GOVERNMENT OF GOA

REPORT

ON

6th Census of Minor Irrigation Schemes

(Reference Year 2017-18)

Open Well

Bandhara

Minor Irrigation Tank

Irrigation Tank

Open Irrigation Well with pump House

Lift Irrigation Scheme

Tube Well

Irrigation Canal

A Borewell

DIRECTORATE OF PLANNING, STATISTICS AND EVALUATION

PORVORIM-GOA

Content

PREFACE

Irrigation plays a crucial role in the sustenance and growth of agriculture. Although agriculture proper is not the predominant sector of the economy of Goa, its contribution to the Gross State Domestic Product is considerable.

Under the orbit of irrigation, a substantial share of irrigation across the State is contributed by Minor Irrigation Schemes with a Cultural Command Area (CCA) of less than 2000 Ha. The importance of minor irrigation schemes with short gestation period, lower investments and a major share in the irrigation sector cannot be underestimated. Since planning and policy formation of this sector at the national as well as State level necessitates a sound and reliable database, the Government of India has been conducting a Census of Minor Irrigation Schemes throughout the country with 100% Central Assistance on quinquennial basis. Goa is also participating in this National level program.

The 6th Minor Irrigation Census with reference year 2017-18 was conducted in Goa by the Directorate of Planning, Statistics and Evaluation as per the guidelines of the Ministry of Water Resources, Government of India under the guidance of the ex-Director Dr. Y. Durga Prasad. The efforts of the team of the field functionaries involved in the fieldwork of the Census and the inputs provided by the State Water Resources Department are appreciated.

Considering the importance and sustainable management of water resources, for the first time, the Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation, Government of India has introduced the 1st Census of Water Bodies (CWB) along with the 6th Minor Irrigation Census (MIC) under the Centrally Sponsored Scheme ”Irrigation Census” in the country. Both the censuses were conducted concurrently.

This Census report is drafted by Ms. Neumani M. Rodrigues, Dy. Director with the assistance of Shri Rajesh Veluskar, Statistical Assistant from the Minor Irrigation Census Cell of the Coordination Division of this Directorate, and under the overall supervision of the Census Commissioner/Director (DPSE), Shri Vijay B. Saxena.

The report presents a brief analysis of the Census results both at the State and District level.It is hoped that this report will be useful for planners, researchers, administrators, agriculturists, ground water scientists and all concerned with irrigation development.

Shri Vijay B. Saxena

Director& Minor Irrigation
Census Commissioner

Porvorim - Goa
Dated: July, 2024.

HIGHLIGHTS OF THE 6TH MINOR IRRIGATION CENSUS (MIC) AT THE NATIONAL LEVEL

- The initiative of conducting the 6th MIC concurrently with the 1st Census of Water Bodies resulted in substantial savings in respect of planning, training of field staff, data entry, validation etc. because the coverage area of both the censuses in rural area was the same.

- 23138964 nos. of Minor Irrigation (MI) schemes were reported in the country from 695 districts and 6,47,394 villages. Out of all MI schemes, 21931924 nos. (94.8%) are Ground Water (GW) schemes and 1207040 nos. (5.2%) are Surface Water (SW) schemes. Dug wells have a dominant share in the total number of MI schemes followed by shallow tube wells, medium tube wells and deep tube wells.

- Uttar Pradesh possesses the largest number of MI schemes in the country (17.2%) followed by Maharashtra (15.4%) Madhya Pradesh (9.9%) and Tamil Nadu (9.1%) Leading States in GW schemes are Uttar Pradesh, Maharashtra, Madhya Pradesh, Tamil Nadu and Telangana whereas Maharashtra, Karnataka, Telangana, Odisha and Jharkhand have the highest share in SW schemes. Out of 32 States/UTS, 10 States have more than 10 lakh MI schemes and 7 States have MI schemes ranging between 1 lakh to 10 lakh. Remaining 15 States/UTs have less than 1 lakh schemes.

- There has been an increase of about 1424831 nos. in MI schemes with their number standing at 23138964 nos. during 6th MIC as compared to 21714133 nos. in 5th Census at the national level. Both GW and SW schemes have increased by 6.9% and 1.2%, respectively.

- Correspondingly, Irrigation Potential Created (IPC) and Irrigation Potential Utilized (IPU) from GW schemes have increased in the 6th MIC. On the other hand, IPC and IPU from SW schemes have declined in the 6th MIC. This indicates declining dependency of farmers on SW schemes and increasing dependency on GW schemes for meeting their minor irrigation needs.

- At the agreegate level, IPC of MI schemes has marginally decreased (0.76%) from 89.52 million hectares in 5th Census to 88.84 million hectares in 6th Census. Shallow tube well schemes have the maximum share in IPC during 6th Census followed by dug wells and medium tube wells.

- However, IPU has increased (6.1%) from 71.32 million hectares in 5th Census to 75.64 million hectares in 6th Census. Shallow tube well schemes have the maximum share in IPU during 6th Census. Ratio of irrigation potential utilized to potential created has also increased from 79.7% in 5th MIC to 85.1% in 6th MIC.

- A majority of MI schemes (96.6%) continue to remain under private ownership. Most MI structures in India are, therefore, owned by individual farmers or group of farmers and hence it has maximum outreach for irrigation purposes. Within this, small and marginal farmers (having less than 2 hectares of land) still own a major share of MI schemes. This underlines the need for strengthening the network of MI structures for irrigation purposes in the country for improving the livelihood of small and marginal farmers.

- Around 60.2% schemes have single source of finance whereas 39.8% schemes have more than one source of finance. In single source of finance, majority of schemes (79.5%) are being financed by own savings of individual farmer, pointing out the need for more financial support to the farmers by the financial institutions.

- Out of 23138964 nos. of MI schemes, 22.32 million schemes (96.4%) are have lifting device installed in them for water lifting purposes. Majority of schemes (57.6%) have submersible pump as lifting device followed by centrifugal pump (37.1%)

- The information on source of energy used for operating lifting device for lifting water from the source was collected for "not in use' and "temporarily not in use" schemes. Majority of these schemes (76%) utilize electricity as source of energy followed by diesel (22.2%)

- There has been an improvement in water use efficiency and decline in wastage of water through use of improved water distribution devices over the years. 53% schemes used open channels for conveying water to the fields during the last census: this has reduced to 42% in 6th MI census. Correspondingly, the share of efficient water distribution system like surface pipe, underground pipe, drip and sprinklers has increased. Underground pipes have recorded the highest increase followed by surface pipes and drip.

- Out of 22437920 nos. of 'in use' MI schemes in 6th MIC, about 3.2 million schemes were having constraints in utilization due to reasons like mechanical breakdown, non-

availability of adequate power supply, less discharge of water, etc. however, the share of underutilized schemes has reduced to 14.1% in 6th MIC from 21.1% in 5th MIC.

- Out of all the schemes, 97% are 'in use' whereas 2.1% and 0.9% are 'temporarily not in use' and 'permanently not in use', respectively. 'Less discharge of water' is the major reason for conversion of 'in use' MI schemes to 'temporarily not in use' category, whereas in the case of 'permanently not in use' schemes, the major reason for not using the structure is that the schemes have dried up.

- Goa has recorded 6,133 MI schemes comprising of 65.7% (4,031 nos.) Ground Water (GW) schemes and 34.3% (2102 nos.) Surface Water (SW) schemes. Goa accounts for 0.03% of the total minor irrigation schemes enumerated in the Country which is negligible.

CHAPTER – 1

GENERAL BACKGROUND

1.1 Introduction

The economy of our country is predominantly agriculture-centric and undoubtedly agriculture sector is the largest source of employment for rural workers. It is also the most water intensive sector. In this context, irrigation plays a crucial role in increasing cropping intensity as also the land productivity given the fact that agriculture plays a critical role in the overall growth of the Indian economy. Although, more than half the area under cultivation is rain-fed, monsoons can be unpredictable. Moreover, the distribution of monsoon across the country is also not uniform. In this scenario, irrigation provides the perfect backup for crops against the vagaries of rainfall. However, water is also a fast depleting resource and hence water management in a judicious and sustainable manner becomes all the more imperative.

Under the orbit of irrigation, a substantial share of irrigation is contributed by Minor Irrigation Schemes. Most minor irrigation schemes provide irrigation throughout the year and are dependable in sustaining agricultural production. The importance of minor irrigation schemes with short gestation period, smaller investments and a major share in the irrigation sector cannot be underestimated. Besides, benefits of these schemes are availed by the farmers directly. Since planning and policy formation of this sector at the national as well as State level necessitates a sound and reliable database, the Government of India has been conducting a Census of Minor Irrigation Schemes throughout the country with 100% Central assistance on quinquennial basis. Goa is also participating in this National level program.

1.2 Classification of Irrigation

Irrigation is classified into Major, Medium and Minor Irrigation.

- A scheme having Culturable Command Area (CCA) of more than 10,000 hectares (Ha) is termed as a Major Irrigation scheme.
- A scheme having CCA of more than 2000 Ha. and up to 10,000 Ha. is termed as a Medium Irrigation scheme.
- A scheme having CCA of up to 2000 Ha. individually is classified as a Minor Irrigation scheme.

1.3 Importance of Minor Irrigation Schemes

Major and Medium irrigation projects not only involve huge investments but also take long gestation periods. These projects often result in displacement of large number of families, settled in the catchments areas and give rise to problems associated with their rehabilitation. Some of these projects serve multi-purposes i.e. besides providing water for irrigation, they also cater to the domestic, industrial and commercial needs of the country as also for power generation.

Minor Irrigation schemes/projects on the other hand require relatively lesser investment and shorter gestation period and can be taken up with local resources and many a times without specialized technical skills. They also create employment opportunities in the rural areas and yield quicker and wide spread results. Moreover, minor irrigation schemes are best suited in uneven terrain and hilly areas and result in efficient use of water. Minor Irrigation, therefore, plays an important role in the development of irrigation potential where scarce resources of a territory are under pressure from several directions. The expansion and improvement of minor irrigation facilities is, therefore, a key ingredient of agricultural and rural development.

1.4 Minor Irrigation Schemes (MISs)

Minor irrigation schemes include all schemes of Ground Water and Surface Water development (both flow and lift) which as stated above have a culturable command area (CCA) of up-to 2000 Ha individually. The Ground Water Schemes are broadly categorized into (a) dug wells and dug cum bore wells and (b) shallow, medium and deep tube wells. The Surface Water Schemes comprise (a) surface flow schemes and (b) surface lift irrigation schemes (generally referred as LIS).

Ground Water Schemes

a) Dug Well: These are ordinary open wells of varying dimension dug or sunk from the ground surface into water bearing stratum to extract water for irrigation purpose. These also include dug-cum-bore wells. The construction of the open wells can be masonry or kutcha from which water is lifted with the help of animals or manpower. Most of such wells are of private nature belonging to individual farmers and cultivators. The diameter of the well ranges between 2 to 6 meters (mts.) and the depth between 8 and 15 mts. The Cultural Command Area (CCA) of a standard open well generally varies from 1 to 2 Ha. and in case of dug-cum-bore well, the capacity and depth is similar to that of tube well of similar capacity and depth of a bore well.

b) Shallow Tube-Well: This consists of a bore hole built into the ground with the purpose of tapping ground water from porous zones. In sedimentary formations, depth of a shallow tube well does not exceed 35 mts. These tube wells are either cavity tube-wells or strainer tube-wells. The success and popularity of the scheme depends on how cheap they are. The shallow tube wells are generally operated for 6 to 8 hours during irrigation season and give a yield of 100-200 cubic meters per day, which is roughly 2 times that of a dug well. Their CCA may go up to 10 Ha.

c) Medium Tube Well: This consists of a bore hole built into the ground with the purpose of tapping ground water from porous zones. In sedimentary formations, depth of a medium tube well will vary between 35-70 mts. The medium tube wells are generally operated for 8-10 hours during irrigation season and give a yield of 200-300 cubic mts. per day, which is roughly 3 times that of a dug well. Their CCA may range from 10-15 Ha. The concept of medium tube wells was introduced during the 5th MIC as per the needs of State Governments to capture the rapid changes in the ground water sector.

d) Deep Tube Well: This type of well usually extends to a depth of more than 70 mts. and are designed to give a discharge of 100 to 200 cubic mts. per hour. Deep tube wells are drilled by rotary percussion or rotary cum percussion rigs and operate round the clock during the irrigation season, depending upon the availability of power. Their annual output is roughly 15 times that of an average shallow tube well and is usually constructed as a public scheme owned and operated generally by Government Departments or Corporations. Their CCA may extend up to 50 Ha.

Surface Water Schemes

a) Surface Flow Irrigation Schemes: These comprise tanks, ponds, lakes, bandharas, diversion schemes, check dams, reservoirs, rain water harvesting structures etc. These structures are generally prevalent in hilly regions. In Goa, rain water harvesting structures come under the perview of water resources development works and are best suited for the State. Besides having an irrigation component, these also serve as water conservation cum ground water recharge schemes and are also used for recreation activities. The command areas of such schemes are 20 Ha. or less. The large storage tanks whose command varies from 20 to 2000 Ha. are generally constructed by Government Departments or Local Bodies like Village Panchayats and Zilla Parishads. These are the biggest items of surface minor irrigation works.

(i) Storage Schemes: These include tanks and reservoirs which impound water of streams and rivers for irrigation purposes by building a dam or bund which is of earth or masonry. After

wells, tanks occupy a very important place under the minor irrigation system. In big States like Maharashtra, Karnataka, Kerala, Andhra Pradesh, Tamilnadu and Orissa, tanks and reservoirs account for nearly two thirds of the total irrigation from minor irrigation sources.

(ii) Diversion Schemes: These aim at providing gravity flow irrigation by mere diversion of stream water supply without creating any storage by constructing an obstruction (weir) or temporary bund across the stream for raising and diverting water. As compared to storage schemes they are economical but their feasibility is dependent on the presence of flow in the stream at the time of actual irrigation requirements. Such schemes being temporary, require frequent renovation and are liable to be washed away by floods or during the monsoons. Some diversion schemes are also constructed as kharif or monsoon channels supplying water only during the monsoon season and are useful for providing supplementary irrigation for paddy and preliminary watering for sowing of rabi crops.

(iii) Water Conservation-cum-Ground-Water Recharging Schemes: These include schemes which serve primarily to submerge agricultural land during monsoons for sowing post-monsoon crops and to improve moisture regime of the adjoining fields downstream for raising of post-monsoon crops without irrigation and also to replenish the ground water. An additional advantage of these schemes is that they help to conserve the soil. During the rainy season, water is stored upstream and the excess water is let out and the submerged land is released for cultivation. The other advantage of submerging land in this manner is that the first flood or monsoons brings a lot of silt which acts as rich manure. By preventing free flow of water across steep gradient, the soil of the land is also conserved.

(**iv) Percolation Tanks**: These consist of bunds constructed across streams and nallahs for the purpose of retarding the surface flow and also the sub-surface flow to a certain extent by flattening the bed slope of the stream/nallah resulting in percolation of water in the sub-soil consequently increasing the ground water supply. These are very popular in States like Maharashtra, Kerala, Tamilnadu and Rajasthan.

b) Surface Lift Irrigation Scheme: are generally built in regions where the topography does not permit direct flow irrigation from rivers and streams and hence water has to be lifted into the irrigation channels. These works are similar to diversion schemes, but in addition, pumps are installed and pump houses constructed. These schemes being costly in operation, are feasible only in areas where water is available in the streams for at least about 200 days in a year, and cheap electric power is available. However, for lifting small amounts of discharge by individual cultivators, portable diesel engine pump sets are feasible as they provide greater

flexibility and mobility for installation at different points of the water source or sources. The CCA of such schemes may go up to 20 Ha.

CHAPTER – 2

DEVELOPMENT OF MINOR IRRIGATION AND ITS ORGANIZATION IN STATES

2.1 Development of Minor Irrigation

Water being a State subject, steps for augmentation, conservation and efficient management of water resources are primarily undertaken by the respective State Governments and Union Territories (UTs). In order to supplement the efforts of the State Governments, the Central Government provides technical and financial assistance to the States through various schemes and programmes for development of this sector. Minor Irrigation sector in the Government of India is handled by the Department of Water Resources, River Development and Ganga Rejuvenation (Dowr, RD & GR), Agriculture & Farmer's Welfare, Rural Development and Ministry of Tribal Affairs. Similarly, at the State level, respective Ministries and Department of Water Resources, Agriculture and Rural Development deal with the sector.

The Central Ministry takes ample initiatives towards providing financial assistance to the States/UTs to construct minor irrigation schemes, either through the Department of Irrigation/Minor Irrigation, Water Resources Development or under PWD/Local Bodies for development of MI works and for management of on-farm irrigation system and water distribution devices. Further, in many States, subsidy is being provided for construction of minor irrigation works for drilling/boring of tube wells, for digging of wells, purchasing of water distribution devices and micro-irrigation equipments like pipes, drip and sprinklers system.

Minor Irrigation Schemes (MIS) are implemented in the States by different departments including Agriculture, Irrigation/Water Resources, Rural Development, Land Administration, Public Works Department, Local Bodies, Municipal Administration etc. for the growth and development of minor irrigation. No single Government Department is involved in development of minor irrigation works and a large number of private works are being constructed over the years in the States with or without support from State Government. Therefore, coordination and monitoring of information about minor irrigation works becomes difficult at the State level.

2.2 **Need for Census of Minor Irrigation Schemes (MIS)**

A major share of irrigation across the country is contributed by minor irrigation schemes which necessitate the creation of a sound and reliable database in the minor irrigation sector in order to provide a strong foundation for planning and policy formulation.

Since the data/irrigation statistics from the States available with the Ministry of Water Resources, at the national level regarding potential created and utilized from various minor irrigation sources/schemes was conflicting, and efforts to reconcile much of the conflicting data were unsuccessful, in the year 1970, the Planning Commission had first recommended to take up a detailed Census of Minor Irrigation works. Thereafter, the National Commission on Agriculture examined in detail the status of Minor Irrigation in India and recommended that a census of irrigation sources be carried out once in five years throughout the country with 100% Central assistance to conduct a complete enumeration of minor irrigation sources to create a credible database.

2.3 Formulation of the Census Scheme

Keeping this in view, a central scheme "Rationalisation of Minor Irrigation Statistics (RMIS)" was launched in 1987-88 with 100% Central assistance to the States/UTs. During the XIth Five Year Plan, the RMIS scheme became part of the Central Sector Plan Scheme, "Development of Water Resources Information System (DWRIS)". Subsequently, during the XII Plan, RMIS was a sub-component of "Irrigation Census" component of the plan scheme DWRIS.

Currently Irrigation Census (parent component of "RMIS") is a standalone component under the umbrella scheme "Pradhan Manti Krishi Sinchai Yojana (PMKSY)" and other schemes. PMKSY has been formulated with the vision of extending the coverage of irrigation "Har khet ko Pani" and to improve water use efficiency "more crop per drop" in a focused manner with end to end solution on source creation, distribution, management, field applications and extension activities. PMKSY not only focuses on creating water resources for assured irrigation, but it is also creating protective irrigation by harnessing rain-water at micro level- " Jal Sanchay" " Jal Sinchan".

2.4 Objective of the Scheme

The main objective of the RMIS scheme is to build up a comprehensive and reliable database in the minor irrigation (MI) sector for effective planning and policy making. The major activity under the scheme is the census of minor irrigation schemes conducted in the States/UTs covering all ground water and surface water schemes (which are mostly under private ownership up to 2000 ha.). in the MI Census detailed information on various parameters like irrigation sources (dug well, shallow tube well, medium tube well, deep tube well, surface flow and surface lift schemes), irrigation potential created (IPC), potential utilized, ownership, holding size of land by owner, devices used for lifting water, sources of energy, energy

conserving devices such as sprinkler and drip irrigation, use of non-conventional energy sources such as solar pumps, wind mills etc. is collected.

2.5 **Chronology of Minor Irrigation Census (MIC)**

The 1st Census of Minor Irrigation Schemes was conducted with the reference year 1986-87 and the report was published in November 1993.

The 2nd MIC with reference year 1993-94 was initiated in September 1994 and the report was published in March 2001. In this census, information related to use of newly developed water and power saving technology such as sprinkler and drip irrigation was collected. So also, data related to use of non-conventional sources of energy such as solar pumps and wind mills was covered. It was for the first time that census data was computerized with the help of the National Informatics Centre and the results were released on the Ministry's website.

The 3rd MIC with reference year 2000-2001 was conducted in 33 nos. of States/Union Territories. The report was released in November 2005. Data entry was initiated at district level in most States as against the State Headquarters during this census.

The 4th Census of MI schemes was conducted with reference year 2006-07 and the number of schedules was reduced from 6 to 3 in this census viz. one Village Schedule, one Ground Water Schedule covering all types of ground water schemes and one Surface Water Schedule for surface water schemes. New items of data collection were introduced in this census such as cost and source of funding of MI schemes, type of energy sources used for these schemes etc. the national report of the 4th MIC was published in the year 2014.

The 5th MIC was conducted with reference year 2013-14.The canvassing schedules were upgraded to include more parameters for data collection. A new category of MI scheme viz. medium tube well (with depth ranging from 35 to 70 mts.) was introduced under ground water MI scheme, as per needs of the State Governments to capture the rapid changes in the ground water sector.New items of data collection like number of lifting devices, more than one sources of energy and sources of finance were added in the scheme schedules in order to capture the diversities in the types of lifting devices, funding pattern, subsidy and sources of energy employed by the owners of minor irrigation schemes.

A dedicated online portal was designed and maintained by National Informatics Centre and data entry and validation of the data collected of the 5th MIC was successfully done online using this portal which facilitated real time monitoring of progress of data entry/validation both

by the Central and State Governments.The national report of 5th MIC was published in in the year 2017.

All the above censuses portray the changing composition of the minor irrigation sector as well as the diversities in irrigation practices across the country. The State of Goa has participated in all the censuses conducted thus far.

The schedules canvassed during each census are updated/ revised by introducing new items of data collection depending on the need for filling up the data gaps.

CHAPTER – 3

6th CENSUS OF MINOR IRRIGATION SCHEMES (MIS)

3.1 Preamble

So far, as elaborated in the previous Chapter, five censuses have been conducted with reference years 1986-87, 1993-94, 2000-01, 2006-07 and 2013-14. The scope of the "Irrigation Census" has been enlarged by the launch of First Census of Water Bodies in convergence with 6th Minor Irrigation Census (with reference year 2017-18) with the objective of developing a national database for all water bodies. The convergence of 6th MI Census and Census of Water Bodies offers substantial savings in resources on planning, training of field work, scrutiny, data entry, validation etc. Because the coverage area of both the censuses in rural areas in the same.

For the implementation of the scheme, each State/UT identifies a Nodal Department for collection, compilation and dissemination of information for the State. State Statistical Cells are generally created within the Nodal Department so identified by the State Government. These Cells assist the Head of the Nodal Department of Census Commissioner in the State in organising, coordinating and supervising the Census as an when planned by the Ministry.

In Goa, the Directorate of Planning, Statistics and Evaluation (DPSE) is the Nodal Department for conducting the Minor Irrigation Census. The Director (DPSE) is designated as the Census Commissioner.

3.2 6th Census of Minor Irrigation Census (MIC) - Objectives

There is an increased focus of the Central Government on expansion of cultivable area under assured irrigation and improving on-farm water use efficiency under the "Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)" with emphasis on growth and development of Minor Irrigation under the component of "Har Khet Ko Pani".With changes in the ground water scenario and shift to mechanized mode of water lifting along with adoption of more efficient water distribution practices like drip and sprinkler, sub-surface pipes etc., the share of various types of minor irrigation schemes has been changing over time. Hence, it is necessary to study the composition of the minor irrigation sector and irrigation potential created (IPC) and utilized (IPU) by the minor irrigation schemes as also to assess the factors contributing to the gap between IPC and IPU and to adopt corrective measures, the census of minor irrigation schemes is conducted on quinquennial basis in the country.

3.3 New Initiatives Adopted in 6TH MIC

The 6th MIC has been conducted in the country with reference year 2017-18. The 1st Census of Water Bodies was also introduced and conducted in convergence with the 6th MIC. In all, five nos. of schedules were canvassed, two nos. of schedules for the MIC viz., Ground Water Scheme schedule and Surface Water Scheme schedule. The Village schedule was common for Minor Irrigation schemes and water bodies in rural areas. For urban areas, two additional schedules viz.Urban schedule and Water Body schedule (for urban areas) were canvassed. The State report of the First Census of Water Bodies has been published in July 2024. The schedules of MI census are provided at the conclusion of the report. The changes which were incorporated in the 6th MIC as compared to the 5th MIC are as follows:

- The information about gender of the owner of MI scheme was also collected in case of individual ownership, along with social status of the owner.
- In 5th MIC, only pre-monsoon average ground water level in a village was taken. In the 6th MIC, post-monsoon average ground water level was also canvassed in the Village schedule.
- If a MI scheme existed in the command area of any major/medium irrigation scheme, name of major/medium scheme was also collected in 6th MIC along with its reason.
- The schemes meant only for recharge of ground water were also covered in 6th MIC.

Keeping in view the above objectives, the 6th census of MI schemes has been conducted in Goa as per the methodology, guidelines and timeline of the Government of India, Ministry of Water Resources, River Development and Ganga Rejuvenation, Minor Irrigation Statistics Wing, New Delhi.

The field work of the MIC was commenced in 2018-19. Training was imparted to State Government officials in Regional Data Processing Workshops and States/UTs started data entry and validation work on the online portal. Meanwhile tabulation plan prepared by MI-Stat. Wing was shared with National Informatics Centre. After completion of data entry and validation by the States/UTs, comments of the States/UTs on certain board parameters were so sought after scrutiny and thoughts consistency checking of data emerging from the tabulation reports at the Central level. After rectification, if any, by State Governments, data on online portal was frozen in order to generate the final tables on various parameters. After receiving comments on final tables from all States, the State level tables were generated and State level data was aggregated to finalize the National level report. The national report of 6th MI Census was published in the year 2023.

CHAPTER 4

METHODOLOGY ADOPTED FOR CONDUCT OF 6TH MINOR IRRIGATION CENSUS (MIC)

4.1 Capacity Buiding for Data Collection

The main objective of the Rationalization of Minor Irrigation Statistics Scheme (RMIS) is to build up a comprehensive and reliable database in the Minor Irrigation (MI) sector for effective planning and policymaking and the major activity under RMIS in the State is the conduct of MIC of all ground water and surface water sources under private as well as public ownership.

In Goa, the Directorate of Planning, Statistics & Evaluation (DPSE), is the Nodal Department for conducting the MIC in the State. A State MIC Statistical Cell has been created within the Nodal Department to organize, co-ordinate and supervise the MIC as and when planned by the Central Ministry. Besides, the MIC Cell compiles and sends to the Ministry, the quarterly and annual physical and financial consolidated progress reports of MI schemes obtained from the State Agriculture Department and the Department of Water Resources. The posts sanctioned by the Ministry for the RMIS Cell in Goa are that of an Assistant Director, a Research Assistant and a peon for which the Ministry releases funds.

4.2 Mechanism of Conduct of 6th MI Census (MIC)

The 6th MIC was conducted along with the 1st Census of Water Bodies with reference year 2017-18. The Schedules to be canvassed were designed by the Ministry of Jal Shakti, New Delhi. The statistical instruments for conducting the census like questionnaire, guidelines etc. were finalized by the Ministry in consultation with the stakeholders. The software for data entry was developed by National Informatics Center (NIC). Thereafter, regional trainings and data processing workshops were conducted by the Ministry to train the trainers in States/UTs for familiarizing them with the process of conducting the census along with hands-on training on the data entry software.

Subsequently, the States conducted training at district and block level for enabling the field level functionaries to collect the data. After, completing all the preparatory work, the field work of the 6th MIC was launched in the States/UTs along with the first Census of Water Bodies.

4.3 Methodology of Data Collection

As in the earlier censuses, for the conduct of the 6th MIC 2017-18, the traditional methodology was followed which involved canvassing three paper based enumeration schedules viz. Village Schedule, Ground Water Schedule and Surface Water Schedule for collecting village level and MI scheme-wise data in rural areas. Since the 6th MIC was conducted concurrently with the 1st Water Bodies Census, the data was collected through canvassing the enumeration schedules of

both the censuses by the same enumerator. The Village Schedule was common for both the Censuses and hence data related to minor irrigation schemes and water bodies was recorded in the same schedule for rural areas.

In Goa, the field work was conducted during the period of January 2019 to March 2021 in all the 404 nos. of revenue villages. While the field work was in progress, supervision and checking was done by:

i. Enumerator's Supervisor
ii. Block level Officers
iii. District level Officers
iv. State level Officers as per the norms prescribed by the Ministry.

After the States/UTs had completed the field work, data entry and validation work, the validated data was again examined at the central level before generation of final tables. The tabulated data was again shared with States for final confirmation about their reported data.

4.4 Coordination Mechanism

A Steering Committee was constituted at the Central level under the Chairmanship of Secretary and members from NITI Aayog, Central line Ministries like Ministry of Agriculture, Rural Development, Panchayati Raj, Housing and Urban Affairs, Home Affairs, Statistics and Programme Implementation; State Governments of Rajasthan, Uttar Pradesh, Telangana, Haryana, West Bengal and Sikkim; Central Water Commission and Central Ground Water Board to guide and advise about the conduct of 6th MIC and first WBC.

A Steering Committee was also formed in each State with Secretary of the Nodal Department as Chairman and members from the State Departments of Revenue, Irrigation/Water Resources, Panchayati Raj, State Directorate of Planning, Economics and Statistics, Rural Development and State head of National Sample Survey Office (Field Operations Division).

Further, a Technical Sub Committee was formed under the Chairmanship of Regional Chief Engineer of CWC in charge of the State to provide technical inputs and guide the State Nodal Statistical Cell during the census operations. The Regional Chief Engineer of Central Water Commission and a representative from regional Office of Central Ground Water Board were also members of this Committee, wherever possible.

4.5 Training Programme for Data Collection

To ensure quality of data collection, a training-cum-Workshop for the Trainers was organized during March 2018 at the Central level in New Delhi in which officers from each State/ UT participated.

The next level of training on schedules/ instructions for 6th MIC and WBC was imparted through Six regional training Workshops organized by the Ministry in association with six host States of Uttarakhand, Telangana, Sikkim, Goa, Himachal Pradesh, Odisha from June to August 2018.

Four Regional Workshops for Data Processing were also organized during December, 2018 to January, 2019 to impart training on data processing modules of the software along with mobile App developed by NIC for 6th MIC and Census of Water Bodies. Further, State/ District/Block level trainings were organized by respective States.

4.6 Field Work

The 6th MIC was conducted under the overall charge of the Census Commissioner who was a Senior Officer of the Nodal department of the concerned State/UT. The fieldwork was either undertaken by the Nodal department itself or entrusted/outsourced to some other agencies as per the prerogative of the State/UT Government, keeping in view the infrastructure available. However, for the entire census operation, Census Commissioner of the State /UT was the pivotal point. The primary work of collection of data was carried out by the enumerators in rural and urban areas. They were employees from Local Bodies and other Government departments designated by the State/UT Government in rural and urban area.

4.7 Supervision and Inspection

The primary enumerators, while canvassing the schedules, visited the owner of the minor irrigation scheme or its next neighbour and collected information on the basis of personal enquiry from him. Physical verification of the schemes was also done by the enumerators. The purpose of the census was explained to the farmers/owners to win over their confidence in revealing the specific information in respect of minor irrigation sources as the case may be. Assurance that the data furnished by them would be kept confidential was given to the owners. Certain information relating to the minor irrigation schemes was collected by the enumerators by physical examination of the scheme.

After filling up the schedules, the enumerators deposited all completed schedules along with their summary in the prescribed format to their immediate supervisor for scrutiny.

The work of supervision was entrusted to higher supervisor level officers. The Supervisors were advised to submit all schedules to the Block Development Officer/Officer-in-charge at the block level. However, the overall quality of field work was monitored by Block/District level/State Officers, who in order to ensure the correctness of data, conducted frequent site visits of the schemes and checked the entries made by primary enumerators.

The objective of the additional scrutiny by the officer next in hierarchy to the enumerators was for improvement in quality of data starting right from the village. In addition, a Central team along with the State Statisticall Cell officials conducted field visits in the States to check the quality of the field work carried out.

4.8 Sample Check

The block level officer had to visit at least 5 villages in his block and physically verify the MI schemes, quality of census and the extent of coverage of schemes in the village and scrutinize at least 35% of MI scheme schedules and 100% village schedules. This was introduced in the 6^{th} MIC, to ensure better quality of data collected. During the 5^{th} MIC, only 10% of scheme schedules were scrutinized by the immediate Supervisor of the enumerator. On completion of the scrutiny and after the field visits, block level officer was required to fill up the supervisor's report form and submit all the schedules to the district level officer concerned (with copy to State Nodal Office).

At least 1% of the total schedules or 100 Schedules, whichever is maximum, were selected at random and scrutinized by the district level officer. The district level officer visited atleast 5 villages in 5 separate blocks to physically verify the quality and coverage of the MI schemes schedules.

After the completion of inspection of the field work and scrutiny of the schedules, the supervisor's report form was to be filled up by the district level officer and submitted to the State Nodal office.

The Monthly Progress Reports on the Census were sent by the States/UTs adequately reflecting scrutiny/inspection details sent by Block/District level Officer along with the progress of field work. Frequent inspections and sample checks were also conducted by officers from the State Statistical Cells along with field visits by Central team from the Department of Water Resources, River Development and Ganga Rejuvenation (RD & GR). The filled up schedules were handed over to the State Nodal Department, either for in-house data entry, validation, tabulation etc. or for handing over the work to a selected agency.

4.9 Computerization of Census Data

NIC had developed the online software for computerization of data of 6th MIC and provided technical support along with training in the Regional Data Processing Workshops organized by the Ministry in association with the host States. This was followed by State level trainings organized by the respective State Census Commissioner. The user ID and password for accessing the online portal were provided to the State Nodal Officers for enabling Online data entry, validation etc.

The Census data entered in the online portal by the States/UTs was again scrutinized at the Central level and observations/queries thereon were referred to States/UTs for possible corrections/clarifications. On-line tables were generated on the portal on the basis of data fed by States/UTs. After receipt of comments from States and due rectification, the online tables generated through portal were analysed and aggregated for compiling National Level Report.

4.10 Monitoring Process

The States/UTs were required to submit Monthly Progress Report in a format prescribed by the Ministry. Besides that, real time progress of data entry and validation was accessed online through the software provided by the Ministry. This helped in monitoring the progress of census work and taking remedial measures whenever required. In addition to the monthly progress reports, a report regarding completion of field work from all villages/towns was submitted by the States/UTs duly ensuring completion of field work at enumerator/supervisor/block and district level.

4.11 Financial Aspects

As a token of appreciation for work entrusted to various officials in addition to their normal duties and not as compensation or remuneration for additional work, the officials who were involved in field work, scrutiny, inspection of field work and schedules at the State/District/ Block/Village levels were paid suitable honorarium from the grants released to the States/UTs by the Ministry of Jal Shakti as per the operational guidelines. Funds were provided for meeting the expenditure towards printing of schedules, data entry and validation etc. were also. So also, funds were earmarked separately for conduct of various trainings and for meeting any contingencies.

CHAPTER – 5

CONCEPTS AND DEFINITIONS

5.1 Concepts and Definitions

A brief understanding of the basic concepts, terminology and definitions associated with the MIC is given below:

Cultivable Command Area (CCA):is the area which can be irrigated from a scheme and is fit for cultivation.

Cultivable Area: consists of net area sown, current fallow, fallow lands, other lands, currentfallow, culturable waste and land under miscellaneous tree crops**.**

Gross Irrigated Area: is the area irrigated under various crops during a year, counting the areairrigated under more than one crop during the same year as many times asthe number of crops grown and irrigated.

Net Irrigated Area: is the area irrigated through any source in a year for aparticular crop.

Irrigation Potential Created (IPC): is the total gross area proposed to be irrigated under different crops during ayear by a scheme. The area proposed to be irrigated under more than onecrop during the same year is counted as many times as the number of cropsgrown and irrigated. If original Irrigation Potential of the scheme is notknown then the maximum area irrigated during the past five year or so maybe taken as the IPC.

Irrigation Potential Utilized (IPU): is the gross area actually irrigated during reference year out of the grossproposed area to be irrigated by the scheme during the year.

Minor Irrigation (M.I.) Scheme: is asource of irrigation having CCA up to 2,000 hectares individually.

Medium Irrigation Scheme: is asource of irrigation having CCA of more than 2,000 hectares and up to 10,000 hectaresindividually.

Major Irrigation Scheme: is a source of irrigation having CCA more than 10,000 hectares.

Sprinkler Irrigation System: is a method of applying irrigation water which is similarto rainfall. Water is distributed through a system of pipes usually bypumping. It is then sprayed into the air of entire soil surface through sprayheads so that it breaks up into small water drops which fall to the ground.

Drip Irrigation System: Drip irrigation system delivers water to the crop using a network ofmainlines, sub-mains and lateral lines with emission points spaced alongtheir lengths. Each dripper/emitter, orifice supplies a measured, precisely controlled uniform application of water, nutrients, and other required growth substances directly into the root zone of the plant.

Non-Submersible or Centrifugal Pump: This is the most common type of pump. Typically the pump is ″close-coupled″ to anelectric motor, i.e. thepump is mounted right on theend of the motor′s drive shaftand the pump case is boltedstraight into the motor so thatit looks like a single unit. This type of pump needs to be installed on a pad above the high water level ifpumping from a lake or river.

Submersible Pump: Submersible pumps are installed completely underwater, including themotor. The pump consists of an electric motor and pump combined in a single unit and shapedlike a long cylinder. Although most submersibles are designed to be installed in awell, many can also be laid on their side on thebottom of a lake or stream. These pumps are moreefficient because they only push the water,they do not need to suck water into them.

Turbines and Jet Pumps: A turbine pump is basically a centrifugal pumpmounted underwater and attached by a shaft to a huge motor mounted above the water. Turbine pumps are very efficient and are used primarily for larger pump applications and are typically used on municipal water system wells, large parks, golf courses etc. where water is pumped from lakes.

Water Body: All natural or artificial storages of watersuchas tanks, reservoirs, ponds, lakes, bandharas etc. fall under the purview of water bodies. These may be with or without masonry work and may be used forirrigation or other purposes.

Pond: is a small body of water usually earthen, and generally no one would require a boat to cross.

Tanks: is a shallow water storage usually larger than a pond created byconstructing earthen or masonry barricades which receives watereither from rains or any other water source.

Reservoirs: are large man made impoundments of varying magnitude createdby erecting, bunds, dams, barrages or other hydraulic structures acrossstreams or rivers serving one or more purposes such as irrigation,power generation, flood control or other water resource developmentprojects.

CHAPTER – 6

GOA – A PROFILE

Introduction

Goa, a former Union Territory attained Statehood on May 30th, 1987 to join as the 25th State of India. Hailed as the land of sun, sea and song, Goa is famed for its picturesque beaches and is popularly known as the 365 days tourist destination of the world. Goa still exhibits the religious and cultural influence of the Portuguese who ruled it from 1510 to 1961 with its unique architecture, churches and temples, feasts and festivals.

Panaji is the State Capital of Goa and is governed by the Corporation of the City of Panaji. Margao is the Commercial Capital of Goa and Ponda is considered as the Cultural Capital of Goa. Vasco the Gama is the largest city of the State. The smallest of all States in India by area and the fourth smallest by population, Goa is one of India's richest States and tops for the best quality of life.

6.2 Location and Topography

Goa is a maritime State on the Arabian Sea coast bounded on the North by the State of Maharashtra and on the East and South by Karnataka. Goa lies between $15^0$48' 00" N and $14^0$53' 54" NLatitude and $74^0$20' 13" E and $73^0$40' 33" E Longitude.

Located on the west coast of India, Goa forms part of the larger Sahyadri eco system covering a geographical area of 3,702 km^2. Broadly, the State comprises 4 distinct geographical divisions viz. (a) the Eastern Hilly region i.e. Sahyadri ranges (which separates the State from the Deccan plateau further East) encompassing the talukas in the Western Ghats areas like Sanguem, Sattari, Canacona and Dharbandora (b) the Central Plainscomprise plateaus at elevations between 30 mts. to 300 mts. above mean sea level, making up the talukasof Pernem, Bicholim, eastern Sanguem and Quepem. (c) the Flood Plains constituting the coastal plains and undulating uplands and (d) the Coastal Plainsare alluvial lowlands formed by the estuaries at the mouths of the rivers draining into the Arabian Sea and make up the talukas of Mormugao, Tiswadi, Salcete and Bardez. The major rivers flowing through Goa originate from the thickly wooded Western Ghats.

6.3 Administrative Structure

For administrative purpose, Goa is divided into 2 districts viz. North Goa District and South Goa District comprising 12 Talukas/Tehsils. There are 5 talukas in the North Goa District viz. Bardez, Bicholim, Pernem, Sattari and Tiswadiand 7 talukas in South Goa District viz.

Canacona, Mormugao, Salcette, Sanguem, Quepem, Ponda and Dharbandora. The State comprises of 404 nos. of revenue villages including 14 nos. of urban blocks governed by 191 Village Panchayats, 13 nos. of Municipal Councils and 1 Corporation respectively. Pernem Taluka in North Goa District occupies the highest coverage of 15.94 Kms. of the total area whereas Dharbandora Taluka in South Goa occupies the least area i.e. 1.20%.

6.4 Climate

Being in the tropical zone, the climate in Goa is generally hot and humid. Barring the months from December to mid-February which are pleasantly cooler, the maximum temperatures stay in the range of 20^0C to 35^0C throughout the year. Summers are hottest in May. Being located on the west coast of India, the State receives copious annual rainfall of about 2,500 to 5,000 mm from South-West monsoons for a short period of four months from June to September. Rainfall pattern is heaviest on the mountain ranges and its western slopes i.e. 5000 mm and it gradually reduces towards the coastal plains i.e. 2500 mm. Relative humidity averages at 76% rising to as high as 89% in August.

6.5 Soils

The undulating topography of Goa with diverse soil conditions especially on its eastern side, is intersected by a number of rivers flowing westwards, which provides a network of internal waterways.The soils in the State can be categorized into three types viz. i) Lateritic ii) Alluvial and iii) Sandy to Sandy loams.About 81 per cent of Goa's soils (2,75,900 Ha.) are lateritic and are sandy loam to silt loam in texture, fairly rich in organic matter and nitrogen but very deficient in Phosphate and Potash. The area along the sea coast and estuaries constituting about 11% are sandy to sandy loams and the remaining 8% of the soils are alluvial in nature. Soils in the Khazans and adjoining areas are alluvial, subject to saline water inundation and have high water table. Khazan lands are unique to Goa and consist of low lying areas, often below sea level, along the estuaries. An estimated 18,000 Ha. of land in Goa comprises Khazans and is basically utilized for cultivation of saline water resistant monsoon paddy crops followed by Rabi vegetables.

6.6 Demography

As per the decennial Population Census 2011, Goa has a populace of 14,58,545 with a density of 394 persons per sq. km. which is higher than the national average of 382 persons per sq. km. The decadal population growth rate in the State has dropped down from 15.21 percent in the year 2001 to 8.23 percent in the year 2011, the lowest since liberation of the State. Among the different Talukas of the State, the density of population is highest in Mormugao Taluka with

1406 persons per sq.km, followed by Salcete with 1005 persons per sq.km. Sanguem Taluka has the lowest density of 75 persons per sq.km.Out of the total population, 62.17% is found to be residing in urban areas.

As per the 2011 Census, the sex ratio in Goa is 973 females per 1000 males, which is above the national average of 960. Similarly, the literacy rate in Goa for the same period is 88.70 %.

6.7 Economy

Goa is regarded as one of the most developed Indian States in terms of literacy (88.70% as per Census 2011) and public infrastructure. It is well connected by rail, road, air and waterways.

Presently, tourism and fisheries are the important sectors of the Goan economy. Mining which was the backbone of the Goan economy has taken a backseat as there has been a blanket ban on mining from the year 2012 resulting in tremendous pressure on the economy. As far as industries are concerned, pharmaceutical industries have a strong foothold.

Even though the State is naturally gifted with agricultural land and water resources, agriculture is registering a declining trend and the population engaged in agriculture has declined from 14% in 1971 to about 4% in 2011. As more and more people are veering away from agriculture towards tourism related activities, Goa is dependent on neighboring States to supplement its need for food grains, vegetables and fruits. However, with Government interventions, agriculture is again steadily picking up. As per the 10th Agriculture census 2015-16, there were 74,563 operational land holders in Goa with a total area of 82,085 Ha. of operational land holdings. The average size of a land holding in Goa is small i.e. a mere 1.10 Ha. The proportion of land holdings below 1 Ha. is about 80%.

In spite of the odds, Goa is considered as one of the richest States in India with a GSDP per capita which is more than 3 times that of the country. The per capita income of the State for the year 2017-18 was Rs.4,54,172/-. Though agriculture proper is not the predominant sector in the State,its contribution to the Gross State Domestic Product (GSDP) of Goa for the year 2017-18 as prepared by the Directorate of Planning, Statistics and Evaluation on the basis of standard methodology recommended by the National Statistics Office of the Government of India, works out to Rs.2151.91crores at current prices which represents 3.50% of the total gross regional income.

6.8 Land Utilization

The following table gives the details of land utilization in Goa during 2017-18.

Sl. No.	Land Use Category	Area in Ha.	Percentage to total geographical area

1	2	3	4
1.	Total reported area according to village papers for land utilization	3,61,113	100.00
2.	Area under Forest	1,25,473	34.75
3.	Land not available for cultivation	37,137	10.28
4.	Other uncultivable land		
	i) Permanent Pastures & other grazing lands	1,305	0.36
	ii) Land under miscellaneous tree crops and groves not included in net area sown	580	0.16
	iii) Cultivable waste including fallow land and current fallow	67,487	18.69
5.	Net area sown	1,29,131	35.76
6.	Area sown more than once	22,826	-
7.	Gross cropped area	1,51,957	-

Source: Directorate of Agriculture

Although the total geographical area according to the Survey of India is 3,70,200 Ha., as per the Settlement and Land Records Department (Land Survey Department), the total reported area according to village papers for land utilization is 3,61,113 Ha. More than 34% of the State's area is under forest cover, which comprises seven sanctuaries, protected forests, evergreen forests in the Western Ghats, mangroves, strand vegetation and plateau vegetation. Out of the total geographical area, only 35.76% is under cultivation.

CHAPTER – 7

ORGANIZATION AND DEVELOPMENT OF IRRIGATION IN GOA

Introduction

Goa has a long coastline stretching 103 Kms. along the Arabian Sea offering picturesque beaches, estuaries and tidal zones. These coastal areas are essential for tourism, fishing and maintaining the delicate balance of marine ecosystem.

