2000-01 to 2013-14.



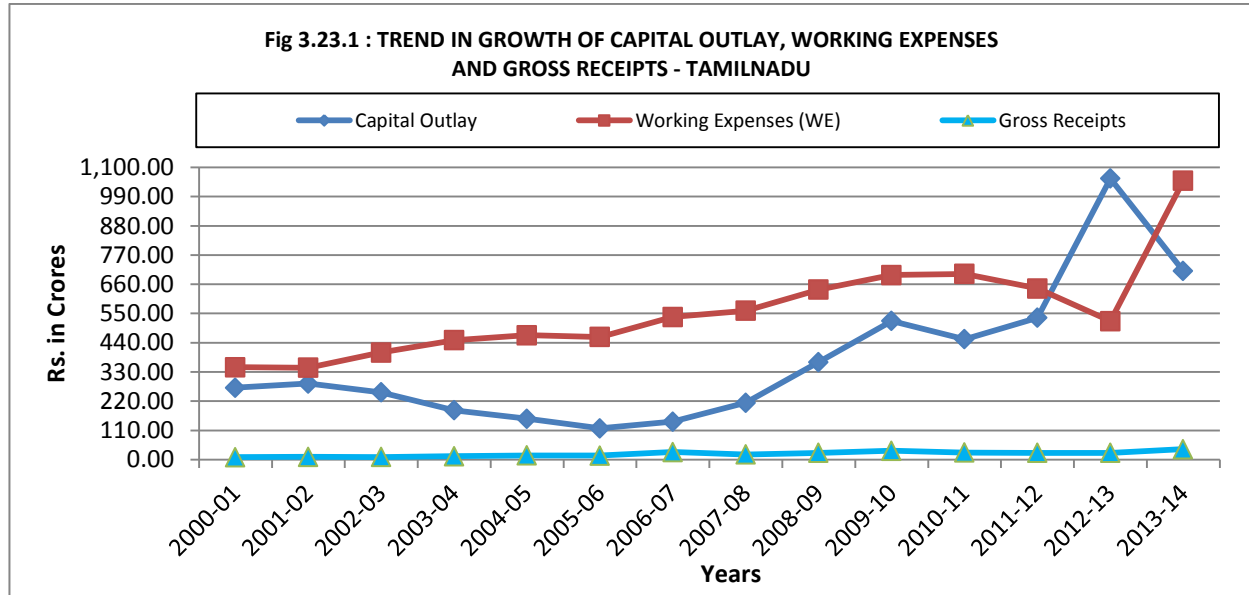
3.3.22.5 The gap between Gross Receipt on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipt on account of water charges and other economic activities are in the range of 2.96% to 7.46% of Working Expenses during 2000-01 to 2013-14. The Working Expenses are increasing significantly while the growth in the recovery of Gross receipt is proportionately very low during Tenth to Eleventh Five Year Plans.



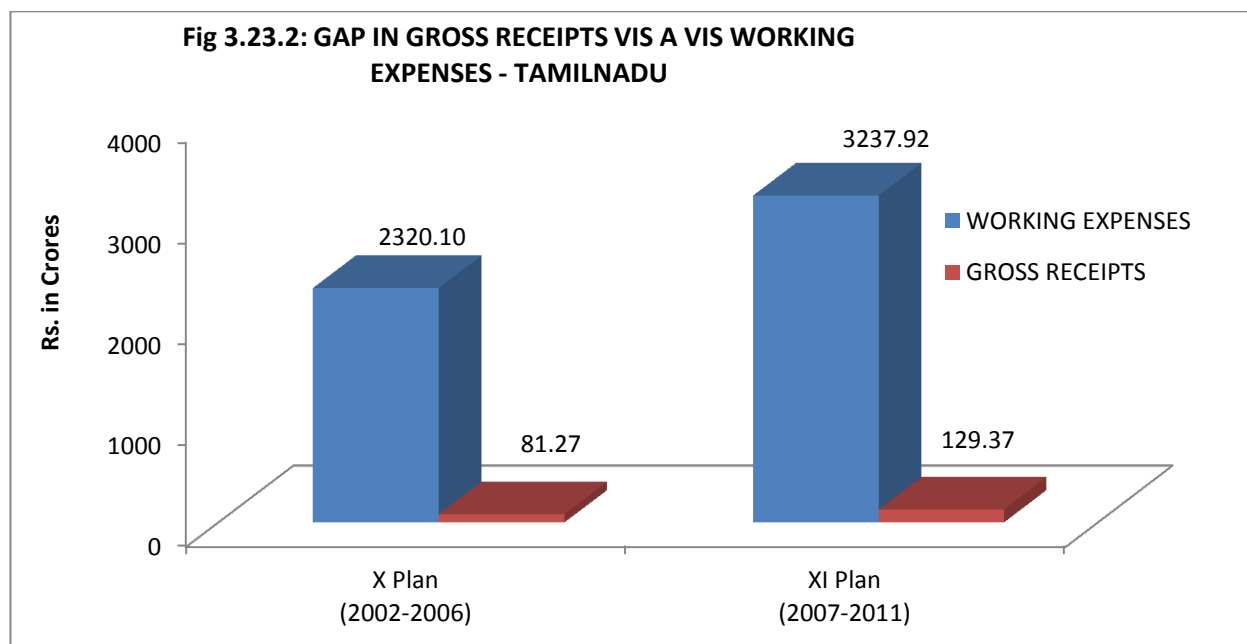
3.3.23 Tamil Nadu

3.3.23.1 The Revenue Department in the State collects water revenue for supply of water for irrigation purposes. The regular revenue staff viz. the village administrative officers attend to the land revenue and water cess collection work under the direct supervision and control of the Revenue Inspectors, Tehsildars and Deputy Collectors (District Revenue Officers). The revenue collection work is reviewed by the Collectors, Commissioners of Land Administration.

3.3.23.2 The Capital Expenditure has consistently increased from Rs. 270.43 crores to Rs. 709.67 crore from the year 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.25). Similarly, Annual Working Expenses has improved to Rs. 1049.53 crore from Rs. 347.69 crore during 2000-01 to 2013-14.



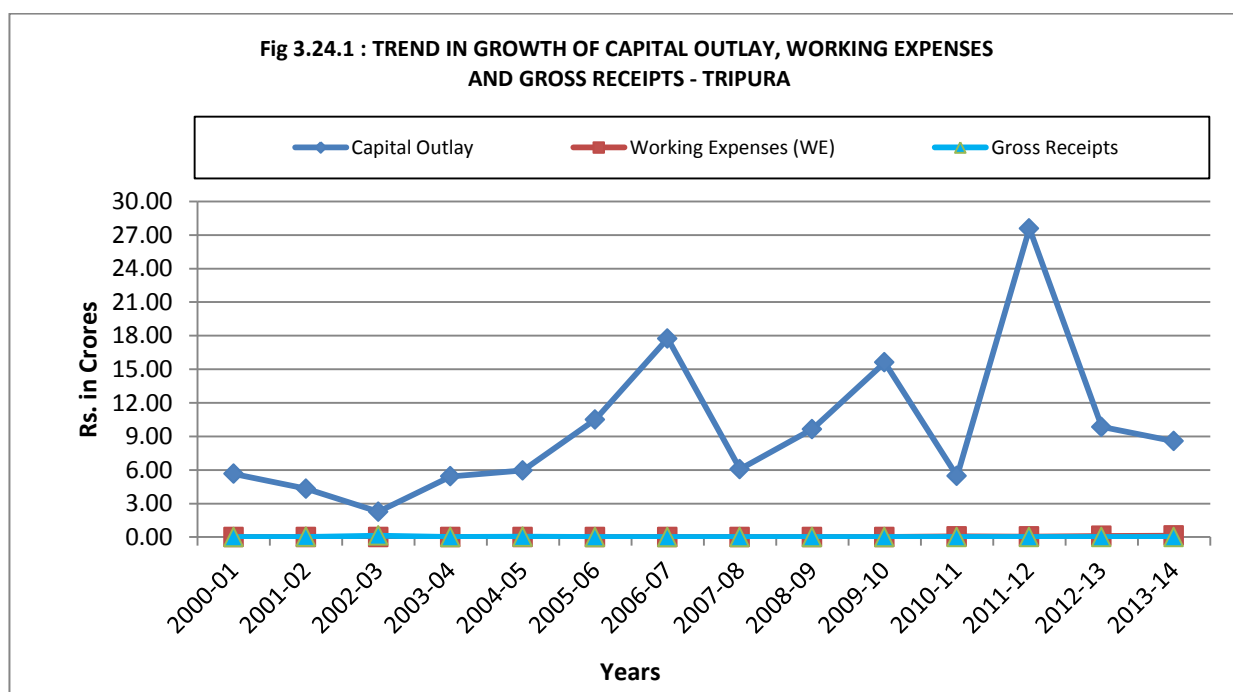
3.3.23.3 The gap between Gross Receipts on account of levy of water charges and Working Expenses is depicted in the chart. The Gross Receipts on account of water charges and other economic activities are in the range of 2.36% to 5.31 % of Working Expenses during 2000-01 to 2013-14. The percentage of Gross Receipts to working expenses during Tenth to Eleventh Five Year Plans is less than four percent.



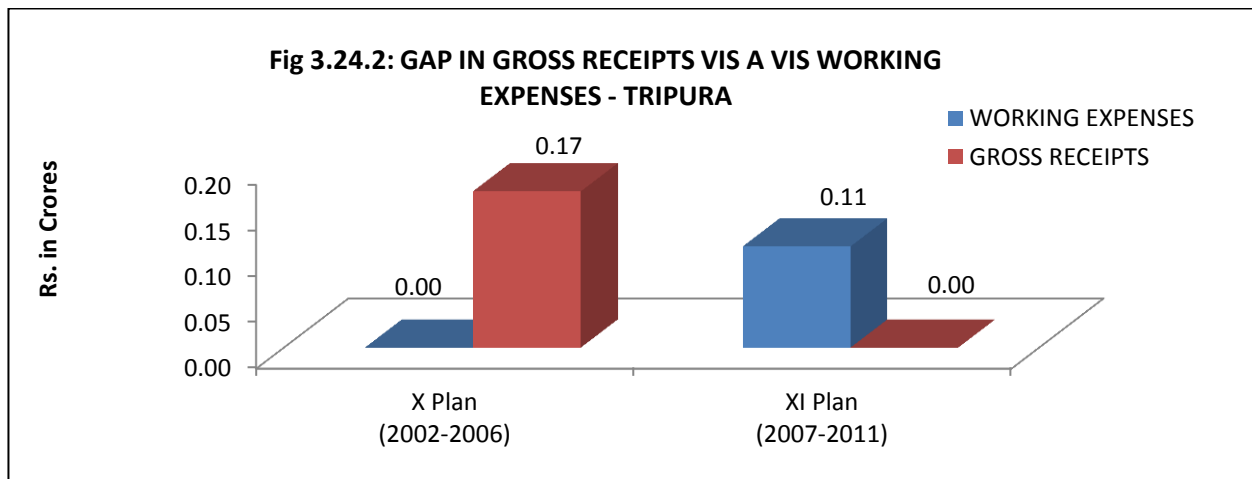
3.3.24.1 There are no water rates in vogue. However, Water Revenue is collected through Panchayats/Block Advisory Committee for the Minor Irrigation Schemes, which shall not be less than Rs. 312.50 per hectare/per crop for operation and maintenance including payment of power consumption bill. The Net Income generated by way of collection of water tax on minor irrigation schemes for the project were calculated after deducting the expenditure and commission for revenue-collection.