7.1 Organization of Water Resources in Goa

The Water Resources Department, Goa, has the jurisdiction for the overall development and management of water at source. The State has published the State Water Policy in the year 2000 to regulate, manage and develop the available water resources of the State and its integrated and judicious utilization in a scientific manner.

Under Water Resources Development Program, the State is successfully implementing the inter linking of rivers by transferring/diverting water from surplus rivers to deficient rivers to attain stability.

As per the Master Plans prepared by the Water Resources Department, to identify water potential and to assess the requirement of water in the State by the year 2051, an estimated 89,660 Ha. of agricultural land can be brought under irrigation, out of which 82,260 Ha. will be by surface water and 7,400 Ha. by ground water.

The following Acts have been enacted to regulate irrigation related activities in Goa.

a) Goa Irrigation Act, 1973 for construction, maintenance and regulation of canals for supply of water and certain other matters pertaining to irrigation.

b) Goa Command Area Development Act, 1997 to provide accelerated increase in agriculture and allied production in Goa through a program of comprehensive and systematic development of command area.

7.2 River Basin System in Goa

The river basin system in Goa consists of nine river basins as under:

Sr. No.	River Basin	Basin Area (Sq. kms)	% Area of Goa State	Length of river within the State of Goa (km)	Length within salinity zone (km)
1.	Terekhol	71	1.92	27.00	27.00
2.	Chapora	255	6.89	32.00	28.00
3.	Baga	50	1.35	10.00	10.00
4.	Mandovi/ Madei	1580	42.68	76.00	46.00
5.	Zuari	973	28.28	87.00	61.00
6.	Sal	301	8.13	40.00	22.00
7.	Saleri	149	4.02	11.00	5.00
8.	Talpona	233	6.29	41.00	7.00
9.	Galjibag	90	2.03	14.00	4.00

Out of the nine rivers in Goa, six rivers originate and flow exclusively within the State boundaries and do not have any Inter-State implications. However, out of the other three rivers, Terecol and Chapora originate in Maharashtra State and Mandovi and Zuariwhich originate in Karnataka State are the main and biggest rivers, which drain about 70% of the run-off generated in the State.

Plain land in the State is restricted to a few kilometers from the coastal line and since rivers flowing through the plain lands have very flat slopes at the estuarine reaches, acting as back waters of the sea, the tidal effect is felt right up to the foothills of the Western Ghats. Short lengths of rivers, deep marine ingress, steep slopes in the Western Ghats and reserved forests pose constraints for large storage structures. Due to thin soil cover and highly rugged configuration of the topography, heavy rainfall leads to high run off rendering the period from November to May dry. However, the State has provided adequate storage dams to meet the domestic, industrial, irrigation and other water supply needs of the State

Under the irrigation sector, the activities are classified into (i) Major & Medium Irrigation (ii) Minor Irrigation including water conservation schemes and allied activities (iii) Command Area Development and (iv) Western Ghats Development Program (WGDP).

7.3 Irrigation Projects

Major and Medium Irrigation Dams

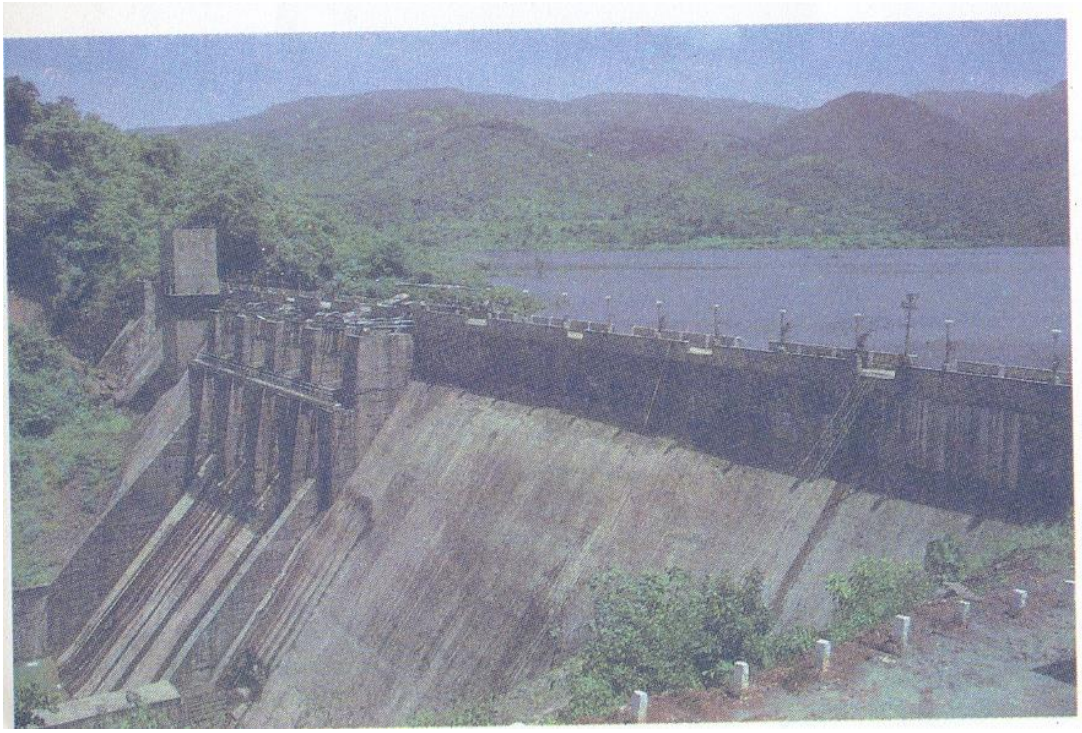
There are 3 nos. of irrigation dams viz. Salaulim, Anjunem and Tillari. Out of these, 2 nos. of dams viz. Salaulim Irrigation dam (major) with culturable command area of 9,686 Ha and the Anjunem Irrigation dam (medium)with culturable command area of 2,100 Ha, are locatedin Goa and are functioning successfully. The Tillari Irrigation dam(major),with culturable command area of 14,521 Ha, an inter-State joint venture of the Governments of Maharashtra and Goa is located at Tillariwada in Sindhadurga district of Maharashtra and the canal networks are shared in both the States. The dam meets the irrigation, domestic, industrial and other non-agricultural needs of the State.

Sl.No	Dam	Location (Taluka)	Storage (mcm)	Command Area
1.	Tillari Dam (inter-State project)	Sindhudurg District, Maharashtra	447.29	14521 Ha
2.	Salaulim Dam	Sanguem	227.16	9686 Ha
3.	Anjunem Dam	Sattari	44.83	2100 Ha

Source: Water Resources Department, Government of Goa

Salaulim Irrigation Dam

Anjunem Irrigation Dam



Tillari Irrigation Dam – A Joint Venture of the Governments of Goa and Maharashtra

Minor Irrigation Tanks/Reservoirs

At the time of Goa's liberation in 1961, there were several water bodies to meet the minor irrigation needs as well as domestic needs of the State such as lakes, ponds, wells, springs etc. There were also two small water reservoirs built by constructing dams at Khandepar across the river Khandepar and at Paroda across the river Kushavati, with canal distribution systems,

irrigating approximately 200 Ha. and 380 Ha. of land respectively.However, post liberation, with the implementation of various developmental activities, water sources have increased considerably such as minor irrigation tanks, canals, lift irrigation schemes, bandharas and post monsoon water harvesting structures which are undertaken as per feasibility.

There are 4 nos. of minor irrigation tanks constructed by the Government of Goa through the State Water Resources Department at Chapoli and Gavnem in Canacona taluka, Panchwadi in Ponda taluka and Amthane in Bicholim taluka having a combined cultural command area of 622 Ha. The minor irrigation tank at Gavnem is largely catering to the Scheduled Tribe community and also has a domestic water supply component. Details are as under:

Sl.No	Dam	Location (Taluka)	Storage (mcm)	Command Area
1.	Chapoli Tank	Canacona	10.72	212.00 Ha
2.	Panchwadi Tank	Ponda	4.36	150.00 Ha
3.	Amthane Tank	Bicholim	5.81	160.00 Ha
4.	Gavnem Tank	Canacona	1.77	100.00 Ha.

Source: Water Resources Department, Government of Goa

Gaunem M.I. Tank, Canacona Taluka

Panchwadi M.I. Tank, Ponda Taluka

Amthane M.I. Tank, Bicholim Taluka

Chapoli M.I. Tank, Canacona Taluka

Bandharas/ Post Monsoon Water Harvesting Structures

In order to overcome the precarious water shortage situations arising due to monsoon failures as well as to augment the future water requirement in the State, the State undertakes inter-linking of rivers by transferring water from surplus rivers to deficient rivers and also by constructing series of bandharas (eco-friendly structures) for augmentation of water sources to water treatment plantsespecially during the lean season.A bandhara is an environment friendly structure constructed across the river/nallah with piers and openings which are provided with removable gates or needles. The bandharas are either constructed for diversion of water or for creating storages within the river banks by retarding the interflow of ground water into the riverine systemas well asto help in ground water re-charge. Over 300 nos. of bandharas (permanent diversions and water conservation structures) have been constructed on various rivers/ nallahs.

Beneficial effects of this scheme have been felt in a tangible and substantial way and agriculture has vastly benefited due to the uninterrupted supply of irrigation water thereby opening up innumerable avenues for growth and prosperity of the farmers. Under this scheme, the riverine system has been cascading water for the full length of the river and the ground water reserve in the basins has also been built up through recharge providing a tremendous boost to irrigation and drinking water supply in the local remote areas.

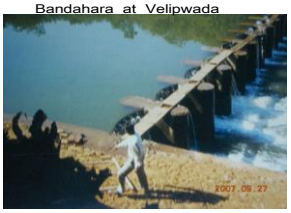
In order to boost minor irrigation, the Government provides subsidy to individuals/groups of farmers for construction of new open wells/bore wells etc.

Post Monsoon Water Harvesting Bhandharas

Bandahara at Velipwada

Bandhara at Daukhond

Bandhara at Matojanwada



Bandhara at Okhamba

Bandhara at Signewal

Bandhara at Kumbharwadi

Irrigation Program in the Hill Area/Western Ghats Region

Minor irrigation schemes having a smaller gestation period are implemented in the three talukas of Sattari, Sanguem, Dharbandora and Canacona which lie in the Western Ghats region to serve the farming populace of these areas and help in their economic up-liftment.

Surface Flow and Lift Irrigation Schemes

In Goa, surface lift schemes are popular amongst indiviual farmers whose farms are located in the command areas of major irrigation projects or minor irrigation tanks where the reverse flow in the canals is tapped by installing pump sets and lifting the water into the fields. However, large Lift Irrigation schemes are constructed and maintained only by the State department of Water Resources since they are cost intensive and generally cater to one or more villages.

Lift Irrigation Scheme (top)/ Surface Water Scheme (below)

CHAPTER – 8

6TH MINOR IRRIGATION CENSUS ANALYSIS AND KEY FINDINGS

The 6th Minor Irrigation Census was completed in Goa within the timeline of the Ministry of Jal Shakti, New Delhi. In all 6,133 nos. of minor irrigation sources were enumerated during the course of field operations, out of which 4031 nos.(66%) were ground water schemes and 2102 nos. (34%) were surface water schemes. Table 8.1 below gives a district-wise comparison of the various ground and surface water minor irrigation schemes identified in Goa during the 5th and 6th Minor Irrigation Censuses.

8.1 Number and Type of Minor Irrigation Schemes (District-wise) during the 5th (2013-14) and the 6th MIC (2017-18) Censuses

Sl. No.	Type of Source	Total number of schemes enumerated during the 5th Minor Irrigation Census			Total number of schemes enumerated during the 6th Minor Irrigation Census		
		North Goa	South Goa	Total	North Goa	South Goa	Total
1.	Dug wells	2828 (60.52)	1845 (39.48)	4673 (100)	2085 (53.02)	1847 (46.98)	3932 (100)
2.	Shallow tube wells	61 (73.49)	22 (26.51)	83 (100)	41 (57.74)	30 (42.26)	71 (100)
3.	Medium tube wells	1 (100)	-	1 (100)	15 (71.42)	6 (28.58)	21 (100)
4.	Deep tube wells	5 (44.40)	8 (55.60)	13 (100)	6 (85.71)	1 (14.29)	7 (100)
5.	Surface flow schemes	952 (44.40)	1192 (55.60)	2144 (100)	237 (23.00)	793 (77.00)	1030 (100)
6.	Surface lift schemes	443 (52.68)	398 (47.32)	841 (100)	297 (27.70)	775 (72.30)	1072 (100)
	All Sources	4290 (55.32)	3465 (44.68)	7755 (100)	2681 (43.71)	3452 (56.29)	6133 (100)

Note: Figures in brackets indicate percentages

A glance at the above table shows that dug wells is the dominant source of Irrigationin Goa with maximum number of wells i.e. 53% located in North Goa District. The surface flow irrigation is the 2nd largest widely used irrigation source with 1030 nos. of schemes with maximum schemes in South Goa i.e. 793 nos. (77%) as against 237nos. (23%) in North Goa District.

Lift Irrigation is another significant source of irrigation with 1072 nos. of schemes in Goa, out of which, 124 nos. of schemes are owned by the Public Sector. Table 8.2 below gives a compararism of the MI schemes enumerated in Goa over the past 6 censuses and the variations

8.2 Comparative Statement of Number of Irrigation Sources in the First,Second, Third, Fourth, Fifth and Sixth Minor Irrigation Census

State/District	Census	Ground Water Sources	Surface Irrigation	Total
	1st Census	5212	3764	8976
	2nd Census	4022	3928	7950
	3rd Census	5206	4845	10051
	4th Census	4423	2651	7074
	5th Census	4770	2985	7755
	6th Census	4031	2102	6133
	*Variation (%)	(-15.50)	(-29.59)	(-20.92)
	1st Census	4133	1786	5919
	2nd Census	2891	2744	5635
	3rd Census	3819	3238	7057
	4th Census	2995	1194	4189
	5th Census	2895	1395	4290
	6th Census	2147	534	2681
	*Variation (%)	(-25.84)	(-61.73)	(-37.51)
	1st Census	1079	1978	3057
	2nd Census	1131	1184	2315
	3rd Census	1387	1607	2994
	4th Census	1428	1457	2885
	5th Census	1875	1590	3465
	6th Census	1884	1568	3452
	*Variation (%)	(+0.48)	(-1.39)	(-0.38)

* Variation as compared to 5th Minor Irrigation Census

8.3 AGRICULTURAL LAND HOLDINGS

As per the 10th Agriculture Census 2015-16, there were 74,563 operational land holders in Goa with a total area of 82,085 Ha. of operational land holdings. The average size of a land holding in Goa is small i.e. a mere 1.10 Ha. The proportion of land holdings below 1 Ha. is about 80%. The details of the distribution of number and area of operational land holdings by size classes along with its percentages is given in the table below. It is evident from the table that the land distribution in Goa is very uneven.

Sl. No.	Size Classes (Ha.)	Total Holdings	
		Number	Area (Ha.)
1	2	3	4
1	Below 0.5	46016 (61.71)	11701.20 (14.25)
2	0.5 - 1.0	13456 (18.05)	11774.99 (14.34)
3	1.0 - 2.0	8083 (10.84)	13432.90 (16.36)
4	2.0 - 3.0	3002 (4.03)	8847.87 (10.78)
5	3.0 - 4.0	1307 (1.75)	5170.44 (6.30)
6	4.0 - 5.0	849 (1.14)	4194.35 (5.11)
7	5.0 - 7.5	905 (1.21)	6621.35 (8.07)
8	7.5 - 10.0	338 (0.45)	3296.75 (4.02)
9	10.0 - 20.0	375 (0.50)	6294.02 (7.67)
10	20.0 and above	232 (0.31)	10751.02 (13.10)
	Total	**74563 (100)**	**82084.89 (100)**

Source: Agriculture Census, 2015-16. Figures in brackets indicate percentages)

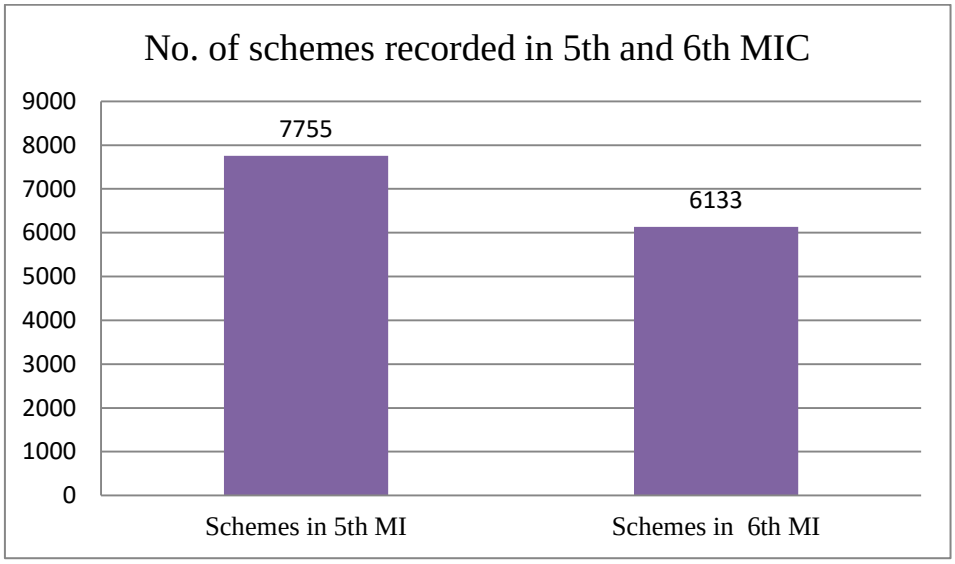
As can be seen from the above Table, land holdings in Goa are largely marginal in size and cultivated area is predominantly rain fed, given the fact that that Kharif paddy is the major crop grown in the State. Irrigation is restricted to a meagre cultivated area in the State.

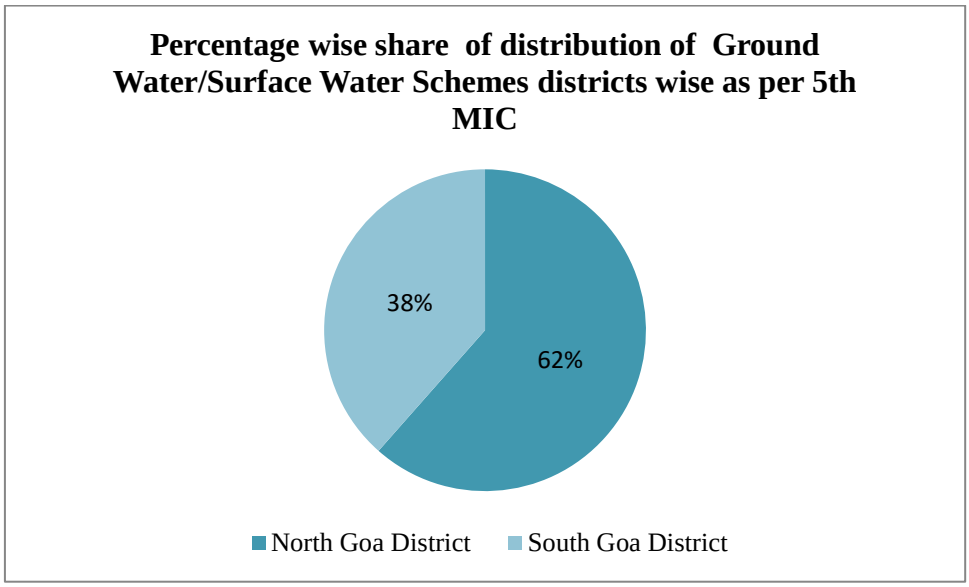
8.4 The 6th Census of minor Irrigation schemes with reference year 2017-18 was conducted in 2 districts covering 404 revenue villages. Collection of data of 6,133 minor irrigation schemes was completed by the enumerators in the State under the overall supervision of the Directorate of Planning, Statistics and Evaluation, Government of Goa (Nodal Department). The Key findings of the 6th MIC, parameter wise analysis, scheme wise analysis and comparison with 5th MIC are summarized below and are followed by detailed analysis. So also, the detailed data tables as per the Census results are appended.

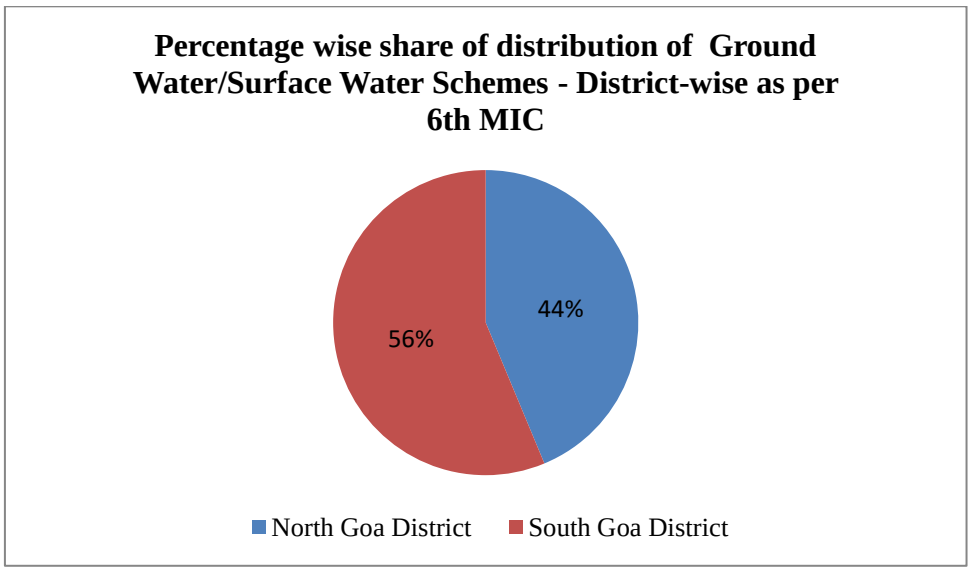
- Ground water continues to dominate the minor irrigation scene and accounts for a major share (65.7%) and Surface water accounts for 34.3% as per 6th MIC as compared to 61.50% Ground Water Schemes and 38.50% Surface Water Schemes recorded in the 5th MIC.
- 92.9% minor irrigation schemes continue to remain under private ownership, and 6.1% under public ownership.
- Own Savings continues to be the major source of financing minor irrigation schemes in the private sector.
- The water distribution to fields through open channel accounts for 32.8% of share followed by sprinklers and surface pipes.
- Total 3,932 nos. of dug wells were enumerated in the 6th MIC which is 64.1% of the total enumerated schemes compared to 4673 nos. dug wells enumerated in the 5th MIC. There was a decline by 741 nos. of dug wells which is 15.85% lower than 5th MIC. These are largely wells which formerly served both irrigation and domestic purposes but are now restricted to domestic use only.
- Total 1,072 nos. of Surface Lift Schemes were enumerated in the 6th MIC which is 17.5% of the total enumerated schemes as compared to 841 nos. of surface lift schemes recorded in 5th MIC, which is 21.54% higher than 5th MIC. This is due to commissioning of more lift irrigation schemes by the State Water Resources Department.
- Total 1,030 nos. of Surface Flow Schemes were enumerated in the 6th MIC which is 16.8% of the total enumerated schemes as compared to 2,144 nos. of surface flow schemes recorded in 5th MIC, which is 51.95% lower than 6th MIC.
- Total 71 nos. of Shallow Tube wells were recorded in the 6th MIC which is 1.15% of the total enumerated schemes as compared to 83 nos. of shallow tube wells recorded in the 5th MIC, registering a decline by 14.45% in the 6th MIC.

- Total 21 nos. of Medium Tube wells were enumerated in the 6th MICensus which is 0.32% of the total enumerated schemes compared to only one medium tube well recorded in 5th MIC, which has increased by 20 times in the 6th MIC.
- Total 7 nos. Deep Tube Wells were listed in the 6th MIC which is 0.11% of the total enumerated schemes as against 13 nos. of deep tube wells recorded in the 5th MIC a decline of 53.84% in the 6th MI.
- As per 6th MIC, 3,180 hectares irrigation potential is created through Ground Water schemes and 4,430 hectares through Surface Water schemes. Irrigation potential utilized is 3,037 hectares and 4,083 hectares for Ground Water and Surface Water schemes, respectively.
- 95.5% of the potential created through Ground Water Schemes has been utilized while percentage utilization in respect of Surface Water schemes is 92.2%.
- There has been a marginal increase of 0.9% in the irrigation potential created in 6th MIC compared to 5th MIC.

As per the 6th Census of Minor Irrigation Schemes with reference year 2017-18, Goa has 6,133 MI schemes comprising of 65.7% (4,031 nos.) Ground Water (GW) schemes and 34.3% (2102 nos.) Surface Water (SW) schemes. There is a decline to the tune of 20.9% in 6th MIC as compared to 7,755 schemes in 5th MIC in the State of Goa.

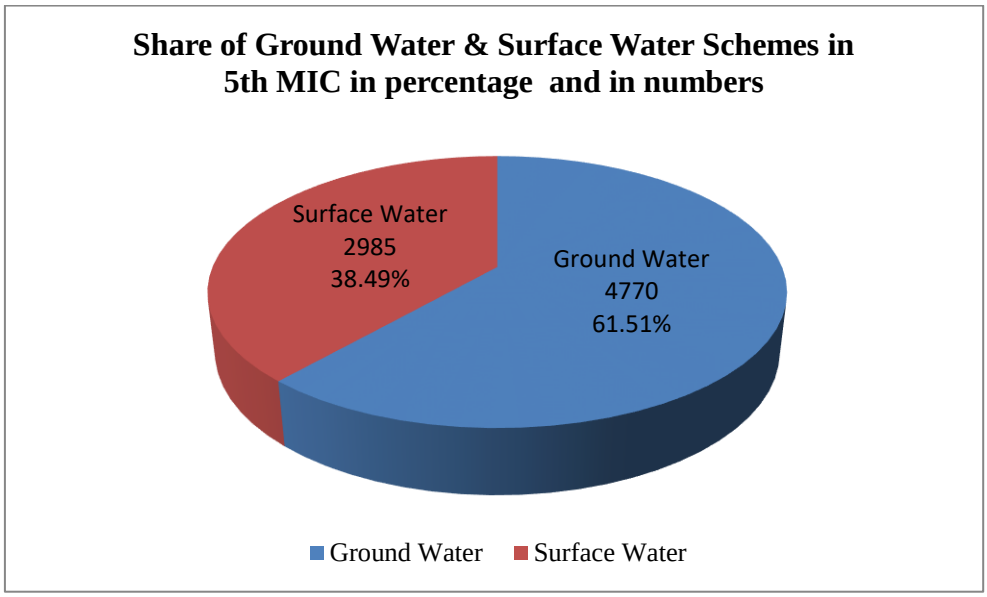


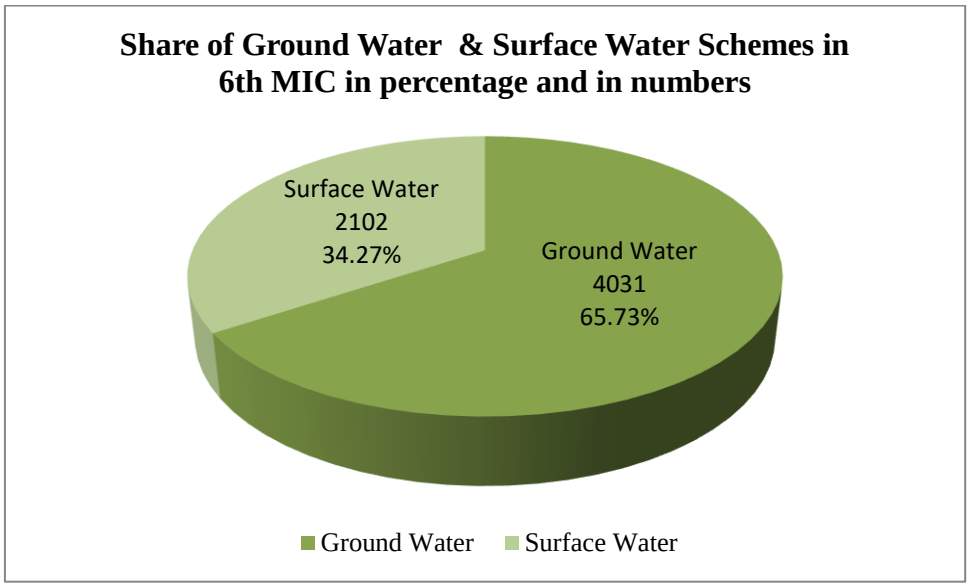




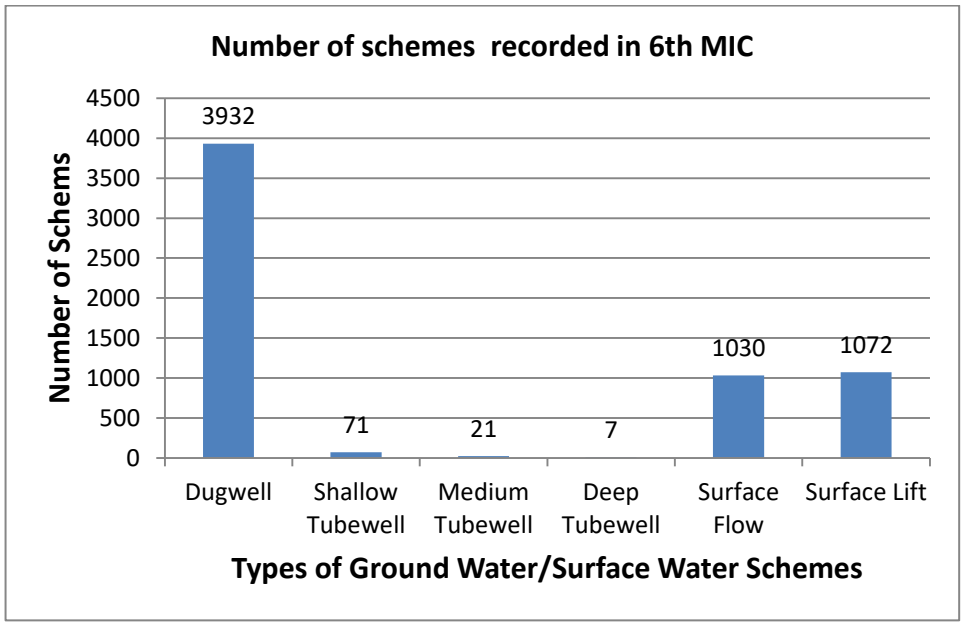
There is a decline of 15% (739 nos.) in Ground Water Schemes and 30% (883 nos.) in Surface Water Schemes during 6th MIC compared to 4,770 Ground Water Schemes and 2,985 Surface Water Schemes recorded in 5th MIC.

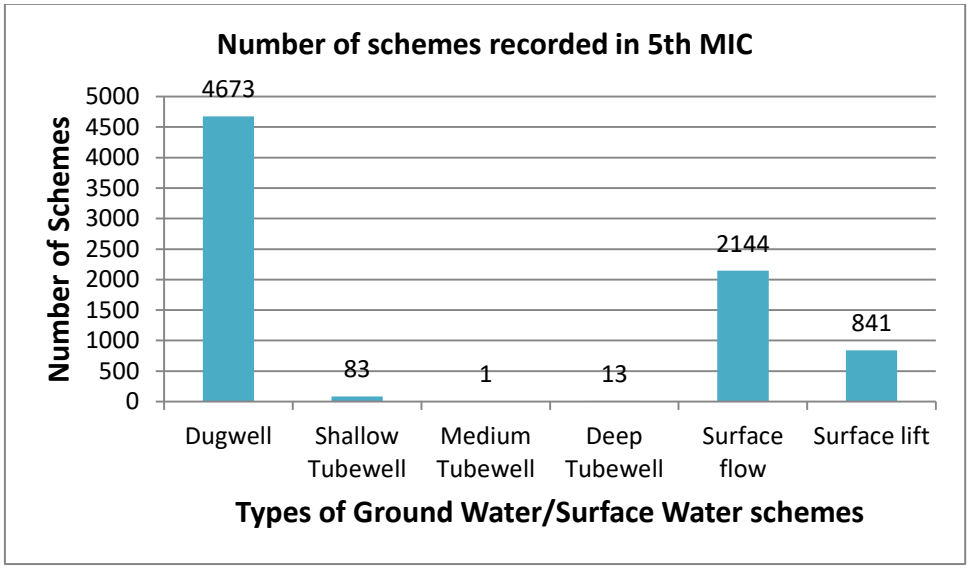
The share of Ground Water Schemes in the State of Goa has increased from 61.5% in 5th MIC to 65.7% in 6th MIC whereas share of Surface Water Schemes declined from 38.5% in 5th MIC to 34.3% in 6th MIC as shown in the pie chart given below.





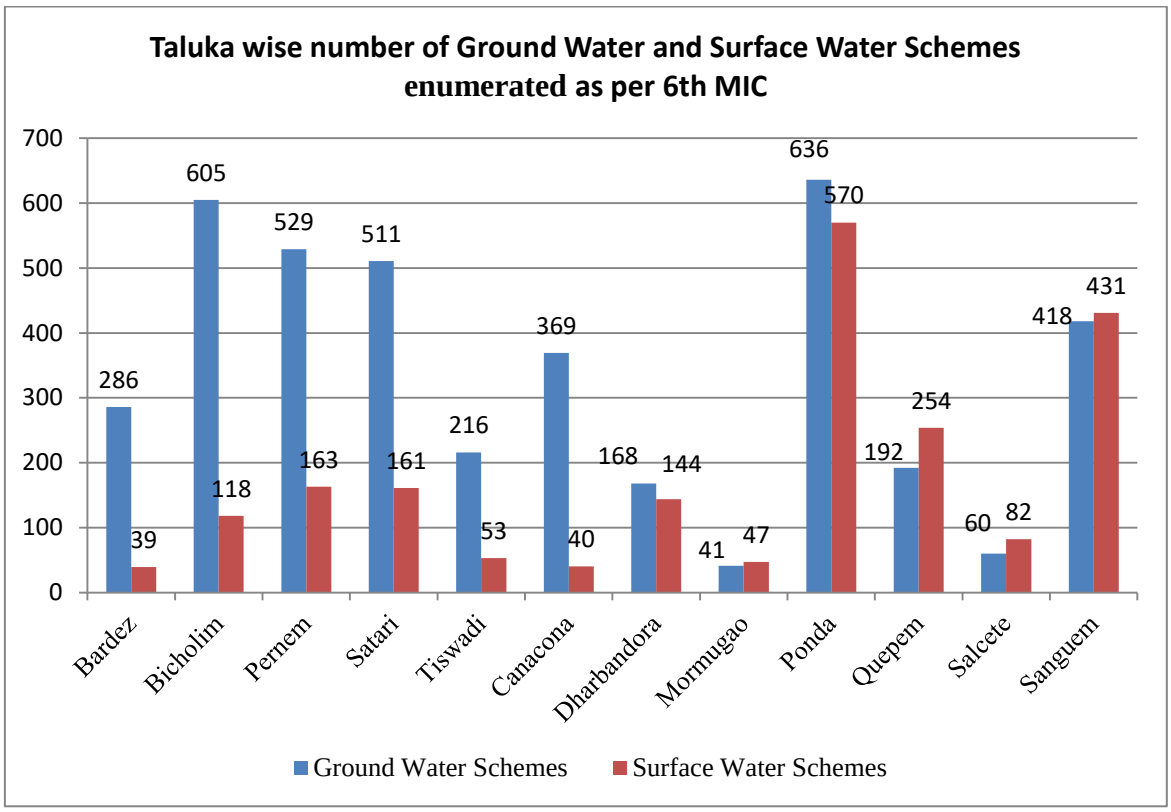
Out of the 6,133 nos. of MI schemes reported in Goa, 64.1% (3,932 nos.) are dug wells followed by 17.5% (1,072 nos.) Surface Lift and 16.8% (1,030 nos.) Surface Flow schemes. Distribution of different Ground Water and Surface Water schemes is shown in the chart below.





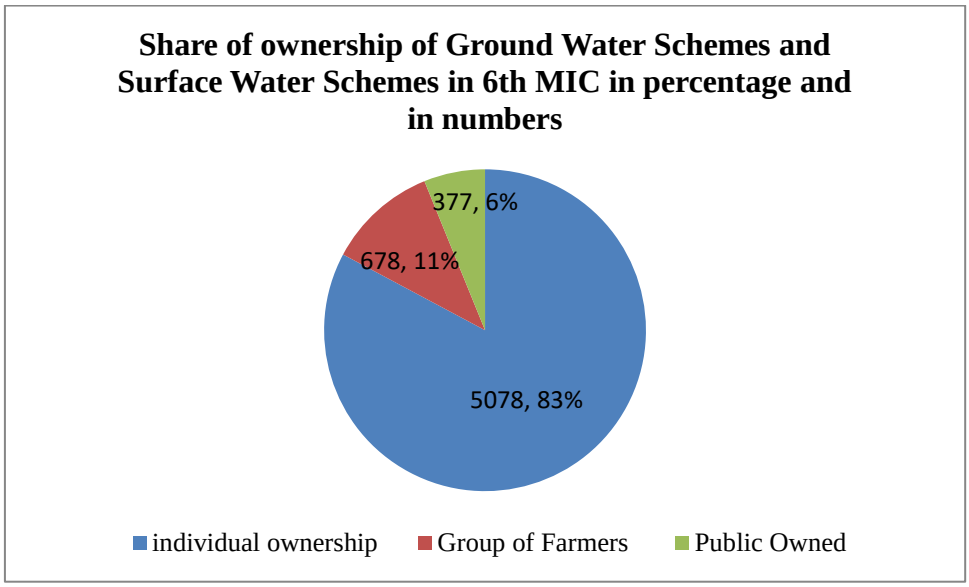
Out of the 6,133 MI schemes reported in Goa, Ponda taluka has total 570 nos. of Surface Water Schemes and 636 nos. of Ground Water Schemes in South Goa District which is 19.66% of total schemes recorded in 6th MIC, followed by Sanguem taluka which has 431 nos. of Surface Water Schemes and 418 nos. of Ground Water Schemes, which is 13.84% of the total schemes. Bicholim taluka has 118 nos. of Surface Water Schemes and 605 nos. of Ground Water Schemes in North Goa District, which is 11.78% of the total schemes recorded in 6th MIC. Pernem taluka has 163 nos. of Surface Water Schemes and 529 nos. of Ground Water Schemes which is 11.28% , Sattari taluka has 161 nos. of Surface Water Schemes and 511 nos. of Ground Water Schemes which is 10.95%, Quepem taluka has 254 nos. of Surface Water Schemes and 192 nos. of Ground Water Schemes which is 7.27%, Canacona taluka has 40 nos. of Surface Water Schemes and 369 nos. of Ground Water Schemes which is 6.66%, Bardez has 39 nos. of Surface Water Schemes and 286 nos. of Ground Water Schemes which is 5.29%,

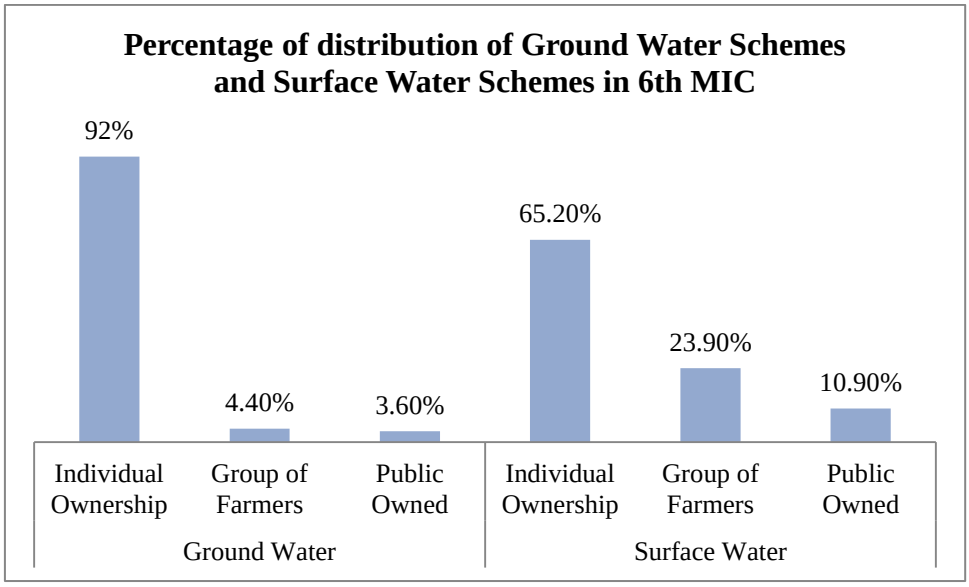
Dharbandora taluka has 144 nos. of Surface Water Schemes and 168 nos. of Ground Water Schemes which is 5.08%, Tiswadi taluka has 53 nos. Surface Water Schemes and 216 nos. of Ground Water Schemes, which is 4.38%, Salcete taluka has 82 nos. of Surface Water Schemes and 60 nos. of Ground Water Schemes which is 2.31%, and Mormugao taluka has 47 nos. of Surface Water Schemes and 41 nos. of Ground Water Schemes, which is 1.43% of the total schemes enumerated as per 6th Minor Irrigation Census.



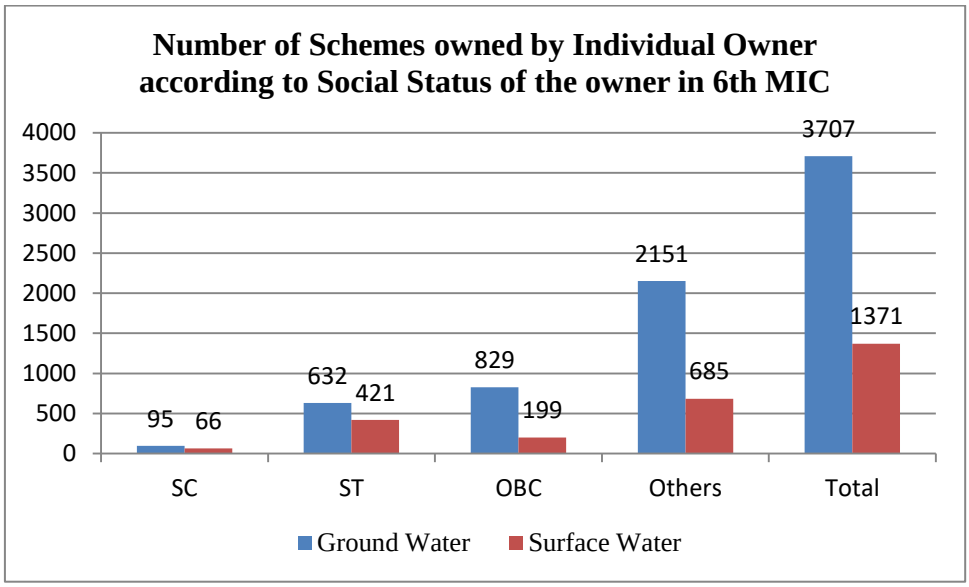
Ownership of Minor Irrigation Schemes

Out of 6,133 MI Schemes, majority of the schemes i.e. 82.8% (5,078 nos.) continue to remain under individual ownership, 11.1% (678) schemes are owned by group of farmers and a small chunk of 6.1% (377) schemes are publically owned. Among 4,031 Ground Water schemes, 92.0% (3,707) schemes are individually owned and among 2,102 Surface Water schemes, 65.2% (1,371) are owned by individual farmers. Most of MI structures in Goa are owned by individual farmers or group of farmers which has been brought out in the figure given below. Individual farmers/group of farmers are getting maximum benefit from minor irrigation schemes.

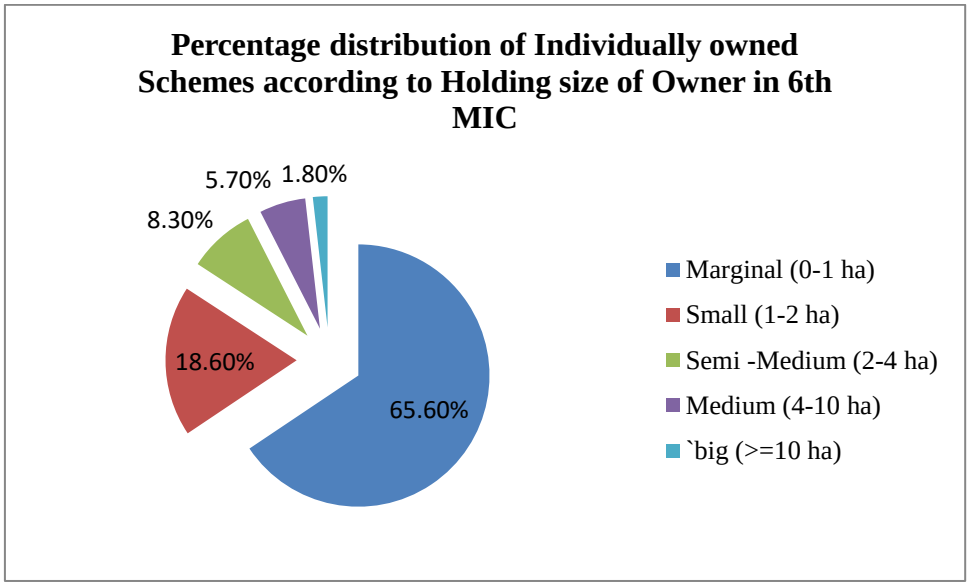




Out of 5,078 individually owned schemes based on social status of owner, Scheduled Castes (SC) owns 95 nos. of Ground Water Schemes as compared to 66 nos. of Surface Water Schemes. Scheduled Tribe (ST) owners own 632 nos. of Ground Water Schemes as compared to 421 nos. of Surface Water Schemes. Other Backward Class (OBC) owners own 829 nos. of Ground Water Schemes as compared to 199 nos. of Surface Water Schemes. Other Owners owns 2,151 nos. of Ground Water Schemes as compared to 685 nos. of Surface Water Schemes. Number of schemes owned by individual owners according to social status of the owner is given in the chart below.