3.3.24.2 The Panchayat Level Committee collects Water Tax from the cultivators/individual farmers.

3.3.24.3 The Annual Capital Expenditure fluctuated from Rs. 5.66 crore to Rs. 8.57 crore during 2000-01 to 2013-14. No Annual Working Expenses was incurred during 2000-01 to 2009-10, it has reached to 0.14 crore in 2013-14 from 0.06 crore in 2010-11 in Major and Medium Irrigation projects (Table 3.26).



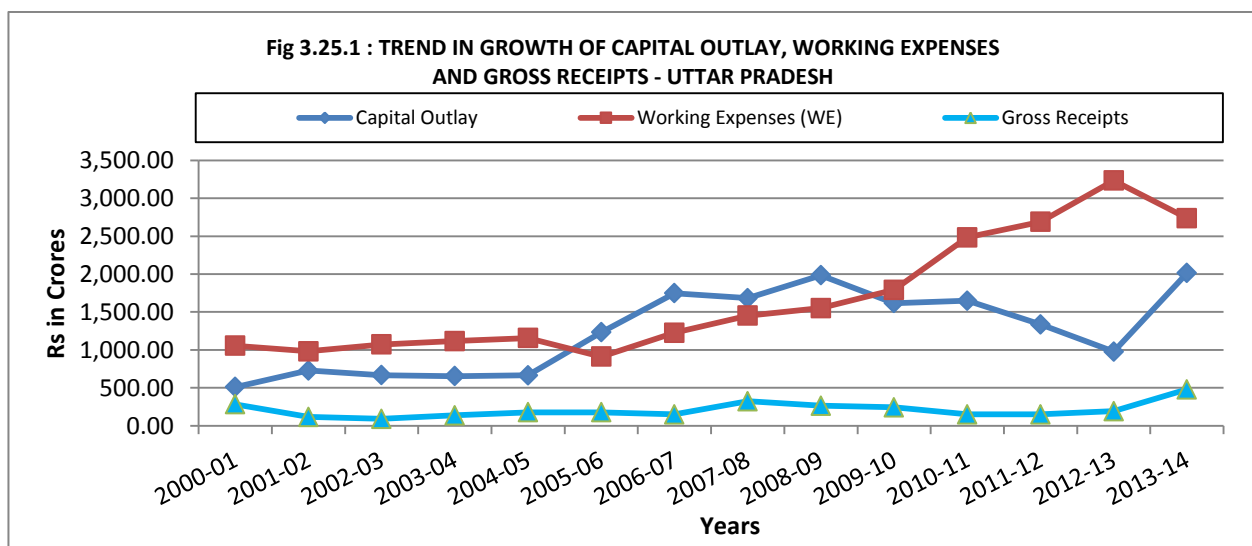
3.3.24.4 The gap between Gross Receipts on account of levy of water charges and Working Expenses is depicted in the chart. The Gross Receipts have been collected only for the years 2001-02, 2002-03 and 2004-05. There is a drastic decrease in Gross receipts from Tenth to Eleventh Plan.



3.3.25 Uttar Pradesh

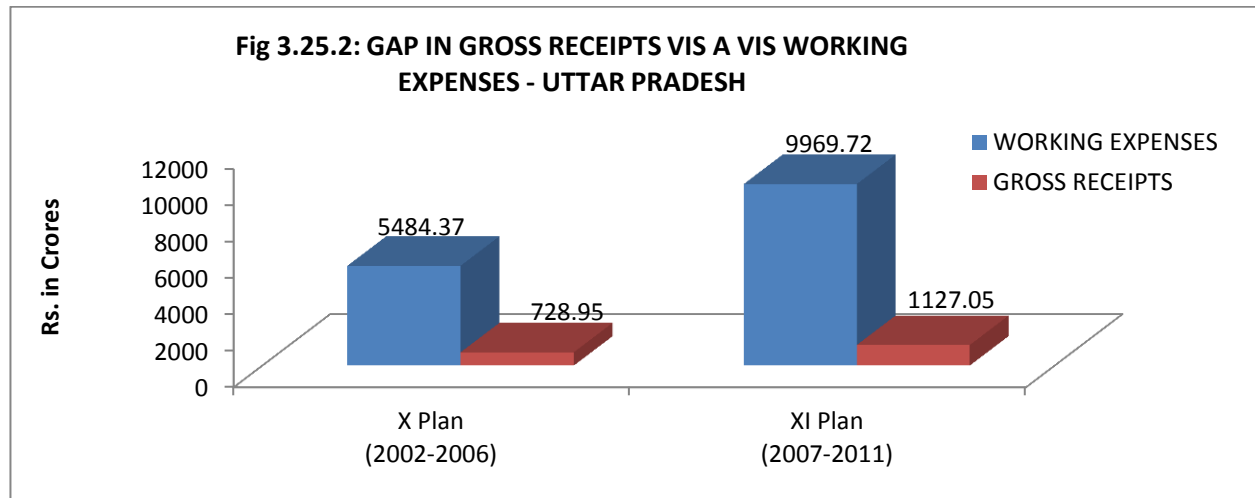
3.3.25.1 The function of Irrigation Department in Uttar Pradesh is performed by its two branches viz; (i) Engineering Branch and (ii) Revenue Branch. The construction of canals, maintenance and supply of canal water to cultivators for their fields is the main work carried out by Engineering Branch while the work of recording the irrigation details and preparing papers for realization of irrigation charges is carried out by the Revenue Staff. (iv) The District Magistrate realizes the irrigation charges through Tehsils and informs the Irrigation Department about the realization of irrigation charges and also informs periodically to the Accountant General. At village level, Lambardar collects the revenue.

3.3.25.2 The Annual Capital Expenditure has consistently increased from Rs. 511.10 crore to Rs. 2013.60 crore from 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.27). Similarly, Annual Working Expenses has increased from Rs.1054.73 crore to Rs. 2737.82 crore during 2000-01 to 2013-14.



3.3.25.3 The gap between Gross Receipts on account of levy of water charges and Working Expenses is widening and is depicted in chart. The Gross Receipts on account of water charges and other economic activities were in the range of 5.57% to 26.75 % of Working Expenses

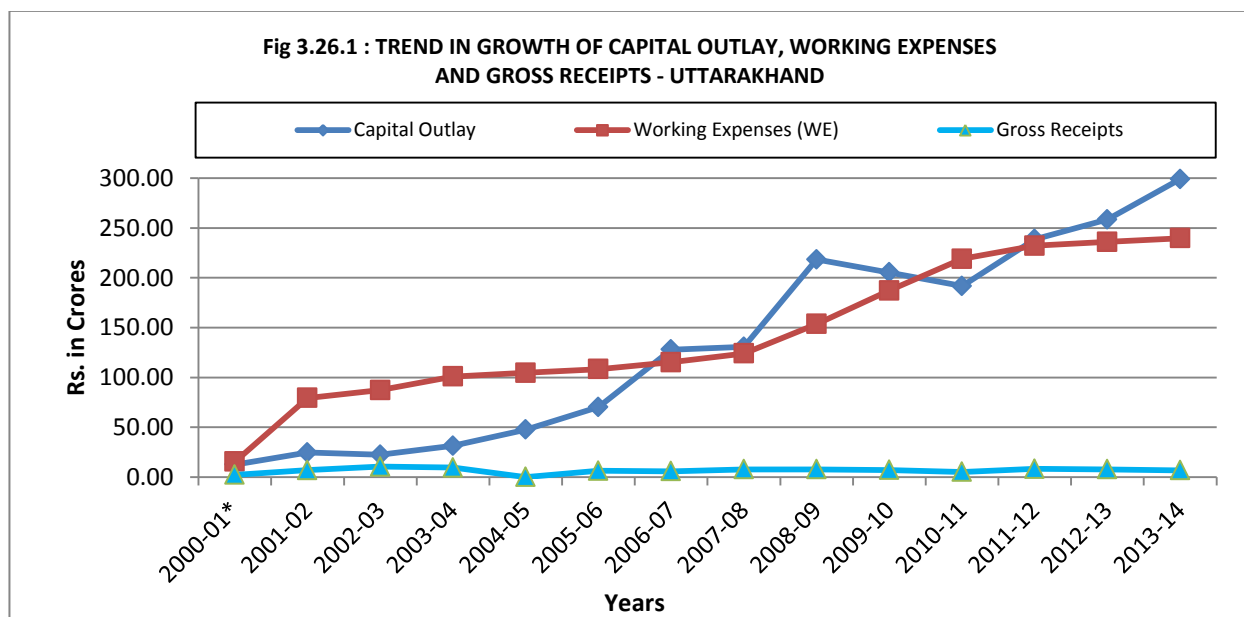
during 2000-01 to 2013-14. The percentage of Gross Receipts to Working Expenses has reduced to 11% during Eleventh Five Year Plan as compared to 13% in Tenth Five Year Plan.



3.3.26 Uttarakhand

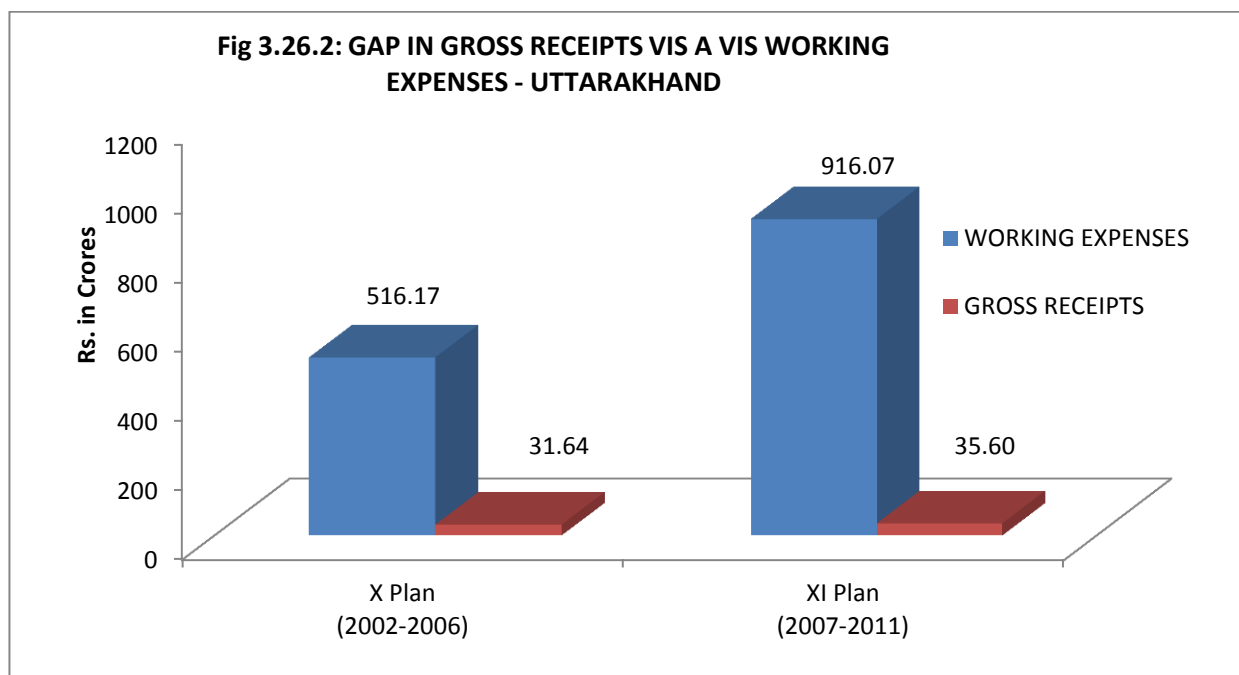
3.3.26.1 The recovery of water revenue is done by Revenue Department.

3.3.26.2 The State has come into being in the year 2000 having been carved out from the erstwhile Uttar Pradesh. An amount of Rs. 262.32 crore and Rs. 6718.93 crore remain as un-apportioned Capital Expenditure between Uttar Pradesh and Uttaranchal in the year 2000-01 for Major and Medium Irrigation projects. The Annual Capital Expenditure has consistently increased from Rs. 12.51 crore to Rs. 299.05 crore during 2000-01 to 2013-14 in Major and Medium Irrigation projects (Table 3.28). Likewise, Annual Working Expenses has amplified from Rs. 15.37 crore to Rs. 239.75 crore from 2000-01 to 2013-14.



3.3.26.3 The gap between Gross Receipts on account of levy of water charges and Working Expenses is depicted in chart. The Gross Receipts on account of water charges and other economic activities were in the range of 0.0% to 14.51 % of Working Expenses during 2000-01 to

2013-14. The working Expenses have been increased significantly (increased by 77%) from Tenth to Eleventh Plan whereas Gross Receipts have almost remain the same.



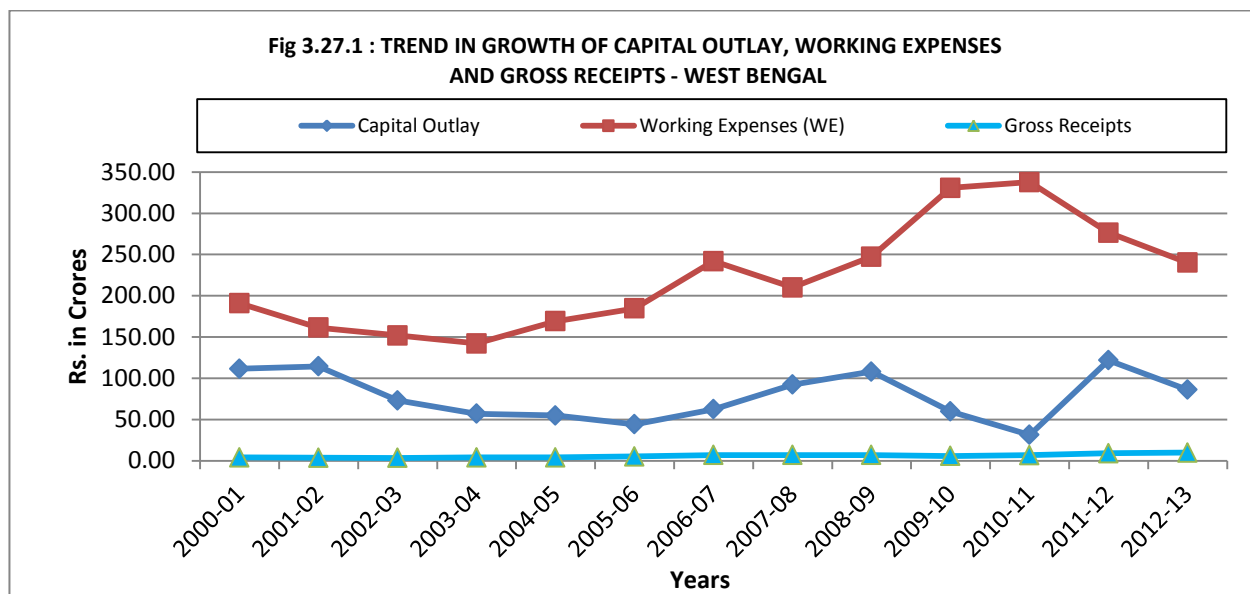
3.3.27 West Bengal

3.3.27.1 In West Bengal, there is difference between revenue collection mechanism for Major/ Medium and Minor Irrigation Schemes. In case of minor irrigation schemes the system stresses that the water rates should be pre-paid but for Major & Medium irrigation projects/schemes, the lands in any area, getting benefits or likely to be benefited by irrigation have to be notified for imposing the water rates.

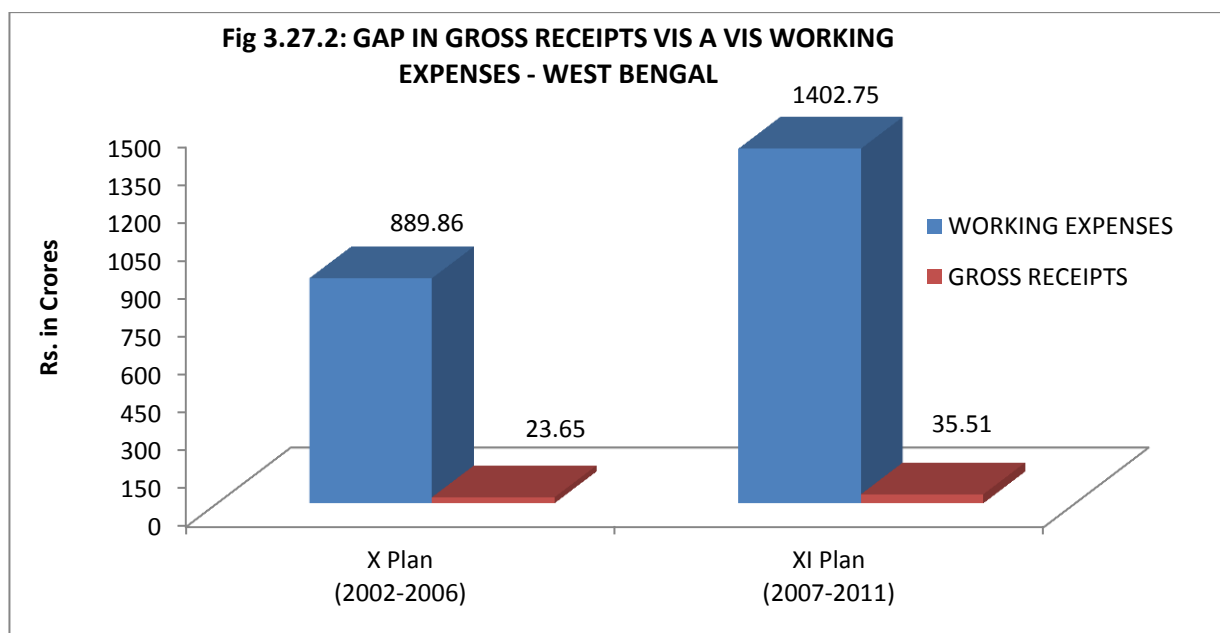
3.3.27.2 The concerned Executive Engineer prepares test note in each year according to the water supplied from the canal for irrigation purposes, mentioning therein the area benefited. He submits it to the Canal Revenue Officer who is in-charge of collecting the water revenue. The Canal Revenue Officer prepares an assessment list showing names of all persons liable to pay the water revenue and the amount payable for each season.

3.3.27.3 The Minor Irrigation Schemes are looked after by the State Agriculture Department.

3.3.27.4 The Capital Expenditure in West Bengal has declined from Rs. 111.63 crore to Rs. 86.07 crore during the period 2000-01 to 2012-13 in Major and Medium Irrigation projects (Table 3.29). However, Annual Working Expenses has constantly increased from Rs. 190.87 crore to Rs. 240.26 crore from 2000-01 to 2012-13.



3.3.27.5 The gap between Gross Receipts on account of levy of water charges and Working Expenses is widening and is depicted in chart. The Gross Receipts on account of water charges and other economic activities are in the range of 1.76% to 4.13 % of Working Expenses during 2000-01 to 2012-13. The growth in the Gross receipts is marginal, while the Working Expenses has increased rapidly during Tenth Five Year Plan to Eleventh Five Year Plan.



3.3.28 Dadra & Nagar Haveli

In Dadra & Nagar Haveli, demand statements in respect of irrigation water rates for different crops/seasons/sources are prepared by Irrigation Department. After preparation of demand statement, it is submitted to the Mamlatdar for collection of revenue from farmers/users of the Irrigation schemes.

3.3.29 Daman & Diu

In the UT of Daman & Diu, payment on account of water rates is made as per the actual areas irrigated to the Irrigation Department.