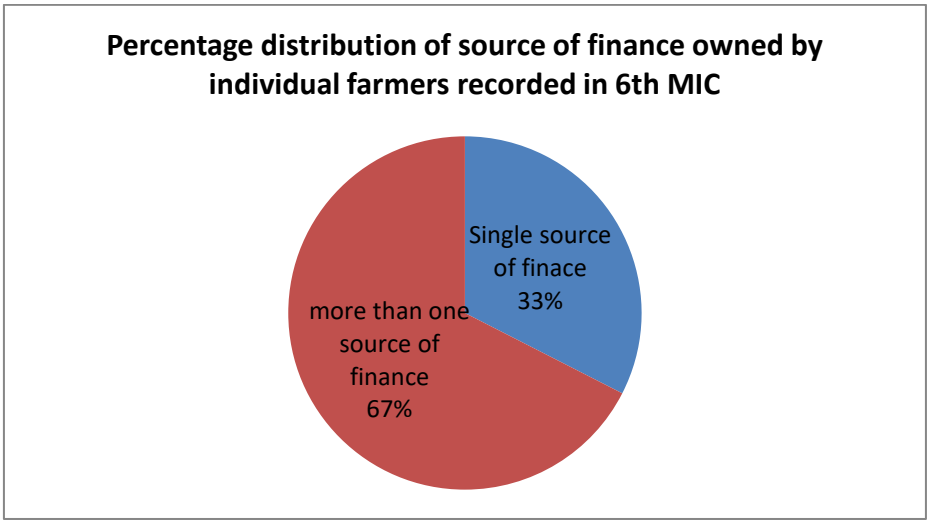
Out of 5,078 nos. of individually owned schemes, based on size of holding of the owner, small and marginal farmers (having less than 2 hectares) still own a major share of 84.2% (4,276 nos.) in MI schemes. The remaining 15.8% of schemes are owned by semi-medium farmers with holding size of more than 2 hectares which is shown in the pie chart given below. This emphasizes the need for strengthening the network of MI structures for irrigation purposes which will play a crucial role in improving the livelihood of small and marginal farmers.

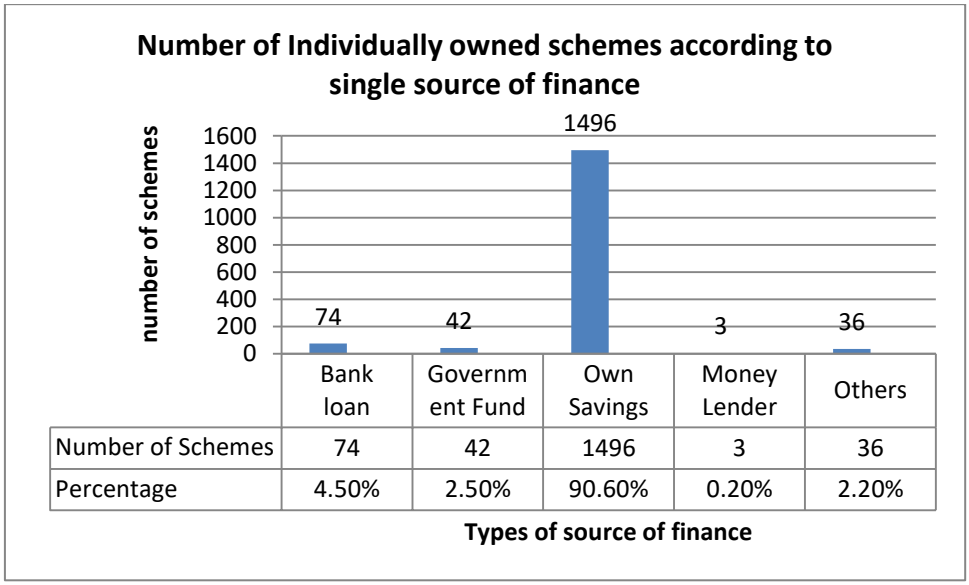


Financing of Minor Irrigation Schemes

Out of the total 5,078 nos. of individually owned schemes, 32.5% (1,651 nos.) have single source of finance for constructing the schemes whereas 67.5% (3,427 nos.) have more than one source of finance. In the schemes with single source of finance (1,651), majority of schemes i.e. 90.6% (1496 nos.) are being financed by own savings of individual farmer. Other reported

sources of finance are bank loan 4.5% (74 nos.), Government fund 2.5% (42 nos.), money lenders 0.2% (3 nos.) and others 2.2% (36 nos.). Distribution of individually owned Minor Irrigation schemes according to source of finance is shown in the chart given below.

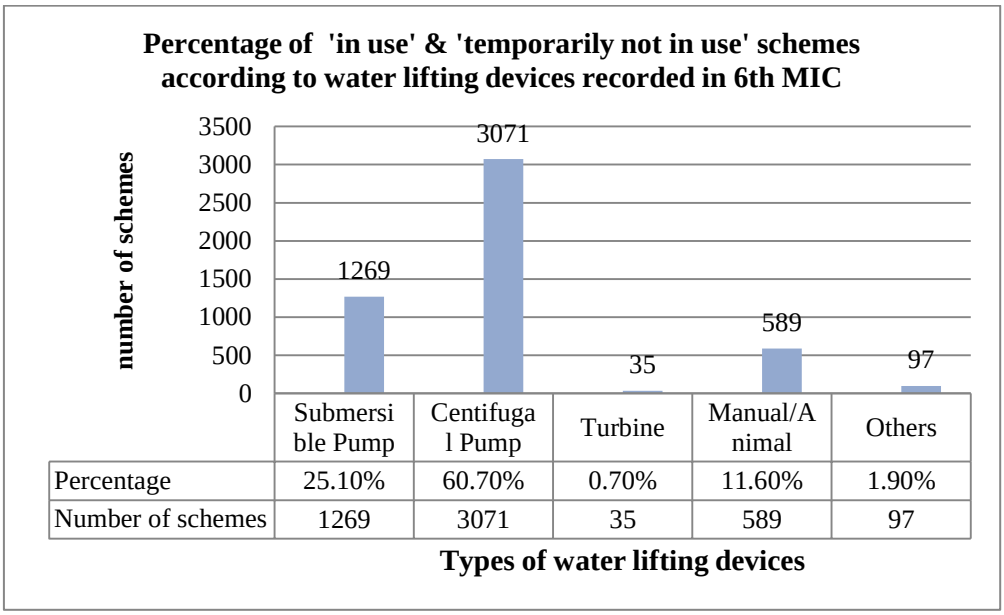




Distribution of lifting devices in Minor Irrigation Schemes

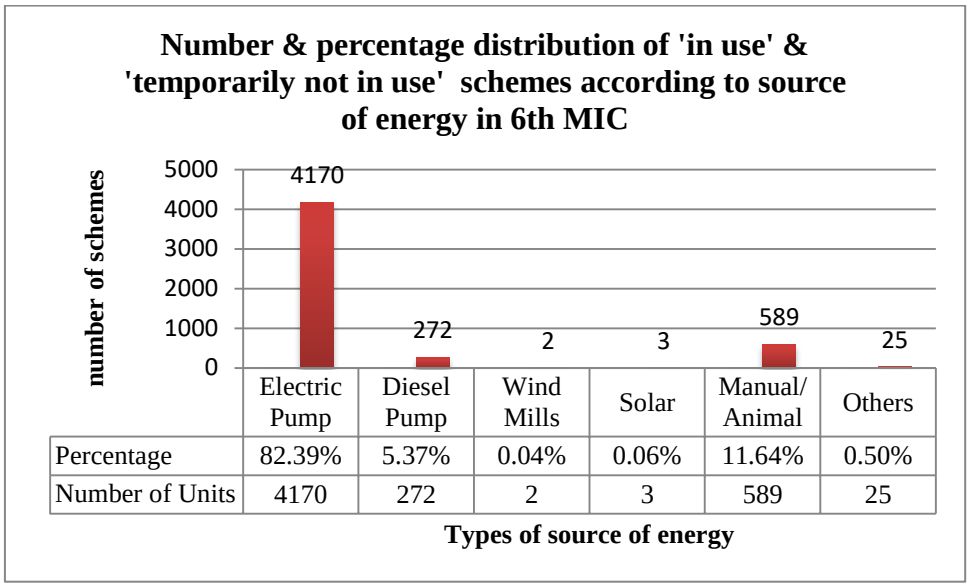
During 6th MIC, the information on lifting device was collected for 'in use' and 'temporarily not in use' schemes which comes under the category of ground water and surface lift schemes. The number of such schemes is 5,061 nos., out of the total 6,133 nos. of MI schemes. Out of these (5,061 nos.) schemes, majority of schemes i.e. 60.7% (3,071 nos.) have centrifugal pump and 25.1% (1,269 nos.) schemes have submersible pump as lifting device. 11.6% (589 nos.) schemes are being operated manually or by using animal power for water lifting purposes. 0.7% (35 nos.) are operated by turbines and rest 1.9% (97 nos.) use some other lifting devices.

The percentage distribution of schemes according to lifting devices is shown in the figure given below.



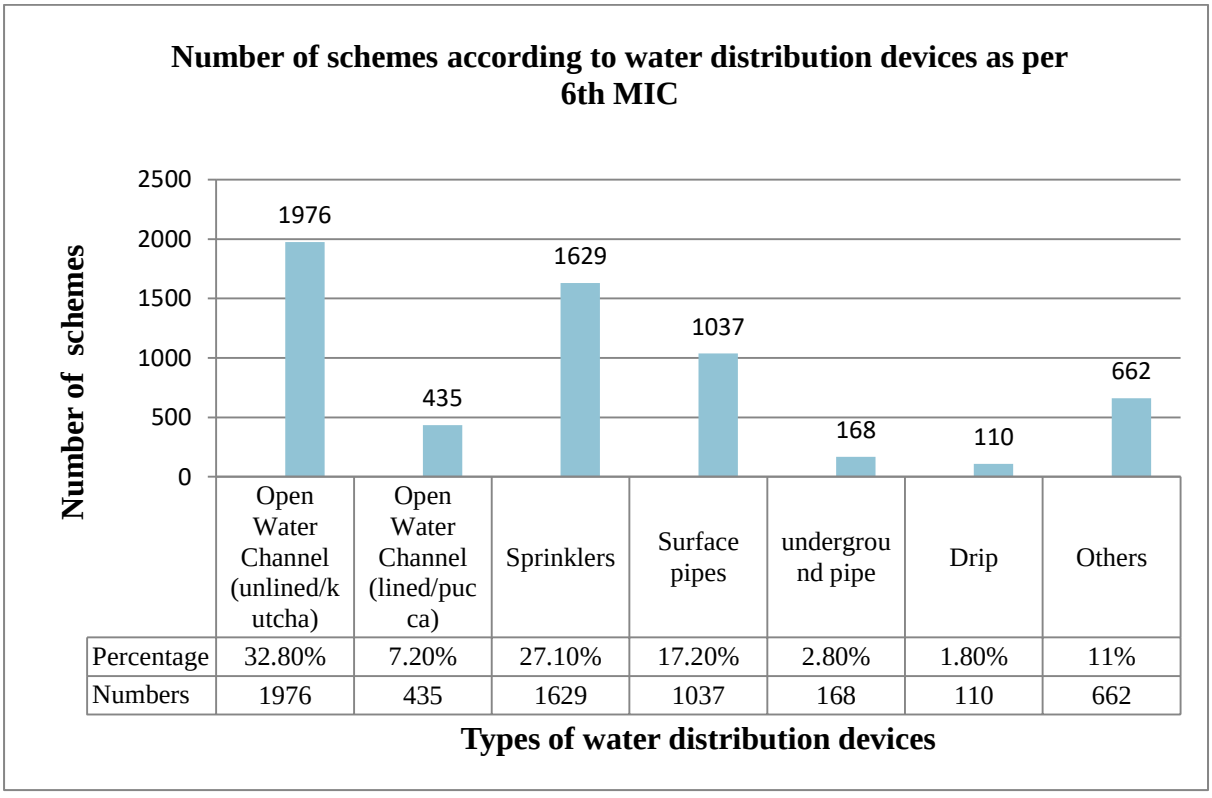
Distribution of Source of Energy

The information on source of energy used for operating lifting devices for lifting water from the MI scheme was collected for ‘in use’ and ‘temporarily not in use’ schemes which come under the category of ground water and surface lift schemes. The number of such schemes is 5,061. Out of these schemes, majority of schemes i.e. 82.39% (4,170 nos.) schemes are using electricity as source of energy followed by diesel pumps in 5.37% (272 nos.) schemes. In rest of the cases, 11.64% (589 nos.), 0.06% (3 nos.), 0.04% (2 nos.) and 0.50 (25 nos.) schemes are using manual labour, animal power, solar pumps, wind mills and other sources respectively. The percentage distribution of schemes according to source of energy is shown in the chart given below.



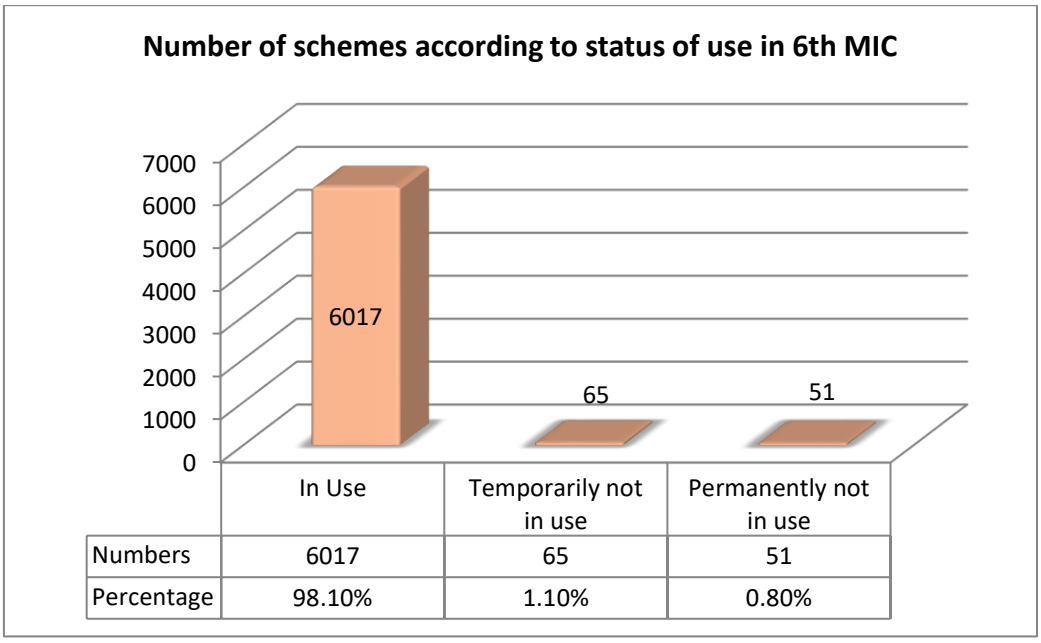
Water Distribution Device

As per the 6th MIC, the percentage share of MI schemes which distribute water through open water channel (unlined/kutcha) is 32.8% (1,976 nos.) followed by 27.1% (1,629 nos.) sprinklers and 17.2% (1,037 nos.) surface pipes. The water distribution devices used in the rest of the MI Schemes are 7.2% (435 nos.) open water channel (lined/pucca), 2.8% underground pipe (168 nos.), 1.8% (110 nos.) drip and 11% (662 nos.) in others category. The percentage share of schemes according to water distribution devices is shown in the chart given below.

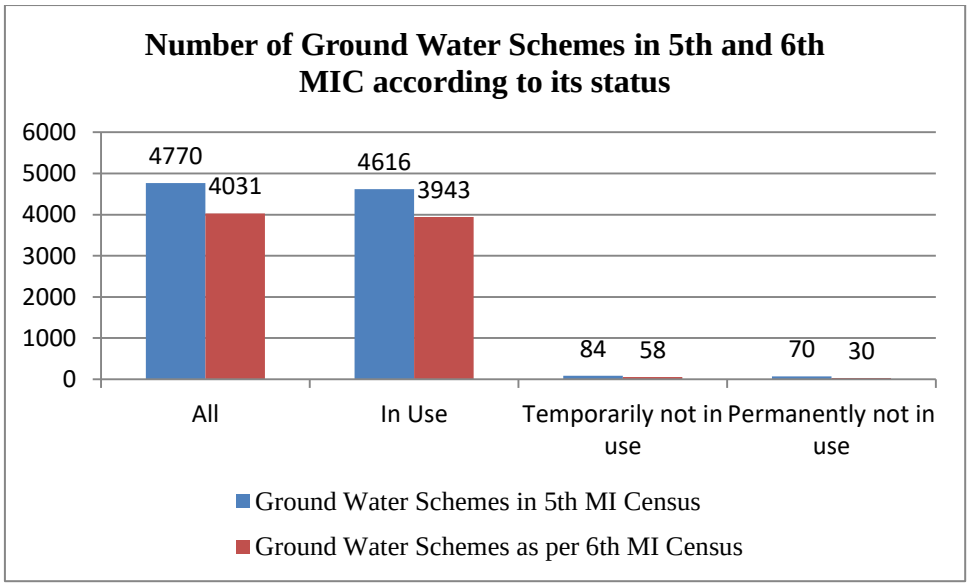


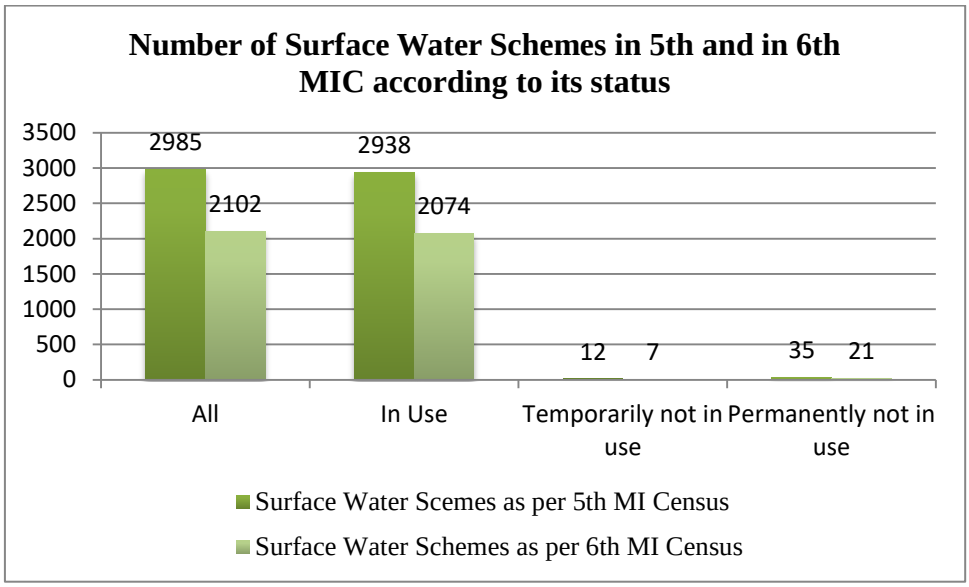
Status of Minor Irrigation Schemes

Out of total number of 6,133 MI schemes, 98.1% (6,017) are 'in use'. 1.1% (65) are 'temporarily not in use' and only 0.8% (51) are 'permanently not in use' schemes which is shown in column chart given below.



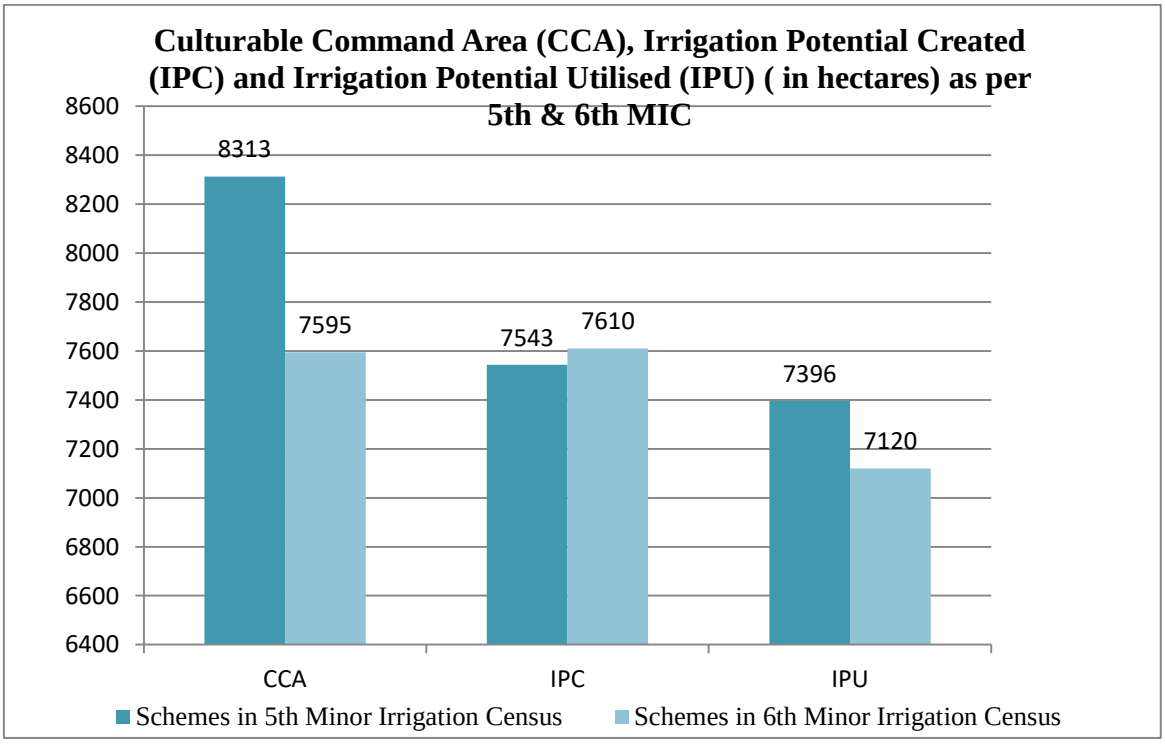
Out of 65 nos. of 'temporarily not in use' schemes, 58 nos. are Ground Water Schemes and 7 nos. are Surface Water Schemes. Among 51 nos. of 'Permanently not in use' schemes, 30 nos. are Ground Water and 21 nos. are Surface Water schemes. Status of Ground Water and Surface Water schemes during the 5th and 6th MIC is shown in the graphs below.





Irrigation Potential Created (IPC) and Irrigation Potential Utilized (IPU)

There has been marginal increase of 0.9% in the irrigation potential created from minor irrigation structures in the State during 6th MIC as compared to 5th MIC since IPC is increased from 7,543 hectares during 5th MIC to 7,610 hectares during 6th MIC. Irrigation potential utilized was 7,396 hectares during 5th MIC in Goa, which has declined by 3.7% during 6th MIC. A comparative chart showing Culturable Command Area (CCA), IPC and IPU of schemes during 5th and 6th MIC is shown in the chart given below.



As per 6th MIC, 3,180 hectares irrigation potential is created through Ground Water schemes and 4,430 hectares through Surface Water schemes. Irrigation potential utilized is 3,037 hectares and 4,083 hectares for Ground Water and Surface Water schemes, respectively. This shows that 95.5% of the potential created through Ground Water Schemes has been utilized while percentage utilization in respect of Surface Water schemes is 92.2%. The scheme-wise ratio of Irrigation Potential Utilised and Irrigation Potential Created in Goa is presented in the table given below.

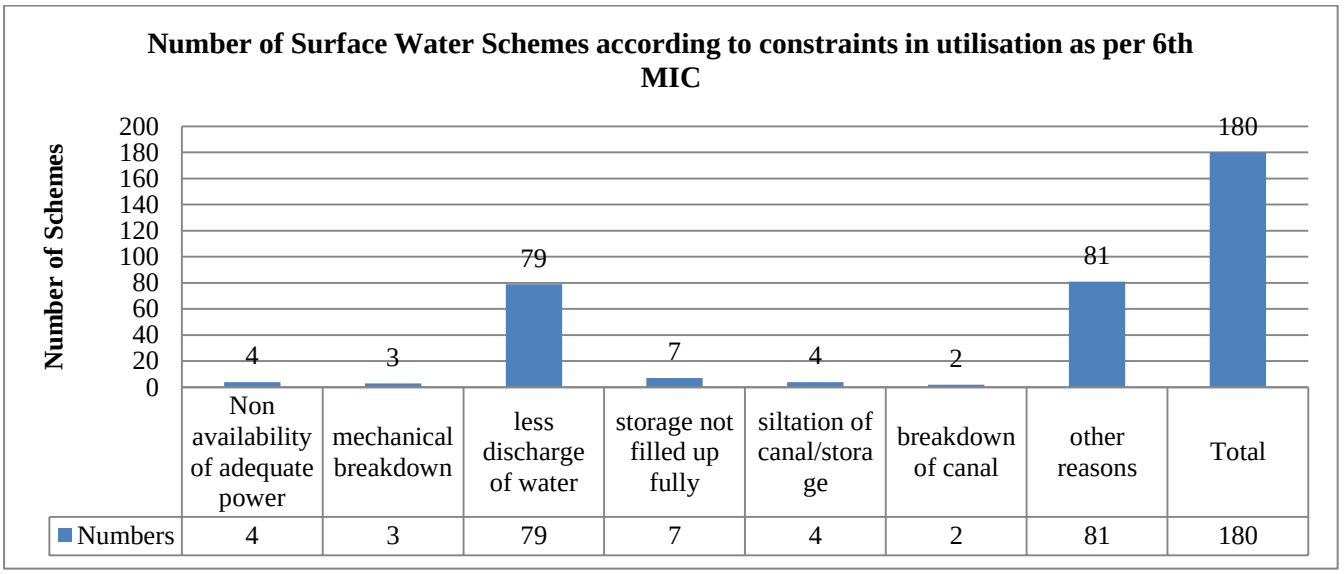
Scheme-wise ratio of IPU to IPC in Goa			
	IPC	**IPU**	**Ratio of IPU/IPC**
Dug wells	3,084	2,942	0.95
Shallow Tube wells	62	62	1.00
Medium Tube wells	30	30	1.00
Deep Tube wells	5	4	0.79
Surface flow	1,953	1,708	0.87
Surface lift	2,477	2,375	0.96

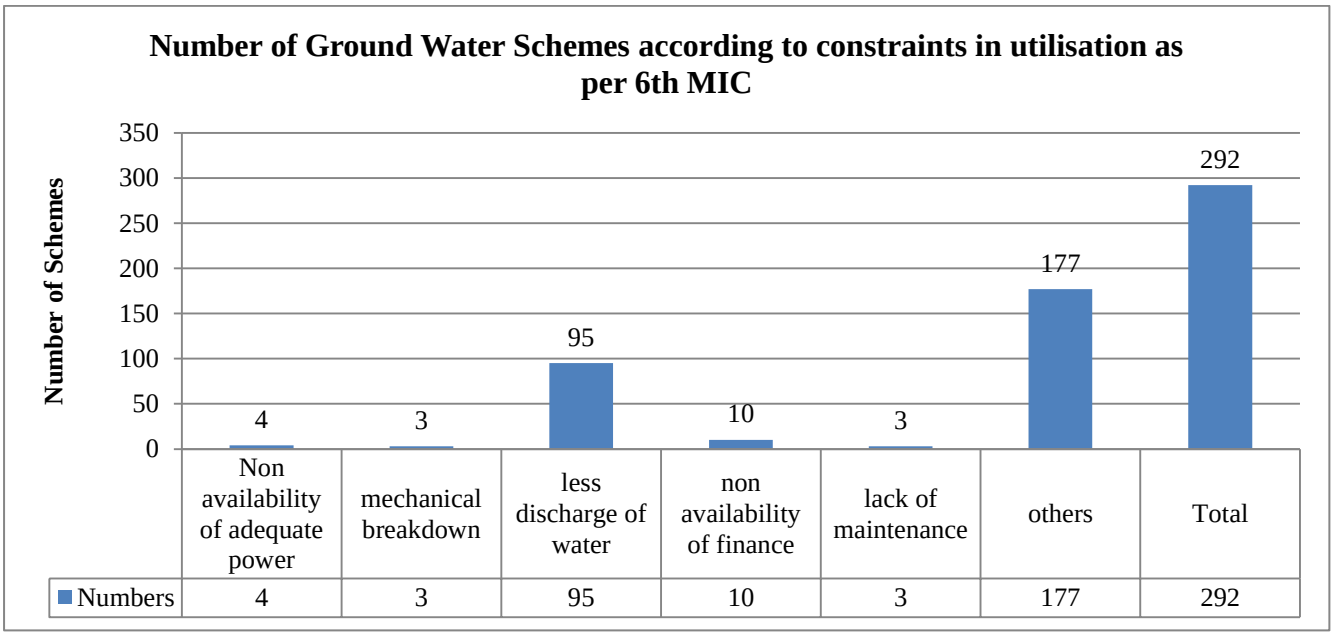
Dug wells have the highest Irrigation Potential Created (IPC) and Irrigation Potential Utilised followed by Surface Lift and Surface Flow Schemes. If we see the ratio of IPU to IPC in 6th MIC for different types of schemes, all the schemes shows more than 85% utilisaton of the potential created except deep tube wells with a utilization of 79%.

Under utilization of In-Use Schemes

It is observed in the previous rounds of Minor Irrigation Censuses that many 'in use' schemes were under–utilised due to various constraints. As per the 6th MIC, 472 nos. of (7.8%) schemes out of 6,017 nos. of 'in use' schemes in Goa are under utilized due to several reasons. Remaining 92.2% 'in use' MI schemes are functioning without any constraints.

Among 472 nos. of under-utilised schemes, 292 nos. of schemes are Ground Water Schemes and 180 nos. are Surface Water Schemes. The major factor contributing to constraints in utilization of Ground Water Schemes is reported to be 'less discharge of water' followed by non-availability of finance. On the other hand, the Surface Water Schemes are under utilised mainly due to 'less discharge of water'. The percentage distribution of reasons of under-utilisation of Ground Water and Surface Water Schemes is shown in chart given below.


Number of Surface Water Schemes according to constraints in utilisation as per 6th MIC
Number of Schemes
200
180
160
140
120
100
80
60
40
20
0
4
3
79
7
4
2
81
180
Non availability of adequate power
mechanical breakdown
less discharge of water
storage not filled up fully
siltation of canal/storage
breakdown of canal
other reasons
Total
Numbers
4
3
79
7
4
2
81
180


Number of Ground Water Schemes according to constraints in utilisation as per 6th MIC
Number of Schemes
350
300
250
200
150
100
50
0
4
3
95
10
3
177
292
Non availability of adequate power
mechanical breakdown
less discharge of water
non availability of finance
lack of maintenance
others
Total
Numbers
4
3
95
10
3
177
292

Key Parameters of 6th Minor Irrigation Census						
Parameter		**Unit**	**Value**			**(%)**
Number of Schemes	**Ground Water Schemes**					
	Dug Wells	No.	3,932			64.11
	Shallow Tube Wells	No.	71			1.16
	Medium Tube Wells	No.	21			0.34
	Deep Tube Wells	No.	7			0.11
	Total Ground Water Schemes	No.	**4,031**			**65.73**
	Surface Water Schemes					
	Surface Flow	No.	1,030			16.79
	Surface Lift	No.	1,072			17.48
	Total Surface Water Schemes	No.	**2,102**			**34.27**
	Total Schemes (Ground Water + Surface Water)	**No.**	**6,133**			**100.00**
			GW	**SW**	**Total**	
CCA,IPC,and IPU	Culturable Command Area (CCA)	Ha.	3,165	4,430	7,595	
	Irrigation Potential Created (IPC)	Ha.	3,180	4,430	7,610	
	Irrigation Potential Utilized (IPU)	Ha.	3,037	4,083	7,120	
	IPC of In Use Schemes	Ha.	3,149	4,302	7,451	
	IPU of In Use Schemes	Ha.	3,017	4,079	7,096	
	% Ratio of IPU with respect to IPC	%	**95.50**	**92.17**	**93.56**	
	Gap in IPC and IPU	**Ha.**	**143**	**347**	**490**	
Number of Schemes by Ownership	Individual Ownership	No.	3,707	1,371	5,078	82.80
	Group of Farmers	No.	177	501	678	11.05
	Public Owned	No.	147	230	377	6.15
	Total	**No.**	**4,031**	**2,102**	**6,133**	**100.00**
Social Status of Individual Owners	SC	No.	95	66	161	3.17
	ST	No.	632	421	1,053	20.74
	OBC	No.	829	199	1,028	20.24
	Others	No.	2,151	685	2,836	55.85
	Total Individual Owners	**No.**	**3,707**	**1,371**	**5,078**	**100.00**
Water Distribution Devices	Open Water Channels (Lined/Pucca)	No.	239	196	435	7.23
	Open water channel (unlined/kutcha)	No.	912	1,064	1,976	32.84
	Underground Pipe	No.	134	34	168	2.79
	Surface Pipe	No.	903	134	1,037	17.23
	Drip	No.	87	23	110	1.83
	Sprinklers	No.	1,247	382	1,629	27.07
	Others	No.	421	241	662	11.00
	Total	**No.**	**3,943**	**2,074**	**6,017**	**100.00**

MINOR IRRIGATION CENSUS (2017-18) - STATISTICAL TABLES

Integrated Tables:

These tables contain State wise aggregate data for the reference year 2017-18 for all types of schemes on key items such as number, irrigation potential created, irrigation potential utilised for MI schemes, crop-wise irrigation, sources of finance for construction of schemes in the private sector, distribution of MI schemes by social category, type of farmers, e.g., marginal, small, big farmers, use of distribution devices, constraints in utilization of MI schemes etc.

Scheme-wise Tables:

These tables contain detailed tables on other important aspects of ground water and surface water MI schemes separately by each type of scheme. The items covered are ownership of scheme, cost of construction, distribution device, social status of owner, type and status of scheme, source of finance and water lifting device. The scheme wise tables also provide data for the State on each item. Additional district level data is available on the website of the Ministry and data upto village level is made available in the Open Government Data (OGD) platform (http://data.gov.in) as per the National Data Sharing & Accessibility Policy (NDSAP), Government of India.

6th Minor Irrigation Census Tables: Integrated

6th Minor Irrigation Census Tables: Dug Wells

6th Minor Irrigation Census Tables: Shallow Tube Wells

6th MI Census Tables: Medium Tube Wells

6th MI Census Tables: Deep Tube Wells

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6th MI Census Tables: Surface Flow Schemes

6th MI Census Tables: Surface Lift Schemes

Minor Irrigation Schemes at a Glance in Goa

Sl. No.	Districts	Taluka	No. of Villages	Total Number of Schemes								
				Ground Water					Surface Water			
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Schemes	Surface Lift Schemes	Total	Total (9+12)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
1	**North Goa**	Bardez	43	285	1	0	0	286	26	13	39	325
2		Bicholim	31	604	1	0	0	605	29	89	118	723
3		Pernem	27	523	1	3	2	529	78	85	163	692
4		Satari	78	463	32	12	4	511	52	109	161	672
5		Tiswadi	39	210	6	0	0	216	52	1	53	269
		Total A	**218**	**2085**	**41**	**15**	**6**	**2147**	**237**	**297**	**534**	**2681**
6	**South Goa**	Canacona	10	366	3	0	0	369	23	17	40	409
7		Dharbandora	16	163	2	3	0	168	56	88	144	312
8		Mormugao	14	41	0	0	0	41	34	13	47	88
9		Ponda	32	631	4	1	0	636	290	280	570	1206
10		Quepem	42	177	14	1	0	192	177	77	254	446
11		Salcete	50	57	2	0	1	60	67	15	82	142
12		Sanguem	36	412	5	1	0	418	146	285	431	849
		Total B	**200**	**1847**	**30**	**6**	**1**	**1884**	**793**	**775**	**1568**	**3452**
	Goa	**Grand Total (A+B)**	**418**	**3932**	**71**	**21**	**7**	**4031**	**1030**	**1072**	**2102**	**6133**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Bardez**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	North Goa	Bardez	Aldona	5	0	0	0	5	0	0	0
2			Anjuna	7	0	0	0	7	0	0	0
3			Arpora	3	0	0	0	3	0	0	0
4			Assagao	6	1	0	0	7	1	0	1
5			Assonora	3	0	0	0	3	0	0	0
6			Bastora	6	0	0	0	6	0	0	0
7			Calangute	1	0	0	0	1	0	0	0
8			Calvim	0	0	0	0	0	0	0	0
9			Camurlim	0	0	0	0	0	0	0	0
10			Canca	0	0	0	0	0	0	0	0
11			Candolim	6	0	0	0	6	3	0	3
12			Colvale	2	0	0	0	2	0	0	0
13			Corjuvem	4	0	0	0	4	0	3	3
14			Guirim	7	0	0	0	7	1	0	1
15			Mapusa	1	0	0	0	1	0	0	0
16			Marna	1	0	0	0	1	3	6	9
17			Marra	0	0	0	0	0	0	0	0
18			Moira	6	0	0	0	6	0	0	0
19			Nachinola	3	0	0	0	3	0	0	0
20			Nadora	13	0	0	0	13	1	0	1
21			Nagoa	7	0	0	0	7	0	0	0
22			Nerul	8	0	0	0	8	5	0	5
23			Olaulim	3	0	0	0	3	3	0	3
24			Oxel	13	0	0	0	13	0	4	4
25			Paliem	5	0	0	0	5	0	0	0
26			Panoli	0	0	0	0	0	0	0	0

27			Parra	19	0	0	0	19	0	0	0
28			Penha-de-France	0	0	0	0	0	0	0	0
29			Pilerne	0	0	0	0	0	0	0	0
30			Pirna	38	0	0	0	38	0	0	0
31			Pomburpa	6	0	0	0	6	1	0	1
32			Punola	0	0	0	0	0	0	0	0
33			Reis-Magos	3	0	0	0	3	0	0	0
34			Revora	3	0	0	0	3	2	0	2
35			Saligao	38	0	0	0	38	0	0	0
36			Salvador-do-Mundo	6	0	0	0	6	0	0	0
37			Sangolda	5	0	0	0	5	1	0	1
38			Siolim	16	0	0	0	16	3	0	3
39			Sirsaim	5	0	0	0	5	0	0	0
40			Socorro	9	0	0	0	9	0	0	0
41			Tivim	16	0	0	0	16	2	0	2
42			Ucasaim	7	0	0	0	7	0	0	0
43			Verla	4	0	0	0	4	0	0	0
			Total	**285**	**1**	**0**	**0**	**286**	**26**	**13**	**39**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Bicholim**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	North Goa	Bicholim	Advalpal	33	0	0	0	33	0	0	0
2			Amona	49	0	0	0	49	0	1	1
3			Arvalem	25	1	0	0	26	0	0	0
4			Bicholim	0	0	0	0	0	0	0	0
5			Bordem	36	0	0	0	36	0	1	1
6			Carapur	22	0	0	0	22	1	0	1
7			Cassab e de Sanquelim	3	0	0	0	3	0	1	1
8			Cotombi	1	0	0	0	1	0	0	0
9			Cudnem	26	0	0	0	26	1	1	2
10			Curchirem	6	0	0	0	6	1	18	19
11			Dhumacem	1	0	0	0	1	0	2	2
12			Haturlim	9	0	0	0	9	0	5	5
13			Lamgao	3	0	0	0	3	0	1	1
14			Latambarcem	49	0	0	0	49	0	12	12
15			Maem	105	0	0	0	105	5	0	5
16			Maulinguem-North	8	0	0	0	8	0	3	3
17			Maulinguem-South	1	0	0	0	1	0	0	0
18			Mencurem	26	0	0	0	26	0	0	0
19			Mulgao	17	0	0	0	17	0	0	0
20			Narova	34	0	0	0	34	0	26	26
21			Navelim	31	0	0	0	31	0	1	1

22			Ona	8	0	0	0	8	0	1	1
23			Pale	9	0	0	0	9	1	2	3
24			Pilgao	32	0	0	0	32	1	0	1
25			Salem	4	0	0	0	4	0	7	7
26			Sarvorna	15	0	0	0	15	1	4	5
27			Sirgao	1	0	0	0	1	0	0	0
28			Surla	23	0	0	0	23	14	2	16
29			Vaiginim	5	0	0	0	5	1	0	1
30			Velguem	15	0	0	0	15	3	1	4
31			Virdi	7	0	0	0	7	0	0	0
			Total	**604**	**1**	**0**	**0**	**605**	**29**	**89**	**118**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Pernem**

Sl.No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	North Goa	Pernem	Agarvado	16	0	0	0	16	0	1	1
2			Alorna	14	0	0	0	14	1	3	4
3			Amberem	2	0	0	0	2	6	1	7
4			Arambol	45	0	1	0	46	0	2	2
5			Cansarvornem	2	0	0	0	2	1	6	7
6			Casnem	1	0	0	0	1	5	0	5
7			Chandel	0	0	0	0	0	0	4	4
8			Chopdem	0	0	0	0	0	0	0	0
9			Corgao	68	0	0	0	68	2	3	5
10			Dargalim	32	0	0	0	32	0	0	0
11			Ibrampur	18	0	0	0	18	1	14	15
12			Mandrem	101	0	0	0	101	21	0	21
13			Mopa	6	0	0	0	6	0	10	10
14			Morjim	47	0	0	0	47	0	0	0
15			ozorim	8	0	0	0	8	1	1	2
16			Paliem	9	0	0	0	9	0	11	11
17			Parcem	6	0	0	0	6	2	0	2
18			Pernem	0	0	0	0	0	0	0	0
19			Poroscodem	2	0	0	0	2	6	0	6
20			Querim	4	0	0	0	4	0	0	0
21			Tamboxem	2	0	0	0	2	2	0	2
22			Tiracol	0	0	0	0	0	0	0	0
23			Torxem	17	0	2	0	19	1	3	4
24			Tuem	1	0	0	0	1	1	5	6
25			Uguem	3	0	0	0	3	1	4	5
26			Varconda	8	0	0	0	8	14	12	26
27			Virnoda	41	1	0	1	43	13	4	17
			Total	**453**	**1**	**3**	**1**	**458**	**78**	**84**	**162**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Sattari**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	North Goa	Sattari	Advoi	8	0	1	0	9	0	0	0
2			Ambedem	15	0	2	0	17	2	2	4
3			Ambeli	1	0	0	0	1	0	1	1
4			Ansolem	0	0	0	0	0	0	0	0
5			Assodem	3	0	0	0	3	0	0	0
6			Birondem	2	0	2	0	4	0	3	3
7			Bombadem	6	0	0	0	6	0	0	0
8			Buimpal	9	2	0	0	11	0	0	0
9			Carambolim-Buzruco	5	0	0	0	5	0	0	0
10			Caranzol	10	0	0	0	10	0	5	5
11			Choraundem	15	0	0	1	16	0	0	0
12			Codal	4	0	0	0	4	0	1	1
13			Codiem	5	0	1	0	6	0	0	0
14			Codqui	2	0	0	0	2	0	5	5
15			Codvol	0	0	0	0	0	0	0	0
16			Compordem	9	16	0	0	25	0	2	2
17			Conquirem	3	0	0	0	3	2	0	2
18			Cotorem	8	0	0	0	8	0	1	1
19			Cudcem	4	0	0	0	4	0	0	0
20			Cumarconda	0	0	0	0	0	0	0	0
21			Dabem	3	0	0	0	3	0	0	0
22			Damocem	4	0	0	0	4	0	1	1
23			Davem	25	0	0	0	25	7	12	19
24			Derodem	0	0	0	0	0	0	0	0
25			Dongurli	19	3	1	0	23	6	0	6
26			Edorem	8	0	0	0	8	1	6	7

27			Golauli	6	0	0	0	6	2	0	2
28			Gonteli	0	0	0	0	0	0	3	3
29			Govanem	5	0	0	0	5	1	0	1
30			Guleli	6	0	0	0	6	0	1	1
31			Iverem-Curdo	2	0	0	0	2	0	0	0
32			Ivrem-Buzruco	2	1	0	0	3	0	0	0
33			Karambolim-Brama	25	0	0	2	27	3	0	3
34			Maloli	18	0	0	0	18	1	9	10
35			Malpona	12	0	0	0	12	1	0	1
36			Massordem	3	0	0	0	3	0	0	0
37			Mauzi	4	0	0	0	4	1	0	1
38			Melauli	8	0	0	0	8	2	3	5
39			Morlem	5	0	0	0	5	2	0	2
40			Nagargao	14	0	0	0	14	0	0	0
41			Naguem	2	0	0	0	2	0	0	0
42			Naneli	0	1	0	0	1	2	0	2
43			Nanorem	10	0	0	0	10	0	4	4
44			Nanus	4	0	0	0	4	0	2	2
45			Onda	11	0	0	0	11	0	0	0
46			Padeli	1	0	0	0	1	0	0	0
47			Pale	6	6	2	0	14	1	0	1
48			Pendral	0	0	0	0	0	0	0	0
49			Pissurlem	5	0	1	1	7	0	0	0
50			Podocem	0	0	0	0	0	0	3	3
51			Ponocem	3	0	0	0	3	0	0	0
52			Poriem	27	0	0	0	27	13	0	13
53			Querim	2	0	0	0	2	0	1	1
54			Ravona	0	0	0	0	0	0	1	1
55			Rivem	3	0	0	0	3	0	3	3
56			Saleli	7	0	0	0	7	0	0	0
57			Sanvorcem	1	0	0	0	1	0	1	1
58			Sanvordem	0	0	0	0	0	0	1	1
59			Satorem	9	0	0	0	9	0	11	11
60			Satrem	3	0	0	0	3	0	0	0

61			Sigonem	2	0	2	0	4	1	1	2
62			Siranguli	5	0	0	0	5	0	0	0
63			Siroli	0	0	0	0	0	0	1	1
64			Sirsodem	7	0	0	0	7	0	1	1
65			Sonal	3	0	0	0	3	3	1	4
66			Sonus-Vonvoliem	1	0	0	0	1	0	0	0
67			Surla	0	0	0	0	0	0	0	0
68			Ustem	8	0	0	0	8	0	6	6
69			Vaguriem	4	0	0	0	4	0	0	0
70			Vainguinim	0	0	0	0	0	0	0	0
71			Valpoi	32	1	0	0	33	0	0	0
72			Vantem	3	0	0	0	3	0	4	4
73			Velguem	7	0	0	0	7	0	2	2
74			Velus	10	2	0	0	12	0	9	9
75			Xelop-Buzruco	3	0	0	0	3	1	2	3
76			Xelopo-Curdo	4	0	0	0	4	0	0	0
77			Zarani	0	0	0	0	0	0	0	0
78			Zormen	2	0	0	0	2	0	0	0
			Total	**463**	**32**	**12**	**4**	**511**	**52**	**109**	**161**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Tiswadi**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	North Goa	Tiswadi	Ambarim	0	0	0	0	0	0	0	0
2			Azossim	2	0	0	0	2	0	0	0
3			Baingunum	0	0	0	0	0	0	0	0
4			Bambolim	3	0	0	0	3	0	0	0
5			Batim	6	0	0	0	6	0	0	0
6			Calapor	2	0	0	0	2	51	0	51
7			Capao	0	0	0	0	0	0	0	0
8			Caraim	3	0	0	0	3	0	0	0
9			Carambolim	7	0	0	0	7	1	0	1
10			Chimbel	14	0	0	0	14	0	0	0
11			Chorao	7	6	0	0	13	0	0	0
12			Corlim	6	0	0	0	6	0	0	0
13			Cujira	0	0	0	0	0	0	0	0
14			Cumbarjua	25	0	0	0	25	0	0	0
15			Curca	1	0	0	0	1	0	0	0
16			Durgawadi	0	0	0	0	0	0	0	0
17			Ella	1	0	0	0	1	0	0	0
18			Gancim	0	0	0	0	0	0	0	0
19			Gandaulim	4	0	0	0	4	0	0	0
20			Goalim-Moula	3	0	0	0	3	0	0	0
21			Goa Velha	17	0	0	0	17	0	0	0
22			Goltim	3	0	0	0	3	0	0	0
23			Jua	2	0	0	0	2	0	0	0
24			Malar	0	0	0	0	0	0	0	0
25			Mandur	7	0	0	0	7	0	0	0
26			Mercurim	16	0	0	0	16	0	0	0