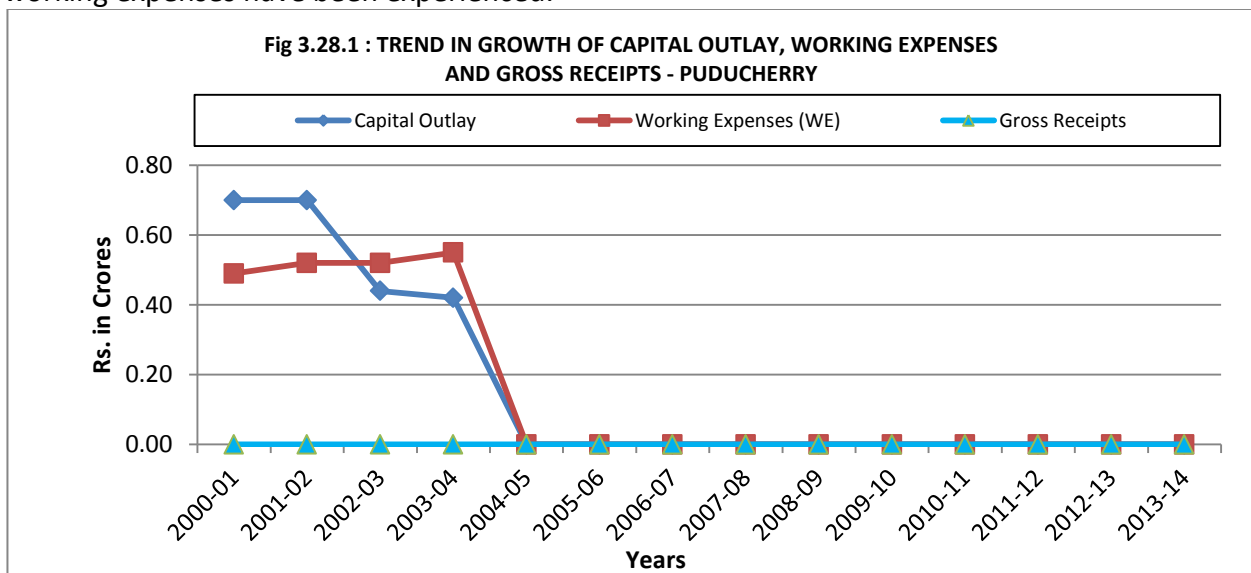
3.3.30 Puducherry

3.3.30.1 The system of water rates for agriculture purposes in Puducherry is similar to that of Tamil Nadu. Wet assessment has the portion of water rate inherent in it. Assessment and collection is done by Revenue Department. The Water supply system is maintained by the Public Works Department. Under this system, the ground water sources are mainly tapped by sinking bore wells.

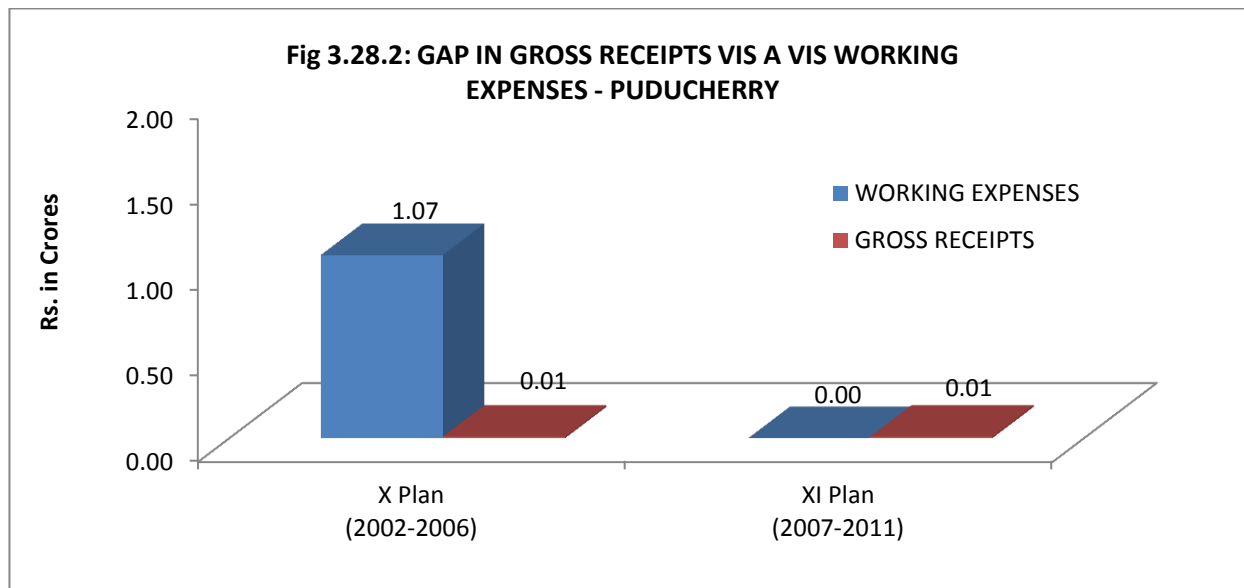
3.3.30.2 Though the maintenance of water supply system in rural areas is looked after by the Municipalities/Panchayats, the water revenue collection is vested in the Public Works Department. The Meter Reader inspects meter reading and thereafter issues bills on the spot to the consumers based on the actual consumption.

3.3.30.3 Regarding the water tax on public tap, the Municipalities/ Panchayats pay the same at a flat rate in respect of their regions.

3.3.30.4 The Capital Expenditure has declined from Rs. 0.70 crore to Rs. 0.42 crore during 2000-01 to 2003-04 in Major and Medium Irrigation projects (Table 3.30) and after that no capital expenditure has been incurred till 2013-14. The Annual Working Expenses has marginally increased from Rs.0.49 crore to Rs.0.55 crore from 2000-01 to 2003-04 and thereafter no working expenses have been experienced.



3.3.30.5 The gap between Gross Receipts on account of levy of water charges and Working Expenses is depicted in the chart. The Gross Receipts on account of water charges and other economic activities has remained nil during 2000-01 to 2013-14.



3.3.31 Nagaland

There are no water rates in vogue.

3.3.32 Sikkim

Water Rates are available but no mechanism for collection of Water Rates has been reported for the State.

3.3.33 Andaman Nicobar Island

There are no Water Rates in vogue.

3.3.34 Chandigarh

Revenue Department does both assessment & collection of Water Rates but system of assessment and Collection of Revenue has not been reported clearly.

3.3.35 Lakshadweep

There are no water rates in vogue.

Financial Performance of Major and Medium Irrigation Projects in India, Gap in revenue assessed and realized are given below.

**Table : 3.1 : FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS-
ALL INDIA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	6821.63	78197.21	8762.44	753.51	8.60
2	2001-02	7649.37	85846.72	8239.19	652.26	7.92
3	2002-03	10161.31	96007.86	8845.93	783.38	8.86
4	2003-04	14464.48	110472.70	6293.60	1047.59	16.65
5	2004-05	17652.24	128444.64	7018.32	1264.14	18.01
6	2005-06	21964.81	150409.64	8216.07	1194.71	14.54
7	2006-07	26542.66	168979.76	9604.42	1504.65	15.67
8	2007-08	30879.23	199861.52	11898.87	2044.92	17.19
9	2008-09	36230.56	236092.07	12196.86	1903.97	15.61
10	2009-10	32074.86	268164.22	14920.92	2351.11	15.76
11	2010-11	32303.61	300464.06	17363.58	2597.52	14.96
12	2011-12	33895.28	334359.04	18720.10	3892.87	20.80
13	2012-13	36097.64	370908.34	21348.87	3128.30	14.65
14	2013-14	36597.13	405164.66	21853.08	4336.43	19.84

Source : Combined Finance and Revenue Accounts of the Union & States Govt. of India.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the States.

**Table : 3.2: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS –
UNION GOVERNMENT DURING 2000-01 TO 2013-14**

(Rs. in Crore)

SI No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	3.45	128.86	118.79	8.60	7.24
2	2001-02	3.58	132.43	126.99	7.72	6.08
3	2002-03	4.54	136.97	123.85	18.81	15.19
4	2003-04	0.15	137.12	150.56	8.23	5.47
5	2004-05	0.67	137.79	156.27	14.09	9.02
6	2005-06	0.99	138.78	158.99	9.72	6.11
7	2006-07	0.55	139.33	163.62	10.02	6.12
8	2007-08	0.51	139.84	196.55	11.81	6.01
9	2008-09	0.08	139.91	298.10	6.64	2.23
10	2009-10	2.60	142.51	360.53	10.42	2.89
11	2010-11	1.11	143.62	362.00	15.23	4.21
12	2011-12	2.69	146.31	386.25	33.16	8.59
13	2012-13	2.00	148.31	392.47	15.64	3.99
14	2013-14	1.16	149.47	432.58	20.52	4.74

Source : Combined Finance and Revenue Accounts of Union Territories.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.3: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS-
ANDHRA PRADESH DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl. No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	915.59	9098.29	1295.39	11.43	0.88
2	2001-02	939.90	10038.20	1342.13	10.27	0.77
3	2002-03	1160.32	11198.52	1574.47	8.47	0.54
4	2003-04	1287.76	12486.69	1726.56	15.52	0.90
5	2004-05	2924.1	15410.78	1772.31	56.27	3.17
6	2005-06	5747.21	21158.00	2470.94	47.82	1.94
7	2006-07	7599.49	28757.48	3026.51	68.81	2.27
8	2007-08	10210.77	38970.77	4541.49	42.03	0.93
9	2008-09	7762.6	46733.37	3797.6	38.33	1.01
10	2009-10	10174.86	56908.24	5116.54	81.88	1.60
11	2010-11	8059.44	64967.67	6092.56	65.32	1.07
12	2011-12	9206.64	74174.31	6349.33	72.27	0.11
13	2012-13	9300.17	83477.20	8394.21	193.25	2.30
14	2013-14	8234.85	91712.05	8370.12	206.82	2.47

Source : Combined Finance and Revenue Accounts of Andhra Pradesh.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.4: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS –
ARUNACHAL PRADESH DURING 2000-01 TO 2013-14**

(Rs. in Crore)

SI No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	0.00	1.82	0.34	0.00	0.00
2	2001-02	0.00	1.82	0.36	0.00	0.00
3	2002-03	0.00	1.82	0.40	0.00	0.00
4	2003-04	0.00	1.82	0.40	0.00	0.00
5	2004-05	0.00	1.82	0.40	0.00	0.00
6	2005-06	0.00	1.82	0.40	0.00	0.00
7	2006-07	0.00	1.82	0.56	0.00	0.00
8	2007-08	0.00	1.82	0.48	0.00	0.00
9	2008-09	0.00	1.82	0.50	0.00	0.00
10	2009-10	0.00	1.82	0.00	0.00	0.00
11	2010-11	0.00	1.82	0.60	0.00	0.00
12	2011-12	0.00	1.82	0.72	0.00	0.00
13	2012-13	0.00	1.82	0.80	0.00	0.00
14	2013-14	0.00	1.82	0.48	0.00	0.00

Source : Combined Finance and Revenue Accounts of Arunachal Pradesh.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.5: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS-
ASSAM DURING 2000-01 TO 2013-14**

(Rs. in Crore)

SI No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	44.26	562.45	24.75	0.15	0.61
2	2001-02	40.58	603.03	22.48	0.18	0.80
3	2002-03	32.35	635.37	13.9	0.28	2.01
4	2003-04	20.81	656.18	24.2	0.26	1.07
5	2004-05	28.46	684.64	33.49	0.26	0.78
6	2005-06	14.93	699.57	36.53	0.21	0.57
7	2006-07	20.96	720.53	38.56	0.38	0.99
8	2007-08	22.62	743.15	37.39	0.36	0.96
9	2008-09	80.83	823.99	44.46	0.56	1.26
10	2009-10	93.56	917.55	65.37	0.59	0.90
11	2010-11	16.14	933.68	94.4	0.38	0.40
12	2011-12	56.82	990.51	96.67	0.21	0.22
13	2012-13	53.20	1043.71	121.36	0.38	0.31
14	2013-14	63.84	1107.55	117.00	0.43	0.37

Source : Combined Finance and Revenue Accounts of Assam.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State

**Table : 3.6: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
BIHAR DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	337.57	5728.67	179.72	33.90	18.86
2	2001-02	201.45	5930.12	145.08	15.58	10.74
3	2002-03	220.06	6150.18	153.69	15.43	10.04
4	2003-04	262.69	6412.87	150.45	26.22	17.43
5	2004-05	264.35	6677.22	150.35	20.82	13.85
6	2005-06	422.93	7100.14	162.15	12.44	7.67
7	2006-07	450.94	7551.08	186.91	12.90	6.90
8	2007-08	555.41	8106.49	261.96	12.08	4.61
9	2008-09	526.47	8632.96	310.35	13.95	4.49
10	2009-10	513.85	9146.81	373.91	17.83	4.77
11	2010-11	606.73	9753.55	445.30	21.76	4.89
12	2011-12	677.49	10431.04	707.13	20.75	2.93
13	2012-13	816.15	11247.18	399.47	17.06	4.27
14	2013-14	848.70	12095.88	385.25	19.54	5.07

Source : Combined Finance and Revenue Accounts of Bihar.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.7: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS -
CHHATTISGARH DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	34.55	1376.35	27.33	10.38	37.98
2	2001-02	120.4	1496.75	73.43	38.2	52.02
3	2002-03	235.26	1732.01	80.54	53.72	66.70
4	2003-04	261.95	1993.96	87.02	44.85	51.54
5	2004-05	421.96	2415.92	89.45	67.26	75.19
6	2005-06	337.15	2753.07	94.13	38.98	41.41
7	2006-07	361.15	3114.22	98.81	104.96	106.22
8	2007-08	385.69	3499.92	107.3	97.62	90.98
9	2008-09	430.54	3930.45	143.85	126.04	87.62
10	2009-10	464.61	4395.07	221.08	105.37	47.66
11	2010-11	453.05	4848.12	230.67	222.00	96.24
12	2011-12	372.92	5221.04	287.03	336.49	117.23
13	2012-13	342.91	5563.95	302.38	357.23	118.14
14	2013-14	376.16	5940.11	337.1	348.64	103.42

Source : Combined Finance and Revenue Accounts of Bihar.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.8: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS--
DELHI DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	0.00	0.65	0.00	2.67	0.00
2	2001-02	0.00	0.65	0.00	2.57	0.00
3	2002-03	0.00	0.65	0.00	1.91	0.00
4	2003-04	0.00	0.65	0.00	2.51	0.00
5	2004-05	0.00	0.65	0.00	1.86	0.00
6	2005-06	0.00	0.65	0.00	3.22	0.00
7	2006-07	0.00	0.65	0.00	5.35	0.00
8	2007-08	0.00	0.65	0.00	9.66	0.00
9	2008-09	0.00	0.65	0.00	8.83	0.00
10	2009-10	0.00	0.65	0.00	8.49	0.00
11	2010-11	0.00	0.65	0.00	5.41	0.00
12	2011-12	0.00	0.65	0.00	9.73	0.00
13	2012-13	0.00	0.65	0.00	8.29	0.00
14	2013-14	0.00	0.65	0.00	8.74	0.00

Source : Combined Finance and Revenue Accounts of Delhi.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

* : Delhi got the status of statehood in 1992-93 only and as such for these years the details are included under Union Government

** : relate to the combined expenditure on Irrigation & Flood Control Projects.
Separate breakup is not available.

**Table : 3.9: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATIONPROJECTS -
GOA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	45.90	403.28	7.60	0.22	2.89
2	2001-02	41.44	444.72	5.99	13.70	228.71
3	2002-03	15.38	460.10	6.58	4.26	64.74
4	2003-04	10.84	470.93	6.71	2.94	43.82
5	2004-05	29.92	500.85	7.38	3.49	47.29
6	2005-06	130.26	631.11	8.34	10.32	123.74
7	2006-07	125.83	756.94	9.00	2.93	32.56
8	2007-08	114.58	871.52	13.72	3.56	25.95
9	2008-09	109.71	981.23	17.26	8.51	49.30
10	2009-10	83.00	1064.23	24.45	10.57	43.23
11	2010-11	123.35	1187.58	24.33	9.91	40.73
12	2011-12	118.07	1305.65	26.70	14.70	55.06
13	2012-13	15.92	1321.57	28.46	7.04	24.74
14	2013-14	29.01	1350.58	34.85	12.11	34.75

Source : Combined Finance and Revenue Accounts of Goa.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.10: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
GUJARAT DURING 2000-01 TO 2013-14**

(Rs. in Crore)

SI No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	970.16	10671.43	1729.00	136.58	7.90
2	2001-02	437.48	11108.90	1694.14	132.09	7.80
3	2002-03	758.44	11867.35	1807.51	267.23	14.78
4	2003-04	1211.50	13078.85	214.44	202.78	94.56
5	2004-05	1066.53	14145.38	255.72	207.09	80.98
6	2005-06	1415.60	15560.98	241.56	248.62	102.92
7	2006-07	3556.57	19117.55	325.56	330.62	101.55
8	2007-08	2652.84	21770.39	310.02	452.82	146.06
9	2008-09	5827.78	27598.17	343.13	455.77	132.83
10	2009-10	2868.18	30466.35	430.56	504.61	117.20
11	2010-11	2842.84	33309.19	481.07	618.14	128.49
12	2011-12	3881.29	37190.48	496.23	684.16	137.87
13	2012-13	5956.42	43146.91	559.18	714.13	127.71
14	2013-14	5496.40	48643.30	526.20	897.51	170.56

Source : Combined Finance and Revenue Accounts of Gujarat.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.11: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
HARYANA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	256.46	2478.82	279.65	54.30	19.42
2	2001-02	280.68	2759.50	344.77	68.51	19.87
3	2002-03	196.59	2956.09	371.89	52.05	14.00
4	2003-04	191.60	3147.69	380.74	183.00	48.06
5	2004-05	222.72	3370.40	387.90	103.32	26.64
6	2005-06	407.97	3778.37	401.31	64.13	15.98
7	2006-07	497.92	4276.29	492.97	87.19	17.69
8	2007-08	822.96	5099.25	613.34	72.27	11.78
9	2008-09	730.35	5829.60	661.32	74.01	11.19
10	2009-10	677.38	6506.98	729.34	218.56	29.97
11	2010-11	639.30	7146.28	758.46	202.26	26.67
12	2011-12	754.02	7900.29	849.10	583.16	68.68
13	2012-13	724.17	8624.46	922.71	139.12	15.08
14	2013-14	689.20	9313.66	990.22	95.04	9.60

Source : Combined Finance and Revenue Accounts of Haryana.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.12: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS -
HIMACHAL PRADESH DURING 2000-01 TO 2013-14**

(Rs. in Crore)

SI No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col. 5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	11.48	79.45	4.32	0.02	0.46
2	2001-02	11.15	90.6	2.84	11.06	389.44
3	2002-03	-3.72	86.88	3.47	0.06	1.73
4	2003-04	16.09	102.96	3.12	0.06	1.92
5	2004-05	14.68	117.65	5.48	0.09	1.64
6	2005-06	20.87	138.71	5.16	0.44	8.53
7	2006-07	39.21	177.72	5.5	0.21	3.82
8	2007-08	98.66	276.38	7.34	0.22	3.00
9	2008-09	78.98	355.36	9.64	0.17	1.76
10	2009-10	85.66	441.01	10.38	0.14	1.35
11	2010-11	62.46	503.47	12.82	6.84	53.35
12	2011-12	127.30	630.48	17.88	0.36	2.01
13	2012-13	48.85	679.33	14.5	0.33	2.28
14	2013-14	38.4	717.73	24.73	0.37	1.50

Source : Combined Finance and Revenue Accounts of Himachal Pradesh.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.13: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS-
JAMMU & KASHMIR DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	17.91	318.7	21.70	0.44	2.03
2	2001-02	23.49	342.19	12.08	0.58	4.80
3	2002-03	24.77	366.97	21.06	0.73	3.47
4	2003-04	61.51	428.48	22.2	1.03	4.64
5	2004-05	44.88	473.36	58.34	0.97	1.66
6	2005-06	54.68	528.04	28.53	0.88	3.08
7	2006-07	38.43	566.47	34.87	1.01	2.90
8	2007-08	61.09	627.56	45.38	0.86	1.90
9	2008-09	98.95	726.51	46.59	0.67	1.44
10	2009-10	73.15	799.66	49.52	1.37	2.77
11	2010-11	72.22	871.89	49.35	1.02	2.07
12	2011-12	75.29	947.18	57.91	565.83	977.09
13	2012-13	60.44	1007.62	60.26	160.49	266.33
14	2013-14	29.54	1037.16	62.89	844.16	1342.28