27			Morambi-o-Grande (Merces)	20	0	0	0	20	0	1	1
28			Morambi-o-Pequeno (Merces)	12	0	0	0	12	0	0	0
29			Murda	14	0	0	0	14	0	0	0
30			Naroa	0	0	0	0	0	0	0	0
31			Navelim	0	0	0	0	0	0	0	0
32			Neura-o-Grande	4	0	0	0	4	0	0	0
33			Neura-o-Pequeno	0	0	0	0	0	0	0	0
34			Panaji	0	0	0	0	0	0	0	0
35			Panelim	0	0	0	0	0	0	0	0
36			Renovadi	10	0	0	0	10	0	0	0
37			Siridao	0	0	0	0	0	0	0	0
38			Talaulim	10	0	0	0	10	0	0	0
39			Taleigao	11	0	0	0	11	0	0	0
			Total	**210**	**6**	**0**	**0**	**216**	**52**	**1**	**53**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Canacona**

Sl.No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	South Goa	Canacona	Agonda	3	0	0	0	3	0	2	2
2			Anjadip	0	0	0	0	0	0	0	0
3			Canacona	40	1	0	0	41	0	2	2
4			Chaudi	0	0	0	0	0	0	0	0
5			Cola	29	1	0	0	30	5	3	8
6			Cotigao	40	0	0	0	40	2	1	3
7			Gaondongrem	80	1	0	0	81	15	0	15
8			Loliem	79	0	0	0	79	1	0	1
9			Nagorcem/Palolem	25	0	0	0	25	0	1	1
10			Poinguinim	70	0	0	0	70	0	8	8
			Total	**366**	**3**	**0**	**0**	**369**	**23**	**17**	**40**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka:Dharbandora**

Sl.No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	South Goa	Dharbandora	Aglote	13	0	0	0	13	3	23	26
2			Bandoli	16	0	0	0	16	4	0	4
3			Camarkhand	14	0	0	0	14	0	6	6
4			Caranzol	0	0	0	0	0	0	1	1
5			Codli	25	1	0	0	26	1	1	2
6			Collem	12	0	0	0	12	35	9	44
7			Cormonem	4	0	0	0	4	6	0	6
8			Dharbandora	19	1	0	0	20	1	6	7
9			Moisal	2	0	0	0	2	0	0	0
10			Mollem	4	0	0	0	4	0	2	2
11			Piliem	1	0	2	0	3	0	6	6
12			Sancordem	14	0	0	0	14	1	17	18
13			Sangod	21	0	0	0	21	1	1	2
14			Sigao	10	0	1	0	11	0	10	10
15			Sonauli	0	0	0	0	0	4	1	5
16			Surla	8	0	0	0	8	0	5	5
			Total	**163**	**2**	**3**	**0**	**168**	**56**	**88**	**144**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Mormugao**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	South Goa	Mormugao	Arossim	8	0	0	0	8	0	8	8
2			Cansaulim	4	0	0	0	4	0	5	5
3			Chicalim	4	0	0	0	4	0	0	0
4			Chicolna	0	0	0	0	0	0	0	0
5			Cortalim	0	0	0	0	0	16	0	16
6			Cuelim	4	0	0	0	4	10	0	10
7			Dabolim	4	0	0	0	4	0	0	0
8			Issorcim	1	0	0	0	1	0	0	0
9			Mormugao port	4	0	0	0	4	0	0	0
10			Pale	3	0	0	0	3	2	0	2
11			Quelossim	2	0	0	0	2	5	0	5
12			Sancoale	3	0	0	0	3	1	0	1
13			Sao Jacinto Island	0	0	0	0	0	0	0	0
14			Velsao	4	0	0	0	4	0	0	0
			Total	**41**	**0**	**0**	**0**	**41**	**34**	**13**	**47**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Ponda**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	South Goa	Ponda	Adcolna	11	0	0	0	11	3	0	3
2			Bandora	29	0	0	0	29	19	13	32
3			Betora	16	0	0	0	16	5	2	7
4			Betqui	28	0	0	0	28	2	61	63
5			Boma	0	0	0	0	0	8	0	8
6			Borim	32	0	0	0	32	12	28	40
7			Candepar	14	0	0	0	14	26	1	27
8			Candola	1	0	0	0	1	0	7	7
9			Codar	9	0	0	0	9	0	0	0
10			Conxem	22	0	0	0	22	0	1	1
11			Cuncoleim	2	0	0	0	2	17	0	17
12			Cundaim	0	0	0	0	0	11	0	11
13			Curti	17	0	0	0	17	0	34	34
14			Durbhat	4	0	0	0	4	4	0	4
15			Ganjem	1	0	0	0	1	0	11	11
16			Marcaim	11	0	0	0	11	0	0	0
17			Nirancal	76	0	0	0	76	6	5	11
18			Orgao	4	0	0	0	4	1	11	12
19			Panchavadi	5	0	0	0	5	5	0	5
20			Ponda	7	0	0	0	7	17	0	17
21			Priol	97	0	0	0	97	32	41	73
22			Querim	88	0	1	0	89	19	4	23
23			Queula	8	0	0	0	8	42	0	42
24			Savoi- verem	69	0	0	0	69	30	17	47
25			Shiroda	44	2	0	0	46	6	7	13
26			Talaulim	0	0	0	0	0	17	0	17

27			Tivrem	2	0	0	0	2	1	0	1
28			Usgao	20	0	0	0	20	0	36	36
29			Vadi	0	0	0	0	0	0	0	0
30			Vagurbem	1	0	0	0	1	0	0	0
31			Velinga	1	0	0	0	1	7	1	8
32			Volvoi	12	2	0	0	14	0	0	0
			Total	**631**	**4**	**1**	**0**	**636**	**290**	**280**	**570**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Quepem**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	South Goa	Quepem	Adnem	6	0	0	0	6	0	0	0
2			Ambaulim	1	0	0	0	1	53	2	55
3			Amona	3	0	0	0	3	0	4	4
4			Assolda	3	0	1	0	4	0	6	6
5			Avedem	6	0	0	0	6	1	2	3
6			Bali	6	0	0	0	6	0	0	0
7			Barcem	2	0	0	0	2	11	6	17
8			Bendordem	7	0	0	0	7	0	3	3
9			Cacora	6	0	0	0	6	4	1	5
10			Cavorem	8	0	0	0	8	0	0	0
11			Cazur	4	0	0	0	4	0	0	0
12			Chaifi	0	0	0	0	0	0	0	0
13			Cordem	1	0	0	0	1	9	0	9
14			Corla	1	0	0	0	1	0	0	0
15			Cotombi	11	0	0	0	11	2	0	2
16			Curchorem	0	0	0	0	0	0	4	4
17			Cusmane	1	0	0	0	1	0	3	3
18			Deao	0	0	0	0	0	0	3	3
19			Fatorpa	5	0	0	0	5	0	1	1
20			Goculdem	2	0	0	0	2	2	4	6
21			Maina	10	0	0	0	10	7	0	7
22			Mangal	1	0	0	0	1	9	0	9
23			Molcopona	4	0	0	0	4	8	1	9
24			Molcornem	20	0	0	0	20	0	1	1
25			Morpirla	17	10	0	0	27	26	0	26

26			Nagvem	4	0	0	0	4	0	2	2
27			Naqueri	1	1	0	0	2	1	0	1
28			Odar	0	1	0	0	1	0	0	0
29			Padi	1	0	0	0	1	0	0	0
30			Pirla	13	0	0	0	13	1	4	5
31			Quedem	0	0	0	0	0	0	0	0
32			Quepem	0	0	0	0	0	0	0	0
33			Quisconda	2	0	0	0	2	0	1	1
34			Quitol	5	2	0	0	7	0	0	0
35			Sirvoi	1	0	0	0	1	16	11	27
36			Sulcorna	9	0	0	0	9	0	3	3
37			Tiloi	0	0	0	0	0	0	4	4
38			Undorna	0	0	0	0	0	19	0	19
39			Xeldem	6	0	0	0	6	8	0	8
40			Xelvona	5	0	0	0	5	0	0	0
41			Xic-Xelvona	0	0	0	0	0	0	0	0
42			Zanodem	5	0	0	0	5	0	11	11
			Total	**177**	**14**	**1**	**0**	**192**	**177**	**77**	**254**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Salcete**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	South Goa	Salcete	Adsulim	0	0	0	0	0	0	0	0
2			Ambelim	4	0	0	0	4	0	0	0
3			Aquem-baixo	3	0	0	0	3	0	2	2
4			Assolna	3	0	0	0	3	0	0	0
5			Benaulim	2	0	0	0	2	0	0	0
6			Betalbatim	0	0	0	0	0	1	1	2
7			Calata	0	0	0	0	0	0	0	0
8			Camurlim	0	0	0	0	0	0	0	0
9			Cana	2	0	0	0	2	0	0	0
10			Carmona	2	0	0	0	2	0	0	0
11			Cavelossim	2	0	0	0	2	0	0	0
12			Cavorim	0	0	0	0	0	0	0	0
13			Chandor	0	0	0	0	0	0	0	0
14			Chinchinim	5	0	0	0	5	0	0	0
15			Colva	0	0	0	0	0	0	0	0
16			Cuncolim	0	0	0	0	0	3	0	3
17			Curtorim	2	0	0	0	2	5	0	5
18			Davorlim	0	0	0	0	0	1	0	1
19			Deussua	0	0	0	0	0	0	0	0
20			Dicarpale	3	0	0	0	3	7	1	8
21			Dramapur	0	0	0	0	0	0	0	0
22			Duncolim	0	0	0	0	0	0	0	0
23			Gaundaulim	0	0	0	0	0	0	0	0
24			Gonsua	0	0	0	0	0	0	0	0
25			Guirdolim	1	0	0	0	1	6	0	6
26			Loutolim	3	0	0	0	3	0	0	0

27			Macasana	0	0	0	0	0	1	0	1
28			Majorda	1	0	0	0	1	0	0	0
29			Margao	0	0	0	1	1	0	0	0
30			Mulem	8	0	0	0	8	0	0	0
31			Nagoa	0	0	0	0	0	0	0	0
32			Navelim	0	0	0	0	0	0	0	0
33			Nuvem	0	0	0	0	0	0	0	0
34			Orlim	1	0	0	0	1	0	0	0
35			Paroda	1	0	0	0	1	0	0	0
36			Rachol	0	0	0	0	0	0	0	0
37			Raia	1	2	0	0	3	0	0	0
38			Sao Jose de Areal	0	0	0	0	0	0	0	0
39			Sarzora	1	0	0	0	1	0	0	0
40			Seraulim	0	0	0	0	0	0	0	0
41			Sernabatim	0	0	0	0	0	0	0	0
42			Sirlim	1	0	0	0	1	0	0	0
43			Talaulim	0	0	0	0	0	0	0	0
44			Talvorda	0	0	0	0	0	1	1	2
45			Utorda	0	0	0	0	0	0	0	0
46			Vanelim	1	0	0	0	1	0	0	0
47			Varca	0	0	0	0	0	0	0	0
48			Velim	10	0	0	0	10	42	9	51
49			Verna	0	0	0	0	0	0	0	0
50			Veroda	0	0	0	0	0	0	1	1
			Total	**57**	**2**	**0**	**1**	**60**	**67**	**15**	**82**

Taluka and Village-wise Minor Irrigation Schemes at a Glance

State: Goa **Taluka: Sanguem**

Sl. No.	District	Taluka	Name of the Village	Total Number of Schemes							
				Ground Water					Surface Water		
				Dug Well	Shallow Tube Well	Medium Tube Well	Deep Tube Well	Total	Surface Flow Scheme	Surface Lift Scheme	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	South Goa	Sanguem	Antorem	1	0	0	0	1	0	0	0
2			Bhati	20	0	0	0	20	20	54	74
3			Boma	0	0	0	0	0	0	0	0
4			Calem	8	1	0	0	9	1	15	16
5			Colomba	70	1	0	0	71	14	40	54
6			Comproi	0	0	0	0	0	0	5	5
7			Corrangunim	1	0	0	0	1	0	0	0
8			Costi	8	0	0	0	8	0	1	1
9			Cotarli	1	0	0	0	1	4	3	7
10			Cumbari	5	0	0	0	5	6	1	7
11			Curdi	7	0	0	0	7	0	0	0
12			Curpem	19	0	0	0	19	14	1	15
13			Dongor	2	0	0	0	2	0	4	4
14			Dongurli	0	0	0	0	0	0	0	0
15			Dudal	2	0	0	0	2	0	2	2
16			Maulinguem	0	0	0	0	0	0	0	0
17			Muguli	2	0	0	0	2	2	1	3
18			Naiquinim	27	0	0	0	27	7	2	9
19			Neturlim	72	0	0	0	72	11	34	45
20			Nundrem	9	0	0	0	9	1	0	1
21			Oxel	0	0	0	0	0	0	0	0
22			Patiem	0	0	0	0	0	7	7	14
23			Portem	70	0	0	0	70	0	2	2
24			Potrem	3	0	0	0	3	1	5	6
25			Rivona	49	3	1	0	53	26	63	89

26			Rumbrem	0	0	0	0	0	0	0	0
27			Sanguem	0	0	0	0	0	0	25	25
28			Santona	2	0	0	0	2	0	0	0
29			Sanvordem	3	0	0	0	3	2	4	6
30			Sigonem	0	0	0	0	0	0	0	0
31			Todou	3	0	0	0	3	1	7	8
32			Uguem	0	0	0	0	0	5	4	9
33			Verlem	0	0	0	0	0	8	0	8
34			Vichundrem	24	0	0	0	24	4	3	7
35			Viliena	2	0	0	0	2	9	1	10
36			Xelpem	2	0	0	0	2	3	1	4
			Total	**412**	**5**	**1**	**0**	**418**	**146**	**285**	**431**

District and Taluka wise Distribution of CCA and Irrigation Potential of all Minor Irrigation Schemes,

State: Goa

Sl. No.	District	Talukas	No. of Villages	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	North Goa	Bardez	43	104.79	106.54	98.39	28.43	28.86	20.99
2		Bicholim	31	332.64	332.64	297.91	570.27	570.27	491.46
3		Pernem	27	288.87	288.87	242.92	424.88	424.88	216.77
4		Satari	78	661.13	661.13	618.13	648.85	648.85	603.79
5		Tiswadi	39	69.62	70.72	70.57	9.68	9.68	9.68
		Total A	**218**	**1457.05**	**1459.9**	**1327.92**	**1682.11**	**1682.54**	**1342.69**
6	South Goa	Canacona	10	253.5	253.5	252.5	52.68	52.68	52.68
7		Dharbandora	16	176.81	176.81	173.21	349.56	349.56	349.56
8		Mormugao	14	24.7	24.7	24.3	18.49	18.49	18.49
9		Ponda	32	390.38	401.39	398.99	623.39	623.39	623.39
10		Quepem	42	210.32	210.32	207.57	187.8	187.8	182.8
11		Salcete	50	13.05	13.05	12.41	486.34	486.34	484.17
12		Sanguem	36	639.57	640.47	640.47	1029.2	1029.2	1029.2
		Total B	**200**	**1708.33**	**1720.24**	**1709.45**	**2747.46**	**2747.46**	**2740.29**
	Goa	**Grand Total (A+B)**	**418**	**3165.38**	**3180.14**	**3037.37**	**4429.57**	**4430.00**	**4082.98**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka; Bardez**

Sl. No.	District	Taluka	Name of the Villages	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	North Goa	Bardez	Aldona	4.6	4.6	4.6	0	0	0
2			Anjuna	2.53	2.53	2.53	0	0	0
3			Arpora	1.7	1.7	1.7	0	0	0
4			Assagao	0.87	0.87	0.87	2	2	0.02
5			Assonora	0.25	0.25	0.25	0	0	0
6			Bastora	2.47	2.47	2.29	0	0	0
7			Calangute	0.1	0.1	0.1	0	0	0
8			Calvim	0	0	0	0	0	0
9			Camurlim	0	0	0	0	0	0
10			Canca	0	0	0	0	0	0
11			Candolim	0.44	0.44	0.44	0.15	0.15	0.15
12			Colvale	3.1	3.1	3.1	0	0	0
13			Corjuvem	0.36	0.36	0.36	0.66	0.66	0.66
14			Guirim	2.05	2.05	1.98	0.4	0.4	0.4
15			Mapusa	0.2	0.2	0.2	0	0	0
16			Marna	0.8	0.8	0.8	10.25	10.25	5.74
17			Marra	0	0	0	0	0	0
18			Moira	1.01	1.01	1.01	0	0	0
19			Nachinola	1.8	1.8	1.8	0	0	0
20			Nadora	5.15	5.35	5.35	2	2	2
21			Nagoa	4.66	4.66	4.66	0	0	0
22			Nerul	0.53	0.53	0.53	0.16	0.16	0.16
23			Olaulim	0.07	0.07	0.07	0.05	0.05	0.05
24			Oxel	2.49	2.74	2.24	0.43	0.86	0.86
25			Paliem	1.1	1.1	1	0	0	0
26			Panoli	0	0	0	0	0	0
27			Parra	6.75	6.75	6.75	0	0	0
28			Penha-de-France	0	0	0	0	0	0
29			Pilerne	0	0	0	0	0	0
30			Pirna	17.87	17.87	17.03	0	0	0
31			Pomburpa	0.13	0.13	0.13	0.2	0.2	0.2

32			Punola	0	0	0	0	0	0
33			Reis-Magos	0.79	0.79	0.79	0	0	0
34			Revora	0.56	0.56	0.56	4	4	4
35			Saligao	2.06	2.06	2.06	0	0	0
36			Salvador-do-Mundo	2.02	2.02	1.25	0	0	0
37			Sangolda	0.72	0.72	0.72	0.02	0.02	0.02
38			Siolim	2.02	2.02	0.88	5.71	5.71	4.33
39			Sirsaim	4.19	4.19	4.19	0	0	0
40			Socorro	3.35	3.35	3.13	0	0	0
41			Tivim	25.62	26.92	22.67	2.4	2.4	2.4
42			Ucasaim	1.4	1.4	1.32	0	0	0
43			Verla	1.03	1.03	1.03	0	0	0
			Total	**104.79**	**106.54**	**98.39**	**28.43**	**28.86**	**20.99**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Bicholim**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	North Goa	Bicholim	Advalpal	10.56	10.56	10.26	0	0	0
2			Amona	23.99	23.99	9.71	0.6	0.6	0.2
3			Arvalem	4.23	4.23	4.13	0	0	0
4			Bicholim	0	0	0	0	0	0
5			Bordem	16.48	16.48	16.48	0.4	0.4	0.4
6			Carapur	15.82	15.82	15.82	12	12	12
7			Cassab e de sanquelim	3.05	3.05	3.05	4.6	4.6	4.6
8			Cotombi	0.2	0.2	0.2	0	0	0
9			Cudnem	22.7	22.7	22.7	24.05	24.05	24.05
10			Curchirem	5.75	5.75	5.75	16.1	16.1	16.1
11			Dhumacem	0.4	0.4	0.4	22.5	22.5	22.5
12			Haturlim	29.91	29.91	29.91	9.24	9.24	9.24
13			Lamgao	2.4	2.4	2.4	0.5	0.5	0.5
14			Latambarcem	40.38	40.38	39.98	12.05	12.05	12.05
15			Maem	47.14	47.14	47.14	65	65	23
16			Maulinguem-North	4.05	4.05	3.86	30.5	30.5	30.5
17			Maulinguem-South	0.05	0.05	0.05	0	0	0
18			Mencurem	8.71	8.71	7.34	0	0	0
19			Mulgao	4.43	4.43	4.41	0	0	0
20			Narova	6.12	6.12	6.12	32.15	32.15	32.15
21			Navelim	11.48	11.48	11.43	0.2	0.2	0.2
22			Ona	10.52	10.52	10.42	1	1	1
23			Pale	2.71	2.71	2.71	4.05	4.05	4.05
24			Pilgao	23.15	23.15	9.88	36	36	36

25			Salem	2.05	2.05	2.05	64.2	64.2	63.2
26			Sarvorna	6.65	6.65	6.65	22.9	22.9	22.9
27			Sirgao	0.1	0.1	0.1	0	0	0
28			Surla	10.35	10.35	7.73	183	183	153
29			Vaiginim	0.72	0.72	0.72	1	1	1
30			Velguem	11.36	11.36	11.36	28.23	28.23	22.82
31			Virdi	7.18	7.18	5.15	0	0	0
			Total	**332.64**	**332.64**	**297.91**	**570.27**	**570.27**	**491.46**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Pernem**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	North Goa	Pernem	Agarvado	0.72	0.72	0.72	0.2	0.2	0.2
2			Alorna	13.24	13.24	13.24	38.63	38.63	38.63
3			Amberem	0.7	0.7	0.7	1.8	1.8	1.8
4			Arambol	22.76	22.76	22.16	0.22	0.22	0.2
5			Cansarvornem	3.87	3.87	3.87	23.5	23.5	23.5
6			Casnem	0.3	0.3	0.3	2.85	2.85	2.25
7			Chandel	0	0	0	0	0	0
8			Chopdem	0	0	0	0	0	0
9			Corgao	13.64	13.64	9.45	0.3	0.3	0.24
10			Dargalim	21.3	21.3	21.3	0	0	0
11			Ibrampur	25.33	25.33	12.84	30.33	30.33	9.82
12			Mandrem	42.49	42.49	40.94	3.59	3.59	3.59
13			Mopa	4.83	4.83	1.93	54.53	54.53	37.5
14			Morjim	5.25	5.25	5.25	0	0	0
15			Ozorim	23.65	23.65	23.15	3.8	3.8	3.8
16			Paliem	34.32	34.32	34.32	6.76	6.76	5.46
17			Parcem	0.38	0.38	0.38	2.6	2.6	2.6
18			Pernem	0	0	0	0	0	0
19			Poroscodem	0.7	0.7	0.55	14.15	14.15	9.37
20			Querim	0.1	0.1	0.05	0	0	0
21			Tamboxem	20.8	20.8	11.3	20.7	20.7	11.2
22			Tiracol	0	0	0	0	0	0
23			Torxem	37.62	37.62	24.2	132.6	132.6	3.45
24			Tuem	0.35	0.35	0.35	14	14	14
25			Uguem	1.5	1.5	1.5	46.1	46.1	21.2
26			Varconda	6.1	6.1	5.5	20.73	20.73	20.47
27			Virnoda	8.92	8.92	8.92	7.49	7.49	7.49
			Total	**288.87**	**288.87**	**242.92**	**424.88**	**424.88**	**216.77**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Satari**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	North Goa	Satari	Advoi	3.1	3.1	3.1	0	0	0
2			Ambedem	14.42	14.42	14.42	3.68	3.68	3.68
3			Ambeli	2	2	2	4	4	4
4			Ansolem	0	0	0	0	0	0
5			Assodem	2.55	2.55	2.55	0	0	0
6			Birondem	3.24	3.24	3.24	6.45	6.45	6.45
7			Bombadem	14.15	14.15	14.15	0	0	0
8			Buimpal	7.3	7.3	7.3	0	0	0
9			Carambolim-buzruco	13	13	6.5	0	0	0
10			Caranzol	20.7	20.7	11.7	5.1	5.1	4.9
11			Choraundem	7.23	7.23	7.13	0	0	0
12			Codal	8	8	7.8	2	2	1
13			Codiem	41.8	41.8	41.8	0	0	0
14			Codqui	2.2	2.2	2.2	7.8	7.8	7.8
15			Codvol	0	0	0	0	0	0
16			Compordem	26.1	26.1	26.1	2.6	2.6	2.6
17			Conquirem	3.2	3.2	3.2	6	6	6
18			Cotorem	15.6	15.6	15.6	1.2	1.2	1.2
19			Cudcem	3.7	3.7	3.7	0	0	0
20			Cumarconda	0	0	0	0	0	0
21			Dabem	0.29	0.29	0.29	0	0	0
22			Damocem	10.11	10.11	8.5	46	46	46
23			Davem	35.57	35.57	35.55	42.74	42.74	42.14
24			Derodem	0	0	0	0	0	0
25			Dongurli	23	23	23	17.8	17.8	17.8
26			Edorem	10.44	10.44	10.44	4.77	4.77	4.77
27			Golauli	5.3	5.3	5	1.3	1.3	1.2

28			Gonteli	0	0	0	0	0	0
29			Govanem	2.3	2.3	2.3	2.4	2.4	2.4
30			Guleli	14.91	14.91	14.11	50	50	30
31			Iverem-curdo	0.89	0.89	0.89	0	0	0
32			Ivrem-buzruco	0.91	0.91	0.91	0	0	0
33			Karambolim-brama	31.62	31.62	28.42	16.4	16.4	14.2
34			Maloli	23	23	19.8	27.91	27.91	19.4
35			Malpona	12.2	12.2	12.2	2.5	2.5	2.5
36			Massordem	2.8	2.8	2.8	0	0	0
37			Mauzi	38.8	38.8	31.8	36	36	29
38			Melauli	7	7	7	16.5	16.5	16.5
39			Morlem	8.1	8.1	8.1	7	7	7
40			Nagargao	10.4	10.4	5.7	0	0	0
41			Naguem	7.07	7.07	7.07	0	0	0
42			Naneli	1.2	1.2	1.2	4	4	4
43			Nanorem	17.58	17.58	14.88	25.2	25.2	23.2
44			Nanus	8.75	8.75	8.75	33.7	33.7	33.7
45			Onda	14.4	14.4	14.4	0	0	0
46			Padeli	4	4	3	0	0	0
47			Pale	16.4	16.4	16.4	0	0	0
48			Pendral	0	0	0	0	0	0
49			Pissurlem	3.5	3.5	3.5	0	0	0
50			Podocem	0	0	0	1.95	1.95	1.95
51			Ponocem	3.3	3.3	3.3	0	0	0
52			Poriem	15.1	15.1	15.1	14.9	14.9	14.9
53			Querim	3	3	3	1	1	1
54			Ravona	0	0	0	50	50	50
55			Rivem	3	3	2.8	9.8	9.8	6.6
56			Saleli	2.95	2.95	2.95	0	0	0
57			Sanvorcem	0.2	0.2	0.2	40	40	40
58			Sanvordem	0	0	0	10	10	10
59			Satorem	13.8	13.8	11.7	16.74	16.74	16.69
60			Satrem	10.63	10.63	10.63	0	0	0

61			Sigonem	8	8	8	18	18	18
62			Siranguli	3.8	3.8	3.6	0	0	0
63			Siroli	0	0	0	3	3	3
64			Sirsodem	1.45	1.45	1.45	0.5	0.5	0.5
65			Sonal	3	3	3	20	20	20
66			Sonus-Vonvoliem	1	1	1	0	0	0
67			Surla	0	0	0	0	0	0
68			Ustem	6.7	6.7	6.53	6.8	6.8	6.6
69			Vaguriem	6.8	6.8	6.8	0	0	0
70			Vainguinim	0	0	0	0	0	0
71			Valpoi	50.93	50.93	50.93	0	0	0
72			Vantem	4.1	4.1	4.1	19	19	19
73			Velguem	8.9	8.9	8.9	1.6	1.6	1.6
74			Velus	11.38	11.38	11.38	53.11	53.11	53.11
75			Xelopo-Buzruco	2.2	2.2	2.2	9.4	9.4	9.4
76			Xelopo-Curdo	2	2	2	0	0	0
77			Zarani	0	0	0	0	0	0
78			Zormen	0.06	0.06	0.06	0	0	0
			Total	**661.13**	**661.13**	**618.13**	**648.85**	**648.85**	**603.79**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Tiswadi**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	North Goa	Tiswadi	Ambarim	0	0	0	0	0	0
2			Azossim	0.65	1.05	1.05	0	0	0
3			Baingunum	0	0	0	0	0	0
4			Bambolim	1.05	1.05	1.05	0	0	0
5			Batim	1.92	2.12	2.12	0	0	0
6			Calapor	1.5	2	2	8.73	8.73	8.73
7			Capao	0	0	0	0	0	0
8			Caraim	0.75	0.75	0.75	0	0	0
9			Carambolim	0	0	0	0	0	0
10			Chimbel	5.65	5.65	5.65	0	0	0
11			Chorao	1.35	1.35	1.35	0	0	0
12			Corlim	11.94	11.94	11.94	0	0	0
13			Cujira	0	0	0	0	0	0
14			Cumbarjua	0.3	0.3	0.3	0	0	0
15			Curca	0.18	0.18	0.18	0	0	0
16			Durgawadi	0	0	0	0	0	0
17			Ella	1.5	1.5	1.5	0	0	0
18			Gancim	0	0	0	0	0	0
19			Gandaulim	1.7	1.7	1.7	0	0	0
20			Goalim-Moula	0.71	0.71	0.71	0	0	0
21			Goa Velha	5.04	5.04	5.04	0	0	0
22			Goltim	0.7	0.7	0.7	0	0	0
23			Jua	0.25	0.25	0.25	0	0	0
24			Malar	0	0	0	0	0	0
25			Mandur	0.3	0.3	0.3	0	0	0
26			Mercurim	5.25	5.25	5.25	0	0	0
27			Morambi-o-Grande (Merces)	9.25	9.25	9.1	0.95	0.95	0.95

28			Morambi-o-pequeno (Merces)	3.51	3.51	3.51	0	0	0
29			Murda	6.06	6.06	6.06	0	0	0
30			Naroa	0	0	0	0	0	0
31			Navelim	0	0	0	0	0	0
32			Neura-o-Grande	1.6	1.6	1.6	0	0	0
33			Neura-o-Pequeno	0	0	0	0	0	0
34			Panaji	0	0	0	0	0	0
35			Panelim	0	0	0	0	0	0
36			Renovadi	2.41	2.41	2.41	0	0	0
37			Siridao	0	0	0	0	0	0
38			Talaulim	4.31	4.31	4.31	0	0	0
39			Taleigao	1.74	1.74	1.74	0	0	0
			Total	**69.62**	**70.72**	**70.57**	**9.68**	**9.68**	**9.68**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Canacona**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	South Goa	Canacona	Agonda	1.4	1.4	1.4	1.3	1.3	1.3
2			Anjadip	0	0	0	0	0	0
3			Canacona	9.13	9.13	9.13	0	0	0
4			Chaudi	0	0	0	0	0	0
5			Cola	14.97	14.97	13.97	4.58	4.58	4.58
6			Cotigao	35.78	35.78	35.78	2.7	2.7	2.7
7			Gaondongrem	47.35	47.35	47.35	35.5	35.5	35.5
8			Loliem	72.08	72.08	72.08	1	1	1
9			Nagorcem/palolem	10.19	10.19	10.19	0.9	0.9	0.9
10			Poinguinim	62.6	62.6	62.6	6.7	6.7	6.7
			Total	**253.5**	**253.5**	**252.5**	**52.68**	**52.68**	**52.68**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Darbandora**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	South Goa	Dharbandora	Aglote	13.9	13.9	13.9	68.8	68.8	68.8
2			Bandoli	6.05	6.05	6.05	1.8	1.8	1.8
3			Camarkhand	11	11	8.4	5	5	5
4			Caranzol	0	0	0	45	45	45
5			Codli	13.8	13.8	12.8	10.6	10.6	10.6
6			Collem	10.85	10.85	10.85	22.91	22.91	22.91
7			Cormonem	2.8	2.8	2.8	2.5	2.5	2.5
8			Dharbandora	24.13	24.13	24.13	9.9	9.9	9.9
9			Moisal	0.55	0.55	0.55	0	0	0
10			Mollem	3.8	3.8	3.8	12	12	12
11			Piliem	2.54	2.54	2.54	27.85	27.85	27.85
12			Sancordem	16.4	16.4	16.4	42.9	42.9	42.9
13			Sangod	38.4	38.4	38.4	24	24	24
14			Sigao	22.59	22.59	22.59	56.8	56.8	56.8
15			Sonauli	0	0	0	9	9	9
16			Surla	10	10	10	10.5	10.5	10.5
			Total	**176.81**	**176.81**	**173.21**	**349.56**	**349.56**	**349.56**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Mormugao**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	South Goa	Mormugao	Arossim	4.63	4.63	4.63	1.34	1.34	1.34
2			Cansaulim	1.23	1.23	1.23	0.75	0.75	0.75
3			Chicalim	1.69	1.69	1.34	0	0	0
4			Chicolna	0	0	0	0	0	0
5			Cortalim	0	0	0	0.58	0.58	0.58
6			Cuelim	0.6	0.6	0.6	2.05	2.05	2.05
7			Dabolim	5.75	5.75	5.75	0	0	0
8			Issorcim	1	1	1	0	0	0
9			Mormugao port	0.99	0.99	0.94	0	0	0
10			Pale	1.73	1.73	1.73	11.55	11.55	11.55
11			Quelossim	0.97	0.97	0.97	0.22	0.22	0.22
12			Sancoale	1.36	1.36	1.36	2	2	2
13			Sao jacinto island	0	0	0	0	0	0
14			Velsao	4.75	4.75	4.75	0	0	0
			Total	**24.7**	**24.7**	**24.3**	**18.49**	**18.49**	**18.49**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Ponda**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	South Goa	Ponda	Adcolna	4.32	4.32	4.32	2.5	2.5	2.5
2			Bandora	17.3	17.3	17.3	43.75	43.75	43.75
3			Betora	3.66	3.66	3.66	2.19	2.19	2.19
4			Betqui	6.37	6.37	6.37	16.42	16.42	16.42
5			Boma	0	0	0	3	3	3
6			Borim	23.63	23.63	23.23	28.45	28.45	28.45
7			Candepar	11.06	11.06	11.06	26.7	26.7	26.7
8			Candola	1.5	1.5	1.5	44	44	44
9			Codar	9.28	9.28	9.28	0	0	0
10			Conxem	7.6	7.6	7.6	1	1	1
11			Cuncoleim	1.34	1.34	1.34	82.8	82.8	82.8
12			Cundaim	0	0	0	4.05	4.05	4.05
13			Curti	18.65	18.65	18.65	111.52	111.52	111.52
14			Durbhat	1.54	1.54	1.54	8	8	8
15			Ganjem	0.3	0.3	0.3	0.48	0.48	0.48
16			Marcaim	7.18	7.18	5.18	0	0	0
17			Nirancal	76.68	76.68	76.68	16.35	16.35	16.35
18			Orgao	1.8	2.2	2.2	9.45	9.45	9.45
19			Panchavadi	1.91	1.91	1.91	12.4	12.4	12.4
20			Ponda	1.28	1.28	1.28	1.46	1.46	1.46
21			Priol	63	63	63	105.61	105.61	105.61
22			Querim	37.04	47.38	47.38	10.8	10.8	10.8
23			Queula	7.2	7.2	7.2	12.73	12.73	12.73
24			Savoi- verem	39.14	39.14	39.14	53.26	53.26	53.26
25			Shiroda	15.88	16.05	16.05	2.75	2.75	2.75
26			Talaulim	0	0	0	3.13	3.13	3.13
27			Tivrem	0.1	0.2	0.2	0.2	0.2	0.2
28			Usgao	13.07	13.07	13.07	7.19	7.19	7.19

29			Vadi	0	0	0	0	0	0
30			Vagurbem	0.55	0.55	0.55	0	0	0
31			Velinga	0.5	0.5	0.5	13.2	13.2	13.2
32			Volvoi	18.5	18.5	18.5	0	0	0
			Total	**390.38**	**401.39**	**398.99**	**623.39**	**623.39**	**623.39**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Quepem**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	South Goa	Quepem	Adnem	1.25	1.25	1.25	0	0	0
2			Ambaulim	0.05	0.05	0.05	10	10	9
3			Amona	3.61	3.61	3.61	4.11	4.11	4.11
4			Assolda	3.85	3.85	3.85	3.1	3.1	3.1
5			Avedem	4.36	4.36	4.36	0.98	0.98	0.98
6			Bali	5.75	5.75	5.75	0	0	0
7			Barcem	1.3	1.3	1.3	5.65	5.65	5.65
8			Bendordem	2.5	2.5	2.5	1.6	1.6	1.3
9			Cacora	1.69	1.69	1.69	2.6	2.6	2.6
10			Cavorem	11.5	11.5	11.5	0	0	0
11			Cazur	2.01	2.01	2.01	0	0	0
12			Chaifi	0	0	0	0	0	0
13			Cordem	0.2	0.2	0.1	4.2	4.2	1.95
14			Corla	0.63	0.63	0.63	0	0	0
15			Cotombi	4.77	4.77	4.77	0.65	0.65	0.65
16			Curchorem	0	0	0	4.1	4.1	4.1
17			Cusmane	1.59	1.59	1.59	3.79	3.79	3.79
18			Deao	0	0	0	0.83	0.83	0.83
19			Fatorpa	7.6	7.6	7.6	0.6	0.6	0.6
20			Goculdem	1.47	1.47	1.47	6.5	6.5	6.5
21			Maina	17	17	16	10	10	10
22			Mangal	1.2	1.2	1.2	11.6	11.6	11.6
23			Molcopona	19	19	19	2.6	2.6	2.6
24			Molcornem	6.06	6.06	6.06	0.1	0.1	0.1
25			Morpirla	7.13	7.13	7.13	5.65	5.65	5.65
26			Nagvem	10.6	10.6	10.6	0.77	0.77	0.77
27			Naqueri	1.2	1.2	1.2	0.2	0.2	0.2
28			Odar	1	1	1	0	0	0
29			Padi	0.44	0.44	0.44	0	0	0
30			Pirla	37.5	37.5	37.5	8	8	8
31			Quedem	0	0	0	0	0	0

32			Quepem	0	0	0	0	0	0
33			Quisconda	3.7	3.7	3.7	1	1	1
34			Quitol	9.23	9.23	9.23	0	0	0
35			Sirvoi	0.37	0.37	0.37	49.47	49.47	49.47
36			Sulcorna	31.4	31.4	31.4	29	29	29
37			Tiloi	0	0	0	2.1	2.1	1.95
38			Undorna	0	0	0	7.7	7.7	7.7
39			Xeldem	5.3	5.3	3.65	2.6	2.6	1.3
40			Xelvona	0.56	0.56	0.56	0	0	0
41			Xic-xelvona	0	0	0	0	0	0
42			Zanodem	4.5	4.5	4.5	8.3	8.3	8.3
			Total	**210.32**	**210.32**	**207.57**	**187.8**	**187.8**	**182.8**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Salcete**

Sl. No.	District	Taluka	Name of the Village		Ground Water			Surface Water		
					CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)
1	South Goa	Salcete	Adsulim		0	0	0	0	0	0
2			Ambelim		0.7	0.7	0.7	0	0	0
3			Aquem-Baixo		0.75	0.75	0.75	1.26	1.26	1.26
4			Assolna		1.04	1.04	1.04	0	0	0
5			Benaulim		0.91	0.91	0.91	0	0	0
6			Betalbatim		0	0	0	15	15	15
7			Calata		0	0	0	0	0	0
8			Camurlim		0	0	0	0	0	0
9			Cana		0.2	0.2	0.1	0	0	0
10			Carmona		0.64	0.64	0.64	0	0	0
11			Cavelossim		0.08	0.08	0.08	0	0	0
12			Cavorim		0	0	0	0	0	0
13			Chandor		0	0	0	0	0	0
14			Chinchinim		1.63	1.63	1.63	0	0	0
15			Colva		0	0	0	0	0	0
16			Cuncolim		0	0	0	393.51	393.51	393.51
17			Curtorim		0.7	0.7	0.7	51.26	51.26	51.26
18			Davorlim		0	0	0	0.4	0.4	0.4
19			Deussua		0	0	0	0	0	0
20			Dicarpale		1.79	1.79	1.25	4.8	4.8	2.8
21			Dramapur		0	0	0	0	0	0
22			Duncolim		0	0	0	0	0	0
23			Gaundaulim		0	0	0	0	0	0
24			Gonsua		0	0	0	0	0	0
25			Guirdolim		0	0	0	1.5	1.5	1.5
26			Loutolim		0.35	0.35	0.35	0	0	0
27			Macasana		0	0	0	1	1	1

28			Majorda		0.45	0.45	0.45	0	0	0
29			Margao		0.22	0.22	0.22	0	0	0
30			Mulem		0.17	0.17	0.17	0	0	0
31			Nagoa		0	0	0	0	0	0
32			Navelim		0	0	0	0	0	0
33			Nuvem		0	0	0	0	0	0
34			Orlim		1.3	1.3	1.3	0	0	0
35			Paroda		0.1	0.1	0.1	0	0	0
36			Rachol		0	0	0	0	0	0
37			Raia		0.61	0.61	0.61	0	0	0
38			Sao Jose de Areal		0	0	0	0	0	0
39			Sarzora		0.8	0.8	0.8	0	0	0
40			Seraulim		0	0	0	0	0	0
41			Sernabatim		0	0	0	0	0	0
42			Sirlim		0.09	0.09	0.09	0	0	0
43			Talaulim		0	0	0	0	0	0
44			Talvorda		0	0	0	3.46	3.46	3.46
45			Utorda		0	0	0	0	0	0
46			Vanelim		0	0	0	0	0	0
47			Varca		0	0	0	0	0	0
48			Velim		0.52	0.52	0.52	12.98	12.98	12.98
49			Verna		0	0	0	0	0	0
50			Veroda		0	0	0	1.17	1.17	1
			Total		**13.05**	**13.05**	**12.41**	**486.34**	**486.34**	**484.17**

Taluka and Village-wise Distribution of Minor Irrigation Schemes, CCA and Irrigation Potential

State: Goa **Taluka: Sanguem**

Sl. No.	District	Taluka	Name of the Village	Ground Water			Surface Water		
				CCA	IPC	IPU	CCA	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	South Goa	Sanguem	Antorem	3.30	3.30	3.30	0.00	0.00	0.00
2			Bhati	40.87	41.77	41.77	78.90	78.90	78.90
3			Boma	0.00	0.00	0.00	0.00	0.00	0.00
4			Calem	3.82	3.82	3.82	61.85	61.85	61.85
5			Colomba	113.73	113.73	113.73	194.88	194.88	194.88
6			Comproi	0.00	0.00	0.00	2.00	2.00	2.00
7			Corrangunim	1.00	1.00	1.00	0.00	0.00	0.00
8			Costi	18.48	18.48	18.48	3.00	3.00	3.00
9			Cotarli	0.50	0.50	0.50	9.50	9.50	9.50
10			Cumbari	8.20	8.20	8.20	10.85	10.85	10.85
11			Curdi	11.50	11.50	11.50	0.00	0.00	0.00
12			Curpem	14.01	14.01	14.01	18.54	18.54	18.54
13			Dongor	1.40	1.40	1.40	9.90	9.90	9.90
14			Dongurli	0.00	0.00	0.00	0.00	0.00	0.00
15			Dudal	6.00	6.00	6.00	3.10	3.10	3.10
16			Maulinguem	0.00	0.00	0.00	0.00	0.00	0.00
17			Muguli	11.00	11.00	11.00	3.00	3.00	3.00
18			Naiquinim	24.80	24.80	24.80	6.25	6.25	6.25
19			Neturlim	79.06	79.06	79.06	115.68	115.68	115.68
20			Nundrem	6.60	6.60	6.60	3.10	3.10	3.10
21			Oxel	0.00	0.00	0.00	0.00	0.00	0.00
22			Patiem	0.00	0.00	0.00	7.40	7.40	7.40
23			Portem	71.00	71.00	71.00	78.00	78.00	78.00
24			Potrem	6.30	6.30	6.30	14.70	14.70	14.70
25			Rivona	111.83	111.83	111.83	200.97	200.97	200.97
26			Rumbrem	0.00	0.00	0.00	0.00	0.00	0.00
27			Sanguem	0.00	0.00	0.00	13.80	13.80	13.80
28			Santona	4.00	4.00	4.00	0.00	0.00	0.00

29			Sanvordem	5.18	5.18	5.18	3.85	3.85	3.85
30			Sigonem	0.00	0.00	0.00	0.00	0.00	0.00
31			Todou	39.00	39.00	39.00	41.20	41.20	41.20
32			Uguem	0.00	0.00	0.00	48.50	48.50	48.50
33			Verlem	0.00	0.00	0.00	38.24	38.24	38.24
34			Vichundrem	44.99	44.99	44.99	36.29	36.29	36.29
35			Viliena	12.00	12.00	12.00	20.20	20.20	20.20
36			Xelpem	1.00	1.00	1.00	5.50	5.50	5.50
			Total	**639.57**	**640.47**	**640.47**	**1029.20**	**1029.20**	**1029.20**

Table 1 - District and Taluka-wise Minor Irrigation Schemes, CCA and Irrigation Potential in all Schemes

State : Goa

Sl. No.	District	Block	Ground Water Schemes				Surface Water Schemes				Total			
			Nos.	CCA	IPC	IPU	Nos.	CCA	IPC	IPU	Nos.	CCA	IPC	IPU
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	North Goa	Bardez	286	104.79	106.54	98.39	39	28.43	28.86	20.99	325	133.22	135.40	119.38
2		Bicholim	605	332.64	332.64	297.91	118	570.27	570.27	491.46	723	902.91	902.91	789.37
3		Pernem	529	288.87	288.87	242.92	163	424.88	424.88	216.77	692	713.75	713.75	459.69
4		Satari	511	661.13	661.13	618.13	161	648.85	648.85	603.79	672	1309.98	1309.98	1221.92
5		Tiswadi	216	69.62	70.72	70.57	53	9.68	9.68	9.68	269	79.30	80.40	80.25
		Total A	**2147**	**1457.05**	**1459.90**	**1327.92**	**534**	**1682.11**	**1682.54**	**1342.69**	**2681**	**3139.16**	**3142.44**	**2670.61**
6	South Goa	Canacona	369	253.50	253.50	252.50	40	52.68	52.68	52.68	409	306.18	306.18	305.18
7		Dharbandora	168	176.81	176.81	173.21	144	349.56	349.56	349.56	312	526.37	526.37	522.77
8		Mormugao	41	24.70	24.70	24.30	47	18.49	18.49	18.49	88	43.19	43.19	42.79
9		Ponda	636	390.38	401.39	398.99	570	623.39	623.39	623.09	1206	1013.77	1024.78	1022.08
10		Quepem	192	210.32	210.32	207.57	254	187.80	187.80	182.80	446	398.12	398.12	390.37
11		Salcete	60	13.05	13.05	12.41	82	486.34	486.34	484.17	142	499.39	499.39	496.58
12		Sanguem	418	639.57	640.47	640.47	431	1029.20	1029.20	1029.20	849	1668.77	1669.67	1669.67
		Total B	**1884**	**1708.33**	**1720.24**	**1709.45**	**1568**	**2747.46**	**2747.46**	**2739.99**	**3452**	**4455.79**	**4467.70**	**4449.44**
	Goa	**Grand Total (A+B)**	**4031**	**3165.38**	**3180.14**	**3037.37**	**2102**	**4429.57**	**4430.00**	**4082.68**	**6133**	**7594.95**	**7610.14**	**7120.05**

Table 2 - Minor Irrigation Schemes for Recharge of Ground Water only

State : Goa

Sl. No.	District	Name of the Block	No. of villages	Total Number of Ground Water Recharge Schemes								
				Ground Water Schemes					Surface Water Schemes			Grand Total (10+13)
				Dug well	Shallow Tube well	Medium Tube well	Deep Tube well	Total (6+7+8+9)	S. Flow Scheme	S. Lift Scheme	Total (11+12)	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	North Goa	Bardez	43	0	0	0	0	0	0	0	0	0
2		Bicholim	31	3	0	0	0	3	0	0	0	3
3		Pernem	27	0	0	0	0	0	0	0	0	0
4		Satari	78	3	0	0	0	3	10	5	15	18
5		Tiswadi	39	0	0	0	0	0	0	0	0	0
		Total A	**218**	**6**	**0**	**0**	**0**	**6**	**10**	**5**	**15**	**21**
6	South Goa	Canacona	10	0	0	0	0	0	0	0	0	0
7		Dharbandora	16	0	0	0	0	0	0	0	0	0
8		Mormugao	14	0	0	0	0	0	0	0	0	0
9		Ponda	32	0	0	0	0	0	0	0	0	0
10		Quepem	42	2	0	0	0	2	0	0	0	2
11		Salcete	50	2	0	0	0	2	0	0	0	2
12		Sanguem	36	0	0	0	0	0	0	1	1	1
		Total B	**200**	**4**	**0**	**0**	**0**	**4**	**0**	**1**	**1**	**5**
	Goa	**Grand Total (A+ B)**	**418**	**10**	**0**	**0**	**0**	**10**	**10**	**6**	**16**	**26**

Table 3 (a) - Minor Irrigation Schemes in Use, CCA and Irrigation Potential

State : Goa

Sl. No.	District	Block	Ground Water Schemes				Surface Water Schemes				Total			
			In Use (Nos.)	CCA	IPC	IPU	In Use (Nos.)	CCA	IPC	IPU	In Use (Nos.)	CCA	IPC	IPU
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	North Goa	Bardez	270	102.30	104.05	96.30	33	27.77	28.20	20.33	303	130.07	132.25	116.63
2		Bicholim	602	332.61	332.61	297.91	118	570.27	570.27	491.46	720	902.88	902.88	789.37
3		Pernem	519	281.89	281.89	241.97	156	299.34	299.34	214.74	675	581.23	581.23	456.71
4		Satari	509	651.13	651.13	608.13	155	648.85	648.85	603.79	664	1299.98	1299.98	1211.92
5		Tiswadi	187	64.36	65.46	65.46	52	9.68	9.68	9.68	239	74.04	75.14	75.14
		Total A	**2087**	**1432.29**	**1435.14**	**1309.77**	**514**	**1555.91**	**1556.34**	**1340.00**	**2601**	**2988.20**	**2991.48**	**2649.77**
6	South Goa	Canacona	358	250.90	250.90	250.90	40	52.68	52.68	52.68	398	303.58	303.58	303.58
7		Dharbandora	163	173.21	173.21	173.21	144	349.56	349.56	349.56	307	522.77	522.77	522.77
8		Mormugao	41	24.70	24.70	24.30	47	18.49	18.49	18.49	88	43.19	43.19	42.79
9		Ponda	630	390.18	401.19	398.79	569	623.09	623.09	623.09	1199	1013.27	1024.28	1021.88
10		Quepem	190	210.32	210.32	207.57	252	186.40	186.40	181.40	442	396.72	396.72	388.97
11		Salcete	57	12.95	12.95	12.41	77	486.34	486.34	484.17	134	499.29	499.29	496.58
12		Sanguem	417	639.57	640.47	640.47	431	1029.20	1029.20	1029.20	848	1668.77	1669.67	1669.67
		Total B	**1856**	**1701.83**	**1713.74**	**1707.65**	**1560**	**2745.76**	**2745.76**	**2738.59**	**3416**	**4447.59**	**4459.50**	**4446.24**
	Goa	**Grand Total (A+B)**	**3943**	**3134.12**	**3148.88**	**3017.42**	**2074**	**4301.67**	**4302.10**	**4078.59**	**6017**	**7435.79**	**7450.98**	**7096.01**

Table 3 (b) - Minor Irrigation Schemes Temporarily Not in Use, CCA and Irrigation Potential

State: Goa

Sl. No.	District	Ground Water Schemes				Surface Water Schemes				Total			
		Temp. not in Use (Nos.)	CCA	IPC	IPU	Temp. not in Use (Nos.)	CCA	IPC	IPU	Temp. not in Use (Nos.)	CCA	IPC	IPU
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	North Goa	40	23.95	23.95	18.15	5	6.20	6.20	2.69	45	30.15	30.15	20.84
2	South Goa	18	5.50	5.50	1.80	2	1.40	1.40	1.40	20	6.90	6.90	3.20
	Goa	**58**	**29.45**	**29.45**	**19.95**	**7**	**7.60**	**7.60**	**4.09**	**65**	**37.05**	**37.05**	**24.04**

Table 3 (c) - Minor Irrigation Schemes (In Use and Temporarily Not in Use) according to Water Lifting Devices- Ground Water

State : Goa

(In Numbers)

Sl. No.	District	Block	Ground Water Schemes					
			Submersible Pump	Centrifugal Pump	Turbine/ Jet Pump	Manual/Animal	Others	Total (4 to 8)
1	2	3	4	5	6	7	8	9
1	North Goa	Bardez	37	97	0	145	0	279
2		Bicholim	131	395	0	78	0	604
3		Pernem	40	453	7	26	0	526
4		Satari	315	171	3	4	17	510
5		Tiswadi	20	122	0	56	10	208
		Total A	**543**	**1238**	**10**	**309**	**27**	**2127**
6	South Goa	Canacona	86	235	6	23	14	364
7		Dharbandora	62	81	1	22	2	168
8		Mormugao	0	21	0	20	0	41
9		Ponda	252	327	2	40	11	632
10		Quepem	72	97	3	10	10	192
11		Salcete	23	3	0	29	5	60
12		Sanguem	31	372	1	1	12	417
		Total B	**526**	**1136**	**13**	**145**	**54**	**1874**
	Goa	**Grand Total**	**1069**	**2374**	**23**	**454**	**81**	**4001**

Table 3 (d) - Minor Irrigation Schemes (In Use and Temporarily Not in Use) according to Water Lifting Devices- Surface Water

State : Goa

(In Numbers)

Sl. No.	District	Block	Surface Water Lift Schemes only					
			Submersible Pump	Centrifugal Pump	Turbine/ Jet Pump	Manual/Animal	Others	Total (4 to 8)
1	2	3	4	5	6	7	8	9
1	North Goa	Bardez	3	4	0	3	0	10
2		Bicholim	6	81	0	2	0	89
3		Pernem	3	59	9	10	0	81
4		Satari	33	66	3	1	1	104
5		Tiswadi	0	1	0	0	0	1
		Total A	**45**	**211**	**12**	**16**	**1**	**285**
6	South Goa	Canacona	9	7	0	0	1	17
7		Dharbandora	24	60	0	4	0	88
8		Mormugao	0	0	0	13	0	13
9		Ponda	91	96	0	90	3	280
10		Quepem	13	60	0	1	3	77
11		Salcete	3	1	0	11	0	15
12		Sanguem	15	262	0	0	8	285
		Total B	**155**	**486**	**0**	**119**	**15**	**775**
	Goa	**Grand Total (A+B)**	**200**	**697**	**12**	**135**	**16**	**1060**

Table 3 (e) - Minor Irrigation Schemes (In Use and Temporarily Not in Use) according to Source of Energy – Ground Water

State : Goa

(In Numbers)

Sl.No.	District	Block	Ground Water Schemes						
			Electric Pump	Diesel Pump	Wind mills	Solar pumps	Manual/Animal	Others	Total (4 to 9)
1	2	3	4	5	6	7	8	9	10
1	North Goa	Bardez	128	6	0	0	145	0	279
2		Bicholim	493	33	0	0	78	0	604
3		Pernem	492	8	0	0	26	0	526
4		Satari	499	7	0	0	4	0	510
5		Tiswadi	135	14	0	0	56	3	208
		Total A	**1747**	**68**	**0**	**0**	**309**	**3**	**2127**
6	South Goa	Canacona	309	32	0	0	23	0	364
7		Dharbandora	140	4	1	0	22	1	168
8		Mormugao	21	0	0	0	20	0	41
9		Ponda	569	11	0	1	40	11	632
10		Quepem	144	34	1	1	10	2	192
11		Salcete	26	3	0	0	29	2	60
12		Sanguem	383	30	0	0	1	3	417
		Total B	**1592**	**114**	**2**	**2**	**145**	**19**	**1874**
	Goa	**Grand Total (A+B)**	**3339**	**182**	**2**	**2**	**454**	**22**	**4001**

Table 3 (f) - Minor Irrigation Schemes (In Use and Temporarily Not in Use) according to Source of Energy – Surface Water

State : Goa

(In Numbers)

Sl. No.	District	Block	Surface Water Lift Schemes						
			Electric Pump	Diesel Pump	Wind mills	Solar pumps	Manual/Animal	Others	Total (4 to 9)
1	2	3	4	5	6	7	8	9	10
1	North Goa	Bardez	2	5	0	0	3	0	10
2		Bicholim	80	7	0	0	2	0	89
3		Pernem	56	15	0	0	10	0	81
4		Sattari	102	1	0	0	1	0	104
5		Tiswadi	1	0	0	0	0	0	1
		Total A	**241**	**28**	**0**	**0**	**16**	**0**	**285**
6	South Goa	Canacona	16	1	0	0	0	0	17
7		Dharbandora	81	2	0	0	4	1	88
8		Mormugao	0	0	0	0	13	0	13
9		Ponda	166	23	0	1	90	0	280
10		Quepem	53	23	0	0	1	0	77
11		Salcete	1	2	0	0	11	1	15
12		Sanguem	273	11	0	0	0	1	285
		Total B	**590**	**62**	**0**	**1**	**119**	**3**	**775**
	Goa	**Grand Total (A+B)**	**831**	**90**	**0**	**1**	**135**	**3**	**1060**

Table 3 (g) - Minor Irrigation Schemes (In Use and Temporarily Not in Use) according to Source of Energy - All Schemes

State : Goa

(In Numbers)

Sl. No.	District	Block	All Schemes						
			Electric Pump	Diesel Pump	Wind Mills	Solar pumps	Manual/Animal	Others	Total (4 to 9)
1	2	3	4	5	6	7	8	9	10
1	North Goa	Bardez	130	11	0	0	148	0	289
2		Bicholim	573	40	0	0	80	0	693
3		Pernem	548	23	0	0	36	0	607
4		Sattari	601	8	0	0	5	0	614
5		Tiswadi	136	14	0	0	56	3	209
		Total A	**1988**	**96**	**0**	**0**	**325**	**3**	**2412**
6	South Goa	Canacona	325	33	0	0	23	0	381
7		Dharbandora	221	6	1	0	26	2	256
8		Mormugao	21	0	0	0	33	0	54
9		Ponda	735	34	0	2	130	11	912
10		Quepem	197	57	1	1	11	2	269
11		Salcete	27	5	0	0	40	3	75
12		Sanguem	656	41	0	0	1	4	702
		Total B	**2182**	**176**	**2**	**3**	**264**	**22**	**2649**
	Goa	**Grand Total (A+B)**	**4170**	**272**	**2**	**3**	**589**	**25**	**5061**

Table 3 (h) - Number of Schemes Temporarily Not in Use and Potential partially Utilised/Un-utilised - Ground Water

State : Goa

(Area in Ha)

Sl. No.	District	Block	Ground Water Schemes Temporarily not in use due to																											
			Non Availability of Adequate Power				Mechanical Break Down				Less discharge of Water				Non - Availability of Finance				Lack of Maintenance				Any Other Reasons				Total			
			No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	North Goa	Bardez	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	0.10	0.10	0.10	0	0.00	0.00	0.00	0	0.00	0.00	0.00	8	2.19	2.19	1.99	9	2.29	2.29	2.09
2		Bicholim	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	2	0.00	0.00	0.00	2	0.00	0.00	0.00
3		Pernem	0	0.00	0.00	0.00	2	3.65	3.65	0.05	2	0.30	0.30	0.10	0	0.00	0.00	0.00	2	1.80	1.80	0.00	1	0.80	0.80	0.80	7	6.55	6.55	0.95
4		Satari	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	10.00	10.00	10.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	10.00	10.00	10.00
5		Tiswadi	1	0.10	0.10	0.10	0	0.00	0.00	0.00	9	2.40	2.40	2.40	0	0.00	0.00	0.00	2	0.25	0.25	0.25	9	2.36	2.36	2.36	21	5.11	5.11	5.11
		Total A	**1**	**0.10**	**0.10**	**0.10**	**2**	**3.65**	**3.65**	**0.05**	**13**	**12.80**	**12.80**	**12.60**	**0**	**0.00**	**0.00**	**0.00**	**4**	**2.05**	**2.05**	**0.25**	**20**	**5.35**	**5.35**	**5.15**	**40**	**23.95**	**23.95**	**18.15**
6	South Goa	Canacona	1	0.10	0.10	0.10	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	5	1.50	1.50	1.50	0	0.00	0.00	0.00	6	1.60	1.60	1.60
7		Dharbandora	0	0.00	0.00	0.00	0	0.00	0.00	0.00	4	3.60	3.60	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	0.00	0.00	0.00	5	3.60	3.60	0.00
8		Mormugao	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00
9		Ponda	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	0.20	0.20	0.20	1	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	2	0.20	0.20	0.20
10		Quepem	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	0.00	0.00	0.00	2	0.00	0.00	0.00
11		Salcete	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	0.00	0.00	0.00	0	0.00	0.00	0.00	2	0.10	0.10	0.00	3	0.10	0.10	0.00
12		Sanguem	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00
		Total B	**1**	**0.10**	**0.10**	**0.10**	**0**	**0.00**	**0.00**	**0.00**	**6**	**3.80**	**3.80**	**0.20**	**2**	**0.00**	**0.00**	**0.00**	**5**	**1.50**	**1.50**	**1.50**	**4**	**0.10**	**0.10**	**0.00**	**18**	**5.50**	**5.50**	**1.80**
	Goa	**Grand Total (A+B)**	**2**	**0.20**	**0.20**	**0.20**	**2**	**3.65**	**3.65**	**0.05**	**19**	**16.60**	**16.60**	**12.80**	**2**	**0.00**	**0.00**	**0.00**	**9**	**3.55**	**3.55**	**1.75**	**24**	**5.45**	**5.45**	**5.15**	**58**	**29.45**	**29.45**	**19.95**

Table 3 (i) -Number of Schemes Temporarily Not in Use and Potential Partially Utilized/ Un-utilized - Surface Water

State : Goa

Sl No.	District	Block	Surface Water Schemes Temporarily not in use due to																													
			Non Availability of Adequate Power				Mechanical Break Down				Less discharge of water				Non - Availability of Finance				Storage Not filled up fully				Siltation of Canal / Storage				Channel break down				Any Other Reasons		
			No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC	IPU	No.	CCA	IPC
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1	North Goa	Bardez	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	3	0.66	0.66
2		Bicholim	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
3		Pernem	0	0.00	0.00	0.00	1	5.50	5.50	2.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	1	0.04	0.04	0.03	0	0.00	0.00
4		Satari	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
5		Tiswadi	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
		Total A	**0**	**0.00**	**0.00**	**0.00**	**1**	**5.50**	**5.50**	**2.00**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**1**	**0.04**	**0.04**	**0.03**	**3**	**0.66**	**0.66**
6	South Goa	Canacona	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
7		Dharbandora	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
8		Mormugao	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
9		Ponda	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
10		Quepem	0	0.00	0.00	0.00	0	0.00	0.00	0.00	2	1.40	1.40	1.40	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
11		Salcete	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
12		Sanguem	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0.00
		Total B	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**2**	**1.40**	**1.40**	**1.40**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**
	Goa	**Grand Total (A+B)**	**0**	**0.00**	**0.00**	**0.00**	**1**	**5.50**	**5.50**	**2.00**	**2**	**1.40**	**1.40**	**1.40**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0.00**	**1**	**0.04**	**0.04**	**0.03**	**3**	**0.66**	**0.66**

Table 4 (a) - Number of Minor Irrigation Schemes by Cost of Scheme - Ground Water

State : Goa

Sl. No.	District	Block	No. of Ground Water Schemes having Cost of Construction						
			< Rs. 10000	Rs.10000 to Rs.50000	Rs.50000 to Rs.1 Lakh	Rs.1 Lakh to Rs.5 Lakhs	Rs.5 lakh to Rs.10 lakhs	> =Rs.10 Lakhs	Total (4 to 9)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	**North Goa**	Bardez	123	100	47	16	0	0	286
2		Bicholim	74	264	145	122	0	0	605
3		Pernem	107	176	169	77	0	0	529
4		Satari	1	11	52	447	0	0	511
5		Tiswadi	82	80	48	6	0	0	216
		Total A	**387**	**631**	**461**	**668**	**0**	**0**	**2147**
6	**South Goa**	Canacona	29	87	201	51	1	0	369
7		Dharbandora	4	102	43	19	0	0	168
8		Mormugao	15	16	8	2	0	0	41
9		Ponda	237	151	93	154	1	0	636
10		Quepem	35	59	67	31	0	0	192
11		Salcete	30	8	3	19	0	0	60
12		Sanguem	5	191	146	75	1	0	418
		Total B	**355**	**614**	**561**	**351**	**3**	**0**	**1884**
	Goa	**Grand Total (A+B)**	**742**	**1245**	**1022**	**1019**	**3**	**0**	**4031**

Table 4 (b) - Number of Minor Irrigation Schemes by Cost of Scheme - Surface Water

State : Goa

Sl. No.	District	Block	No. of Surface Water Schemes having Cost of Construction						
			<Rs.10000	Rs.10000 to Rs.50000	Rs.50000 to Rs.1 Lakhs	Rs.1 Lakh to Rs.5 Lakhs	Rs.5 lakh to Rs.10 lakhs	>=Rs.10 Lakhs	Total (4 to 9)
1	2	3	4	5	6	7	8	9	10
1	North Goa	Bardez	37	2	0	0	0	0	39
2		Bicholim	70	19	16	13	0	0	118
3		Pernem	140	11	4	8	0	0	163
4		Sattari	7	35	31	86	2	0	161
5		Tiswadi	53	0	0	0	0	0	53
		Total A	**307**	**67**	**51**	**107**	**2**	**0**	**534**
6	South Goa	Canacona	28	5	1	6	0	0	40
7		Dharbandora	86	47	9	2	0	0	144
8		Mormugao	46	0	1	0	0	0	47
9		Ponda	415	99	23	28	5	0	570
10		Quepem	169	69	9	5	2	0	254
11		Salcete	72	7	3	0	0	0	82
12		Sanguem	114	196	94	27	0	0	431
		Total B	**930**	**423**	**140**	**68**	**7**	**0**	**1568**
	Goa	**Grand Total (A+B)**	**1237**	**490**	**191**	**175**	**9**	**0**	**2102**

Table 4 (c) - Total Number of Minor Irrigation Schemes by Cost of Schemes

State : Goa

Sl. No.	District	Block	Total No. of Minor Irrigation Schemes having Cost of Construction						
			<Rs. 10000	Rs.10000 to 50000	Rs.50000 to 1 Lakh	Rs.1 Lakh to 5 Lakhs	Rs.5 lakh to 10 lakhs	>=Rs. 10 Lakhs	Total (4 to 9)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	**North Goa**	Bardez	160	102	47	16	0	0	325
2		Bicholim	144	283	161	135	0	0	723
3		Pernem	247	187	173	85	0	0	692
4		Satari	8	46	83	533	2	0	672
5		Tiswadi	135	80	48	6	0	0	269
		Total A	**694**	**698**	**512**	**775**	**2**	**0**	**2681**
6	**South Goa**	Canacona	57	92	202	57	1	0	409
7		Dharbandora	90	149	52	21	0	0	312
8		Mormugao	61	16	9	2	0	0	88
9		Ponda	652	250	116	182	6	0	1206
10		Quepem	204	128	76	36	2	0	446
11		Salcete	102	15	6	19	0	0	142
12		Sanguem	119	387	240	102	1	0	849
		Total B	**1285**	**1037**	**701**	**419**	**10**	**0**	**3452**
	Goa	**Grand Total (A+B)**	**1979**	**1735**	**1213**	**1194**	**12**	**0**	**6133**

Table 5 - Season wise Area Irrigated as Supplementary Source by Minor Irrigation Schemes

State : Goa

(Area in Ha.)

Sl. No.	District	Block	Area Irrigated by Ground Water Schemes					Area Irrigated by Surface Water Schemes					Area Irrigated by all Minor Irrigation Schemes				
			Kharif	Rabi	Perennial	Others	Total (4 to 7)	Kharif	Rabi	Perennial	Others	Total (9 to 12)	Kharif	Rabi	Perennial	Others	Total (14 to 17)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	North Goa	Bardez	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2		Bicholim	0.00	0.00	0.40	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.40
3		Pernem	0.00	23.94	58.92	1.80	84.66	0.00	37.36	16.21	0.00	53.57	0.00	61.30	75.13	1.80	138.23
4		Satari	0.00	0.00	0.44	0.00	0.44	0.00	0.00	59.00	0.00	59.00	0.00	0.00	59.44	0.00	59.44
5		Tiswadi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Total A	**0.00**	**23.94**	**59.76**	**1.80**	**85.50**	**0.00**	**37.36**	**75.21**	**0.00**	**112.57**	**0.00**	**61.30**	**134.97**	**1.80**	**198.07**
6	South Goa	Canacona	0.00	0.00	0.00	1.03	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	1.03
7		Dharbandora	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8		Mormugao	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9		Ponda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10		Quepem	0.00	0.00	17.70	0.00	17.70	0.00	9.31	52.40	0.00	61.71	0.00	9.31	70.10	0.00	79.41
11		Salcete	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
12		Sanguem	0.00	0.60	0.90	0.00	1.50	0.00	9.00	8.80	0.70	18.50	0.00	9.60	9.70	0.70	20.00
		Total B	**0.00**	**0.60**	**18.60**	**1.03**	**20.23**	**0.00**	**19.31**	**61.20**	**0.70**	**81.21**	**0.00**	**19.91**	**79.80**	**1.73**	**101.44**
	Goa	**Total (A+B)**	**0.00**	**24.54**	**78.36**	**2.83**	**105.73**	**0.00**	**56.67**	**136.41**	**0.70**	**193.78**	**0.00**	**81.21**	**214.77**	**3.53**	**299.51**

Table 6 (a): Number of Schemes Permanently Not in Use by Type of Reasons – Ground Water

State : **Goa**

(Area in Ha)

Sl. No.	District	Taluka	Ground Water Schemes Permanently Not in Use															
			Salinity		Dried up		Destroyed beyond repair		Sea water intrusion		Industrial effluents		Availability of Major/Medium Irrigation Projects		Other Reasons		Total	
			No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	North Goa	Bardez	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	7	0.20	7	0.20
2		Bicholim	0	0.00	1	0.03	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.03
3		Pernem	0	0.00	0	0.00	0	0.00	0	0.00	1	0.25	0	0.00	2	0.18	3	0.43
4		Satari	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00
5		Tiswadi	8	0.15	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	8	0.15
		Total A	**8**	**0.15**	**2**	**0.03**	**0**	**0.00**	**0**	**0.00**	**1**	**0.25**	**0**	**0.00**	**9**	**0.38**	**20**	**0.81**
6	South Goa	Canacona	0	0.00	3	0.60	2	0.40	0	0.00	0	0.00	0	0.00	0	0.00	5	1.00
7		Ponda	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	0.00	4	0.00
8		Sanguem	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	1	0.00
		Total B	**0**	**0.00**	**4**	**0.60**	**2**	**0.40**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**4**	**0.00**	**10**	**1.00**
	Goa	**Grand Total (A+B)**	**8**	**0.15**	**6**	**0.63**	**2**	**0.40**	**0**	**0.00**	**1**	**0.25**	**0**	**0.00**	**13**	**0.38**	**30**	**1.81**

Table 6 (b): Number of Schemes Permanently Not in Use by Type of Reasons - Surface Water

State : Goa

(Area in Ha)

Sl. No.	District	Taluka	Surface Water Schemes Permanently Not in Use																	
			Salinity		Dried up		Destroyed beyond repair		Sea water intrusion		Industrial effluents		Availability of Major/Medium Irrigation Projects		Due to Sinking		Other Reasons		Total	
			No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost	No.	IPC Lost
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	North Goa	Bardez	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	3	0.00	3	0.00
2		Pernem	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	5	120.00	5	120.00
3		Satari	0	0.00	1	0.00	2	0.00	0	0.00	0	0.00	0	0.00	0	0	3	0.00	6	0.00
4		Tiswadi	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	1	0.00	1	0.00
		Total A	**0**	**0.00**	**1**	**0.00**	**2**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0**	**12**	**120.00**	**15**	**120.00**
6	South Goa	Ponda	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	1	0.30	1	0.30
7		Salcete	0	0.00	2	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0	3	0.00	5	0.00
		Total B	**0**	**0.00**	**2**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0**	**4**	**0.30**	**6**	**0.30**
	Goa	**Grand Total (A+B)**	**0**	**0.00**	**3**	**0.00**	**2**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0**	**16**	**120.30**	**21**	**120.30**

Table 7 (a): Number of Under-utilized In-Use Schemes and Under-utilized Potential - Ground Water

State : Goa

(Area in Ha)

Sl. No.	District	Taluka	Constraints in utilization of Potential of Ground Water Schemes													
			Non Availability of Adequate Power		Mechanical Break Down		Less discharge of Water		Non - Availability of Finance		Lack of Maintenance		Others		Total	
			No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	**North Goa**	Bardez	0	0.00	0	0.00	3	2.00	0	0.00	0	0.00	4	2.50	7	4.50
2		Bicholim	0	0.00	0	0.00	11	5.31	0	0.00	1	3.30	43	24.30	55	32.91
3		Pernem	1	0.20	1	0.00	32	7.50	10	3.03	2	0.22	62	28.42	108	39.37
4		Satari	1	0.00	0	0.00	5	2.67	0	0.00	0	0.00	2	1.20	8	3.87
5		Tiswadi	0	0.00	0	0.00	10	0.00	0	0.00	0	0.00	31	0.00	41	0.00
		Total A	**2**	**0.20**	**1**	**0.00**	**61**	**17.48**	**10**	**3.03**	**3**	**3.52**	**142**	**56.42**	**219**	**80.65**
6	**South Goa**	Canacona	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
7		Dharbandora	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
8		Mormugao	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	1	0.00
9		Ponda	0	0.00	0	0.00	1	0.40	0	0.00	0	0.00	2	2.00	3	2.40
10		Quepem	1	0.00	2	0.00	33	1.50	0	0.00	0	0.00	32	1.25	68	2.75
11		Salcete	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00
12		Sanguem	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		Total B	**2**	**0.00**	**2**	**0.00**	**34**	**1.90**	**0**	**0.00**	**0**	**0.00**	**35**	**3.25**	**73**	**5.15**
	Goa	**Grand Total (A+B)**	**4**	**0.20**	**3**	**0.00**	**95**	**19.38**	**10**	**3.03**	**3**	**3.52**	**177**	**59.67**	**292**	**85.80**

Table 7 (b): Number of Under-utilized In Use Schemes and Under-utilized Potential - Surface Water

State : Goa **(Area in Ha.)**

Sl. No.	District	Block	Constraints in utilization of Potential of Surface Water Schemes															
			Non Availability of Adequate Power		Mechanical Break Down		Less discharge of Water		Storage not filled up fully		Siltation of canal/storage		Breakdown of channels		Others		Total	
			No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized	No.	Potential under Utilized
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	North Goa	Bardez	0	0.00	0	0.00	3	1.90	0	0.00	1	0.30	0	0.00	3	0.00	7	2.20
2		Bicholim	0	0.00	0	0.00	0	0.00	1	13.50	0	0.00	0	0.00	9	64.91	10	78.41
3		Pernem	0	0.00	1	0.20	3	0.07	2	8.80	2	0.00	2	0.00	39	70.92	49	79.99
4		Satari	3	0.00	0	0.00	0	0.00	0	0.00	1	0.40	0	0.00	3	0.25	7	0.65
5		Tiswadi	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
		Total A	**3**	**0.00**	**1**	**0.20**	**6**	**1.97**	**3**	**22.30**	**4**	**0.70**	**2**	**0.00**	**54**	**136.08**	**73**	**161.25**
6	South Goa	Canacona	0	0.00	0	0.00	3	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	0.00
7		Dharbandora	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
8		Mormugao	0	0.00	0	0.00	18	0.00	0	0.00	0	0.00	0	0.00	8	0.00	26	0.00
9		Ponda	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
10		Quepem	1	0.00	1	0.00	52	2.40	4	0.90	0	0.00	0	0.00	18	0.40	76	3.70
11		Salcete	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	1	0.00
12		SANGUEM	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00
		Total B	**1**	**0.00**	**2**	**0.00**	**73**	**2.40**	**4**	**0.90**	**0**	**0.00**	**0**	**0.00**	**27**	**0.40**	**107**	**3.70**
	Goa	**Grand Total (A+B)**	**4**	**0.00**	**3**	**0.20**	**79**	**4.37**	**7**	**23.20**	**4**	**0.70**	**2**	**0.00**	**81**	**136.48**	**180**	**164.95**

Table 8 (a): Minor Irrigation Schemes according to Ownership Type for Ground Water Scheme

State : Goa

(In Numbers)

Sl. No.	District	Block	Ground water Schemes by Ownership								
			Public					Private			Grand Total (8 + 11)
			Government	Co-op. Society	Panchayat	Others	Total (4 to 7)	Group of Farmers	Individual Farmer	Total (9 to 11)	
1	2	3	4	5	6	7	8	9	10	11	12
1	North Goa	Bardez	2	2	0	9	13	13	260	273	286
2		Bicholim	5	0	2	2	9	10	586	596	605
3		Pernem	18	4	0	3	25	58	446	504	529
4		Satari	45	3	1	3	52	31	428	459	511
5		Tiswadi	2	0	0	2	4	8	204	212	216
		Total A	**72**	**9**	**3**	**19**	**103**	**120**	**1924**	**2044**	**2147**
1	South Goa	Canacona	0	1	0	1	2	18	349	367	369
2		Dharbandora	0	2	0	2	4	0	164	164	168
3		Mormugao	2	0	2	2	6	6	29	35	41
4		Ponda	2	0	3	11	16	23	597	620	636
5		Quepem	2	0	0	1	3	6	183	189	192
6		Salcete	0	0	0	0	0	4	56	60	60
7		Sanguem	5	0	0	8	13	0	405	405	418
		Total B	**11**	**3**	**5**	**25**	**44**	**57**	**1783**	**1840**	**1884**
	Goa	**Grand Total (A+B)**	**83**	**12**	**8**	**44**	**147**	**177**	**3707**	**3884**	**4031**

Table 8 (b): Minor Irrigation Schemes according to Ownership Type for Surface Water Scheme

State : Goa

(In Numbers)

Sl. No.	District	Block	Surface Water Schemes by Ownership								
			Public					Private			Grand Total (8 + 11)
			Government	Co-op Society	Panchayat	Other	Total (4 to 7)	Group of Farmers	Individual Farmer	Total (9 to 11)	
1	2	3	4	5	6	7	8	9	10	11	12
1	North Goa	Bardez	2	0	2	18	22	13	4	17	39
2		Bicholim	20	0	0	5	25	16	77	93	118
3		Pernem	21	0	1	12	34	38	91	129	163
4		Satari	33	4	0	6	43	24	94	118	161
5		Tiswadi	0	0	0	0	0	52	1	53	53
		Total A	**76**	**4**	**3**	**41**	**124**	**143**	**267**	**410**	**534**
6	South Goa	Canacona	1	0	0	1	2	6	32	38	40
7		Dharbandora	2	1	0	6	9	6	129	135	144
8		Mormugao	0	0	0	1	1	40	6	46	47
9		Ponda	10	0	1	40	51	216	303	519	570
10		Quepem	4	0	0	4	8	6	240	246	254
11		Salcete	4	0	0	1	5	11	66	77	82
12		Sanguem	9	6	0	15	30	73	328	401	431
		Total B	**30**	**7**	**1**	**68**	**106**	**358**	**1104**	**1462**	**1568**
	Goa	**Grand Total (A+B)**	**106**	**11**	**4**	**109**	**230**	**501**	**1371**	**1872**	**2102**

Table 9 (a): Minor Irrigation Schemes under Individual Ownership according to Holding size of Owner - Ground Water

State : Goa

(In Numbers)

Sl. No.	District	Block	No. of Ground Water Schemes owned by Farmers					
			Marginal (0-1 Ha)	Small (1-2 Ha)	Semi-Medium (2- 4 Ha)	Medium (4-10 Ha)	Big (>=10 Ha)	Total (4 to 8)
1	2	3	4	5	6	7	8	9
1	North Goa	Bardez	231	15	9	4	1	260
2		Bicholim	487	56	20	20	3	586
3		Pernem	346	49	39	10	2	446
4		Satari	221	128	49	25	5	428
5		Tiswadi	185	6	4	1	8	204
		Total A	**1470**	**254**	**121**	**60**	**19**	**1924**
6	South Goa	Canacona	244	66	34	5	0	349
7		Dharbandora	65	28	32	32	7	164
8		Mormugao	17	9	1	1	1	29
9		Ponda	464	74	34	19	6	597
10		Quepem	109	31	23	19	1	183
11		Salcete	52	4	0	0	0	56
12		Sanguem	147	144	49	48	17	405
		Total B	**1098**	**356**	**173**	**124**	**32**	**1783**
	Goa	**Grand Total (A+B)**	**2568**	**610**	**294**	**184**	**51**	**3707**

Table 9(b): Minor Irrigation Schemes under Individual Ownership according to Holding size of Owner - Surface Water

State : Goa

(In Numbers)

Sl. No.	District	Block	No. of Surface Water Schemes owned by Farmers					
			Marginal (0-1 Ha)	Small (1-2 Ha)	Semi-Medium (2- 4 Ha)	Medium (4-10 Ha)	Big (>=10 Ha)	Total (4 to 8)
1	2	3	4	5	6	7	8	9
1	North Goa	Bardez	2	2	0	0	0	4
2		Bicholim	39	14	16	7	1	77
3		Pernem	0	80	5	4	2	91
4		Satari	32	29	19	12	2	94
5		Tiswadi	1	0	0	0	0	1
		Total A	**74**	**125**	**40**	**23**	**5**	**267**
6	South Goa	Canacona	15	6	9	2	0	32
7		Dharbandora	61	14	25	21	8	129
8		Mormugao	5	1	0	0	0	6
9		Ponda	258	28	6	6	5	303
10		Quepem	170	44	11	12	3	240
11		Salcete	55	6	0	1	4	66
12		Sanguem	126	110	36	39	17	328
		Total B	**690**	**209**	**87**	**81**	**37**	**1104**
	Goa	**Grand Total (A+B)**	**764**	**334**	**127**	**104**	**42**	**1371**

Table 9(c): Minor Irrigation Schemes under Individual Ownership according to Holding size of Owner - All Schemes

State : Goa

(In Numbers)

Sl. No.	District	Block	Total number of Minor Irrigation Schemes owned by Farmers					
			Marginal (0-1 Ha)	Small (1-2 Ha)	Semi-Medium (2- 4 Ha)	Medium (4-10 Ha)	Big (>=10 Ha)	Total (4 to 8)
1	2	3	4	5	6	7	8	9
1	North Goa	Bardez	233	17	9	4	1	264
2		Bicholim	526	70	36	27	4	663
3		Pernem	346	129	44	14	4	537
4		Satari	253	157	68	37	7	522
5		Tiswadi	186	6	4	1	8	205
		Total A	**1544**	**379**	**161**	**83**	**24**	**2191**
6	South Goa	Canacona	259	72	43	7	0	381
7		Dharbandora	126	42	57	53	15	293
8		Mormugao	22	10	1	1	1	35
9		Ponda	722	102	40	25	11	900
10		Quepem	279	75	34	31	4	423
11		Salcete	107	10	0	1	4	122
12		Sanguem	273	254	85	87	34	733
		Total B	**1788**	**565**	**260**	**205**	**69**	**2887**
	Goa	**Grand Total (A+B)**	**3332**	**944**	**421**	**288**	**93**	**5078**

Table 10(a): Minor Irrigation Schemes according to Social Status of Individual Owner - Ground Water

State : Goa

(In Number)

Sl. No.	District	Block	No. of Ground Water Schemes						
			Social Status of Individual Owner						
			Scheduled Caste	Scheduled Tribe	OBC	Others	Total (4 to 7)	Owned by other than Individual Farmer (incl. Public & Group of farmers)	Total (8+9)
1	2	3	4	5	6	7	8	9	10
1	North Goa	Bardez	0	3	121	136	260	26	286
2		Bicholim	8	19	181	378	586	19	605
3		Pernem	3	1	157	285	446	83	529
4		Satari	13	4	5	406	428	83	511
5		Tiswadi	6	53	82	63	204	12	216
		Total A	**30**	**80**	**546**	**1268**	**1924**	**223**	**2147**
6	South Goa	Canacona	7	134	25	183	349	20	369
7		Dharbandora	17	39	13	95	164	4	168
8		Mormugao	0	7	3	19	29	12	41
9		Ponda	18	140	185	254	597	39	636
10		Quepem	11	46	18	108	183	9	192
11		Salcete	0	25	0	31	56	4	60
12		Sanguem	12	161	39	193	405	13	418
		Total B	**65**	**552**	**283**	**883**	**1783**	**101**	**1884**
	Goa	**Grand Total (A+B)**	**95**	**632**	**829**	**2151**	**3707**	**324**	**4031**

Table 10(b): Minor Irrigation Schemes according to Social Status of Individual Owner – Surface Water

State : Goa

(In Numbers)

Sl. No.	District	Block	No. of Surface Water Schemes						
			Social Status of Individual Owner						
			Scheduled Caste	Scheduled Tribe	OBC	Others	Total (4 to 7)	Owned by other than Individual Farmer (incl. Public & Group of farmers)	Total (7+9)
1	2	3	4	5	6	7	8	9	10
1	North Goa	Bardez	0	0	4	0	4	35	39
2		Bicholim	0	6	15	56	77	41	118
3		Pernem	0	0	28	63	91	72	163
4		Satari	2	0	3	89	94	67	161
5		Tiswadi	0	0	1	0	1	52	53
		Total A	**2**	**6**	**51**	**208**	**267**	**267**	**534**
6	South Goa	Canacona	0	20	2	10	32	8	40
7		Dharbandora	4	21	8	96	129	15	144
8		Mormugao	0	0	0	6	6	41	47
9		Ponda	6	101	90	106	303	267	570
10		Quepem	43	129	11	57	240	14	254
11		Salcete	0	51	0	15	66	16	82
12		Sanguem	11	93	37	187	328	103	431
		Total B	**64**	**415**	**148**	**477**	**1104**	**464**	**1568**
	Goa	**Grand Total (A+B)**	**66**	**421**	**199**	**685**	**1371**	**731**	**2102**

Table 10 (c): Minor Irrigation Schemes according to Social Status of Individual Owner - All Schemes

State : Goa **(In Numbers)**

Sl. No.	District	Block	Total Number of Minor Irrigation Schemes by Social Status						
			Social Status of Individual Owner						
			Scheduled Caste	Scheduled Tribe	OBC	Others	Total (4 to 7)	Owned by other than Individual Farmer (incl. Public & Group of farmers)	Total (8+9)
1	2	3	4	5	6	7	8	9	10
1	North Goa	Bardez	0	3	125	136	264	61	325
2		Bicholim	8	25	196	434	663	60	723
3		Pernem	3	1	185	348	537	155	692
4		Satari	15	4	8	495	522	150	672
5		Tiswadi	6	53	83	63	205	64	269
		Total A	**32**	**86**	**597**	**1476**	**2191**	**490**	**2681**
6	South Goa	Canacona	7	154	27	193	381	28	409
7		Dharbandora	21	60	21	191	293	19	312
8		Mormugao	0	7	3	25	35	53	88
9		Ponda	24	241	275	360	900	306	1206
10		Quepem	54	175	29	165	423	23	446
11		Salcete	0	76	0	46	122	20	142
12		Sanguem	23	254	76	380	733	116	849
		Total B	**129**	**967**	**431**	**1360**	**2887**	**565**	**3452**
	Goa	**Grand Total (A+B)**	**161**	**1053**	**1028**	**2836**	**5078**	**1055**	**6133**

Table 10 (d): Minor Irrigation Schemes according to Social Status of Female Owner - Ground Water

State : Goa

(In Numbers)

Sl. No.	District	Block	No. of Ground Water Schemes owned by				
			Scheduled Caste	Scheduled Tribe	OBC	Others	Total (4 to 7)
1	2	3	4	5	6	7	8
1	North Goa	Bardez	0	1	32	26	59
2		Bicholim	0	3	26	32	61
3		Pernem	0	0	18	21	39
4		Satari	1	0	0	24	25
5		Tiswadi	0	6	18	14	38
		Total A	**1**	**10**	**94**	**117**	**222**
6	South Goa	Canacona	1	1	1	20	23
7		Dharbandora	1	1	0	4	6
8		Mormugao	0	4	0	2	6
9		Ponda	0	16	12	19	47
10		Quepem	2	4	1	8	15
11		Salcete	0	11	0	9	20
12		Sanguem	0	15	9	40	64
		Total B	**4**	**52**	**23**	**102**	**181**
	Goa	**Grand Total (A+B)**	**5**	**62**	**117**	**219**	**403**

Table 10 (e): Minor Irrigation Schemes according to Social Status of Female Owner -Surface Water

State : Goa

(In Numbers)

Sl. No.	District	Block	No. of Surface Water Scheme owned by				
			Scheduled Caste	Scheduled Tribe	OBC	Others	Total (4 to 7)
1	2	3	4	5	6	7	8
1	North Goa	Bardez	0	0	2	0	2
2		Bicholim	0	0	1	0	1
3		Pernem	0	0	1	2	3
4		Satari	0	0	0	3	3
5		Tiswadi	0	0	1	0	1
		Total A	**0**	**0**	**5**	**5**	**10**
6	South Goa	Canacona	0	0	0	2	2
7		Dharbandora	0	1	0	7	8
8		Ponda	0	9	7	8	24
9		Quepem	17	15	3	10	45
10		Salcete	0	42	0	2	44
11		Sanguem	4	10	7	32	53
12		**Total B**	**21**	**77**	**17**	**61**	**176**
	Goa	**Grand Total (A+B)**	**21**	**77**	**22**	**66**	**186**

Table 10 (f) :Minor Irrigation Schemes according to Social Status of Female Owner - All Schemes

State : Goa **(In Numbers)**

Sl. No.	District	Block	Total Number of Minor Irrigation Schemes				
			Scheduled Caste	Scheduled Tribe	OBC	Others	Total (4 to 7)
1	2	3	4	5	6	7	8
1	North Goa	Bardez	0	1	34	26	61
2		Bicholim	0	3	27	32	62
3		Pernem	0	0	19	23	42
4		Satari	1	0	0	27	28
5		Tiswadi	0	6	19	14	39
		Total A	**1**	**10**	**99**	**122**	**232**
6	South Goa	Canacona	1	1	1	22	25
7		Dharbandora	1	2	0	11	14
8		Mormugao	0	4	0	2	6
9		Ponda	0	25	19	27	71
10		Quepem	19	19	4	18	60
11		Salcete	0	53	0	11	64
12		Sanguem	4	25	16	72	117
		Total B	**25**	**129**	**40**	**163**	**357**
	Goa	**Grand Total (A+B)**	**26**	**139**	**139**	**285**	**589**

Table 10 (g): Minor Irrigation Schemes according to Social Status of Transgender Owner - Ground Water

State : Goa **(In Numbers)**

Sl. No.	District	Block	No. of Ground Water Schemes				
			Social Status of Owner				
			Scheduled Caste	Scheduled Tribe	OBC	Others	Total (4 to 7)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	**North Goa**		0	0	0	0	0
		Total A	**0**	**0**	**0**	**0**	**0**
2	**South Goa**	Quepem	2	0	0	0	2
3		Sanguem	1	0	0	1	2
		Total B	**3**	**0**	**0**	**1**	**4**
	Goa	**Grand Total (A+B)**	**3**	**0**	**0**	**1**	**4**

Table 11(a): Minor Irrigation Schemes under Individual Ownership according to Source of Finance - Ground Water

State : Goa

(In Numbers)

Sl. No.	District	Block	Ground Water Schemes														
			With Single Source of Finance						With two Sources of Finance								Grand Total (9 +17)
			Bank Loan	Govt. Fund	Own Saving	Money Lender	Others	Total (4 to 8)	Own Saving & Bank Loan	Own Saving & Govt Fund	Own Saving & Money Lender	Bank Loan & Govt Fund	Bank Loan & Money Lender	Govt Funds & Money Lender	Others	Total (10 to 16)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	North Goa	Bardez	2	5	159	1	6	173	12	17	2	1	0	0	55	87	260
2		Bicholim	19	6	521	1	3	550	2	22	0	6	0	0	6	36	586
3		Pernem	0	0	1	0	0	1	1	8	0	0	0	0	436	445	446
4		Satari	26	2	247	0	9	284	79	44	1	8	0	1	11	144	428
5		Tiswadi	1	9	0	1	0	11	1	5	1	1	0	0	185	193	204
		Total A	**48**	**22**	**928**	**3**	**18**	**1019**	**95**	**96**	**4**	**16**	**0**	**1**	**693**	**905**	**1924**
6	South Goa	Canacona	0	0	44	0	0	44	3	17	0	0	0	0	285	305	349
7		Dharbandora	3	2	124	0	0	129	17	15	0	0	0	0	3	35	164
8		Mormugao	2	3	18	0	2	25	0	0	0	0	0	0	4	4	29
9		Ponda	0	0	0	0	1	1	28	68	0	1	0	0	499	596	597
10		Quepem	3	4	31	0	0	38	3	12	0	1	0	0	129	145	183
11		Salcete	1	2	40	0	7	50	0	2	0	1	0	0	3	6	56
12		Sanguem	0	0	1	0	0	1	43	18	0	3	0	0	340	404	405
		Total B	**9**	**11**	**258**	**0**	**10**	**288**	**94**	**132**	**0**	**6**	**0**	**0**	**1263**	**1495**	**1783**
	Goa	**Grand Total (A+B)**	**57**	**33**	**1186**	**3**	**28**	**1307**	**189**	**228**	**4**	**22**	**0**	**1**	**1956**	**2400**	**3707**