Source : Combined Finance and Revenue Accounts of Jammu & Kashmir.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.14: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
JHARKHAND DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	56.15	56.15	3.28	5.66	172.56
2	2001-02	155.45	211.61	16.72	26.74	159.93
3	2002-03	202.92	414.53	16.31	16.53	101.35
4	2003-04	280.91	695.44	15.56	23.31	149.81
5	2004-05	228.59	924.03	12.85	15.53	120.86
6	2005-06	296.27	1220.31	86.91	11.09	12.76
7	2006-07	171.54	1391.84	126.5	51.09	40.39
8	2007-08	595.03	1986.87	129.89	170.5	131.26
9	2008-09	159.63	2146.5	171.97	48.13	27.99
10	2009-10	147.55	2294.05	204.01	52.86	25.91
11	2010-11	163.83	2457.88	203.19	36.6	18.01
12	2011-12	165.68	2623.56	219.9	40.53	18.43
13	2012-13	378.69	3002.25	220.39	43.29	19.64
14	2013-14	318.94	3321.2	240.36	86.89	36.15

Source : Combined Finance and Revenue Accounts of Jharkhand.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.15: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS -
KARNATAKA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col. 6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	1099.62	9880.57	650.61	18.46	2.84
2	2001-02	1426.64	11307.21	68.60	20.56	29.97
3	2002-03	1917.25	13224.46	69.01	20.93	30.33
4	2003-04	1764.46	14988.92	63.19	11.81	18.69
5	2004-05	2804.93	17793.85	60.6	13.35	22.03
6	2005-06	3143.21	20937.06	68.32	22.3	32.64
7	2006-07	3734.14	24671.2	79.79	21.48	26.92
8	2007-08	3077.18	27748.38	70.66	19.69	27.87
9	2008-09	2514.57	30262.94	69.23	22.11	31.94
10	2009-10	3380.19	33643.13	129.53	16.57	12.79
11	2010-11	4035.34	37678.47	175.55	21.85	12.45
12	2011-12	4419.49	42097.96	213.6	30.6	14.33
13	2012-13	3972.16	46070.13	337.77	23.79	7.04
14	2013-14	5271.39	51341.52	336.47	37.66	11.19

Source : Combined Finance and Revenue Accounts of Karnataka.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.16: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
KERALA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	129.76	2019.22	53.92	3.82	7.08
2	2001-02	114.80	2134.03	41.75	2.99	7.16
3	2002-03	98.90	2232.93	68.02	3.65	5.37
4	2003-04	117.40	2350.29	81.27	6.10	7.51
5	2004-05	138.17	2488.46	99.70	4.78	4.79
6	2005-06	188.41	2676.87	120.36	4.87	4.05
7	2006-07	119.28	2796.16	107.96	4.87	4.51
8	2007-08	127.04	2923.2	160.14	5.13	3.20
9	2008-09	127.33	3050.53	158.10	8.50	5.38
10	2009-10	90.65	3141.17	127.43	8.97	7.04
11	2010-11	160.35	3301.53	160.27	8.27	5.16
12	2011-12	134.25	3435.78	202.21	13.74	6.79
13	2012-13	107.63	3543.41	249.60	14.74	5.91
14	2013-14	137.10	3680.51	239.53	11.88	4.96

Source : Combined Finance and Revenue Accounts of Kerala.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.17: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
MADHYA PRADESH DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	163.97	3285.33	271.21	39.55	14.58
2	2001-02	546.75	3832.08	216.47	27.13	12.53
3	2002-03	771.01	4603.09	211.04	24.64	11.68
4	2003-04	898.48	5501.57	223.95	37.80	16.88
5	2004-05	1500.14	7001.71	250.37	37.92	15.15
6	2005-06	1004.87	8006.58	269.84	29.57	10.96
7	2006-07	1060.47	9067.06	280.59	29.82	10.63
8	2007-08	1468.20	10535.26	313.73	37.42	11.93
9	2008-09	1658.12	12193.38	361.82	37.08	10.25
10	2009-10	1600.99	13793.62	431.80	56.75	13.14
11	2010-11	2503.07	16297.42	527.51	194.89	36.95
12	2011-12	2462.02	18759.44	565.90	263.15	46.50
13	2012-13	3202.52	21961.96	622.75	137.74	22.12
14	2013-14	3242.95	25204.91	659.19	138.48	21.01

Source : Combined Finance and Revenue Accounts of Madhya Pradesh.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.18: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS -
MAHARASHTRA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

SI No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	873.60	13994.60	1601.14	62.49	3.90
2	2001-02	1121.12	15115.87	1635.57	86.03	5.26
3	2002-03	2449.66	17565.38	1654.42	113.05	6.83
4	2003-04	5923.68	23489.06	150.66	230.69	153.12
5	2004-05	5754.70	29243.76	580.80	335.68	57.80
6	2005-06	5892.47	35136.23	979.17	372.39	38.03
7	2006-07	5034.82	32199.15	1053.76	444.93	42.22
8	2007-08	6414.53	38613.68	1160.17	626.41	53.99
9	2008-09	10993.14	49606.82	1432.02	631.76	44.12
10	2009-10	7172.73	56779.55	1659.64	812.58	48.96
11	2010-11	8000.92	64780.47	1742.87	719.13	41.26
12	2011-12	7266.10	72046.57	1927.68	583.05	30.25
13	2012-13	6145.69	78192.26	1783.98	531.89	29.81
14	2013-14	6693.25	84885.51	1941.79	496.72	25.58

Source : Combined Finance and Revenue Accounts of Maharashtra.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.19: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
MANIPUR DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	20.82	454.67	6.90	0.31	4.49
2	2001-02	41.26	495.93	5.33	0.31	5.82
3	2002-03	19.73	515.66	15.22	0.24	1.58
4	2003-04	20.70	536.36	19.45	0.34	1.75
5	2004-05	27.70	564.06	18.27	1.13	6.19
6	2005-06	114.59	678.65	20.89	1.97	9.43
7	2006-07	220.07	898.73	19.31	7.85	40.65
8	2007-08	89.38	988.10	18.02	5.26	29.19
9	2008-09	181.43	1169.53	16.14	8.00	49.57
10	2009-10	108.15	1277.68	29.36	7.00	23.84
11	2010-11	168.22	1445.90	34.16	10.49	30.71
12	2011-12	90.51	1536.41	39.92	8.61	21.57
13	2012-13	424.07	1960.48	35.96	3.75	10.43
14	2013-14	26.17	1986.65	37.65	2.42	6.43

Source : Combined Finance and Revenue Accounts of Manipur.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.20: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS -
MEGHALAYA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

SI No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	2.31	14.58	0.18	0.00	0.00
2	2001-02	1.90	16.49	0.22	0.00	0.00
3	2002-03	1.05	17.54	0.16	0.00	0.00
4	2003-04	1.30	18.84	0.07	0.01	14.29
5	2004-05	-0.28	18.55	0.02	0.03	150.00
6	2005-06	0.18	18.73	0.02	0.00	0.00
7	2006-07	0.00	18.73	0.00	0.00	0.00
8	2007-08	0.00	18.73	0.00	0.00	0.00
9	2008-09	0.00	18.73	0.00	0.00	0.00
10	2009-10	0.00	18.73	0.00	0.00	0.00
11	2010-11	0.00	18.73	0.00	0.00	0.00
12	2011-12	0.00	18.73	0.55	0.00	0.00
13	2012-13	0.00	18.73	0.55	0.00	0.00
14	2013-14	0.00	18.73	0.00	0.00	0.00

Source : Combined Finance and Revenue Accounts of Meghalaya.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.21: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
MIZORAM DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	0.00	0.96	0.01	0.00	0.00
2	2001-02	0.00	0.96	0.01	0.00	0.00
3	2002-03	0.00	0.96	0.01	0.00	0.00
4	2003-04	0.00	0.96	0.06	0.00	0.00
5	2004-05	0.00	0.96	0.01	0.00	0.00
6	2005-06	0.00	0.96	0.01	0.00	0.00
7	2006-07	0.00	0.96	0.01	0.00	0.00
8	2007-08	0.00	0.96	0.01	0.00	0.00
9	2008-09	0.00	0.96	0.01	0.00	0.00
10	2009-10	0.00	0.96	0.01	0.00	0.00
11	2010-11	0.00	0.96	0.01	0.00	0.00
12	2011-12	0.00	0.96	0.00	0.00	0.00
13	2012-13	0.00	0.96	0.00	0.00	0.00
14	2013-14	0.00	0.96	0.00	0.00	0.00

Source : Combined Finance and Revenue Accounts of Mizoram.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.22: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
ORISSA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	418.30	5011.72	70.12	18.71	26.68
2	2001-02	401.49	5413.17	71.86	16.53	23.00
3	2002-03	474.67	5887.83	74.33	22.53	30.31
4	2003-04	363.40	6251.23	75.69	32.29	42.66
5	2004-05	442.85	6694.08	82.22	36.42	44.30
6	2005-06	406.25	7100.33	106.62	39.02	36.60
7	2006-07	617.74	7718.07	123.91	49.75	40.15
8	2007-08	1269.28	8987.36	171.48	43.73	25.50
9	2008-09	1347.63	10334.98	207.25	45.56	21.98
10	2009-10	1222.80	11557.79	247.65	65.46	26.43
11	2010-11	1333.82	12887.11	315.84	133.70	42.33
12	2011-12	1156.66	14043.77	440.59	322.99	73.31
13	2012-13	1376.45	15420.22	475.68	387.59	81.48
14	2013-14	1332.55	16752.78	538.18	436.31	81.07

Source : Combined Finance and Revenue Accounts of Orissa.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.23 FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
PUNJAB DURING 2000-01 TO 2013-14**

(Rs. in Crore)

SI No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	258.41	3882.18	220.66	11.68	5.29
2	2001-02	320.93	4203.11	222.12	16.33	7.35
3	2002-03	286.41	4489.52	248.23	24.47	9.86
4	2003-04	46.98	4536.50	399.46	12.44	3.11
5	2004-05	120.72	4976.93	333.99	90.96	27.23
6	2005-06	173.00	5149.93	467.09	26.17	5.60
7	2006-07	263.86	5413.79	427.86	20.14	4.71
8	2007-08	198.23	5612.02	464.63	20.02	4.31
9	2008-09	291.58	5903.60	498.61	11.85	2.38
10	2009-10	314.46	6218.06	614.56	34.62	5.63
11	2010-11	251.33	6469.39	745.58	29.60	3.97
12	2011-12	228.70	6698.08	760.25	25.20	3.31
13	2012-13	238.51	6936.59	821.17	50.97	6.21
14	2013-14	117.67	7054.26	1073.53	65.93	6.14