Table 11 (b): Minor Irrigation Schemes under Individual Ownership according to Source of Finance - Surface Water

State : Goa

(In Numbers)

Sl. No.	District	Block	Surface Water Schemes														
			With Single Source of Finance						With two Sources of Finance								Grand Total (9 +17)
			Bank Loan	Govt. Fund	Own Saving	Money Lender	Others	Total (4 to 8)	Own Saving & Bank Loan	Own Saving & Govt Fund	Own Saving & Money Lender	Bank Loan & Govt Fund	Bank Loan & Money Lender	Govt Fund & Money Lender	Others	Total (10 to 16)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	North Goa	Bardez	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4
2		Bicholim	1	1	61	0	0	63	3	5	0	0	0	0	6	14	77
3		Pernem	0	0	0	0	0	0	0	2	0	0	0	0	89	91	91
4		Satari	6	0	34	0	0	40	22	27	0	2	1	0	2	54	94
5		Tiswadi	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
		Total A	**7**	**1**	**100**	**0**	**0**	**108**	**25**	**34**	**0**	**2**	**1**	**0**	**97**	**159**	**267**
6	South Goa	Canacona	0	0	14	0	0	14	0	1	0	0	0	0	17	18	32
7		Dharbandora	7	4	108	0	0	119	6	4	0	0	0	0	0	10	129
8		Mormugao	0	0	4	0	2	6	0	0	0	0	0	0	0	0	6
9		Ponda	0	0	0	0	0	0	6	19	0	0	0	0	278	303	303
10		Quepem	3	4	27	0	6	40	2	4	1	1	0	0	192	200	240
11		Salcete	0	0	56	0	0	56	0	1	0	0	0	0	9	10	66
12		Sanguem	0	0	1	0	0	1	8	9	0	2	0	0	308	327	328
		Total B	**10**	**8**	**210**	**0**	**8**	**236**	**22**	**38**	**1**	**3**	**0**	**0**	**804**	**868**	**1104**
	Goa	**Grand Total (A+B)**	**17**	**9**	**310**	**0**	**8**	**344**	**47**	**72**	**1**	**5**	**1**	**0**	**901**	**1027**	**1371**

Table 11 (c): Minor Irrigation Schemes under Individual Ownership according to Source of Finance - All Schemes

State : Goa

(In Numbers)

Sl. No.	District	Block	Total No. of MI Schemes														
			With Single Source of Finance						With two Sources of Finance								Grand Total (9 +17)
			Bank Loan	Govt. Fund	Own Saving	Money Lender	Others	Total (4 to 8)	Own Saving & Bank Loan	Own Saving & Govt Fund	Own Saving & Money Lender	Bank Loan & Govt Fund	Bank Loan & Money Lender	Govt Fund & Money Lender	Others	Total (10 to 16)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	North Goa	Bardez	2	5	163	1	6	177	12	17	2	1	0	0	55	87	264
2		Bicholim	20	7	582	1	3	613	5	27	0	6	0	0	12	50	663
3		Pernem	0	0	1	0	0	1	1	10	0	0	0	0	525	536	537
4		Satari	32	2	281	0	9	324	101	71	1	10	1	1	13	198	522
5		Tiswadi	1	9	1	1	0	12	1	5	1	1	0	0	185	193	205
		Total A	**55**	**23**	**1028**	**3**	**18**	**1127**	**120**	**130**	**4**	**18**	**1**	**1**	**790**	**1064**	**2191**
6	South Goa	Canacona	0	0	58	0	0	58	3	18	0	0	0	0	302	323	381
7		Dharbandora	10	6	232	0	0	248	23	19	0	0	0	0	3	45	293
8		Mormugao	2	3	22	0	4	31	0	0	0	0	0	0	4	4	35
9		Ponda	0	0	0	0	1	1	34	87	0	1	0	0	777	899	900
10		Quepem	6	8	58	0	6	78	5	16	1	2	0	0	321	345	423
11		Salcete	1	2	96	0	7	106	0	3	0	1	0	0	12	16	122
12		Sanguem	0	0	2	0	0	2	51	27	0	5	0	0	648	731	733
		Total B	**19**	**19**	**468**	**0**	**18**	**524**	**116**	**170**	**1**	**9**	**0**	**0**	**2067**	**2363**	**2887**
	Goa	**Total (A+B)**	**74**	**42**	**1496**	**3**	**36**	**1651**	**236**	**300**	**5**	**27**	**1**	**1**	**2857**	**3427**	**5078**

Table 12(a): Minor Irrigation Schemes by Tribal and Non-Tribal Villages - Ground Water

State : Goa

(In Numbers)

Sl. No.	District	Block	Ground Water Schemes														
			Dug Well			Shallow Tube Well			Medium Tube Well			Deep Tube Well			Total		
			Tribal	Non tribal	Total	Tribal	Non tribal	Total	Tribal	Non tribal	Total	Tribal	Non tribal	Total	Tribal	Non tribal	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	North Goa	Bardez	0	285	285	0	1	1	0	0	0	0	0	0	0	286	286
2		Bicholim	0	604	604	0	1	1	0	0	0	0	0	0	0	605	605
3		Pernem	0	523	523	0	1	1	0	3	3	0	2	2	0	529	529
4		Satari	0	463	463	0	32	32	0	12	12	0	4	4	0	511	511
5		Tiswadi	0	210	210	0	6	6	0	0	0	0	0	0	0	216	216
		Total A	**0**	**2085**	**2085**	**0**	**41**	**41**	**0**	**15**	**15**	**0**	**6**	**6**	**0**	**2147**	**2147**
6	South Goa	Canacona	0	366	366	0	3	3	0	0	0	0	0	0	0	369	369
7		Dharbandora	23	140	163	1	1	2	0	3	3	0	0	0	24	144	168
8		Mormugao	0	41	41	0	0	0	0	0	0	0	0	0	0	41	41
9		Ponda	0	631	631	0	4	4	0	1	1	0	0	0	0	636	636
10		Quepem	0	177	177	0	14	14	0	1	1	0	0	0	0	192	192
11		Salcete	18	39	57	0	2	2	0	0	0	0	1	1	18	42	60
12		Sanguem	1	411	412	0	5	5	0	1	1	0	0	0	1	417	418
		Total B	**42**	**1805**	**1847**	**1**	**29**	**30**	**0**	**6**	**6**	**0**	**1**	**1**	**43**	**1841**	**1884**
	Goa	**Grand Total (A+B)**	**42**	**3890**	**3932**	**1**	**70**	**71**	**0**	**21**	**21**	**0**	**7**	**7**	**43**	**3988**	**4031**

Table 12 (b): Minor Irrigation Schemes by Tribal & Non-Tribal Villages – Surface Water

State : Goa

(In Numbers)

Sl. No.	District	Block	Surface Water Schemes								
			Surface Flow Schemes			Surface Lift Schemes			Total		
			Tribal	Non tribal	Total	Tribal	Non tribal	Total	Tribal	Non tribal	Total
1	2	3	4	5	6	7	8	9	10	11	12
1	North Goa	Bardez	0	26	26	0	13	13	0	39	39
2		Bicholim	0	29	29	0	89	89	0	118	118
3		Pernem	0	78	78	0	85	85	0	163	163
4		Satari	0	52	52	0	109	109	0	161	161
5		Tiswadi	0	52	52	0	1	1	0	53	53
		Total A	**0**	**237**	**237**	**0**	**297**	**297**	**0**	**534**	**534**
6	South Goa	Canacona	0	23	23	0	17	17	0	40	40
7		Dharbandora	7	49	56	6	82	88	13	131	144
8		Mormugao	0	34	34	0	13	13	0	47	47
9		Ponda	0	290	290	0	280	280	0	570	570
10		Quepem	0	177	177	0	77	77	0	254	254
11		Salcete	43	24	67	9	6	15	52	30	82
12		Sanguem	4	142	146	3	282	285	7	424	431
		Total B	**54**	**739**	**793**	**18**	**757**	**775**	**72**	**1496**	**1568**
	Goa	**Grand Total (A+B)**	**54**	**976**	**1030**	**18**	**1054**	**1072**	**72**	**2030**	**2102**

Table 13 (a): Number of In Use Ground Water Schemes and Irrigation Potential utilized by Water Distribution Devices

State : Goa

(In Numbers/Area in Ha)

Sl. No.	District	Block	Ground Water Schemes according to Water Distribution System															
			Open Water Channel (Pucca)		Open Water Channel (Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
			No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	North Goa	Bardez	4	0.60	59	20.36	1	0.28	62	29.77	0	0.00	7	5.82	137	39.47	270	96.30
2		Bicholim	12	4.96	49	25.77	4	1.57	219	83.11	8	8.27	235	157.82	75	16.41	602	297.91
3		Pernem	48	17.06	259	81.22	46	49.89	142	62.11	8	27.10	10	4.04	6	0.55	519	241.97
4		Satari	100	97.27	140	143.34	27	32.18	42	39.21	13	27.31	166	253.68	21	15.14	509	608.13
5		Tiswadi	4	1.70	32	10.86	7	4.10	111	40.27	2	0.51	4	1.92	27	6.10	187	65.46
		Total A	**168**	**121.59**	**539**	**281.55**	**85**	**88.02**	**576**	**254.47**	**31**	**63.19**	**422**	**423.28**	**266**	**77.67**	**2087**	**1309.77**
6	South Goa	Canacona	8	4.35	63	45.40	19	11.46	160	106.31	4	6.30	79	68.42	25	8.66	358	250.90
7		Dharbandora	9	10.45	51	38.60	1	1.00	24	26.59	11	22.40	59	69.27	8	4.90	163	173.21
8		Mormugao	0	0.00	0	0.00	0	0.00	19	13.42	1	0.80	0	0.00	21	10.08	41	24.30
9		Ponda	16	7.36	37	20.40	4	2.60	44	31.08	15	11.13	469	309.88	45	16.34	630	398.79
10		Quepem	28	20.38	53	36.85	12	12.19	42	43.08	3	2.40	43	91.17	9	1.50	190	207.57
11		Salcete	1	0.45	11	0.87	7	2.49	5	1.33	1	1.30	2	0.22	30	5.75	57	12.41
12		Sanguem	9	16.08	158	198.41	6	15.15	33	29.59	21	46.56	173	318.58	17	16.10	417	640.47
		Total B	**71**	**59.07**	**373**	**340.53**	**49**	**44.89**	**327**	**251.40**	**56**	**90.89**	**825**	**857.54**	**155**	**63.33**	**1856**	**1707.65**
	Goa	**Grand Total (A+B)**	**239**	**180.66**	**912**	**622.08**	**134**	**132.91**	**903**	**505.87**	**87**	**154.08**	**1247**	**1280.82**	**421**	**141.00**	**3943**	**3017.42**

Table 13(b): Number of In Use Surface Water Schemes and Irrigation Potential utilized by Water Distribution Devices

State : Goa

(In Numbers/Area in Ha)

Sl. No.	District	Block	Surface Water Schemes according to Water Distribution System															
			Open Water Channel (Pucca)		Open Water Channel (Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
			No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	North Goa	Bardez	2	4.00	14	10.17	1	0.05	6	3.86	0	0.00	0	0.00	10	2.25	33	20.33
2		Bicholim	15	161.05	26	201.24	1	0.30	13	16.50	2	27.50	55	64.42	6	20.45	118	491.46
3		Pernem	18	34.88	87	83.32	13	22.68	35	73.45	0	0.00	1	0.10	2	0.31	156	214.74
4		Satari	21	288.65	50	106.00	6	8.85	10	55.70	5	9.50	53	114.49	10	20.60	155	603.79
5		Tiswadi	0	0.00	50	8.58	1	0.95	0	0.00	0	0.00	0	0.00	1	0.15	52	9.68
		Total A	**56**	**488.58**	**227**	**409.31**	**22**	**32.83**	**64**	**149.51**	**7**	**37.00**	**109**	**179.01**	**29**	**43.76**	**514**	**1340.00**
6	South Goa	Canacona	0	0.00	24	41.91	0	0.00	8	5.42	5	2.50	1	0.85	2	2.00	40	52.68
7		Dharbandora	6	43.80	77	125.61	0	0.00	27	124.90	2	2.80	31	51.65	1	0.80	144	349.56
8		Mormugao	0	0.00	33	16.15	0	0.00	0	0.00	0	0.00	0	0.00	14	2.34	47	18.49
9		Ponda	73	15.39	239	257.45	1	0.20	10	10.00	4	9.40	129	203.06	113	127.59	569	623.09
10		Quepem	16	22.06	175	90.59	2	3.82	14	8.94	1	2.00	17	48.71	27	5.28	252	181.40
11		Salcete	13	283.92	17	6.10	0	0.00	0	0.00	1	0.72	0	0.00	46	193.43	77	484.17
12		Sanguem	32	22.09	272	512.35	9	21.41	11	47.74	3	2.78	95	340.03	9	82.80	431	1029.20
		Total B	**140**	**387.26**	**837**	**1050.16**	**12**	**25.43**	**70**	**197.00**	**16**	**20.20**	**273**	**644.30**	**212**	**414.24**	**1560**	**2738.59**
	Goa	**Grand Total (A+B)**	**196**	**875.84**	**1064**	**1459.47**	**34**	**58.26**	**134**	**346.51**	**23**	**57.20**	**382**	**823.31**	**241**	**458.00**	**2074**	**4078.59**

Table 13(c): Number of Minor Irrigation Schemes and Irrigation Potential utilized by Water Distribution Devices - All Schemes

State : Goa

(In Numbers/Area in Ha)

Sl. No.	District	Block	Minor Irrigation Schemes according to Water Distribution System															
			Open Water (Lined/Pucca)		Open Water (Unlined/Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
			No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
1	**North Goa**	Bardez	6	4.60	73	30.53	2	0.33	68	33.63	0	0.00	7	5.82	147	41.72	303	116.63
2		Bicholim	27	166.01	75	227.01	5	1.87	232	99.61	10	35.77	290	222.24	81	36.86	720	789.37
3		Pernem	66	51.94	346	164.54	59	72.57	177	135.56	8	27.10	11	4.14	8	0.86	675	456.71
4		Satari	121	385.92	190	249.34	33	41.03	52	94.91	18	36.81	219	368.17	31	35.74	664	1211.92
5		Tiswadi	4	1.70	82	19.44	8	5.05	111	40.27	2	0.51	4	1.92	28	6.25	239	75.14
		Total A	**224**	**610.17**	**766**	**690.86**	**107**	**120.85**	**640**	**403.98**	**38**	**100.19**	**531**	**602.29**	**295**	**121.43**	**2601**	**2649.77**
6	**South Goa**	Canacona	8	4.35	87	87.31	19	11.46	168	111.73	9	8.80	80	69.27	27	10.66	398	303.58
7		Dharbandora	15	54.25	128	164.21	1	1.00	51	151.49	13	25.20	90	120.92	9	5.70	307	522.77
8		Mormugao	0	0.00	33	16.15	0	0.00	19	13.42	1	0.80	0	0.00	35	12.42	88	42.79
9		Ponda	89	22.75	276	277.85	5	2.80	54	41.08	19	20.53	598	512.94	158	143.93	1,199	1021.88
10		Quepem	44	42.44	228	127.44	14	16.01	56	52.02	4	4.40	60	139.88	36	6.78	442	388.97
11		Salcete	14	284.37	28	6.97	7	2.49	5	1.33	2	2.02	2	0.22	76	199.18	134	496.58
12		Sanguem	41	38.17	430	710.76	15	36.56	44	77.33	24	49.34	268	658.61	26	98.90	848	1669.67
		Total B	**211**	**446.33**	**1210**	**1390.69**	**61**	**70.32**	**397**	**448.40**	**72**	**111.09**	**1098**	**1501.84**	**367**	**477.57**	**3416**	**4446.24**
	Goa	**Grand Total (A+B)**	**435**	**1056.50**	**1976**	**2081.55**	**168**	**191.17**	**1037**	**852.38**	**110**	**211.28**	**1629**	**2104.13**	**662**	**599.00**	**6017**	**7096.01**

Table 14: Number of Minor Irrigation Schemes in the Command Area of Major/Medium Irrigation Dams by Reasons

State : Goa

(In Numbers)

Sl. No.	District	Block	GROUND WATER					SURFACE WATER				
			Water not available up to the field from major/medium scheme	Water available but not adequate for irrigation	Water available but not useable for irrigation	Other reasons	Total (Col 3 to 6)	Water not available up to the field from major/medium scheme	Water available but not adequate for irrigation	Water available but not useable for irrigation	Other reasons	Total (col. 8 to 11)
1	2	3	4	5	6	7	8	9	10	11	12	13
1	North Goa	Bardez	0	0	0	0	0	0	0	0	0	0
2		Bicholim	0	1	0	0	1	0	0	0	0	0
3		Pernem	60	14	0	5	79	18	6	0	6	30
4		Satari	0	2	0	0	2	2	2	0	2	6
5		Tiswadi	0	0	0	0	0	0	0	0	0	0
		Total A	**60**	**17**	**0**	**5**	**82**	**20**	**8**	**0**	**8**	**36**
6	South Goa	Canacona	8	0	0	0	8	0	0	0	0	0
7		Dharbandora	0	0	0	0	0	0	0	0	0	0
8		Mormugao	0	0	0	0	0	0	0	0	0	0
9		Ponda	0	0	0	0	0	0	0	0	0	0
10		Quepem	20	5	0	0	25	66	2	0	13	81
11		Salcete	0	0	0	0	0	0	1	0	0	1
12		Sanguem	2	1	0	0	3	14	1	0	0	15
		Total B	**30**	**6**	**0**	**0**	**36**	**80**	**4**	**0**	**13**	**97**
	Goa	**Grand Total (A+B)**	**90**	**23**	**0**	**5**	**118**	**100**	**12**	**0**	**21**	**133**

Report on Dugwells

Table.1.1 Number of Dug Wells by Type

State : Goa

Sl. No.	District	Pucca	Kutcha	Dug-cum Bore well	Others	Total (3 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**North Goa**	1511	554	6	14	2085
2	**South Goa**	1189	565	77	16	1847
	Goa	**2700**	**1119**	**83**	**30**	**3932**

Table 1.2: Distribution of Dug Wells according to Ownership

(In Numbers)

Sl. No.	District	Public					Private			
		Govt. Owned	Co-op Society	Panchayat Owned	Others	Total (3 to 6)	Group of Farmers	Individual Farmer	Total (8 to 9)	Grand Total (7 + 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	42	7	2	19	70	117	1898	2015	2085
2	**South Goa**	10	1	4	25	40	55	1752	1807	1847
	Goa	**52**	**8**	**6**	**44**	**110**	**172**	**3650**	**3822**	**3932**

Table 1.3.1: Distribution of Dug Wells according to Social Status of Owner

State : Goa

(In Numbers)

Sl. No.	District	No. of Dug Wells owned by						
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)	Owned by other than individual farmer (incl. Public & Group of farmers)	Total (7 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	30	77	542	1249	1898	187	2085
2	**South Goa**	63	542	278	869	1752	95	1847
	Goa	**93**	**619**	**820**	**2118**	**3650**	**282**	**3932**

Table 1.3.2: Distribution of Dug Wells according to Social Status of Female Owner

(In Numbers)

Sl. No.	District	No. of Dug wells owned by				
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**North Goa**	1	9	94	114	218
2	**South Goa**	4	49	22	100	175
	Goa	**5**	**58**	**116**	**214**	**393**

Table 1.4.1: Distribution of Dug Wells according to the Individual Owner's Holding Size

State : Goa
(In Numbers)

Sl. No.	District	No. of Dug Wells by Size Class of Owner's Holding					
		Marginal (0-1 ha)	Small (1-2 ha)	Semi-Medium (2- 4 ha)	Medium (4-10 ha)	Big (>=10 ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	1456	248	119	56	19	1898
2	**South Goa**	1080	350	171	119	32	1752
	Goa	**2536**	**598**	**290**	**175**	**51**	**3650**

Table 1.4.2: Distribution of Dug Wells according to the Individual Female Owner's Holding Size

(In Numbers)

Sl. No.	District	No. of Dug wells by size class of owner					
		Marginal (0-1 ha)	Small (1-2 ha)	Semi-Medium (2- 4 ha)	Medium (4-10 ha)	Big (>=10 ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	191	13	4	8	2	218
2	**South Goa**	109	42	14	6	4	175
	Goa	**300**	**18**	**18**	**14**	**6**	**393**

Table 1.5: Distribution of Dug Wells and Cost of Construction

State : Goa

(In Rs. '000)

Sl. No.	District	Number and Cost of Construction of Dug wells Schemes commissioned during the period/year											
		Up to 2013-14		2014-15		2015-16		2016-17		2017-18		Total	
		No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**North Goa**	1774	108494981	126	9737000	59	3674678	62	4472500	64	4944600	2085	131323759
2	**South Goa**	1445	79729880	145	8792500	86	4344000	62	4394300	109	7016646	1847	104277326
	Goa	**3219**	**188224861**	**271**	**18529500**	**145**	**8018678**	**124**	**8866800**	**173**	**11961246**	**3932**	**235601085**

Table 1.6.1: Distribution of Dug Wells by Cost of Maintenance in the Reference Year

State : Goa

(In Numbers)

Sl. No.	District	No. of Dug Wells according to the Annual Cost of Maintenance					
		Upto Rs. 1000	Rs. 1000 to 10000	Rs. 10000 to 50000	Rs. 50000 to 100000	More than Rs. 100000	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	1381	610	92	1	1	2085
2	**South Goa**	1020	742	83	2	0	1847
	Goa	**2401**	**1352**	**175**	**3**	**1**	**3932**

Table.1.6.2 : Average Cost of Construction, Machinery, Annual Maintenance and Average Amount of Subsidy received for Dug Wells

(Amount in Rupees)

Sl. No.	District	Average cost of construction	Average cost of Machinery	Average cost of annual maintenance during 2017-18	Subsidy for Construction		Subsidy for Machinery	
					No. of Dug Wells for which subsidy was received	Average amount of subsidy	No. of Dug Wells for which subsidy was received	Average amount of subsidy for machinery
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	54222.43	12498.94	2216.39	139	65603.63	109	15480.22
2	**South Goa**	46887.02	14599.94	2350.17	184	32645.73	108	11451.11
	Goa	**101109.45**	**27098.88**	**4566.56**	**323**	**98249.36**	**217**	**26931.33**

Table 1.7: Distribution of Dug Wells according to Major Source of Finance (under Individual Ownership)

State : Goa

(In Numbers)

Sl. No.	District	With Single Source of Finance						With two Sources of Finance								Grand Total (8 +16)
		Bank Loan	Govt. Fund	Own Saving	Money Lender	Others	Total (3 to 7)	Own Saving & Bank Loan	Own Saving & Govt Fund	Own Saving & Money Lender	Bank Loan & Govt Fund	Bank Loan & Money Lender	Govt Fund & Money Lender	Others	Total (9 to 15)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	47	22	920	3	18	1010	94	92	4	16	0	1	681	888	1898
2	**South Goa**	9	11	254	0	10	284	93	131	0	6	0	0	1238	1468	1752
	Goa	**56**	**33**	**1174**	**3**	**28**	**1294**	**187**	**223**	**4**	**22**	**0**	**1**	**1919**	**2356**	**3650**

Table 1.8: Distribution of Dug Wells by Status of Utilisation

(In Numbers)

Sl. No.	District	Dug Wells in use	Dug Wells not in use			Grand Total (3+6)	Number of Schemes meant only for re-charge of Ground Water		
			Temporarily	Permanently	Total (4+5)		In use	Not in use (Temp + Pmt)	Total (8+9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	2028	38	19	57	2085	3	3	6
2	**South Goa**	1820	18	9	27	1847	1	3	4
	Goa	**3848**	**56**	**28**	**84**	**3932**	**4**	**6**	**10**

Table 1.9: : Distribution of Dug Wells Temporarily Not in Use by Reason

State : Goa

(In Numbers/In Ha)

S.No.	District	Non Availability of Adequate Power/Fuel		Mechanical Break Down		Less discharge of Water		Non - Availability of Finance		Lack of Maintenance		Others		Total	
		No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	1	0.00	2	3.60	13	0.20	0	0.00	2	1.80	20	0.20	38	5.80
2	**South Goa**	1	0.00	0	0.00	6	3.60	2	0.00	5	0.00	4	0.10	18	3.70
	Goa	**2**	**0.00**	**2**	**3.60**	**19**	**3.80**	**2**	**0.00**	**7**	**1.80**	**24**	**0.30**	**56**	**9.50**

Table 1.10: Distribution of Dug Wells Permenantly Not in Use by Reason

(In Numbers/In Ha)

Sl. No.	District	Salinity		Dried up		Destroyed beyond repair		Sea water intrusion		Industrial effluents		Availability of Major/Medium Irrigation Projects		Other Reasons		Total	
		No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	8	0.00	2	0.00	0	0.00	0	0.00	1	0.00	0	0.00	8	0.00	19	0.00
2	**South Goa**	0	0.00	3	0.00	2	0.00	0	0.00	0	0.00	0	0.00	4	0.00	9	0.00
	Goa	**8**	**0.00**	**5**	**0.00**	**2**	**0.00**	**0**	**0.00**	**1**	**0.00**	**0**	**0.00**	**12**	**0.00**	**28**	**0.00**

Table 1.11: Distribution of Dug Wells in Use according to Water Distribution System and Potential Utilised

State : Goa

(In Numbers/In Ha.)

Sl. No.	District	No. of Dug well Schemes and Potential utilized according to Water Distribution System															
		Open Water Channel (Lined/Pucca)		Open Water Channel (Unlined/Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
		No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	148	103.44	532	274.25	81	80.62	568	251.82	25	52.04	409	407.58	265	77.42	2028	1247.17
2	**South Goa**	69	58.42	365	330.58	45	40.68	316	246.56	55	87.89	816	848.04	154	62.73	1820	1674.90
	Goa	**217**	**161.86**	**897**	**604.83**	**126**	**121.30**	**884**	**498.38**	**80**	**139.93**	**1225**	**1255.62**	**419**	**140.15**	**3848**	**2922.07**

Table 1.12: Distribution of Dug Wells (In Use, Temporarily Not in Use) according to Water Lifting Devices

(In Numbers)

Sl. No.	District	Number of Dug Wells by Lifting Devices used					
		Submersible Pump	Centrifugal Pump	Turbine	Manual/Animal	Others	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	498	1225	9	309	25	2066
2	**South Goa**	500	1129	13	144	52	1838
	Goa	**998**	**2354**	**22**	**453**	**77**	**3904**

Table 1.13: Distribution of Dug Wells (In Use, Temporarily Not in Use) according to Source of Energy

State : Goa

(In Numbers)

Sl. No.	District	Number of Schemes by source of energy						
		Electric Pump	Diesel Pump	Wind Mills	Solar pumps	Manual/Animal	Others	Total (3 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	1689	65	0	0	0	3	1757
2	**South Goa**	1562	109	2	2	0	19	1694
	Goa	**3251**	**174**	**2**	**2**	**0**	**22**	**3451**

Table 1.14: Distribution of Dug Wells (In Use, Temporarily Not in Use) according to Horse Power of Lifting Devices

State:Goa **(in Numbers)**

Sl. No.	District	No. of Dug Wells by Horse Power of Lifting Devices								Total (9 to 10)
		0-2 Hp	2-4 Hp	4-6 Hp	6-8 Hp	8-10 Hp	above 10 Hp	Total (3 to 8)	Schemes without Horse Power	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	995	239	493	11	14	5	1757	309	2066
2	**South Goa**	754	491	380	38	22	9	1694	144	1838
	Goa	**1749**	**730**	**873**	**49**	**36**	**14**	**3451**	**453**	**3904**

Table 1.15: Distribution of Dug Wells (In Use, Temporarily Not in Use) according to Total Pumping Hours of Operation

State : Goa

(In Numbers)

Sl. No.	District	During Kharif Season							During Rabi Season						
		<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (3 to 8)	<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	17	1	0	0	0	1	19	373	157	29	11	2	0	572
2	**South Goa**	6	1	0	0	0	0	7	245	127	28	7	3	3	413
	Goa	**23**	**2**	**0**	**0**	**0**	**1**	**26**	**618**	**284**	**57**	**18**	**5**	**3**	**985**

Table 1.16: Distribution of Dug Wells (In Use, Temporarily Not in Use) according to Average Hours of Pumping per Day

State : Goa

(In Numbers)

Sl. No.	District	During Kharif Season							During Rabi Season						
		0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (3 to 8)	0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	13	6	0	0	0	0	19	511	60	0	1	0	0	572
2	**South Goa**	7	0	0	0	0	0	7	381	29	1	1	0	0	412
	Goa	**20**	**6**	**0**	**0**	**0**	**0**	**26**	**892**	**89**	**1**	**2**	**0**	**0**	**984**

Table 1.17: Distribution of Dug Wells according to Depth

State : Goa

(In Numbers)

Sl. No.	District	No. of Dug Wells Schemes by Depth					
		0 to 20 mts	20 to 40 mts	40 to 60 mts	60 to 70 mts	>70 mts	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	2074	8	3	0	0	2085
2	**South Goa**	1839	6	1	0	1	1847
	Goa	**3913**	**14**	**4**	**0**	**1**	**3932**

Table 1.18: Distribution of Dug Wells in and outside the Command of Major/Medium Projects

State : Goa

(In Numbers)

Sl. No.	District	Outside command	No. of Dug wells inside the Command Area - by reasons					Total (3+8)
			Water not available up to the field from major/medium scheme	Water available but not adequate for irrigation	Water available but not useable for irrigation	Other reasons	Total (4 to 7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	2005	58	17	0	5	80	2085
2	**South Goa**	1811	30	6	0	0	36	1847
	Goa	**3816**	**88**	**23**	**0**	**5**	**116**	**3932**

Table 1.19.1: CCA and Season wise Potential created through all Dug Wells

State : Goa

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential Created				
			Kharif	Rabi	Perennial	Others	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	1393.20	17.20	222.71	1068.91	87.23	1396.05
2	**South Goa**	1675.58	2.86	259.35	1360.88	64.40	1687.49
	Goa	**3068.78**	**20.06**	**482.06**	**2429.79**	**151.63**	**3083.54**

Table 1.19.2: CCA and Season wise Potential created through all Dug Well (in Use)

State : Goa

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Others	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	1368.69	17.20	215.43	1051.98	86.93	1371.54
2	**South Goa**	1669.08	2.86	259.15	1354.68	64.30	1680.99
	Goa	**3037.77**	**20.06**	**474.58**	**2406.66**	**151.23**	**3052.53**

Table 1.19.3: CCA and Season wise Potential created through all Dug Well (Temporarily Not in Use)

State: Goa **(In Ha)**

Sl. No.	District	Culturable Command Area	Irrigation Potential Created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	23.70	0.00	6.70	16.70	0.30	23.70
2	**South Goa**	5.50	0.00	0.20	5.20	0.10	5.50
	Goa	**29.20**	**0.00**	**6.90**	**21.90**	**0.40**	**29.20**

Table 1.19.4: CCA and Season wise Potential created through all Dug Well (Permanantly Not in Use)

State: Goa

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential Created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0.81	0.00	0.58	0.23	0.00	0.81
2	**South Goa**	1.00	0.00	0.00	1.00	0.00	1.00
	Goa	**1.81**	**0.00**	**0.58**	**1.23**	**0.00**	**1.81**

Table 1.20.1: Season wise Potential utilised through Dug Wells - All Schemes

State : Goa

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to 11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	North Goa	0.00	23.94	53.66	1.80	79.40	15.20	169.73	947.57	53.17	1185.67	15.20	193.67	1001.23	54.97	1265.07
2	South Goa	0.00	0.60	18.60	1.03	20.23	2.86	255.36	1335.03	63.22	1656.47	2.86	255.96	1353.63	64.25	1676.70
	Goa	**0.00**	**24.54**	**72.26**	**2.83**	**99.63**	**18.06**	**425.09**	**2282.60**	**116.39**	**2842.14**	**18.06**	**449.63**	**2354.86**	**119.22**	**2941.77**

Table 1.20.2: Season wise Potential utilised through Dug Wells [in use]

State : Goa (In Ha)

S.No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to 11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

1	**North Goa**	0.00	23.94	53.66	1.80	79.40	15.20	163.38	936.32	52.87	1167.77	15.20	187.32	989.98	54.67	1247.17
2	**South Goa**	0.00	0.60	18.60	1.03	20.23	2.86	255.16	1333.43	63.22	1654.67	2.86	255.76	1352.03	64.25	1674.90
	Goa	**0.00**	**24.54**	**72.26**	**2.83**	**99.63**	**18.06**	**418.54**	**2269.75**	**116.09**	**2822.44**	**18.06**	**443.08**	**2342.01**	**118.92**	**2922.07**

Table 1.20.3 Season wise Potential utilised through Dug Wells [Temporarily Not in Use]

State : Goa

(In Ha)

Sl.No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to 11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00	6.35	11.25	0.30	17.90	0.00	6.35	11.25	0.30	17.90
2	**South Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.20	1.60	0.00	1.80	0.00	0.20	1.60	0.00	1.80
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.55**	**12.85**	**0.30**	**19.70**	**0.00**	**6.55**	**12.85**	**0.30**	**19.70**

Table 1.21 Distribution of Dug Wells (In Use) according to Constraints in Utilisation of potential

State : Goa

(In Numbers)

Sl. No.	District			No. of Dug well Having Constraints in utilisation of potential

		No. of Dug wells in use	No. of Dug wells without constraints	Non Availability of Adequate Power	Mechanical Break Down	Less discharge of Water	Non - Availability of Finance	Lack of Maintenance	Others	Total (5 to 10)
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**
1	**North Goa**	2028	1811	2	1	60	10	3	141	217
2	**South Goa**	1820	1748	2	2	34	0	0	34	72
	Goa	**3848**	**3559**	**4**	**3**	**94**	**10**	**3**	**175**	**289**

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Table 2.1: Distribution of Shallow Tube Wells according to Ownership

State : Goa

(In Numbers)

Sl. No.	District	Public					Private			
		Govt. Owned	Co-operative Society	Panchayat Owned	Other	Total (3 to 6)	Group of Farmers	Individual Farmer	Total (8 to 9)	Grand Total (7 + 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	26	2	0	0	28	0	13	13	41
2	**South Goa**	1	0	1	0	2	2	26	28	30
	Goa	**27**	**2**	**1**	**0**	**30**	**2**	**39**	**41**	**71**

Table 2.2.1: Distribution of Shallow Tube Wells according to Social Status of Owner

State : Goa

(In Numbers)

Sl. No.	District	No. of Shallow Tube Wells owned by						
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)	Owned by other than individual farmer (incl. Public & Group of farmers)	Total (7 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	0	2	4	7	13	28	41
2	**South Goa**	2	10	4	10	26	4	30
	Goa	**2**	**12**	**8**	**17**	**39**	**32**	**71**

Table 2.2.2: Distribution of Shallow Tube Wells according to Social Status of Female Owner

State : Goa

(In Numbers)

Sl. No.	District	No. of Shallow tube well owned by				
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**North Goa**	0	1	0	2	3
2	**South Goa**	0	3	1	2	6
	Goa	**0**	**4**	**1**	**4**	**9**

Table 2.3.1: Distribution of Shallow Tube Wells according to the Individual Owner's Holding Size

State : Goa **(In Numbers)**

Sl. No,	District	No. of Shallow Tube Well by size class of Individual Owner's Holding					
		Marginal (0-1 Ha)	Small (1-2 Ha)	Semi-Medium (2- 4 Ha)	Medium (4-10 Ha)	Big (>=10 Ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	10	1	1	1	0	13
2	**South Goa**	16	6	1	3	0	26
	Goa	**26**	**7**	**2**	**4**	**0**	**39**

Table 2.3.2: Distribution of Shallow Tube Wells according to the Individual Female Owner's Holding Size

State : Goa

(In Numbers)

Sl. No.	District	No. of Shallow Tube Wells by size class of Female Owner					
		Marginal (0-1 Ha)	Small (1-2 Ha)	Semi-Medium (2- 4 Ha)	Medium (4-10 Ha)	Big (>=10 Ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	2	1	0	0	0	3
2	**South Goa**	5	1	0	0	0	6
	Goa	**7**	**2**	**0**	**0**	**0**	**9**

Table 2.4: Distribution of Shallow Tube Wells and Cost of Construction

State : Goa

(In Rs. 000)

Sl. No.	District	Number and Cost of Construction of Shallow Tube Wells Schemes commissioned during the period/year											
		Up-to 2013-14		2014-15		2015-16		2016-17		2017-18		Total	
		No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**North Goa**	27	2718100	13	1209025	0	0	0	0	1	0	41	3927125
2	**South Goa**	13	875000	3	190000	4	355000	3	40000	7	555000	30	2015000
	Goa	**40**	**3593100**	**16**	**1399025**	**4**	**355000**	**3**	**40000**	**8**	**555000**	**71**	**5942125**

Table 2.5.1: Distribution of Shallow Tube Wells by Cost of Maintenance in the Reference Year 2017-18

State : Goa

(In Numbers)

Sl. No.	District	No. of Shallow tube well according to the annual cost of maintenance					
		Up-to Rs.1000	Rs.1000 to Rs.10000	Rs.10000 to Rs.50000	Rs.50000 to Rs.100000	More than Rs.100000	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	35	4	2	0	0	41
2	**South Goa**	22	7	1	0	0	30
	Goa	**57**	**11**	**3**	**0**	**0**	**71**

Table.2.5.2: Average Cost of Construction, Machinery , Annual Maintenance and Average Amount of Subsidy received for Shallow Tube Wells

State : Goa

(Amount in Rupees)

Sl. No.	District	Average cost of Construction	Average cost of Machinery	Average cost of annual maintenance during 2017-18	Subsidy for Construction		Subsidy for Machinery	
					No. of Shallow Tube Well for which subsidy was received	Average amount of subsidy	No. of Shallow Tube Well for which subsidy was received	Average amount of subsidy for machinery
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	62659.15	16341.46	1853.66	0	0	0	0
2	**South Goa**	55500	9666.77	1666.97	1	60000	1	20000
	Goa	**118159.15**	**26008.23**	**3520.63**	**1**	**60000**	**1**	**20000**

Table 2.6: Distribution of Shallow Tube Wells under Individual Ownership according to Major Source of Finance

State : Goa

(In Numbers)

Sl. No.	District	With Single Source of Finance						With two Sources of Finance								Grand Total (8 +16)
		Bank Loan	Govt. Fund	Own Saving	Money Lender	Others	Total (3 to 7)	Own Saving & Bank Loan	Own Saving & Govt. Fund	Own Saving & Money Lender	Bank Loan & Govt. Fund	Bank Loan & Money Lender	Govt. Fund & Money Lender	Others	Total (9 to 15)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	1	0	3	0	0	4	1	0	0	0	0	0	8	9	13
2	**South Goa**	0	0	3	0	0	3	1	1	0	0	0	0	21	23	26
	Goa	**1**	**0**	**6**	**0**	**0**	**7**	**2**	**1**	**0**	**0**	**0**	**0**	**29**	**32**	**39**

Table 2.7: Distribution of Shallow Tube Wells by Status of Utilisation

State : Goa

(In Numbers)

Sl. No.	District	Shallow Tube Well in use	Shallow Tube Well not in use			Grand Total (3+6)	Number of Schemes meant only for re-charge of Ground Water		
			Temporarily	Permanently	Total (4+5)		In use	Not in use (Temp + Pmt)	Total (8+9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	39	2	0	2	41	0	0	0
2	**South Goa**	30	0	0	0	30	0	0	0
	Goa	**69**	**2**	**0**	**2**	**71**	**0**	**0**	**0**

Table 2.8: Distribution of Shallow Tube Wells Temporarily Not In Use by Reason

State : Goa

(In Numbers/In Ha)

Sl. No.	District	Non Availability of Adequate Power/Fuel		Mechanical Break Down		Less discharge of Water		Non - Availability of Finance		Lack of Maintenance		Others		Total	
		No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	0	0.00	0	0.00	0	0.00	0	0.00	2	0.00	0	0.00	2	0.00
	South Goa	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	Goa	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**2**	**0.00**	**0**	**0.00**	**2**	**0.00**

Table 2.9: Distribution of Shallow Tube Wells In Use according to Water Distribution System and Potential Utilised

State : Goa

(In Number/In Ha)

Sl. No.	District	No. & IPU of Shallow Tube Well Schemes According to Water Distribution System															
		Open Water (Lined/Pucca)		Open Water (Unlined/Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
		No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	19	16.75	5	4.70	1	1.00	6	2.20	4	6.45	4	7.30	0	0.00	39	38.40
2	**South Goa**	2	0.65	6	5.55	4	4.21	9	2.84	0	0.00	8	9.28	1	0.60	30	23.13
	Goa	**21**	**17.40**	**11**	**10.25**	**5**	**5.21**	**15**	**5.04**	**4**	**6.45**	**12**	**16.58**	**1**	**0.60**	**69**	**61.53**

Table 2.10: Distribution of In Use, Temporarily Not In Use Shallow Tube Wells according to Water Lifting Devices

State : Goa

(In Numbers)

Sl. No.	District	Number of Schemes by Lifting Device					
		Submersible Pump	Centrifugal Pump	Turbine	Manual/Animal	Others	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	31	8	1	0	1	41
2	**South Goa**	24	3	0	1	2	30
	Goa	**55**	**11**	**1**	**1**	**3**	**71**

Table 2.11: Distribution of In Use, Temporarily Not In Use Shallow Tube Wells according to Source of Energy

State : Goa

(In Numbers)

Sl. No.	District	Number of Schemes by Source of Energy						
		Electric Pump	Diesel Pump	Wind Mills	Solar Pumps	Manual/Animal	Others	Total (3 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	39	2	0	0	0	0	41
2	**South Goa**	25	4	0	0	0	0	29
	Goa	**64**	**6**	**0**	**0**	**0**	**0**	**70**

Table 2.12: Distribution of In Use, Temporarily Not In Use Shallow Tube Wells according to Horse Power of Lifting Device

State : Goa

(In Numbers)

Sl. No.	District	No. of Shallow Tube Well by horse power of Lifting Devices								Total (9 to 10)
		0-2 hp	2-4 hp	4-6 hp	6-8 hp	8-10 hp	above 10 hp	Total (3 to 8)	Schemes without Horse Power	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	9	5	20	0	7	0	41	0	41
2	**South Goa**	14	9	3	2	1	0	29	1	30
	Goa	**23**	**14**	**23**	**2**	**8**	**0**	**70**	**1**	**71**

Table 2.13: Distribution of In Use, Temporarily Not In Use Shallow Tube Wells according to total pumping hours of operation

State : Goa

(In Numbers)

Sl. No.	District	During Kharif Season							During Rabi Season						
		<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (3 to 8)	<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	0	0	0	0	0	0	0	4	2	0	0	0	0	6
2	**South Goa**	0	0	0	0	0	0	0	3	3	1	0	0	0	7
	Goa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**5**	**1**	**0**	**0**	**0**	**13**

Table 2.14: Distribution of In Use, Temporarily Not In Use Shallow Tube Wells according to average Hours of Pumping per Day

State : Goa **(In Numbers)**

Sl. No.	District	During Kharif Season							During Rabi Season						
		0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (3 to 8)	0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	0	0	0	0	0	0	0	6	0	0	0	0	0	6
2	**South Goa**	0	0	0	0	0	0	0	6	1	0	0	0	0	7
	Goa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**0**	**13**

Table 2.15: Distribution of Shallow Tube Wells according to Depth

State : Goa

(In Numbers)

Sl. No.	District	Number of Shallow Tube Wells by the Depth of the Well			
		0 to 20 mts	20 to 35 mts	>35 mts	Total (3 to 5)
(1)	(2)	(3)	(4)	(5)	(6)
1	**North Goa**	19	22	0	41
2	**South Goa**	23	7	0	30
	Goa	**42**	**29**	**0**	**71**

Table 2.16: distribution of shallow tubewells in and outside the command area of major/medium projects

State : Goa

(In Numbers)

Sl. No.	District	Outside Command	No. of Shallow Tube Wells inside the Command Area - by Reasons					Total (3+8)
			Water not available up to the Field from Major/Medium Scheme	Water available but not adequate for Irrigation	Water available but not useable for Irrigation	Other reasons	Total (4 to 7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	41	0	0	0	0	0	41
2	**South Goa**	30	0	0	0	0	0	30
	Goa	**71**	**0**	**0**	**0**	**0**	**0**	**71**

Table 2.17.1: CCA and Season-wise Potential Created through Shallow Tube Wells - all Schemes

State : Goa

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential Created				
			Kharif	Rabi	Perennial	Others	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	38.65	0.00	0.65	38.00	0.00	38.65
2	**South Goa**	23.13	0.00	5.24	17.89	0.00	23.13
	Goa	**61.78**	**0.00**	**5.89**	**55.89**	**0.00**	**61.78**

Table 2.17.2: CCA and Season-wise Potential Created through In Use Shallow Tube Wells

State : Goa

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential Created				
			Kharif	Rabi	Perennial	Others	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	38.40	0.00	0.40	38.00	0.00	38.40
2	**South Goa**	23.13	0.00	5.24	17.89	0.00	23.13
	Goa	**61.53**	**0.00**	**5.64**	**55.89**	**0.00**	**61.53**

Table 2.17.3: CCA and Season-wise Potential Created through Temporarily Not In Use Shallow Tube Wells

State : Goa

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0.25	0.00	0.25	0.00	0.00	0.25
	South Goa	0.00	0.00	0.00	0.00	0.00	0.00
	Goa	**0.25**	**0.00**	**0.25**	**0.00**	**0.00**	**0.25**

Table 2.18.1: Season-wise Potential Utilised through Shallow Tube Wells - All Schemes

State : Goa

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.65	38.00	0.00	38.65	0.00	0.65	38.00	0.00	38.65
2	**South Goa**	0.00	0.00	0.00	0.00	0.00	0.00	5.24	17.89	0.00	23.13	0.00	5.24	17.89	0.00	23.13
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.89**	**55.89**	**0.00**	**61.78**	**0.00**	**5.89**	**55.89**	**0.00**	**61.78**

Table 2.18.2: Season-wise Potential Utilised through Shallow Tube Wells – In Use

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to 11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.40	38.00	0.00	38.40	0.00	0.40	38.00	0.00	38.40
2	**South Goa**	0.00	0.00	0.00	0.00	0.00	0.00	5.24	17.89	0.00	23.13	0.00	5.24	17.89	0.00	23.13
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.64**	**55.89**	**0.00**	**61.53**	**0.00**	**5.64**	**55.89**	**0.00**	**61.53**

Table 2.18.3: Season-wise Potential Utilised through Shallow Tube Wells – Temporarily Not in Use

State **Goa** **(In Ha.)**

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to 11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.25
	South Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.25**	**0.00**	**0.00**	**0.25**	**0.00**	**0.25**	**0.00**	**0.00**	**0.25**