Source : Combined Finance and Revenue Accounts of Punjab.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.24: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS -
RAJASTHAN DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	249.33	4777.30	586.67	36.48	6.22
2	2001-02	260.35	5037.66	622.37	18.43	2.96
3	2002-03	276.78	5314.43	616.00	20.74	3.37
4	2003-04	788.02	6102.45	687.00	43.23	6.29
5	2004-05	689.99	6792.44	763.70	56.50	7.40
6	2005-06	718.14	7510.58	822.90	46.79	5.69
7	2006-07	529.88	8040.46	881.53	60.56	6.87
8	2007-08	590.58	8631.04	928.94	57.92	6.24
9	2008-09	622.57	9253.61	1016.81	54.16	5.33
10	2009-10	581.87	9835.48	1090.13	48.83	4.48
11	2010-11	480.35	10315.83	1167.11	86.04	7.37
12	2011-12	441.87	10757.69	1231.39	91.83	7.46
13	2012-13	542.22	11299.91	1373.67	87.21	6.35
14	2013-14	618.95	11918.86	1477.73	80.62	5.46

Source : Combined Finance and Revenue Accounts of Rajasthan.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.25: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
TAMIL NADU DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	270.43	1881.18	347.69	9.31	2.68
2	2001-02	285.99	2167.18	345.94	10.51	3.04
3	2002-03	253.07	2420.25	403.27	9.52	2.36
4	2003-04	185.48	2605.73	449.76	12.71	2.83
5	2004-05	153.93	2759.67	468.35	15.63	3.34
6	2005-06	117.88	2877.55	461.64	14.90	3.23
7	2006-07	142.77	3020.31	537.09	28.51	5.31
8	2007-08	213.88	3234.19	560.56	19.14	3.41
9	2008-09	366.95	3601.15	639.88	25.47	3.98
10	2009-10	521.77	4120.95	694.83	33.17	4.77
11	2010-11	452.99	4573.94	698.68	26.32	3.77
12	2011-12	534.15	5108.09	643.97	25.27	3.92
13	2012-13	1058.24	6166.33	521.02	25.38	4.87
14	2013-14	709.67	6876.00	1049.53	39.06	3.72

Source : Combined Finance and Revenue Accounts of Tamil Nadu.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.26: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
TRIPURA DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	5.66	121.41	0.00	0.00	0.00
2	2001-02	4.32	125.73	0.00	0.02	0.00
3	2002-03	2.26	127.99	0.00	0.14	0.00
4	2003-04	5.43	133.42	0.00	0.00	0.00
5	2004-05	5.96	139.38	0.00	0.03	0.00
6	2005-06	10.50	149.87	0.00	0.00	0.00
7	2006-07	17.74	167.61	0.00	0.00	0.00
8	2007-08	6.07	173.68	0.00	0.00	0.00
9	2008-09	9.65	183.34	0.00	0.00	0.00
10	2009-10	15.61	198.95	0.00	0.00	0.00
11	2010-11	5.45	204.40	0.06	0.00	0.00
12	2011-12	27.58	231.97	0.05	0.00	0.00
13	2012-13	9.84	241.81	0.10	0.00	0.00
14	2013-14	8.57	250.38	0.14	0.00	0.00

Source : Combined Finance and Revenue Accounts of Tripura.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.27: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS-
UTTAR PRADESH DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	511.10	511.10	1054.73	282.13	26.75
2	2001-02	728.56	1239.65	980.68	115.76	11.80
3	2002-03	667.70	1907.35	1072.91	90.12	8.40
4	2003-04	654.64	2561.99	1117.43	136.10	12.18
5	2004-05	664.20	3226.19	1156.59	176.60	15.27
6	2005-06	1232.11	4458.30	911.27	177.50	19.48
7	2006-07	1748.47	6206.77	1226.17	148.63	12.12
8	2007-08	1681.86	7888.63	1451.36	321.81	22.17
9	2008-09	1985.35	9873.98	1551.30	263.27	16.97
10	2009-10	1616.01	11489.99	1792.29	241.55	13.48
11	2010-11	1648.23	13138.22	2484.32	150.45	6.06
12	2011-12	1335.18	14473.39	2690.46	149.97	5.57
13	2012-13	976.77	15899.11	3234.15	191.42	5.92
14	2013-14	2013.60	17912.70	2737.82	479.63	17.52

Source : Combined Finance and Revenue Accounts of Uttar Pradesh.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

* : Rs. 262.32 and Rs6718.93 crore stood as unapportioned capital outlay between Uttar Pradesh and Uttarakhand during the year and at the end of the year respectively

**Table : 3.28: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS-
UTTARAKHAND DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01*	12.51	12.51	15.37	2.23	14.51
2	2001-02	24.47	36.98	79.35	6.79	8.56
3	2002-03	22.31	59.28	87.30	10.38	11.89
4	2003-04	31.29	90.57	100.92	9.36	9.27
5	2004-05	47.47	138.04	104.52	0.00	0.00
6	2005-06	70.22	208.27	108.23	6.21	5.74
7	2006-07	127.91	336.17	115.20	5.69	4.94
8	2007-08	130.60	466.77	124.11	7.70	6.20
9	2008-09	218.33	685.09	153.56	7.64	4.98
10	2009-10	205.43	890.52	187.23	7.08	3.78
11	2010-11	191.73	1082.25	219.01	5.11	2.33
12	2011-12	238.72	1320.96	232.17	8.07	3.48
13	2012-13	258.56	1579.52	235.99	7.65	3.24
14	2013-14	299.05	1878.57	239.75	6.75	2.82

Source : Combined Finance and Revenue Accounts of Uttarakhand.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

* : Rs. 262.32 and Rs 6718.93 crore stood as unapportioned capital outlay between up and Uttarakhand during the year and at the end of the year respectively

**Table : 3.29: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS–
WEST BENGAL DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl. No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	111.63	1435.38	190.87	3.99	2.09
2	2001-02	114.49	1549.87	161.39	3.67	2.27
3	2002-03	73.16	1623.02	151.82	3.49	2.30
4	2003-04	56.99	1680.02	142.18	4.00	2.81
5	2004-05	54.90	1734.92	169.24	4.06	2.40
6	2005-06	44.12	1779.03	184.76	5.15	2.79
7	2006-07	62.48	1841.52	241.87	6.95	2.87
8	2007-08	92.25	1933.77	210.20	6.91	3.29
9	2008-09	107.99	2041.75	247.36	6.93	2.80
10	2009-10	59.80	2101.55	330.80	5.82	1.76
11	2010-11	31.35	2132.91	337.87	6.82	2.02
12	2011-12	121.83	2254.74	276.52	9.03	3.27
13	2012-13	86.07	2340.81	240.26	9.92	4.13
14	2013-14	NA	NA	NA	NA	-

Source : Combined Finance and Revenue Accounts of West Bengal.

NA : Not Available

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

**Table : 3.30: FINANCIAL ASPECT OF MAJOR & MEDIUM IRRIGATION PROJECTS -
PUDUCHHERRY DURING 2000-01 TO 2013-14**

(Rs. in Crore)

Sl No.	Year	Capital Outlay		Working Expenses (WE)	Gross Receipts (GR)	% Recovery of WE through GR (Col.6/ Col.5*100)
		During the year	At the end of the year			
1	2	3	4	5	6	7
1	2000-01	0.70	9.58	0.49	0.00	0.00
2	2001-02	0.70	10.28	0.52	0.00	0.00
3	2002-03	0.44	10.73	0.52	0.00	0.00
4	2003-04	0.42	11.15	0.55	0.00	0.00
5	2004-05	0.00	11.15	0.00	0.00	0.00
6	2005-06	0.00	11.15	0.00	0.00	0.00
7	2006-07	0.00	11.15	0.00	0.00	0.00
8	2007-08	0.00	11.15	0.00	0.00	0.00
9	2008-09	0.00	11.15	0.00	0.00	0.00
10	2009-10	0.00	11.15	0.00	0.00	0.00
11	2010-11	0.00	11.15	0.00	0.00	0.00
12	2011-12	0.00	11.15	0.00	0.00	0.00
13	2012-13	0.00	11.15	0.00	0.00	0.00
14	2013-14	0.00	11.15	0.00	0.00	0.00

Source : Combined Finance and Revenue Accounts of Puducherry.

Remarks : The figures in Col.(3) and (4) in some cases may be incompatible due to accounting adjustment in the State.

Table 3.31 Gap in Revenue Assessed and Realised during 2000-01 to 2010-11 for Andhra Pradesh

(Rs. In Lakhs)

Year	Revenue assessed	Revenue realized	Percent Recovery
1	2	3	4
2000-2001	29,946.00	11,573.00	35.31
2001-2002	29,241.00	5,806.00	39.58
2002-2003	33,578.00	8,956.00	17.29
2003-2004	33,104.00	3,457.00	27.05
2004-2005	32,635.00	5,660.00	10.59
2005-2006	35,205.00	8,340.00	16.08
2006-2007	35,107.00	6,688.00	23.76
2007-2008	28,417.00	6900.00	23.54
2008-2009	37462.00	11500.00	30.70
2009-2010	37802.00	12371.00	32.73
2010-2011	33550.00	10094.00	30.09

Note: Figures for the years 2011-2012, 2012-2013, 2013-2014 are not available for the state.

**Table 3.32 Gap in Revenue Assessed and Realised during 2000-01 to 2012-13
for Assam**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent Recovery
1	2	3	4
2000-2001	436.83	0.23	0.05
2001-2002	433.84	0.24	0.06
2002-2003	279.57	1.74	0.62
2003-2004	229.70	2.86	1.25
2004-2005	205.21	4.92	2.30
2005-2006	245.97	3.53	1.44
2006-2007	448.36	2.06	0.57
2007-2008	312.78	1.96	0.57
2008-2009	363.16	2.01	0.70
2009-2010	513.41	3.40	0.66
2010-2011	480.75	4.76	0.99
2011-2012	525.00	12.06	2.30
2012-2013	619.90	7.63	1.25

Note: Figures for the year 2013-2014 is not available for the state.