Table 2.19: Distribution of In-Use Shallow Tube Wells according to Constraints in utilisation of Potential

State **: Goa**

(In Numbers)

Sl. No.	District	No. of Shallow tube wells in use	No. of Shallow tube wells without constraints	No. of Shallow Tube Wells having Constraints in utillsation of Potential						
				Non Availability of Adequate Power	Mechanical Break Down	Less discharge of Water	Non - Availability of Finance	Lack of Maintenance	Others	Total (5 to 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	39	38	0	0	1	0	0	0	1
2	**South Goa**	30	29	0	0	0	0	0	1	1
	Goa	**69**	**67**	**0**	**0**	**1**	**0**	**0**	**1**	**2**

Report

On

Medium Tube Wells

Table 3.1: Distribution of Medium Tube Wells according to Ownership

State : **Goa**

(In Numbers)

Sl. No.	District	Public					Private			
		Govt. Owned	Co-op Society	Panchayat Owned	Others	Total (3 to 6)	Group of Farmers	Individual Farmer	Total (8 to 9)	Grand Total (7 + 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	3	0	1	0	4	1	10	11	15
2	**South Goa**	0	2	0	0	2	0	4	4	6
	Goa	**3**	**2**	**1**	**0**	**6**	**1**	**14**	**15**	**21**

Table 3.2.1: Distribution of Medium Tube Wells according to Social Status of Owner

State : Goa

(In Numbers)

Sl. No.	District	No. of Medium Tube Wells owned by						
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)	Owned by Other than Individual Farmer (incl. Public & Group of Farmers)	Total (7 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	0	1	0	9	10	5	15
2	**South Goa**	0	0	1	3	4	2	6
	Goa	**0**	**1**	**1**	**12**	**14**	**7**	**21**

Table 3.2.2: Distribution of Medium Tube Wells according to Social Status of Female Owner

State : Goa

(In Numbers)

Sl. No.	District	No. of Medium Tube Wells owned by				
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**North Goa**	0	0	0	1	1
	South Goa	0	0	0	0	0
	Goa	**0**	**0**	**0**	**1**	**1**

Table 3.3.1: Distribution of Medium Tube Wells according to the Individual Owner's Holding Size

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Medium Tube Wells by size class of Owner					
		Marginal (0-1 Ha)	Small (1-2 ha)	Semi-Medium (2- 4 Ha)	Medium (4-10 Ha)	Big (>=10 ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	2	5	0	3	0	10
2	**South Goa**	1	0	1	2	0	4
	Goa	**3**	**5**	**1**	**5**	**0**	**14**

Table 3.3.2: Distribution of Medium Tube Wells according to the Individual Female Owner's Holding Size

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Medium Tube Wells by size class of owned					
		Marginal (0-1 ha)	Small (1-2 ha)	Semi-Medium (2- 4 ha)	Medium (4-10 ha)	Big (>=10 ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0	1	0	0	0	1
	South Goa	0	0	0	0	0	0
	Goa	**0**	**1**	**0**	**0**	**0**	**1**

Table 3.4: Distribution of Medium Tube Wells and Cost of Construction

State : **Goa**

(**In Rs. 000**)

Sl. No.	District	Number and Cost of Construction of Medium Tube Wells Schemes commissioned during the period/year											
		Up to 2013-14		2014-15		2015-16		2016-17		2017-18		Total	
		No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**North Goa**	10	1215000	4	420000	0	0	1	100000	0	0	15	1735000
2	**South Goa**	5	320000	0	0	0	0	0	0	1	150000	6	470000
	Goa	**15**	**1535000**	**4**	**420000**	**0**	**0**	**1**	**100000**	**1**	**150000**	**21**	**2205000**

Table 3.5.1: Distribution of Medium Tube Wells by Cost of Maintenance in the Reference Year

State **: Goa**

(In Numbers)

Sl. No.	District	No. of Medium Tube Wells according to the annual cost of Maintenance					
		Upto Rs. 1000	Rs. 1000 to 10000	Rs. 10000 to 50000	Rs. 50000 to 100000	More than Rs. 100000	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	4	8	3	0	0	15
2	**South Goa**	2	4	0	0	0	6
	Goa	**6**	**12**	**3**	**0**	**0**	**21**

Table.3.5.2: Average Cost of Construction, Machinery , Annual Maintenance and average amount of Subsidy received for Medium Tube Wells

State **: Goa**

(Amount in Rupees)

Sl. No.	District	Average cost of construction	Average cost of Machinery	Average cost of annual maintenance during 2017-18	Subsidy for Construction		Subsidy for Machinery	
					No. of Medium Tube Well for which subsidy was received	Average amount of Subsidy	No. of Medium Tube Well for which Subsidy was received	Average amount of Subsidy for machinery
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	115666.67	31533.33	7600.00	5	98000.00	4	21250.00
2	**South Goa**	78333.33	21500.00	2833.33	1	1.00	1	5.00
	Goa	**194000.00**	**53033.33**	**10433.33**	**6**	**98001.00**	**5**	**21255.00**

TABLE 3.6: Distribution of Medium Tube Wells under Individual Ownership by Major Source of Finance

State **: Goa**

(In Numbers)

Sl. No.	District	With Single Source of Finance						With two Sources of Finance								Grand Total (8 +16)
		Bank Loan	Govt. Fund	Own Saving	Money Lender	Others	Total (3 to 7)	Own Saving & Bank Loan	Own Saving & Govt Fund	Own Saving & Money Lender	Bank Loan & Govt Fund	Bank Loan & Money Lender	Govt Fund & Money Lender	Others	Total (9 to 15)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0	0	3	0	0	3	0	4	0	0	0	0	3	7	10
2	**South Goa**	0	0	1	0	0	1	0	0	0	0	0	0	3	3	4
	Goa	**0**	**0**	**4**	**0**	**0**	**4**	**0**	**4**	**0**	**0**	**0**	**0**	**6**	**10**	**14**

Table 3.7: Distribution of Medium Tube Wells by Status of Utilisation

State **: Goa**

(In Numbers)

Sl. No.	District	Medium Tube Well in use	Medium Tube Wells not in Use			Grand Total (3+6)	Number of Schemes meant only for re-charge of Ground Water		
			Temporarily	Permanently	Total (4+5)		In use	Not in use (Temp + Pmt)	Total (8+9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	15	0	0	0	15	0	0	0
2	**South Goa**	5	0	1	1	6	0	0	0
	Goa	**20**	**0**	**1**	**1**	**21**	**0**	**0**	**0**

Table 3.8: Distribution of Medium Tube Wells Permanently Not In Use by Reason

State : **Goa**

(In Number/In Ha)

Sl. No.	District	Salinity		Dried up		Destroyed beyond Repair		Sea Water Intrusion		Industrial Effluents		Availability of Major/Medium Irrigation Projects		Other reasons		Total	
		No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	0	0.00	1	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00
	South Goa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Goa	**0**	**0.00**	**1**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**1**	**0.00**

Table 3.9 :Distribution of In Use Medium Tube Wells according to Water Distribution System and Potential Utilised

State : **Goa**

(In Number/In Ha)

Sl. No.	District	No. & IPU of Medium Tube wells Schemes According to Water Distribution System															
		Open Water (Lined/Pucca)		Open Water (Unlined/Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
		No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	1	1.40	1	1.00	2	6.10	1	0.15	2	4.70	8	7.40	0	0.00	15	20.75
2	**South Goa**	0	0.00	2	4.40	0	0.00	2	2.00	1	3.00	0	0.00	0	0.00	5	9.40
	Goa	**1**	**1.40**	**3**	**5.40**	**2**	**6.10**	**3**	**2.15**	**3**	**7.70**	**8**	**7.40**	**0**	**0.00**	**20**	**30.15**

Table 3.10: Distribution of In Use, Temporarily Not In Use Medium Tube Wells according to Water Lifting Devices

State : **Goa**

(In Numbers)

Sl. No.	District	Number of Schemes by Lifting Device					
		Submersible Pump	Centrifugal Pump	Turbine	Manual/Animal	Others	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	11	4	0	0	0	15
2	**South Goa**	2	3	0	0	0	5
	Goa	**13**	**7**	**0**	**0**	**0**	**20**

Table 3.11: Distribution of In Use, Temporarily Not In Use Medium Tube Wells according to Source of Energy

State : **Goa**

(In Numbers)

Sl. No.	District	Number of Schemes by Source of Energy						
		Electric Pump	Diesel Pump	Wind mills	Solar pumps	Manual/Animal	Others	Total (3 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	15	0	0	0	0	0	15
2	**South Goa**	4	1	0	0	0	0	5
	Goa	**19**	**1**	**0**	**0**	**0**	**0**	**20**

Table 3.12: Distribution of In Use, Temporarily Not In Use Medium Tube Wells according to Horse Power of Lifting Devices

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Medium Tube Wells by Horse Power of Lifting Devices								Total (9 to 10)
		0-2 hp	2-4 hp	4-6 hp	6-8 hp	8-10 hp	above 10 hp	Total (3 to 8)	Schemes without Horse Power	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	3	2	10	0	0	0	15	0	15
2	**South Goa**	1	1	1	2	0	0	5	0	5
	Goa	**4**	**3**	**11**	**2**	**0**	**0**	**20**	**0**	**20**

Table 3.13: Distribution of In Use, Temporarily Not In Use Medium Tube Wells according to Total Pumping Hours of Operation

State : **Goa**

(In Numbers)

Sl. No.	District	During Kharif Season							During Rabi Season						
		<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (3 to 8)	<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	0	0	0	0	0	0	0	0	0	1	0	0	0	1
2	**South Goa**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Goa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**

Table 3.14: Distribution of In Use, Temporarily Not In Use Medium Tube Wells according to average Hours of Pumping per Day

State : **Goa** **(In Numbers)**

Sl. No.	District	During Kharif Season							During Rabi Season						
		0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (3 to 8)	0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	0	0	0	0	0	0	0	1	0	0	0	0	0	1
2	**South Goa**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Goa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**

Table 3.15: Distribution of Medium Tube Wells according to Depth

State **: Goa**

(In Numbers)

Sl. No.	District	No. by the Depth of Medium Tube Well					
		0 to 35 mts	35 to 40 mts	40 to 60 mts	60 to 70 mts	>70 mts	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0	3	11	1	0	15
2	**South Goa**	0	3	3	0	0	6
	Goa	**0**	**6**	**14**	**1**	**0**	**21**

Table 3.16: Distribution of Medium Tube Wells in and outside the Command Area of Major/Medium Projects

State : **Goa**

(In Numbers)

Sl. No.	District	Outside Command	No. of Medium Tube Wells inside the Command Area - by reasons					Total (3+8)
			Water not available up to the field from major/medium scheme	Water available but not adequate for irrigation	Water available but not useable for irrigation	Other reasons	Total (4 to 7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	13	2	0	0	0	2	15
2	**South Goa**	6	0	0	0	0	0	6
	Goa	**19**	**2**	**0**	**0**	**0**	**2**	**21**

Table 3.17.1: CCA and Season wise Potential Created through Medium Tube Wells - All Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	20.75	0.00	0.15	20.60	0.00	20.75
2	**South Goa**	9.40	0.00	0.00	9.40	0.00	9.40
	Goa	**30.15**	**0.00**	**0.15**	**30.00**	**0.00**	**30.15**

TABLE 3.17.2: CCA and Season wise Potential Created through In Use Medium Tube Wells

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	20.75	0.00	0.15	20.60	0.00	20.75
2	**South Goa**	9.40	0.00	0.00	9.40	0.00	9.40
	Goa	**30.15**	**0.00**	**0.15**	**30.00**	**0.00**	**30.15**

Table 3.17.3: CCA and Season wise Potential Created through Permanently Not In Use Medium Tube Wells

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00
2	**South Goa**						
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Table 3.18.1: Season wise Potential Utilised through Medium Tube Wells – All Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to 11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	6.10	0.00	6.10	0.00	0.15	14.50	0.00	14.65	0.00	0.15	20.60	0.00	20.75
2	**South Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.40	0.00	9.40	0.00	0.00	9.40	0.00	9.40
	Goa	**0.00**	**0.00**	**6.10**	**0.00**	**6.10**	**0.00**	**0.15**	**23.90**	**0.00**	**24.05**	**0.00**	**0.15**	**30.00**	**0.00**	**30.15**

Table 3.18.2: Season wise Potential Utilised through In Use Medium Tube Wells

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to 11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	6.10	0.00	6.10	0.00	0.15	14.50	0.00	14.65	0.00	0.15	20.60	0.00	20.75
2	**South Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.40	0.00	9.40	0.00	0.00	9.40	0.00	9.40
	Goa	**0.00**	**0.00**	**6.10**	**0.00**	**6.10**	**0.00**	**0.15**	**23.90**	**0.00**	**24.05**	**0.00**	**0.15**	**30.00**	**0.00**	**30.15**

Table 3.19: Distribution of In Use Medium Tube Wells according to Constraints in Utilisation of Potential

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Medium Tube Wells in use	No. of Medium Tube Wells without constraint	No. of Medium Tube Wells having Constraints in utilisation of potential						
				Non Availability of Adequate Power	Mechanical Break Down	Less discharge of Water	Non - Availability of Finance	Lack of Maintenance	Others	Total (5 to 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	15	14	0	0	0	0	0	1	1
2	**South Goa**	5	5	0	0	0	0	0	0	0
	Goa	**20**	**19**	**0**	**0**	**0**	**0**	**0**	**1**	**1**

Report

On

Deep Tube wells

Table 4.1: Distribution of Deep Tube Wells according to Ownership

State : **Goa**

(In Numbers)

Sl. No.	District	Public					Private			
		Govt. Owned	Co-op Society	Panchayat Owned	Other	Total (3 to 6)	Group of Farmers	Individual Farmer	Total (8 to 9)	Grand Total (7 + 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	1	0	0	0	1	2	3	5	6
2	**South Goa**	0	0	0	0	0	0	1	1	1
	Goa	**1**	**0**	**0**	**0**	**1**	**2**	**4**	**6**	**7**

Table 4.2.1: Distribution of Deep Tube Wells according to Social Status of Owner

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Deep Tube Wells owned by						
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)	Owned by other than Individual Farmer (incl. Public & Group of Farmers)	Total (7 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	0	0	0	3	3	3	6
2	**South Goa**	0	0	0	1	1	0	1
	Goa	**0**	**0**	**0**	**4**	**4**	**3**	**7**

Table 4.3.1: Distribution of Deep Tube Wells according to the Individual Owner's Holding Size

State: **Goa**

(In Numbers)

Sl. No.	District	No. of Deep Tube Wells by size class of Owner					
		Marginal (0-1 ha)	Small (1-2 ha)	Semi-Medium (2- 4 ha)	Medium (4-10 ha)	Big (>=10 ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	2	0	1	0	0	3
2	**South Goa**	1	0	0	0	0	1
	Goa	**3**	**0**	**1**	**0**	**0**	**4**

Table 4.4: Distribution of Deep Tube Wells and Cost of Construction

State : **Goa**

(in Rs. 000)

Sl. No.	District	Number and Cost of Construction of Deep Tube Wells Schemes commissioned during the Period/Year											
		Up to 2013-14		2014-15		2015-16		2016-17		2017-18		Total	
		No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**North Goa**	6	470000	0	0	0	0	0	0	0	0	6	470000
2	**South Goa**	1	151250	0	0	0	0	0	0	0	0	1	151250
	Goa	**7**	**621250**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**621250**

Table 4.5.1: Distribution of Deep Tube Wells byCost of Maintenance in the Reference Year

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Deep Tube Wells according to the annual Cost of Maintenance					
		Upto Rs. 1000	Rs. 1000 to 10000	Rs. 10000 to 50000	Rs. 50000 to 100000	More than Rs. 100000	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	3	3	0	0	0	6
2	**South Goa**	1	0	0	0	0	1
	Goa	**4**	**3**	**0**	**0**	**0**	**7**

Table.4.5.2: Average Cost of Construction, Machinery , Annual Maintenance and Average amount of Subsidy received for Deep Tube Wells

State : **Goa**

(Amount in Rupees)

Sl. No.	District	Average cost of construction	Average cost of Machinery	Average cost of annual maintenance during 2017-18	Subsidy for Construction		Subsidy for Machinery	
					No. of Deep tubewell for which subsidy was received	Average amount of subsidy	No. of Deep tubewell for which subsidy was received	Average amount of subsidy for machinery
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	78333.33	10000.00	1216.67	1	100000.00	0	0.00
2	**South Goa**	151250.00	0.00	0.00	1	75000.00	0	0.00
	Goa	**229583.33**	**10000.00**	**1216.67**	**2**	**175000.00**	**0**	**0.00**

Table 4.6: Distribution of Deep Tube Wells under Individual Ownership by Major Source of Finance

State : **Goa**

(In Numbers)

Sl. No.	District	With Single Source of Finance						With Two Sources of Finance								Grand Total (8 +16)
		Bank Loan	Govt. Fund	Own Saving	Money Lender	Others	Total (3 to 7)	Own Saving & Bank Loan	Own Saving & Govt Fund	Own Saving & Money Lender	Bank Loan & Govt Fund	Bank Loan & Money Lender	Govt Fund & Money Lender	Others	Total (9 to 15)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0	0	2	0	0	2	0	0	0	0	0	0	1	1	3
2	**South Goa**	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	Goa	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**4**

Table 4.7: Distribution of Deep Tube Wells by Status of Utilisation

State : **Goa**

(In Numbers)

Sl. No.	District	Deep tube well in use	Deep Tube Wells not in use			Grand Total (3+6)	Number of Schemes meant only for re-charge of Ground Water		
			Temporarily	Permanently	Total (4+5)		In use	Not in use (Temp + Pmt)	Total (8+9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	5	0	1	1	6	0	0	0
2	**South Goa**	1	0	0	0	1	0	0	0
	Goa	**6**	**0**	**1**	**1**	**7**	**0**	**0**	**0**

Table 4.8: Distribution of Permanently Not In Use Deep Tube Wells - by Reason

State : **Goa**

(In Number/In Ha)

Sl. No.	District	Salinity		Dried up		Destroyed beyond repair		Sea water intrusion		Industrial effluents		Availability of Major/Medium Irrigation Projects		Other reasons		Total	
		No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL	No.	PL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	1	0.00
2	**South Goa**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Goa	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**0**	**0.00**	**1**	**0.00**	**1**	**0.00**

Table 4.9: Distribution of In Use Deep Tube Wells according to Water Distribution System and Potential Utilised

State : **Goa**

(In Number/In Ha)

Sl. No.	District	No. and Potential Utilised of Deep Tube well Schemes according to Water Distribution System															
		Open Water (Lined/Pucca)		Open Water (Unlined/Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
		No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	0	0.00	1	1.60	1	0.30	1	0.30	0	0.00	1	1.00	1	0.25	5	3.45
2	**South Goa**	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.22	0	0.00	1	0.22
	Goa	**0**	**0.00**	**1**	**1.60**	**1**	**0.30**	**1**	**0.30**	**0**	**0.00**	**2**	**1.22**	**1**	**0.25**	**6**	**3.67**

Table 4.10: Distribution of In Use, Temporarily Not In Use Deep Tube Wells according to Water Lifting Device

State : **Goa**

(**In Numbers**)

Sl. No.	District	Number of Schemes by Lifting Device					
		Submersible Pump	Centrifugal Pump	Turbine	Manual/Animal	Others	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	3	1	0	0	1	5
2	**South Goa**	0	1	0	0	0	1
	Goa	**3**	**2**	**0**	**0**	**1**	**6**

Table 4.11: Distribution of In Use, Temporarily Not In Use Deep Tube Wells according to Source of Energy

State : **Goa**

(**In Numbers**)

Sl. No.	District	Number of Schemes by Source of Energy						
		Electric Pump	Diesel Pump	Wind mills	Solar pumps	Manual/Animal	Others	Total (3 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	4	1	0	0	0	0	5
2	**South Goa**	1	0	0	0	0	0	1
	Goa	**5**	**1**	**0**	**0**	**0**	**0**	**6**

Table 4.12: Distribution of In Use, Temporarily Not In Use Deep Tube Wells according to Horse Power of Lifting Device

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Deep Tube Wells by Horse Power of Lifting Devices						Total (7 and 8)
		0-6 hp	6-12 hp	12-18 hp	>=18 hp	Total(3 to 6)	Schemes without Horse Power	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	1	4	0	0	5	0	5
2	**South Goa**	0	1	0	0	1	0	1
	Goa	**1**	**5**	**0**	**0**	**6**	**0**	**6**

Table 4.13: Distribution of In Use, Temporarily Not In Use Deep Tube Wells according to Total Pumping Hours of Operation

State : **Goa**

(In Numbers)

Sl. No.	District	During Kharif Season							During Rabi Season						
		<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (3 to 8)	<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**South Goa**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Goa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 4.14: Distribution of In Use, Temporarily Not In Use Deep Tube Wells according to Average Hours of Pumping per Day

State : **Goa**

(**In Number**)

Sl. No.	District	During Kharif Season							During Rabi Season						
		0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (3 to 8)	0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	**South Goa**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Goa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 4.15: Distribution of Deep Tube Wells according to Depth

State : **Goa**

(In Numbers)

Sl. No.	District	No. by the Depth of Deep Tube Wells						
		0 to 70 mts	70 to 90 mts	90 to 110 mts	110 to 130 mts	130 to 150 mts	>=150 mts	Total (3 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	0	4	2	0	0	0	6
2	**South Goa**	0	0	1	0	0	0	1
	Goa	**0**	**4**	**3**	**0**	**0**	**0**	**7**

Table 4.16: Distribution of Deep Tube Wells in and outside the Command Area of Major/Medium Projects

State : **Goa**

(**In Numbers**)

Sl. No.	District	Outside command	No. of Deep Tube Wells inside the Command Area - by Reasons					Total (3+8)
			Water not available up to the field from Major/Medium scheme	Water available but not adequate for Irrigation	Water available but not useable for Irrigation	Other reasons	Total (4 to 7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	6	0	0	0	0	0	6
2	**South Goa**	1	0	0	0	0	0	1
	Goa	**7**	**0**	**0**	**0**	**0**	**0**	**7**

Table 4.17.1: CCA and Season wise Potential Created through Deep Tube Wells - All Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	4.45	0.00	0.00	4.45	0.00	4.45
2	**South Goa**	0.22	0.00	0.00	0.22	0.00	0.22
	Goa	**4.67**	**0.00**	**0.00**	**4.67**	**0.00**	**4.67**

Table 4.17.2: CCA and Season wise Potential Created through In Use Deep Tube Wells

State : Goa

(**In Ha**.)

Sl. No.	District	Culturable Command Area	Irrigation Potential Created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	4.45	0.00	0.00	4.45	0.00	4.45
2	**South Goa**	0.22	0.00	0.00	0.22	0.00	0.22
	Goa	**4.67**	**0.00**	**0.00**	**4.67**	**0.00**	**4.67**

Table 4.17.3: CCA and Season wise Potential Created through Permanently Not In Use Deep Tube Wells

State **: Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential Created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00
2	**South Goa**	0.00	0.00	0.00	0.00	0.00	0.00
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Table 4.18.1: Season wise Potential Utilised through Deep Tube Wells – All Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.45	0.00	3.45	0.00	0.00	3.45	0.00	3.45
2	**South Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.22	0.00	0.00	0.22	0.00	0.22
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.67**	**0.00**	**3.67**	**0.00**	**0.00**	**3.67**	**0.00**	**3.67**

Table 4.18.2: Season wise Potential Utilised through In Use Deep Tube Wells

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to 11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0	0	0	0	0	0	0	3.45	0	3.45	0	0	3.45	0	3.45
2	**South Goa**	0	0	0	0	0	0	0	0.22	0	0.22	0	0	0.22	0	0.22
	Goa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3.67**	**0**	**3.67**	**0**	**0**	**3.67**	**0**	**3.67**

Table 4.19: Distribution of In Use Deep Tube Wells according to Constraints in Utilisation of Potential

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Deep Tube Wells in use	No. of Deep Tube Wells without constraints	No. of Deep Tube Wells having Constraints in utilisation of Potential						
				Non Availability of Adequate Power	Mechanical Break Down	Less discharge of Water	Non - Availability of Finance	Lack of Maintenance	Others	Total (5 to 10)
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	(11)
1	**North Goa**	5	5	0	0	0	0	0	0	0
2	**South Goa**	1	1	0	0	0	0	0	0	0
	Goa	**6**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Report

On

Surface Flow Schemes

Table 5.1: Number of Surface Flow Schemes by Type

State : **Goa**

(In Numbers)

Sl. No.	District	Type of Surface Flow Schemes								
		Reservoir	Tank /Ponds	Other Storage	Permanent Diversion	Temporary Diversion	Water Conservation-cum-Ground Water Recharge Schemes/Percolation Tanks/check dams etc.	Spring Channel	Others	Total (3 to 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	17	84	2	9	69	10	27	19	237
2	**South Goa**	51	241	4	54	228	39	108	68	793
	Goa	**68**	**325**	**6**	**63**	**297**	**49**	**135**	**87**	**1030**

Table 5.2: Distribution of Surface Flow Schemes according to Ownership

State : **Goa**

(In Numbers)

Sl. No.	District	Public					Private			
		Govt. Owned	Coop. Society	Panchayat Owned	Other	Total (3 to 6)	Group of Farmers	Individual Farmer	Total (8 to 9)	Grand Total (7 + 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	35	2	2	24	63	107	67	174	237
2	**South Goa**	14	4	0	25	43	262	488	750	793
	Goa	**49**	**6**	**2**	**49**	**106**	**369**	**555**	**924**	**1030**

Table 5.3.1: Distribution of Surface Flow Schemes according to Social Status of Owner

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Flow Schemes owned by						
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)	Owned by other than Individual Farmer (incl. Public & Group of farmers)	Total (7 + 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	1	0	18	48	67	170	237
2	**South Goa**	43	257	36	152	488	305	793
	Goa	**44**	**257**	**54**	**200**	**555**	**475**	**1030**

Table 5.3.2: Distribution of Surface Flow Schemes according to Social Status of Female Owner

State : Goa

(In Numbers)

Sl. No.	District	No. of Surface Flow Schemes owned by				
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**North Goa**	19	59	5	19	102
2	**South Goa**	0	0	0	0	0
	Goa	**19**	**59**	**5**	**19**	**102**

Table 5.4: Distribution of Surface Flow Schemes according to the Individual Owner's Holding Size

State : Goa **(In Numbers)**

Sl. No.	District	No. of Surface Flow Schemes by Size Class of Owner					
		Marginal (0-1 ha)	Small (1-2 ha)	Semi-Medium (2- 4 ha)	Medium (4-10 ha)	Big (>=10 ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	7	54	3	3	0	67
2	**South Goa**	374	72	20	12	10	488
	Goa	**381**	**126**	**23**	**15**	**10**	**555**

Table 5.5: Distribution of Surface Flow Schemes and Cost of Construction

State : **Goa**

(In Rs. 000)

Sl. No.	District	Number and Cost of Construction of Surface Flow Schemes commissioned during the period/year											
		Up to 2013-14		2014-15		2015-16		2016-17		2017-18		Total	
		No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**North Goa**	222	6905851	3	220000	1	10000	2	120000	9	211500	237	7467351
2	**South Goa**	618	9739503	44	220000	13	242000	6	0	112	55009	793	10256512
	Goa	**840**	**16645354**	**47**	**440000**	**14**	**252000**	**8**	**120000**	**121**	**266509**	**1030**	**17723863**

Table 5.6.1: Distribution of Surface Flow Schemes by Cost of maintenance in the reference year

State **: Goa**

(In Numbers)

Sl. No.	District	No. of Surface Flow Schemes according to the Annual Cost of Maintenance					
		Upto Rs. 1000	Rs. 1000 to 10000	Rs. 10000 to 50000	Rs. 50000 to 100000	More than Rs. 100000	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	220	9	8	0	0	237
2	**South Goa**	572	209	11	1	0	793
	Goa	**792**	**218**	**19**	**1**	**0**	**1030**

Table.5.6.2: Average Cost of Construction, Machinery , Annual Maintenance and Average Amount of Subsidy received for Surface Flow Schemes

State **: Goa**

(Amount in Rupees)

Sl. No.	District	Average cost of Construction	Average cost of Machinery	Average cost of annual maintenance during 2017-18	Subsidy for Construction		Subsidy for Machinery	
					No. of Surface Flow Schemes for which subsidy was received	Average amount of subsidy	No. of Surface Flow Schemes for which Subsidy was received	Average amount of Subsidy for Machinery
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	23516.25	2658.23	913.50	9	142222.56	9	25001.00
2	**South Goa**	10898.49	600.89	991.42	3	2668.00	1	10000.00
	Goa	**34414.74**	**3259.12**	**1904.92**	**12**	**144890.56**	**10**	**35001.00**

Table 5.7: Distribution of Surface Flow Schemes under individual ownership according to major source of finance

State **: Goa**

(In Numbers)

Sl. No.	District	With Single Source of Finance						With two Sources of Finance								Grand Total (8 +16)
		Bank Loan	Govt. Fund	Own Saving	Money Lender	Others	Total (3 to 7)	Own Saving & Bank Loan	Own Saving & Govt Fund	Own Saving & Money Lender	Bank Loan & Govt Fund	Bank Loan & Money Lender	Govt. Fund & Money Lender	Others	Total (9 to 15)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0	0	12	0	0	12	2	1	0	0	0	0	52	55	67
2	**South Goa**	8	2	108	0	6	124	6	2	1	0	0	0	355	364	488
	Goa	**8**	**2**	**120**	**0**	**6**	**136**	**8**	**3**	**1**	**0**	**0**	**0**	**407**	**419**	**555**

Table 5.8: Distribution of Surface Flow Schemes by Status of Utilisation

State **: Goa**

(In Numbers)

Sl. No.	District	Schemes in use	Schemes not in use			Grand Total (3+6)	Number of Schemes meant only for re-charge of Ground Water		
			Temporarily	Permanently	Total (4+5)		In use	Not in use (Temp + Pmt)	Total (8+9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	233	1	3	4	237	9	1	10
2	**South Goa**	785	2	6	8	793	0	0	0
	Goa	**1018**	**3**	**9**	**12**	**1030**	**9**	**1**	**10**

Table 5.9: Distribution of Temporarily Not In Use Surface Flow Schemes by Reasons

State **: Goa**

(In Numbers)

Sl. No.	District	No. of Surface Flow Schemes Temporarily not in use due to								
		Non Availability of adequate Power/Fuel	Mechanical Break Down	Less discharge of Water	Non - Availability of Finance	Storage not filled up fully	Siltation of Channel/ Storage	Channel Break Down	Others	Total (3 to 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	0	0	0	0	0	0	1	0	1
2	**South Goa**	0	0	2	0	0	0	0	0	2
	Goa	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**3**

Table 5.10: Distribution of Permanently Not In Use Surface Flow Schemes by Reasons

State **: Goa**

(In Numbers)

Sl. No.	District	No. of Surface Flow Schemes Permanently not in use due to								
		Salinity	Dried up	Destroyed beyond repair	Due to sea water intrusion	Industrial effluents	Due to Availability of Major/Medium Irrigation Project	Sinking	Other reasons	Total (3 to 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	0	1	0	0	0	0	0	2	3
2	**South Goa**	0	2	0	0	0	0	0	4	6
	Goa	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**6**	**9**

Table 5.11: Distribution of Surface Flow Schemes In Use according to Water Distribution System and Potential Utilised

State : **Goa**

(In Number/In Ha)

Sl. No.	District	No. & PU of Surface Flow Schemes according to Water Distribution System															
		Open Water (Lined/Pucca)		Open Water (Unlined/Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
		No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	25	104.95	172	282.02	2	0.35	6	42.03	0	0.00	3	13.00	25	39.21	233	481.56
2	**South Goa**	42	285.89	563	616.56	2	0.40	9	11.10	1	2.00	25	23.97	143	285.21	785	1225.13
	Goa	**67**	**390.84**	**735**	**898.58**	**4**	**0.75**	**15**	**53.13**	**1**	**2.00**	**28**	**36.97**	**168**	**324.42**	**1018**	**1706.69**

Table 5.12: Distribution of Surface Flow Schemes in and outside the Command Area of Major/Medium Projects

State : **Goa**

(In Numbers)

Sl. No.	District	Outside command	No. of Surface flow Schemes inside the Command Area - by Reasons					Total (3+8)
			Water not available up to the field from major/medium scheme	Water available but not adequate for irrigation	Water available but not useable for irrigation	Other reasons	Total (4 to 7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	233	2	1	0	1	4	237
2	**South Goa**	729	50	1	0	13	64	793
	Goa	**962**	**52**	**2**	**0**	**14**	**68**	**1030**

Table 5.13.1: CCA and Season wise Potential created through Surface Flow Schemes - All

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	720.31	15.10	176.21	476.80	52.20	720.31
2	**South Goa**	1232.57	27.54	809.78	372.04	23.21	1232.57
	Goa	**1952.88**	**42.64**	**985.99**	**848.84**	**75.41**	**1952.88**

Table 5.13.2: CCA and Season wise Potential created through In Use Surface Flow Schemes

State : Goa

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	600.27	15.10	176.17	356.80	52.20	600.27
2	**South Goa**	1230.87	27.54	809.58	370.54	23.21	1230.87
	Goa	**1831.14**	**42.64**	**985.75**	**727.34**	**75.41**	**1831.14**

Table 5.13.3 CCA and Season wise Potential created through Temporarily Not In Use Surface Flow Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0.04	0.00	0.04	0.00	0.00	0.04
2	**South Goa**	1.40	0.00	0.20	1.20	0.00	1.40
	Goa	**1.44**	**0.00**	**0.24**	**1.20**	**0.00**	**1.44**

Table 5.13.4: CCA and Season wise Potential created through Permanently Not In Use Surface Flow Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	120.00	0.00	0.00	120.00	0.00	120.00
2	**South Goa**	0.30	0.00	0.00	0.30	0.00	0.30
	Goa	**120.30**	**0.00**	**0.00**	**120.30**	**0.00**	**120.30**

Table 5.14.1: Season wise Potential Utilised through Surface Flow Schemes - All

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	3.56	0.30	0.00	3.86	12.10	145.79	283.02	36.82	477.73	12.10	149.35	283.32	36.82	481.59
2	**South Goa**	0.00	13.11	5.30	0.00	18.41	27.54	790.93	366.44	23.21	1208.12	27.54	804.04	371.74	23.21	1226.53
	Goa	**0.00**	**16.67**	**5.60**	**0.00**	**22.27**	**39.64**	**936.72**	**649.46**	**60.03**	**1685.85**	**39.64**	**953.39**	**655.06**	**60.03**	**1708.12**

Table 5.14.2: Season wise Potential Utilised through In Use Surface Flow Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	3.56	0.30	0.00	3.86	12.10	145.76	283.02	36.82	477.70	12.10	149.32	283.32	36.82	481.56
2	**South Goa**	0.00	13.11	5.30	0.00	18.41	27.54	790.73	365.24	23.21	1206.72	27.54	803.84	370.54	23.21	1225.13
	Goa	**0.00**	**16.67**	**5.60**	**0.00**	**22.27**	**39.64**	**936.49**	**648.26**	**60.03**	**1684.42**	**39.64**	**953.16**	**653.86**	**60.03**	**1706.69**

Table 5.14.3: Season wise Potential Utilised through Temporarily Not In Use Surface Flow Schemes

State : **Goa**

(In Ha.)

Sl .No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.03	0.00	0.00	0.03
2	**South Goa**	0.00	0.00	0.00	0.00	0.00	0.00	0.20	1.20	0.00	1.40	0.00	0.20	1.20	0.00	1.40
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.23**	**1.20**	**0.00**	**1.43**	**0.00**	**0.23**	**1.20**	**0.00**	**1.43**

Table 5.15: Distribution of In Use Surface Flow Schemes according to Constraints in Utilisation of Potential

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Flow Schemes having Constraints in utilisation of potential										
		No. of Schemes in use	No. of Schemes without constraints	Inadequate power supply	Mechanical Break Down	Less Discharge of Water	Storage not filled up fully	Siltation of Canal/ Storage	Channel Break Down	Others	Total (5 to 11)	Grand Total (4 + 12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**North Goa**	233	206	0	0	3	1	0	2	21	27	233
2	**South Goa**	785	711	0	1	57	4	0	0	12	74	785
	Goa	**1018**	**917**	**0**	**1**	**60**	**5**	**0**	**2**	**33**	**101**	**1018**

Table 5.16: Distribution of Tanks/Reservoirs & Other Storages of Surface Flow Schemes by Storage Size

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Tanks/Reservoir & Other Storages by Designed Storage					
		Not Available or Zero	More than 0 and upto 100 cubic mts	More than 100 and upto 1000 cubic mts	More than 1000 and upto 10000 cubic mts	More than 10000 cubic mts	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0	40	40	20	3	103
2	**South Goa**	0	121	140	13	22	296
	Goa	**0**	**161**	**180**	**33**	**25**	**399**

Table 5.16.1: Number and Storage Capacity of Reservoirs in Surface Flow Schemes

State : **Goa**

(Storage capacity in Cubic Meters)

Sl. No.	District	In use		Temporarily Not in Use		Permanently Not in Use		Total	
		No.	Storage capacity	No.	Storage capacity	No.	Storage capacity	No. (3 + 5 +7)	Storage capacity (4 + 6 + 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	17	54426.00	0	0.00	0	0.00	17	54426.00
2	**South Goa**	51	5815.68	0	0.00	0	0.00	51	5815.68
	Goa	**68**	**60241.68**	**0**	**0.00**	**0**	**0.00**	**68**	**60241.68**

Table 5.16.2: Number and Storage Capacity of Tanks/Ponds in Surface Flow Schemes

State : **Goa**

(**Storage capacity in Cubic Meters)**

Sl. No.	District	In use		Temporarily Not in Use		Permanently Not in Use		Total	
		No.	Storage capacity	No.	Storage capacity	No.	Storage capacity	No. (3 + 5 +7)	Storage capacity (4 + 6 + 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	83	321886.07	1	5.00	0	0.00	84	321891.07
2	**South Goa**	235	462850.61	0	0.00	6	151.05	241	463001.66
	Goa	**318**	**784736.68**	**1**	**5.00**	**6**	**151.05**	**325**	**784892.73**

Table 5.16.3: Number and Storage Capacity of Other Storages in Surface Flow Schemes

State : **Goa**

(Storage capacity in Cubic Meters)

Sl. No.	District	In Use		Temporarily Not in Use		Permanently Not in Use		Total	
		No.	Storage capacity	No.	Storage capacity	No.	Storage capacity	No. (3 + 5 +7)	Storage capacity (4 + 6 + 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	1	900.00	0	0.00	1	900.00	2	1800.00
2	**South Goa**	4	421.00	0	0.00	0	0.00	4	421.00
	Goa	**5**	**1321.00**	**0**	**0.00**	**1**	**900.00**	**6**	**2221.00**

Table 5.16.4: Number and Storage Capacity of Reservoir/Tanks/Ponds/Other Storages in Surface Flow Schemes

State **: Goa**

(Storage capacity in cubic meters)

Sl. No.	District	In Use		Temporarily Not in Use		Permanently Not in Use		Total	
		No.	Storage Capacity	No.	Storage Capacity	No.	Storage Capacity	No. (3 + 5 +7)	Storage Capacity (4 + 6 + 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	101	377212.07	1	5.00	1	900.00	103	378117.07
2	**South Goa**	290	469087.29	0	0.00	6	151.05	296	469238.34
	Goa	**391**	**846299.36**	**1**	**5.00**	**7**	**1051.05**	**399**	**847355.41**

Table 5.17: Distribution of Tanks/Reservoir and Other Storage of Surface Flow Schemes by CCA Classes

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Public Tanks/Reservoirs & Other Storages by CCA Classes							No. of Private Tanks/Reservoirs & Other Storages by CCA Classes						
		CCA Classes							CCA Classes						
		0 to 20 ha	20 to 40 ha	40 to 100 ha	100 to 500 ha	500 to 1000 ha	1000 to 2000 ha	Total (3 to 8)	0 to 20 ha	20 to 40 ha	40 to 100 ha	100 to 500 ha	500 to 1000 ha	1000 to 2000 ha	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	37	4	0	0	0	0	41	53	1	0	1	0	0	55
2	**South Goa**	23	0	0	0	0	0	23	272	1	0	0	0	0	273
	Goa	**60**	**4**	**0**	**0**	**0**	**0**	**64**	**325**	**2**	**0**	**1**	**0**	**0**	**328**

Table 5.18: Distribution of In Use Tanks/ Reservoirs and Other Storages in Surface Flow Schemes

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Tanks/Reservoirs and Other Storages with their IPC and IPU by CCA Class																				
		CCA Classes												CCA Classes								
		0 to 20 Ha			20 to 40 Ha			40 to 100 Ha			100 to 500 Ha			500 to 1000 Ha			1000 to 2000 Ha			Total		
		No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1	**North Goa**	90	229.12	195.56	5	140.00	94.00	0	0.00	0.00	1	120.00	0.00	0	0.00	0.00	0	0.00	0.00	96	489.12	289.56
2	**South Goa**	295	332.76	332.46	1	21.00	21.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	296	353.76	353.46
	Goa	**385**	**561.88**	**528.02**	**6**	**161.00**	**115.00**	**0**	**0.00**	**0.00**	**1**	**120.00**	**0.00**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**392**	**842.88**	**643.02**

Report

On

Surface Lift Schemes

Table 6.1: Number of Surface Lift Schemes by Type

State : **Goa**

(In Numbers)

Sl. No.	District	Type of Surface Lift Schemes					
		On River	On Stream	On Drain/Canal	On Tanks/ Ponds/ Reservoirs/ Check-Dams	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	95	28	11	154	9	297
2	**South Goa**	249	46	79	302	99	775
	Goa	**344**	**74**	**90**	**456**	**108**	**1072**

Table 6.2: Distribution of Surface Lift Schemes according to Ownership

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Lift Schemes owned by								
		Public					Private			
		Govt. Owned	Coop Society	Panchayat Owned	Other	Total (3 to 6)	Group of Farmers	Individual Farmer	Total (8 to 9)	Grand Total (7 + 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	41	2	1	17	61	36	200	236	297
2	**South Goa**	16	3	1	43	63	96	616	712	775
	Goa	**57**	**5**	**2**	**60**	**124**	**132**	**816**	**948**	**1072**

Table 6.3.1: Distribution of Surface Lift Schemes according to Social Status of Owner

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Lift Schemes owned by						Total (7 + 8)
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)	Owned by other than Individual Farmer (incl. Public & Group of Farmers)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	1	6	33	160	200	97	297
2	**South Goa**	21	158	112	325	616	159	775
	Goa	**22**	**164**	**145**	**485**	**816**	**256**	**1072**

Table 6.3.2: Distribution of Surface Lift Schemes according to Social Status of Female Owner

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Lift Schemes owned by				
		Scheduled Caste	Scheduled Tribe	OBC	Others	Total (3 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**North Goa**	0	0	5	5	10
2	**South Goa**	2	18	12	42	74
	Goa	**2**	**18**	**17**	**47**	**84**

Table 6.4: Distribution of Surface Lift Schemes according to the Individual Owner's Holding Size

State : **Goa** **(In Numbers)**

Sl. No.	District	No. of Surface Lift Schemes by size of class of owner					
		Marginal (0-1 Ha)	Small (1-2 Ha)	Semi-Medium (2- 4 Ha)	Medium (4-10 Ha)	Big (>=10 Ha)	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	67	71	37	20	5	200
2	**South Goa**	316	137	67	69	27	616
	Goa	**383**	**208**	**104**	**89**	**32**	**816**

Table 6.5: Distribution of Surface Lift Schemes and Cost of Construction

State : **Goa**

(In Rs. 000)

Sl. No.	District	Number and Cost of Construction of Surface Lift Schemes commissioned during the Period/Year											
		Up to 2013-14		2014-15		2015-16		2016-17		2017-18		Total	
		No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**North Goa**	275	11100800	8	385000	7	540000	3	70000	4	69000	297	12164800
2	**South Goa**	647	18897346	46	1759148	20	1074100	33	773250	29	1300200	775	23804044
	Goa	**922**	**29998146**	**54**	**2144148**	**27**	**1614100**	**36**	**843250**	**33**	**1369200**	**1072**	**35968844**

Table 6.6.1: Distribution of Surface Lift Schemes by Cost of Maintenance in the Reference Year

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Lift Schemes according to the Annual Cost of Maintenance					
		Upto Rs. 1000	Rs. 1000 to 10000	Rs. 10000 to 50000	Rs. 50000 to 100000	More than Rs. 100000	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	217	61	17	2	0	297
2	**South Goa**	417	344	13	1	0	775
	Goa	**634**	**405**	**30**	**3**	**0**	**1072**

Table.6.6.2: Average Cost of Construction, Machinery, Annual Maintenance and Average Amount of Subsidy received for Surface Lift Schemes

State : **Goa**

(Amount in Rupees)

Sl. No.	District	Average cost of construction	Average cost of Machinery	Average cost of annual maintenance during 2017-18	Subsidy for Construction		Subsidy for Machinery	
					No. of Surface lift for which subsidy was received	Average amount of subsidy	No. of Surface lift for which subsidy was received	Average amount of subsidy for machinery
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	39022.90	23024.71	2907.42	13	62692.31	49	17765.31
2	**South Goa**	27236.19	12607.10	1968.79	41	22139.59	22	13626.45
	Goa	**66259.09**	**35631.81**	**4876.21**	**54**	**84831.90**	**71**	**31391.76**

Table 6.7: Distribution of Surface Lift Schemes under Individual Ownership according to Major Source of Finance

State : **Goa**

(In Numbers)

Sl. No.	District	With Single Source of Finance						With Two Sources of Finance								Grand Total (8 +16)
		Bank Loan	Govt. Fund	Own Savings	Money Lender	Others	Total (3 to 7)	Own Saving & Bank Loan	Own Saving & Govt Fund	Own Saving & Money Lender	Bank Loan & Govt Fund	Bank Loan & Money Lender	Govt Fund & Money Lender	Others	Total (9 to 15)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	7	1	88	0	0	96	23	33	0	2	1	0	45	104	200
2	**South Goa**	2	6	102	0	2	112	16	36	0	3	0	0	449	504	616
	Goa	**9**	**7**	**190**	**0**	**2**	**208**	**39**	**69**	**0**	**5**	**1**	**0**	**494**	**608**	**816**

Table 6.8: Distribution of Surface Lift Schemes by Status of Utilization

State **: Goa**

(In Numbers)

Sl. No.	District	Schemes in use	Schemes Not in Use			Grand Total (3+6)	Number of Schemes meant only for re-charge of ground water		
			Temporarily	Permanently	Total (4+5)		In use	Not in use (Temp + Pmt)	Total (8+9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	**North Goa**	281	4	12	16	297	0	5	5
2	**South Goa**	775	0	0	0	775	1	0	1
	Goa	**1056**	**4**	**12**	**16**	**1072**	**1**	**5**	**6**