**Table 3.33 Gap in Revenue Assessed and Realised during 2000-01 to 2010-11
for Bihar**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent Recovery
1	2	3	4
2000-2001	3100.00	1336.31	43.11
2001-2002	2690.00	846.93	31.48
2002-2003	2770.70	809.19	29.21
2003-2004	2783.70	727.85	26.15
2004-2005	2783.70	489.72	17.59
2005-2006	1511.67	537.24	35.54
2006-2007	2347.67	668.42	28.47
2007-2008	2347.67	649.90	27.68
2008-2009	894.00	567.30	63.46
2009-2010	2278.50	454.13	19.93
2010-2011	2572.17	385.86	15.00

Note: Figures for the years 2011-2012, 2012-2013, 2013-2014 are not available for the state.

**Table 3.34 Gap in Revenue Assessed and Realised during 2000-01 to 2010-11
for Chhattisgarh**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent Recovery
1	2	3	4
2000-2001	13948.22	2424.22	17.38
2001-2002	18347.21	452.55	2.47
2002-2003	12286.84	5736.01	46.68
2003-2004	16074.63	4895.00	30.45
2004-2005	17536.66	5544.00	31.61
2005-2006	17056.92	4348.00	25.49
2006-2007	23002.75	11080.00	48.17
2007-2008	23141.47	11620.00	50.21
2008-2009	24633.05	13308.00	54.02
2009-2010	0	47592.00	0
2010-2011	0	65145.00	0

Note: Figures for the years 2009-2010, 2010-2011, 2011-12, 2012-2013, and 2013-2014 are not available for the UT.

**Table 3.35 Gap in Revenue Assessed and Realised during 2000-01 to 2005-06
for Goa**

(Rs. In Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	52,00,000	57,42,000	110.42
2001-2002	13,92,00,000	13,89,21,000	99.80
2002-2003	15,32,00,000	15,56,47,000	101.60
2003-2004	17,41,94,000	4,74,16,000	27.22
2004-2005	19,16,00,000	6,07,11,000	31.69
2005-2006	21,07,50,000	NA	NA

Note: Figures for the years 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.36 Gap in Revenue Assessed and Realised during 2000-01 to 2010-11
for Gujarat**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent Recovery
1	2	3	4
2000-2001	931.00	713.00	76.58
2001-2002	1,492.00	968.00	64.88
2002-2003	2,220.00	1,572.00	70.81
2003-2004	3,392.00	1,892.00	55.78
2004-2005	3,810.00	2,337.00	61.34
2005-2006	5,245.00	3,241.00	61.79
2006-2007	6,187.00	3,754.00	60.68
2007-2008	6,775.00	3,776.00	55.73
2008-2009	7920.00	4484.00	56.62
2009-2010	4449.00	3400.00	76.42
2010-2011	4678.00	3732.00	79.78

Note: Figures for the years 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.37 Gap in Revenue Assessed and Realised during 2000-01 to 2013-2014
for Haryana**

(Rs. In Lakhs)

Year	Revenue assessed	Revenue realized	Percent Recovery
1	2	3	4
2000-2001	2543.14	2671.78	105.06
2001-2002	2702.51	2406.49	89.05
2002-2003	2205.97	2135.67	96.81
2003-2004	3548.48	2965.57	83.57
2004-2005	1662.02	1907.66	114.78
2005-2006	4527.13	2676.78	59.13
2006-2007	3311.20	3475.21	104.95
2007-2008	3140.26	2630.19	83.76
2008-2009	3434.98	2507.27	72.99
2009-2010	3310.10	2958.09	89.36
2010-2011	3456.15	2593.27	75.03
2011-2012	3391.33	3430.92	101.16
2012-2013	3184.69	2936.13	92.19
2013-2014	2690.09	2710.04	100.74

**Table 3.38 Gap in Revenue Assessed and Realised during 2000-01 to 2008-09
for Himachal Pradesh**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	4.92	5.69	115.65
2001-2002	4.97	4.28	86.12
2002-2003	9.57	5.19	54.23
2003-2004	11.51	5.01	43.53
2004-2005	12.50	10.50	84.00
2005-2006	12.18	5.16	42.36
2006-2007	11.22	8.03	71.57
2007-2008	12.25	8.89	72.57
2008-2009	14.70	9.76	66.39

Note: Figures for the years 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.39 Gap in Revenue Assessed and Realised during 2000-01 to 2010-11
for Jammu & Kashmir**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	62.38	7.00	11.22
2001-2002	52.19	22.27	42.67
2002-2003	57.78	23.73	41.07
2003-2004	61.04	26.63	43.46
2004-2005	59.83	35.03	58.55
2005-2006	97.78	75.48	84.31
2006-2007	78.78	63.30	76.01
2007-2008	99.08	83.45	94.38
2008-2009	99.31	79.00	83.70
2009-2010	100.70	104.16	103.44
2010-2011	101.41	91.44	90.17

Note: Figures for the years 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.40 Gap in Revenue Assessed and Realised during 2003-04 to 2010-11
for Karnataka**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2003-2004	Cauvery Neeravari Nigama was formed on 03.06.2003. Details of revenue Assessed & Realised are collected from 2005-06		
2004-2005			
2005-2006	1854.28	758.23	40.89
2006-2007	1920.70	666.15	34.68
2007-2008	2008.69	345.76	17.21
2008-2009	1827.19	433.79	23.74
2009-2010	1985.07	476.44	24.00
2010-2011	1868.62	NA	NA

Note: Figures for the years 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.41 Gap in Revenue Assessed and Realised during 2000-01 to 2008-09
for Kerala**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	6553.07	5980.48	91.26
2001-2002	7589.74	7040.95	92.77
2002-2003	8045.16	7348.58	91.34
2003-2004	10755.61	9928.17	92.31
2004-2005	15808.24	10967.48	69.38
2005-2006	16045.61	11446.71	71.34
2006-2007	15466.57	11831.99	76.50
2007-2008	16602.91	13904.28	83.75
2008-2009	16084.94	15095.40	93.85

Note: Figures for the years 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.42 Gap in Revenue Assessed and Realised during 2000-01 to 2013-14
for Madhya Pradesh**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	8792.65	4033.67	45.88
2001-2002	2529.00	2853.50	112.83
2002-2003	3406.99	3307.14	97.07
2003-2004	2747.36	4023.54	146.45
2004-2005	3740.96	4294.19	114.79
2005-2006	4401.90	3,502.41	79.57
2006-2007	8591.02	3615.40	42.08
2007-2008	14226.90	4762.13	33.47
2008-2009	5095.69	3965.22	77.82
2009-2010	11828.90	6233.13	52.69
2010-2011	30521.49	16004.92	52.44
2011-2012	30902.89	23120.00	74.82
2012-2013	79379.73	31821.35	40.09
2013-2014	25898.32	24230.40	93.56

**Table 3.43 Gap in Revenue Assessed and Realised during 2000-01 to 2008-09
for Maharashtra**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	43708.18	19522.42	44.67
2001-2002	45354.10	25169.09	55.49
2002-2003	44384.61	37752.65	85.06
2003-2004	45329.17	37809.01	83.41
2004-2005	49706.07	44835.22	90.20
2005-2006	41854.49	41347.90	98.79
2006-2007	49945.95	49499.51	99.11
2007-2008	67424.73	62701.30	92.99
2008-2009	80832.89	67317.33	83.28

Note: Figures for the years 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.44 Gap in Revenue Assessed and Realised during 2000-01 to 2004-05
for Mizoram**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	200.00	241.65	120.83
2001-2002	250.00	298.47	119.39
2002-2003	325.00	334.42	102.90
2003-2004	380.00	391.40	103.00
2004-2005	400.00	427.47	106.87

Note: Figures for the years 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.45 Gap in Revenue Assessed and Realised during 2000-01 to 2008-09
for Orissa**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	193.80	109.86	56.69
2001-2002	301.40	123.87	41.10
2002-2003	350.00	161.61	46.17
2003-2004	350.00	236.92	67.69
2004-2005	350.00	277.78	79.37
2005-2006	300.00	282.99	94.33
2006-2007	500.00	285.65	57.13
2007-2008	586.60	297.92	50.79
2008-2009	902.00	298.35	33.08

Note: Figures for the years 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.46 Gap in Revenue Assessed and Realised during 1.11.2002 to 31.5.2009
for Punjab**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
From 01-11-2002 to 31-05-2009	363.62	23.70	6.52

Note: Year- wise breakup figures are not available for the state.

**Table 3.47 Gap in Revenue Assessed and Realised during 2000-01 to 2013-14
for Rajasthan**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	2934.36	2038.63	69.47
2001-2002	2267.89	411.69	18.15
2002-2003	2385.00	403.00	16.90
2003-2004	2356.86	1374.55	58.32
2004-2005	4417.10	4086.68	92.52
2005-2006	4106.80	3955.33	96.31
2006-2007	3468.92	5342.30	154.00
2007-2008	4672.90	3828.30	81.93
2008-2009	4856.58	3844.99	79.17
2009-2010	5324.10	3447.29	64.75
2010-2011	5352.49	4208.98	78.64
2011-2012	6916.50	6809.22	98.45
2012-2013	9945.51	8237.25	82.82
2013-2014	6584.18	6514.03	98.93

**Table 3.48 Gap in Revenue Assessed and Realised during 2000-01 to 2004-05
for Uttar Pradesh**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	8162.07	9963.07	122.07
2001-2002	9462.08	10109.01	106.84
2002-2003	9500.65	6651.66	70.01
2003-2004	9896.28	11462.00	115.82
2004-2005	9708.78	7637.00	78.66

Note: Figures for the years 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.

**Table 3.49 Gap in Revenue Assessed and Realised during 2000-01 to 2008-09
for West Bengal**

(Rs. in Lakhs)

Year	Revenue assessed	Revenue realized	Percent recovery
1	2	3	4
2000-2001	NA	107.51	NA
2001-2002	NA	110.85	NA
2002-2003	NA	136.23	NA
2003-2004	NA	141.78	NA
2004-2005	NA	140.38	NA
2005-2006	NA	133.52	NA
2006-2007	NA	136.70	NA
2007-2008	NA	182.48	NA
2008-2009	NA	161.70	NA

Note: Figures for the years 2000-2001, 2001-2002, 2002-2003, 2003-2004, 2004-2005, 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 are not available for the state.