Table 6.9: Distribution of Surface Lift Schemes Temporarily Not in Use by Reasons

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Lift Schemes Temporarily Not in Use due to								
		Non Availability of adequate Power/Fuel	Mechanical Break Down	Less discharge of Water	Non - Availability of Finance	Storage not filled up fully	Siltation of Channel/ Storage	Channel Break Down	Others	Total (3 to 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	0	1	0	0	0	0	0	3	4
	South Goa	0	0	0	0	0	0	0	0	0
	Goa	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**4**

Table 6.10: Distribution of Surface Lift Schemes Permanently Not in Use by Reasons

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Lift Schemes Permanently Not in Use due to								
		Salinity	Dried up	Destroyed beyond repair	Due to sea water intrusion	Industrial effluents	Due to Availability of Major/Medium Irrigation Project	Sinking	Other reasons	Total (3 to 10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	0	0	2	0	0	0	0	10	12
	South Goa	0	0	0	0	0	0	0	0	0
	Goa	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**10**	**12**

Table 6.11: Distribution of In Use Surface Lift Schemes according to Water Distribution System and Potential Utilised

State : **Goa**

(In Number/In Ha)

Sl. No.	District	No. & PU of Surface Lift Schemes according to Water Distribution System															
		Open Water (Lined/Pucca)		Open Water (Unlined/Kutcha)		Underground pipe		Surface pipe		Drip		Sprinkler		Others		Total	
		No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU	No.	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1	**North Goa**	31	383.63	55	127.29	20	32.48	58	107.48	7	37.00	106	166.01	4	4.55	281	858.44
2	**South Goa**	98	101.37	274	433.60	10	25.03	61	185.90	15	18.20	248	620.33	69	129.03	775	1513.46
	Goa	**129**	**485.00**	**329**	**560.89**	**30**	**57.51**	**119**	**293.38**	**22**	**55.20**	**354**	**786.34**	**73**	**133.58**	**1056**	**2371.90**

Table 6.12: Distribution of In Use, Temporarily Not In Use Surface Lift Schemes according to Lifting Devices

State : **Goa**

(In Numbers)

Sl. No.	District	Number of Schemes by Lifting Device					
		Submersible Pump	Centrifugal Pump	Turbine/Jet Pump	Manual/Animal	Others	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	45	211	12	16	1	285
2	**South Goa**	155	486	0	119	15	775
	Goa	**200**	**697**	**12**	**135**	**16**	**1060**

Table 6.13: Distribution of In Use, Temporarily Not In Use Surface Lift Schemes according to Source of Energy

State : **Goa**

(In Numbers)

Sl. No.	District	Number of Schemes by Source of Energy						
		Electric Pump	Diesel Pump	Wind mills	Solar pumps	Manual/Animal	Others	Total (3 to 8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	241	28	0	0	0	0	269
2	**South Goa**	590	62	0	1	0	3	656
	Goa	**831**	**90**	**0**	**1**	**0**	**3**	**925**

Table 6.14: Distribution of In Use, Temporarily Not In Use Surface Lift Schemes according to Horse Power of Lifting Device

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Surface Lift Scheme by Horse Power of Lifting Devices								Total (9+10)
		0-2 hp	2-4 hp	4-6 hp	6-8 hp	8-10 hp	above 10 hp	Total (3 to 8)	Schemes without Horse Power	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**North Goa**	82	52	101	9	24	1	269	16	285
2	**South Goa**	216	144	180	50	66	0	656	119	775
	Goa	**298**	**196**	**281**	**59**	**90**	**1**	**925**	**135**	**1060**

Table 6.15: Distribution of In Use, Temporarily Not In Use Surface Lift Schemes according to Total Hours of Pumping Operation

State : **Goa**

(In Numbers)

Sl. No.	District	During Kharif Season							During Rabi Season						
		<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (3 to 8)	<200 hrs	200-400 hrs	400-600 hrs	600-800 hrs	800-1000 hrs	>=1000 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	1	0	0	0	0	0	1	32	14	14	2	3	0	65
2	**South Goa**	2	0	0	0	0	0	2	59	50	19	9	1	1	139
	Goa	**3**	**0**	**0**	**0**	**0**	**0**	**3**	**91**	**64**	**33**	**11**	**4**	**1**	**204**

Table 6.16: Distribution of In Use, Temporarily Not In Use Surface Lift Schemes according to Average Hours of Pumping per Day

State : **Goa**

(In Numbers)

Sl. No.	District	During Kharif Season							During Rabi Season						
		0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (3 to 8)	0-4 hrs	4-8 hrs	8-12 hrs	12-16 hrs	16-20 hrs	20-24 hrs	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	1	0	0	0	0	0	1	23	34	7	1	0	0	65
2	**South Goa**	2	0	0	0	0	0	2	114	19	6	0	0	0	139
	Goa	**3**	**0**	**0**	**0**	**0**	**0**	**3**	**137**	**53**	**13**	**1**	**0**	**0**	**204**

Table 6.17: Distribution of Surface Lift Schemes in and outside the Command area of Major/Medium Projects

State : **Goa**

(In Numbers)

Sl. No.	District	Outside Command	No. of Surface Lift Schemes inside Command Area - by reasons					Total (3+8)
			Water not available up to the field from major/medium scheme	Water available but not adequate for irrigation	Water available but not useable for irrigation	Other reasons	Total (4 to 7)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	**North Goa**	265	18	7	0	7	32	297
2	**South Goa**	742	30	3	0	0	33	775
	Goa	**1007**	**48**	**10**	**0**	**7**	**65**	**1072**

Table 6.18: Distribution of In Use Tanks/Ponds/Reservoirs of Surface Lift Schemes by CCA Classes and their IPC and IPU

State : **Goa**

(In Numbers/In Ha)

Sl. No.	District	No. of Tanks/Reservoirs and Other Storages with their IPC and IPU by CCA Class																				
		CCA Classes																				
		0 to 20 Ha			20 to 40 Ha			40 to 100 Ha			100 to 500 Ha			500 to 1000 Ha			1000 to 2000 Ha			Total		
		No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU	No.	IPC	IPU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1	**North Goa**	151	303.93	277.39	2	55.80	55.80	1	50.00	50.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	154	409.73	383.19
2	**South Goa**	300	499.69	499.69	2	61.00	61.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	302	560.69	560.69
	Goa	**451**	**803.62**	**777.08**	**4**	**116.80**	**116.80**	**1**	**50.00**	**50.00**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	**456**	**970.42**	**943.88**

Table 6.19.1: CCA and Season-wise Potential created through Surface Lift Schemes – All Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	961.80	0.63	143.38	811.94	6.28	962.23
2	**South Goa**	1514.89	0.00	210.94	1275.38	28.57	1514.89
	Goa	**2476.69**	**0.63**	**354.32**	**2087.32**	**34.85**	**2477.12**

Table 6.19.2: CCA and Season-wise Potential created through In Use Surface Lift Schemes

State : Goa

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation Potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	955.64	0.63	137.22	811.94	6.28	956.07
2	**South Goa**	1514.89	0.00	210.94	1275.38	28.57	1514.89
	Goa	**2470.53**	**0.63**	**348.16**	**2087.32**	**34.85**	**2470.96**

Table 6.19.3: CCA and Season-wise Potential created through Temporarily Not In Use Surface Lift Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	6.16	0.00	6.16	0.00	0.00	6.16
	South Goa	0.00	0.00	0.00	0.00	0.00	0.00
	Goa	**6.16**	**0.00**	**6.16**	**0.00**	**0.00**	**6.16**

Table 6.19.4: CCA and Season-wise Potential created through Permanently Not In Use Surface Lift Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Culturable Command Area	Irrigation potential created				
			Kharif	Rabi	Perennial	Other	Total (4 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00
	South Goa	0.00	0.00	0.00	0.00	0.00	0.00
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Table 6.20.1: Season wise Potential Utilised through Surface Lift Schemes - All

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Projects					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	33.80	74.91	0.00	108.71	0.63	70.90	677.08	3.78	752.39	0.63	104.70	751.99	3.78	861.10
2	**South Goa**	0.00	6.20	55.90	0.70	62.80	0.00	203.31	1219.48	27.87	1450.66	0.00	209.51	1275.38	28.57	1513.46
	Goa	**0.00**	**40.00**	**130.81**	**0.70**	**171.51**	**0.63**	**274.21**	**1896.56**	**31.65**	**2203.05**	**0.63**	**314.21**	**2027.37**	**32.35**	**2374.56**

Table 6.20.2: Season wise Potential Utilised through In Use Surface Lift Schemes - All

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	33.80	74.91	0.00	108.71	0.63	68.24	677.08	3.78	749.73	0.63	102.04	751.99	3.78	858.44
2	**South Goa**	0.00	6.20	55.90	0.70	62.80	0.00	203.31	1219.48	27.87	1450.66	0.00	209.51	1275.38	28.57	1513.46
	Goa	**0.00**	**40.00**	**130.81**	**0.70**	**171.51**	**0.63**	**271.55**	**1896.56**	**31.65**	**2200.39**	**0.63**	**311.55**	**2027.37**	**32.35**	**2371.90**

Table 6.20.3: Season wise Potential Utilised through Temporarily Not In Use Surface Lift Schemes

State : **Goa**

(In Ha.)

Sl. No.	District	Area Irrigated during 2017-2018														
		Inside Command of Major/Medium Project					Outside Command					Total				
		Kharif	Rabi	Perennial	Others	Total (3 to 6)	Kharif	Rabi	Perennial	Others	Total (8 to11)	Kharif (3+8)	Rabi (4+9)	Perennial (5+10)	Others (6+11)	Total (7 +12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	**North Goa**	0.00	0.00	0.00	0.00	0.00	0.00	2.66	0.00	0.00	2.66	0.00	2.66	0.00	0.00	2.66
	South Goa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Goa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.66**	**0.00**	**0.00**	**2.66**	**0.00**	**2.66**	**0.00**	**0.00**	**2.66**

Table 6.21: Distribution of In Use Surface Lift Schemes according to Constraints in Utilisation of Potential

State : Goa

(In Numbers)

Sl. No.	District	No. of Surface Lift Schemes having Constraints in Utilisation of Potential									
		No. of Schemes in Use	No. of Schemes without Constraints	Inadequate Power Supply	Mechanical Break Down	Less Discharge of Water	Storage not filled up fully	Siltation of Canal/ Storage	Channel Break Down	Others	Total (5 to 11
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**North Goa**	281	235	3	1	3	2	4	0	33	46
2	**South Goa**	775	742	1	1	16	0	0	0	15	33
	Goa	**1056**	**977**	**4**	**2**	**19**	**2**	**4**	**0**	**48**	**79**

Table 6.22: Distribution of Tanks/Reservoirs and Other Storage of Surface Lift Schemes by Storage Size

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Tanks/ Reservoirs and Other Storages by Designed Storage					
		Not Available or Zero cubic mts	More than 0 and upto 100 cubic mts	More than 100 and upto 1000 cubic mts	More than 1000 and upto 10000 cubic mts	More than 10000 cubic mts	Total (3 to 7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	**North Goa**	0	55	65	21	13	154
2	**South Goa**	0	169	116	15	2	302
	Goa	**0**	**224**	**181**	**36**	**15**	**456**

Table 6.23: Distribution of Tanks/ Ponds/ Reservoirs of Surface Lift Schemes by CCA Classes

State : **Goa**

(In Numbers)

Sl. No.	District	No. of Public Tanks/Reservoirs & Other Storages by CCA Classes							No. of Private Tanks/Reservoirs & Other Storages by CCA Classes						
		CCA Classes							CCA Classes						
		0 to 20 ha	20 to 40 ha	40 to 100 ha	100 to 500 ha	500 to 1000 ha	1000 to 2000 ha	Total (3 to 8)	0 to 20 ha	20 to 40 ha	40 to 100 ha	100 to 500 ha	500 to 1000 ha	1000 to 2000 ha	Total (10 to 15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1	**North Goa**	29	1	1	0	0	0	31	122	1	0	0	0	0	123
2	**South Goa**	27	2	0	0	0	0	29	273	0	0	0	0	0	273
	Goa	**56**	**3**	**1**	**0**	**0**	**0**	**60**	**395**	**1**	**0**	**0**	**0**	**0**	**396**

Table.7 Comparative Statement of Area Irrigated under Different Irrigation Sources in the First, Second, Third, Fourth, Fifth and Sixth Census

State/District	Census	Area irrigated under Ground Water Sources (Ha)	Area irrigated under Surface Irrigation Sources (Ha)	Total area irrigated under Irrigation Sources (Ha)
Goa	1st Census	1962	9959.57	11921.58
	2nd Census	3517.41	13182.29	16699.7
	3rd Census	3602	10523	14125
	4th Census	4959	6894	11853
	5th Census	3123.99	4272.3	7396.29
	6th Census	3037.37	4082.68	7120.05
	*Variation (%)	(-2.78)	(-3.44)	(-3.74)
North Goa District	1st Census	1217.53	5699.7	6917.23
	2nd Census	2239.07	7489.64	9728.7
	3rd Census	2171	5638	7809
	4th Census	2371	3390	5782
	5th Census	1821	2413	4234
	6th Census	1327.92	1342.69	2670.61
	*Variation (%)	(-27.08)	(-44.36)	(-36.93)
South Goa District	1st Census	744.48	4259.87	5004.35
	2nd Census	1278.35	5692.65	6971
	3rd Census	1431	4885	6316
	4th Census	2567	3504	6071
	5th Census	1293	1859	3152
	6th Census	1709.45	2739.99	4449.44
	*Variation (%)	(+32.20)	(+47.39)	(+41.16)

* Variation as compared to 5th Minor Irrigation Census.

Table.8 Comparative Statement of Census wise and Taluka wise Irrigation Sources

(in Nos.)

Sl. No.	Name of the Taluka/ District/ State	Dug Wells						Shallow Tube Wells						Medium Tube Wells						Deep Tube Wells						Total (Ground Sources)					
		1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C
1	Bardez	998	659	972	555	571	285	2	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	1000	659	972	555	581	286
2	Bicholim	333	330	509	640	633	604	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	333	330	509	642	634	605
3	Pernem	623	586	345	180	340	523	1	0	0	3	0	1	0	0	0	0	0	3	0	0	0	2	0	2	624	586	345	185	340	529
4	Ponda	420	502	649	679	534	631	0	0	5	14	20	4	0	0	0	0	1	1	0	2	0	7	3	0	420	504	654	700	558	636
5	Sattari	126	279	373	320	388	463	0	20	9	15	30	32	0	0	0	0	0	12	0	16	57	16	2	4	126	315	439	351	420	511
6	Tiswadi	1630	497	900	561	362	210	0	0	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1630	497	900	562	362	216
	North Goa District	**4130**	**2853**	**3748**	**2935**	**2828**	**2716**	**3**	**20**	**14**	**35**	**61**	**45**	**0**	**0**	**0**	**0**	**1**	**16**	**0**	**18**	**57**	**25**	**5**	**6**	**4133**	**2891**	**3819**	**2995**	**2895**	**2783**
7	Canacona	430	451	528	304	576	366	1	4	9	59	10	3	0	0	0	0	0	0	0	0	2	18	7	0	431	455	539	381	593	369
8	Dharbandor	0	0	0	0	234	163	0	0	0	0	1	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	235	168
9	Mormugao	81	81	109	110	108	41	2	2	1	3	3	0	0	0	0	0	0	0	0	0	0	4	1	0	83	83	110	117	112	41
10	Quepem	93	114	178	260	346	177	0	0	1	1	1	14	2	0	0	0	0	1	0	0	0	0	0	0	95	114	179	261	347	192
11	Salcete	328	114	138	160	273	57	0	0	0	4	7	2	0	0	0	0	0	0	0	0	0	0	0	1	328	114	138	164	280	60
12	Sanguem	142	362	415	502	308	412	0	2	5	3	0	5	0	0	0	0	0	1	0	1	1	0	0	0	142	365	421	505	308	418
	South Goa District	**1074**	**1122**	**1368**	**1336**	**1845**	**1216**	**3**	**8**	**16**	**70**	**22**	**26**	**2**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**3**	**22**	**8**	**1**	**1079**	**1131**	**1387**	**1428**	**1875**	**1248**
	Goa State	**5204**	**3975**	**5116**	**4271**	**4673**	3932	**6**	**28**	**30**	**105**	**83**	**71**	**2**	**0**	**0**	**0**	**1**	**21**	**0**	**19**	**60**	**47**	**13**	**7**	**5212**	**4022**	**5206**	**4423**	**4770**	**4031**

C- Census

(Contd...)

Table.8 Comparative Statement of Census wise and Taluka wise Irrigation Sources

(In Nos.)

Sl. No.	Name of the Taluka/ District/ State	Surface Flow Irrigation						Surface Lift Irrigation						Total (Surface Sources)						Total (All Sources)					
		1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C
1	Bardez	139	680	1248	55	30	26	22	0	0	10	2	13	161	680	1248	65	32	39	1161	1339	2220	620	613	325
2	Bicholim	134	209	117	46	106	29	73	73	55	90	71	89	207	282	172	136	177	118	540	612	681	778	811	723
3	Pernem	200	169	164	34	72	78	64	25	78	67	43	85	264	194	242	101	115	163	888	780	587	286	455	692
4	Ponda	630	1043	809	612	669	290	29	37	79	79	151	280	659	1080	888	691	820	570	1079	1584	1542	1391	1378	1206
5	Sattari	354	179	242	95	73	52	111	154	207	94	176	109	465	333	449	189	249	161	591	648	888	540	669	672
6	Tiswadi	30	162	236	6	2	52	0	13	3	6	0	1	30	175	239	12	2	53	1660	672	1139	574	364	269
	North Goa District	**1487**	**2442**	**2816**	**848**	**952**	**527**	**299**	**302**	**422**	**346**	**443**	**577**	**1786**	**2744**	**3238**	**1194**	**1395**	**1104**	**5919**	**5635**	**7057**	**4189**	**4290**	**3887**
7	Canacona	705	289	194	239	110	23	101	105	24	39	76	17	806	394	218	278	186	40	1237	849	757	659	779	409
8	Dharbandora	0	0	0	0	213	56	0	0	0	0	86	88	0	0	0	0	299	144	0	0	0	0	534	312
9	Mormugao	13	13	73	30	15	34	0	20	1	8	2	13	13	33	74	38	17	47	96	116	184	155	129	88
10	Quepem	266	88	248	195	144	177	61	78	101	86	108	77	327	166	349	281	252	254	422	280	528	542	599	446
11	Salcete	238	103	212	81	140	67	10	9	40	13	23	15	248	112	252	94	163	82	576	226	390	258	443	142
12	Sanguem	406	241	318	348	570	146	178	238	396	418	103	285	584	479	714	766	673	431	726	844	1135	1271	981	849
	South Goa District	**1628**	**734**	**1045**	**893**	**1192**	**503**	**350**	**450**	**562**	**564**	**398**	**495**	**1978**	**1184**	**1607**	**1457**	**1590**	**998**	**3057**	**2315**	**2994**	**2885**	**3465**	**2246**
	Goa State	**3115**	**3176**	**3861**	**1741**	**2144**	**1030**	**649**	**752**	**984**	**910**	**841**	**1072**	**3764**	**3928**	**4845**	**2651**	**2985**	**2102**	**8976**	**7950**	**10051**	**7074**	**7755**	**6133**

C-Census

Concluded/

Table.9 Comparative Statement of Census wise and Taluka wise Net AreaIrrigated under Various Minor Irrigation Schemes

(In Ha.)

Sl. No.	Name of the Taluka/ District/ State	Dug Wells						Shallow Tube Wells						Medium Tube Wells						Deep Tube Wells						Total (Ground Sources)					
		1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4thC	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6thC
1	Bardez	116	132	255	331	175		0.7	0	0	0	5.5		0	0	0	0	0		0	0	0	0	0		117	132	255	331	180	98.39
2	Bicholim	137	317	280	366	361		0	0	0	1	0.2		0	0	0	0	0		0	0	0	0	0		137	317	280	367	361	297.91
3	Pernem	196	519	198	242	185		0.3	0	0	0	0		0	0	0	0	0		0	0	0	1	0		197	519	198	243	185	242.92
4	Ponda	253	591	539	432	481		0	0	10	18	11		0	0	0	0	0.5		0	11	0	11	4		253	602	549	461	497	398.99
5	Sattari	241	441	401	578	369		0	27	14	24	35		0	0	0	0	0		0	19	51	161	2.2		241	487	466	763	406	618.13
6	Tiswadi	273	182	423	227	200		0	0	0	0	1.9		0	0	0	0	0		0	0	0	0	0		273	182	423	227	201	70.57
	North Goa District	**1217**	**2182**	**2096**	**2176**	**1770**	**1265**	**1**	**27**	**24**	**43**	**54**	**39**	**0**	**0**	**0**	**0**	**0.5**	**21**	**0**	**30**	**51**	**173**	**6.2**	**3**	**1218**	**2239**	**2171**	**2392**	**1831**	**1726.91**
7	Canacona	172	236	264	782	220		2	1.6	10	49	1.8		0	0	0	0	0		0	0	3	13	1.7		174	238	277	844	223	252.50
8	Dharband	0	0	0	0	154		0	0	0	0	1.5		0	0	0	0	0		0	0	0	0	0		0	0	0	0	155	173.21
9	Mormugao	23.8	44.6	23	55	34.5		0.9	1	1	0	0.1		0	0	0	0	0		0	0	0	0	0.2		24.7	45.6	24	55	34.7	24.30
10	Quepem	139	225	296	257	254		0	0	0	0	0.8		0	0	0	0	0		14	0	0	0	0		153	225	296	257	255	207.57
11	Salcete	102	75.7	114	36	97.1		0	0	0	11	2.8		0	0	0	0	0		0	0	0	0	0		102	75.7	114	47	99.8	12.41
12	Sanguem	291	674	689	1359	526		0	5.7	25	5	0		0	0	0	0	0		0	15	6	0	0		291	695	720	1364	526	640.47
	SouthGoa District	**728**	**1255**	**1386**	**2489**	**1285**	**1677**	**2.9**	**8.3**	**36**	**65**	**6.9**	**23**	**0**	**0**	**0**	**0**	**0**	**9**	**14**	**15**	**9**	**13**	**1.8**	**0.22**	**744**	**1278**	**1431**	**2567**	**1293**	**1310.16**
	Goa State	**1944**	**3437**	**3482**	**4665**	**3055**	**2942**	**3.9**	**35**	**60**	**108**	**61**	**62**	**0**	**0**	**0**	**0**	**0.5**	**30**	**14**	**45**	**60**	**186**	**8**	**3.22**	**1962**	**3517**	**3602**	**4959**	**3124**	**3037.37**
	C- Census																												(Contd...)		

Table.9 Comparative Statement of Census wise and Taluka wise Net Area Irrigated under Various Minor Irrigation Schemes

(In Ha.)

Sl. No.	Name of the Taluka/ District/ State	Surface Flow Irrigation						Surface Lift Irrigation						Total (Surface Sources)						Total (All Sources)					
		1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6th C	1st C	2nd C	3rd C	4th C	5th C	6thC	1st C	2nd C	3rd C	4th C	5th C	6th C
1	Bardez	422.1	171	281	174	12.3		15.3	0	0	5	0.7		437	171.2	281	179	13	20.99	554.1	303.1	536	510	193.19	119.38
2	Bicholim	791.7	1736	786	413	270		96.1	135	152	291	93		888	1871	938	704	363	491.46	1025	2188	1218	1071	724.16	789.37
3	Pernem	1019	842	806	133	126		203	149	265	174	106		1223	990.3	1071	307	231	216.77	1420	1509	1269	550	416.44	459.69
4	Ponda	1633	2204	1500	1155	921		88.3	106	191	227	193		1722	2310	1691	1382	1114	623.09	1975	2912	2240	1843	1610.65	1022.08
5	Sattari	731.2	449	641	171	125		568	815	815	577	566		1300	1264	1456	748	691	603.79	1541	1751	1922	1511	1097.04	1221.92
6	Tiswadi	130.1	874	197	66	0.55		0	8.55	4	4	0		130	882.9	201	70	0.55	9.68	403.2	1065	624	297	201.96	80.25
	North Goa District	**4728**	**6276**	**4211**	**2112**	**1455**	**481.59**	**972**	**1214**	**1427**	**1278**	**958**	**861.10**	**5700**	**7490**	**5638**	**3390**	**2413**	**1965.78**	**6917**	**9729**	**7809**	**5782**	**4243.44**	**3692.69**
7	Canacona	250.1	335	432	463	84.4		68	94.1	35	55	91.9		318	429.6	467	518	176	52.68	491.8	667.3	744	1362	399.32	305.18
8	Dharbandora	0	0	0	0	123		0	0	0	0	159		0	0	0	0	282	349.56	0	0	0	0	437.44	522.77
9	Mormugao	126.4	313	70	21	74.4		0	60.9	1	4	0.23		126	373.4	71	25	74.7	18.49	151.1	419	95	80	109.38	42.79
10	Quepem	331.3	300	306	357	210		277	651	360	486	191		608	950.3	666	843	401	182.80	761.4	1175	962	1100	655.99	390.37
11	Salcete	1095	874	811	73	149		4.22	10.9	48	5	24		1099	884.8	859	78	173	484.17	1201	960.5	973	125	273.16	496.58
12	Sanguem	1044	1383	1148	755	519		1065	1672	1674	1285	233		2108	3055	2822	2040	752	1029.20	2399	3749	3542	3404	1277.47	1669.67
	South Goa District	**2846**	**3204**	**2767**	**1669**	**1161**	**1226.53**	**1414**	**2488**	**2118**	**1835**	**699**	**1513.46**	**4260**	**5693**	**4885**	**3504**	**1859**	**2116.90**	**5004**	**6971**	**6316**	**6071**	**3152.76**	**3427.36**
	Goa State	**7575**	**9480**	**6978**	**3781**	**2615**	**1708.12**	**2385**	**3702**	**3545**	**3113**	**1657**	**2374.56**	**9960**	**13182**	**10523**	**6894**	**4272**	**4082.68**	**11922**	**16700**	**14125**	**11853**	**7396.2**	**7120.69**

C- Census

Table.10 CCA and Season wise potential created through all sources

State: Goa (in Ha.)

Sl..no.	District	Scheme/Source	No. of Schemes		Culturable Command Area	Irrigation potential created					Gross Irrigation Potential Utilised				
			In use	Not in use		Kharif	Rabi	Perennial	other	total (6 to 9)	Kharif	Rabi	Perennial	other	total (11 to 14)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	North Goa	Dug Wells	2028	57	1393.20	17.20	215.43	1051.98	86.93	1371.54	15.20	193.67	1001.23	54.97	1265.07
2		Shallow Tube Wells	39	2	38.65	0.00	0.65	38	0.00	38.65	0.00	0.65	38.00	0.00	38.65
3		Medium Tube Wells	15	0	20.75	0.00	0.15	20.6	0.00	20.75	0.00	0.15	20.60	0.00	20.75
4		Deep Tube Wells	5	1	4.45	0.00	0.00	4.45	0.00	4.45	0.00	0.00	3.45	0.00	3.45
5		Surface Flow Irrigation	233	4	720.31	15.10	176.21	476.8	52.20	720.31	12.10	149.35	283.32	36.82	481.59
6		Surface Lift Irrigation	281	16	961.80	0.63	143.38	811.94	6.28	962.23	0.63	104.7	751.99	3.78	861.10
		North Goa Total	**2601**	**80**	**3139.16**	**32.93**	**535.82**	**2403.77**	**145.41**	**3117.93**	**27.93**	**448.52**	**2098.59**	**95.57**	**2670.61**
1	South Goa	Dug Wells	1820	27	1675.58	2.86	259.15	1354.68	64.30	1680.99	2.86	255.96	1353.63	64.25	1676.70
2		Shallow Tube Wells	30	0	23.13	0.00	5.24	17.89	0.00	23.13	0.00	5.24	17.89	0.00	23.13
3		Medium Tube Wells	5	1	9.40	0.00	0.00	9.40	0.00	9.40	0.00	0.00	9.40	0.00	9.40
4		Deep Tube Wells	1	0	0.22	0.00	0.00	0.22	0.00	0.22	0.00	0.00	0.22	0.00	0.22
5		Surface Flow Irrigation	785	8	1232.57	27.54	809.78	372.04	23.21	1232.57	27.54	804.04	371.74	23.21	1226.53
6		Surface Lift Irrigation	775	0	1514.89	0.00	210.94	1275.38	28.57	1514.89	0.00	209.51	1275.38	28.57	1513.46
		South Goa Total	**3416**	**36**	**4455.79**	**30.40**	**1285.11**	**3029.61**	**116.08**	**4461.20**	**30.40**	**1274.75**	**3028.26**	**116.03**	**4449.44**
	Grand Total		**6017**	**116**	**7594.95**	**63.33**	**1820.93**	**5433.38**	**261.49**	**7579.13**	**58.33**	**1723.27**	**5126.85**	**211.6**	**7120.05**

SIXTH CENSUS OF MINOR IRRIGATION SCHEMES

REFERENCE YEAR 2017-18

VILLAGE SCHEDULE

I. IDENTIFICATION PARTICULARS

(a)State: _____ Code : ☐☐ (b) District: _____ Code : ☐☐☐

(c)Block/Tehsil: Code ☐☐☐☐☐☐ (d)Village: Code ☐☐☐☐☐☐

Date of Enumeration: (DD/MM/YY) ☐☐-☐☐-☐☐

II. SPECIFIC INFORMATION:

1. **Is Village Tribal/ Non-Tribal ?** Code : ☐

Tribal – 1 , Non-Tribal -2

2. **(a) Is the Village covered by Major/ Medium Scheme** Code : ☐

Yes -1, No - 2

(b) If yes, Name of Major/ Medium Scheme _____

(The information in items 3 to 7 of this schedule shall be based on village records)

3. **Geographical Area** In Whole number ☐☐☐☐☐ **Ha.**

4. **Cultivable Area** In Whole number ☐☐☐☐☐ **Ha.**

5. **Net sown Area** In Whole number ☐☐☐☐☐ **Ha.**

6. **Gross Irrigated Area(By all sources)** In Whole number

(i) During Kharif Season ☐☐☐☐☐ **Ha.**

(ii) During Rabi Season ☐☐☐☐☐ **Ha.**

(iii) For Perennial crops ☐☐☐☐☐ **Ha.**

(iv) During Other Season ☐☐☐☐☐ **Ha.**

(v) Total Gross Area Irrigated (Item 6 (i)+6(ii)+6(iii)+6(iv) ☐☐☐☐☐ **Ha.**

7. **Net Area Irrigated (By all sources)** In Whole number ☐☐☐☐☐ **Ha.**

8. **Average Ground Water level (in Metres)**

(i) Pre Monsoon) ☐☐☐ **Mtrs**

(ii) Post Monsoon) ☐☐☐ **Mtrs**

9. **Whether Water Users association (WUA) exists in the village**

Yes -1, No -2, Not known-3 Code : ☐

10 **Summary of Number of Water bodies as per water body Schedules filled in the village**

Pond	Tank	Lake	Reservoirs	Water conservation Schemes/percolation tanks/check-dams	Others	Total (Col. 1 to 6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)

11. **Summary of M I Schemes in the village as per all scheme schedules filled.**

(i) Ground Water Schemes No. ☐☐☐

(ii) Surface Water Schemes No. ☐☐☐

(iii)Total Schemes No. ☐☐☐

Remarks, if any:

Checked by:

Name:

Designation of Supervisory officer:

Mobile No.:

Signature of Enumerator:

Name:

Designation of Enumerator :

Mobile No:

SIXTH CENSUS OF MINOR IRRIGATION SCHEMES
REFERENCE YEAR 2017-18

SCHEDULE 1 : GROUND WATER SCHEMES

I. IDENTIFICATION PARTICULARS

(a)State: _____ **Code :** ☐☐ **(b) District:** _____ **Code:** ☐☐☐

(c)Block/Tehsil: _____ **Code:** ☐☐☐☐☐ **(d) Village:** _____ **Code:** ☐☐☐☐☐☐

Date of Enumeration:(DD/MM/YY) ☐☐-☐☐-☐☐

II. SPECIFIC INFORMATION:

1. Serial Number of scheme : ☐☐☐☐

2. Type of Scheme **Code:** ☐

Dug well-1, Tube well-2

3.1. If code 1 in item 2 above, type of Dug well:

: **Dug-cum-bore well -1, Dug well Pucca -2, Dug well Kutcha -3, Others - 9** **Code:** ☐

3.2.If code 2 in item 2 above, type of Tube well:

Shallow Tube well-1, Medium Tube well-2, Deep Tube well-3 **Code:** ☐

4. Owner of the Scheme (Name in case of individual farmer)

Name _____ **Code:** ☐

Govt. owned - 1, Co-operative owned - 2, Panchayat owned - 3, Owned by Group of farmers - 4.
Owned by individual farmer - 5, Others – 9

5. (a) Khasra number /Plot No./Survey No. in which the scheme is located _____

(b) Location particulars /Land Mark _____

6(a). Total ownership Holding of owner (in case of individual owner only) ☐☐☐☐.☐☐ **Ha.**

(b) Social Status of Owner (in case of individual owner only) **Code:** ☐

Scheduled caste -1 , Scheduled tribe – 2 , OBC- 3, Others- 9

(c) Gender of Owner (in case of individual owner only) **Code:** ☐

Male-1, Female-2, Transgender-3

7. Year of Commissioning of the Scheme **Code :** ☐

Up to 2013-2014 - 1, during 2014-15 - 2, during 2015 -16 - 3, during 2016-17 - 4
during 2017-2018-5

8. Details of the scheme

(a) Depth of the Dug well/Tube well (in meters) ☐☐☐.☐☐ Mtr

(b) Diameter **(In metres for dug well and mm for tube well)** ☐☐.☐☐

(c) Depth of Bore (in metres) **(in case of Dug-cum-borewell)** ☐☐☐.☐☐ Mtr

(d) Distance from any nearest Dug well/Tube well (in meters) ☐☐☐.☐☐ Mtr

9. (a) Cost of construction of the scheme **(Rs.)** ☐☐☐☐☐☐

(b) Cost of machinery **(Rs.)** ☐☐☐☐☐☐

(c) Cost of maintenance during (2017-2018) **(Rs.)** ☐☐☐☐☐☐

10.(a) Major source of finance (upto 2) (For individual owners only) **Code :** ☐☐

Bank loan - 1, Government fund - 2, Own savings - 3, Money lender - 4, Others - 9

10(b). If any subsidy/assistance provided by Govt. / PSU , amount for (For All Schemes)

(i) Construction of Scheme/ drilling/digging **(Rs.)** ☐☐☐☐☐☐

(ii) Cost of machinery/ distribution device **(Rs.)** ☐☐☐☐☐☐

11. Current Status of the Scheme

(a) In use - 1, Temporarily Not in Use - 2, Permanently Not in use - 3

(b) If code 2 or 3 in item 11(a), No. of years not in use

Code: ☐☐

12 . If code 2 in item 11 (a) reason for Temporarily "not in use"

Non availability of adequate power/fuel – 1 , Mechanical break down – 2 ,
Less discharge of water - 3, Non-availability of finance - 4,
Lack of maintenance - 5, Any other reason - 9

Code: ☐

13 . If code 3 in item 11 (a), reason for Permanently "not in use"

Due to salinity - 1, Dried up - 2 , Destroyed beyond repair - 3
Due to sea water intrusion - 4, Due to industrial effluents - 5, Availability of
Major / Medium Irrigation Project - 6, Due to other reasons - 9

Code: ☐

14. Method used for Water distribution

Open Water Channel (lined / pucca) – 1, Open Water Channel(unlined / kutcha) - 2
Under ground pipe – 3, Surface pipe - 4, Drip - 5 , Sprinkler - 6 , Other -9

Code : ☐

15. Types of lifting device

Submersible pump - 1 , Centrifugal Pump - 2, Turbine/Jet pump - 3, Manual/animal - 4, Others - 9

☐

16. Source of energy for lifting device

Electric - 1, Diesel - 2, Wind Mills - 3, Solar - 4, Manual/animal - 5, Others -9

Code : ☐

17. Horse Power of Lifting device

(ignore if lifting device is manual/animal driven)

☐☐.☐ **HP**

18. Number of days pump operated (ignore, if lifting device is manual/animal)

During Kharif season ☐☐☐ **Days**
During Rabi season ☐☐☐ **Days**
For Perennial crops ☐☐☐ **Days**
During Other Season ☐☐☐ **Days**

19. Average hours of pumping per day (ignore, if lifting device is manual/animal)

During Kharif season ☐☐ **Hrs**
During Rabi season ☐☐ **Hrs**
For Perennial crops ☐☐ **Hrs**
During Other Season ☐☐ **Hrs**

20 (a) Whether the scheme is located in the command of Major/ Medium Schemes like Canals etc.

No --- 1
Yes --- 2

Code : ☐

20(b) If Scheme is in command area i.e. code 2 in item 20(a),

(i) Name of command Area: _____

(ii) reasons for Scheme in Command area

Water not available up to field from major/medium scheme-1, Water available but not adequate for irrigation-2
Water available but not useable for irrigation-3, Other reasons-9

Code : ☐

20 (c) Whether the scheme is meant only for recharge of Ground water Yes-1, No-2

(If yes **Keep item 21 to item 31 blank)** ☐

21. Culturable Command Area

☐☐☐☐.☐☐ **Ha.**

— 6 —

SEASON WISE IRRIGATION POTENTIAL CREATED (IPC)

22.	**Kharif**	Ha.
23.	**Rabi**	Ha.
24.	**Perennial**	Ha.
25.	**Other**	Ha.
26	**Total**	Ha.

Season wise actual area irrigated during 2017-18 (IPU)

27.	**Kharif**	Ha.
28.	**Rabi**	Ha.
29.	**Perennial**	Ha.
30.	**Other**	Ha.
31.	**Total**	Ha.

Note (i) If Scheme is out side command area of Major & Medium Scheme then complete IPU is to be reported.

(ii) If the Scheme is in the Command of Major & Medium Scheme then IPU is to be given as supplemented by MI Scheme. Thus the Gross IPU is to be apportioned in the ratio utilised by Major/Medium and MI Scheme.

32(i) Whether the scheme is under utilised (Only for In-use Schemes) Yes-1,No-2 code:

32(ii) If yes i.e. code 1 in item 32(i) , reasons for under utilisation of schemes **Code :**

Non availability of adequate power/fuel – 1 , Mechanical break down – 2 ,

Less discharge of water - 3 , Non availability of finance-4, Lack of Maintenance-5

Any other reason-9

Remarks, if any:

Checked by
Name
Designation
Mobile No.:

Signature of enumerator
Name
Designation :
Mobile No.:

SIXTH CENSUS OF MINOR IRRIGATION SCHEMES
REFERENCE YEAR 2017-18

SCHEDULE 2 : SURFACE WATER SCHEMES

I. IDENTIFICATION PARTICULARS

(a)State: _____ Code : ☐☐ (b) District: _____ Code: ☐☐☐

(c)Block/Tehsil: _____ Code: ☐☐☐☐☐☐ (d) Village: _____ Code: ☐☐☐☐☐☐

Date of Enumeration:(DD/MM/YY) ☐☐-☐☐-☐☐

II. SPECIFIC INFORMATION:

1. Serial Number of scheme : ☐☐☐☐

2. Type of Scheme Code: ☐
Surface Flow Scheme – 1, Surface Lift Scheme - 2

3.1 If code 1 in item 2, Nature of Surface Flow Scheme: Code: ☐
Reservoirs - 1, Tanks/Ponds -2, Other Storages -3, Permanent diversion - 4, Temporary diversion - 5 ,
Water conservation-cum-ground water recharge schemes /percolation tanks/check dams etc - 6, Spring Channel - 7, Others - 9

3.2, If code 2 in item 2, Nature of Surface Lift Scheme: Code: ☐
On River - 1, On Stream - 2, On drain/canal - 3 , On Tanks/Ponds/Reservoirs/check dams - 4, Others - 9

4. Owner of the Scheme (Name in case of individual farmer)
Name _____ Code: ☐
Govt. owned - 1, Co-operative owned - 2, Panchayat owned - 3, Owned by Group of farmers - 4,
Owned by individual farmer - 5, Others – 9

5. Khasra number /Plot No./Survey No. in which the scheme is located _____

6(a). Total Holding of owner (in case of individual owner only) ☐☐☐☐.☐☐☐ Ha.

(b) Social Status of Owner (in case of individual owner only) Code: ☐
Scheduled caste - 1 , Scheduled tribe – 2 , OBC- 3, Others 9

(c) Gender of Owner (in case of individual owner only) Code: ☐
Male-1, Female-2, Transgender-3

7. Year of Commissioning of the Scheme Code : ☐
Upto 2013-14 - 1, during 2014-15 - 2, during 2015-16 - 3, during 2016-17- 4
during 2017-18 - 5

8. (a) Cost of construction of the scheme (Rs.) ☐☐☐☐☐☐☐
(b) Cost of machinery (Rs.) ☐☐☐☐☐☐☐
(c) Cost of maintenance during (2017-18) (Rs.) ☐☐☐☐☐☐☐

9.(a) Major source of finance (upto 2) (For individual owners only) Code : ☐☐
Bank loan - 1, Government fund - 2, Own savings - 3, Money lender - 4, Others - 9

9(b) .If any subsidy/assistance provided by Govt. / PSU , amount for (For All Schemes)
(i) Construction of Scheme/ digging (Rs.) ☐☐☐☐☐☐☐
(ii) Cost of machinery/ distribution device (Rs.) ☐☐☐☐☐☐☐

10. Current Status of the Scheme

(a) In use - 1, Temporarily Not in Use - 2, Permanently Not in use - 3 **Code:** ☐

(b) If code 2 or 3 in item 10(a), No. of years not in use ☐☐

11 . If code 2 in item 10 (a) reason for Temporarily "not in use" **Code:** ☐

Non availability of adequate power/ fuel – 1 , Mechanical break down – 2 ,
Less discharge of water - 3 , Non Availability of finance-4, Storage not filled up fully - 5
Siltation of canal/storage - 6, Breakdown of channels - 7, Any other reason - 9

12 . If code 3 in item 10 (a), reason for Permanently "not in use" **Code:** ☐

Due to salinity - 1, Dried up - 2 , Destroyed beyond repair - 3,
Due to sea water intrusion - 4, Due to industrial effluents - 5, Availability of
Major / Medium Irrigation Project - 6, Due to sinking -7, Due to other reasons - 9

13. Method used for water distribution: **Code :** ☐

Open Water Channel (lined / pucca) – 1, Open Water Channel(unlined / kutcha) - 2
Under ground pipe – 3, Surface pipe - 4, Drip - 5 , Sprinkler - 6 , Others -9

14. Types of lifting device (Only for Surface lift Scheme) ☐

Submersible pump - 1 , Centrifugal Pump - 2, Turbine/Jet pump - 3, Manual/animal - 4, Others - 9

15. Source of energy :(Only for Surface lift scheme) **Code :** ☐

Electric - 1, Diesel - 2, Wind Mills - 3, Solar - 4, Manual/animal - 5, Others - 9

16. Horse Power of Lifting device ☐☐.☐ **HP**

(ignore if lifting device is manual/animal)

17. Number of days pump operated (ignore, if lifting device is manual/animal)

During Kharif season ☐☐☐ **Days**

During Rabi season ☐☐☐ **Days**

For Perennial crop ☐☐☐ **Days**

During other season ☐☐☐ **Days**

18. Average hours of pumping per day (ignore, if lifting device is manual/animal)

During Kharif season ☐☐ **Hrs**

During Rabi season ☐☐ **Hrs**

For Perennial crop ☐☐ **Hrs**

During Other season ☐☐ **Hrs**

19 (a) Whether the scheme is located in the command of Major/ Medium Schemes like Canals etc. **Code :** ☐

No --- 1

Yes --- 2

19(b) If Scheme is in command area i.e. code 2 in item 19(a),

(i) Name of command Area_____

(ii) reasons for Scheme in Command area : **Code :** ☐

Water not available up to field from major/medium scheme-1,Water available but not adequate for irrigation-2
Water available but not useable for irrigation-3, Other reasons-9

19 (c) Whether the scheme is meant only for recharge of Ground water Yes-1, No-2 ☐

(If yes **Keep item 20 to item 30 blank)**

20. Culturable Command Area ☐☐☐☐.☐☐ **Ha.**

SEASON WISE IRRIGATION POTENTIAL CREATED (IPC)

21. **Kharif** ☐☐☐☐.☐☐ Ha.
22. **Rabi** ☐☐☐☐.☐☐ Ha.
23. **Perennial** ☐☐☐☐.☐☐ Ha.
24. **Other** ☐☐☐☐.☐☐ Ha.
25. **Total** ☐☐☐☐.☐☐ Ha.

Season wise actual area irrigated during 2017-18 (IPU)

26. **Kharif** ☐☐☐☐.☐☐ Ha.
27. **Rabi** ☐☐☐☐.☐☐ Ha.
28. **Perennial** ☐☐☐☐.☐☐ Ha.
29. **Other** ☐☐☐☐.☐☐ Ha.
30. **Total** ☐☐☐☐.☐☐ Ha.

Note (i) If Scheme is out side command area of Major & Medium Scheme then complete IPU is to be reported.

(ii) If the Scheme is in the Command of Major & Medium Scheme then IPU is to be given as supplemented by MI Scheme. Thus the Gross IPU is to be apportioned in the ratio utilised by Major/Medium and MI Scheme.

31(i) Whether the scheme is under utilised (Only for In-use Schemes) Yes-1,No-2 code: ☐

31(ii) If yes i.e. code 1 in item 31(i) , reasons for under utilisation of schemes **Code :** ☐

Non availability of adequate power/fuel – 1 , Mechanical break down – 2 ,
Less discharge of water - 3 , Storage not filled up fully - 4, Siltation of canal/storage- 5
Breakdown of channels - 6, Any other reason - 9

32. Number of Villages covered by the scheme ☐☐

33. Specific features of Reservoirs,Tank,Other storages

(a) Designed Storage (in cubic metres) ☐☐☐☐.☐☐

(b) Filled up Storage (during 2017-18) **Code :** ☐

Full - 1 , upto 3/4 - 2 , upto 1/2 -3, upto 1/4 - 4 , Nil/Negligible filled up - 5

(c) Status of filling up of storage Space **Code :** ☐

(based on around 50% filling up of storages during last 5 year)

Filled up every year - 1 , Usually filled up - 2 , Rarely filled up - 3 , Never filled up - 4

34. Specific information releting to Water body ☐☐

(a) 21 Digit Sl no. as per Water body schedule in which the scheme is functioning

R/U	State		Distt.			Tehsil/Town/block						Village/Ward						Serial No.- within village/town		

(b) Total number of schemes in the village in above water body. ☐☐☐

(c) Sl. number of this scheme within village in the water body ☐☐

Remarks, if any

Checked by:
Name
Designation
Mobile No.:

Signature of Enumerator:
Name
Designation
Mobile No.: