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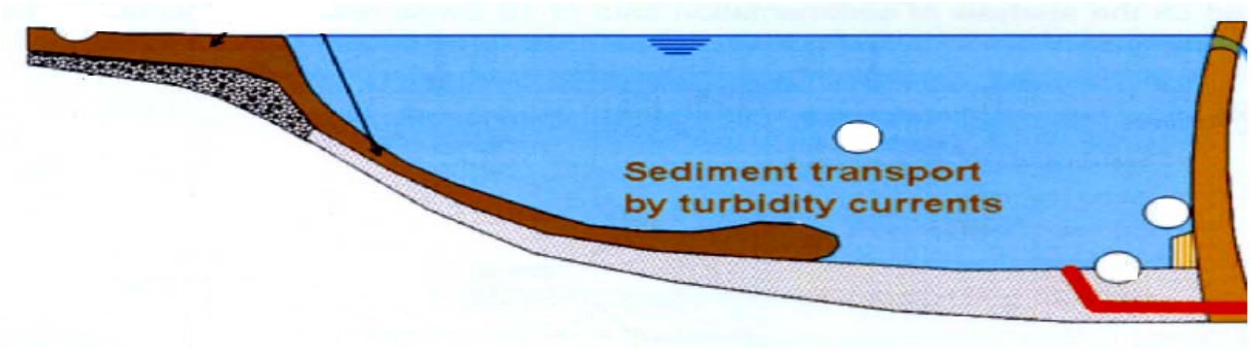
भारत में जलाशयो में गाद अवसादन की संग्रह पुस्तिका
COMPENDIUM ON SILTING OF RESERVOIRS IN INDIA



जलविभाजन एवं जलाशय अवसादन निदेशालय
WATERSHED & RESERVOIR SEDIMENTATION DIRECTORATE
पर्यावरण प्रबंधन संगठन
ENVIRONMENT MANAGEMANT ORGANISATION
जल आयोजन एवं परियोजना स्कंध
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COMPENDIUM ON SILTING OF RESERVOIRS IN INDIA

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FOREWORD

After independence, the Government of India laid emphasis on construction of large dam-based reservoirs which were called "Temples of Modern India" intended to store rainwater for year-round use for agriculture, municipal water supply, industry, hydropower, fisheries, and recreation etc. Over the last fifty years, India has invested heavily in critical infrastructure necessary to store surface runoff in reservoirs formed by large, medium, and small dams with associated appurtenances. India now ranks third in the world in terms of number of dams, after China and the United States with 4847 completed large dams, and about 348 large dams under construction, besides a large number of other small dams. As on March 2013, the total live storage capacity of completed large and medium dams was about 253 billion cubic meters i.e. 37 percent of the estimated utilizable surface water resources (690 billion cubic meters) in India.

Almost half of the large dams are more than twenty-five years old. Sedimentation and silting of reservoirs is a matter of vital concern in all Water Resources Development Projects. Sedimentation in some reservoirs has impacted on the storage capacity, thus limiting economic benefits of these investments. However, de-silting of reservoirs is expensive and the deposit of silt can have environmental impacts. Despite more than decades of research, sedimentation is still probably the most serious technical problem faced by the dam industry. In-depth knowledge of rate of siltation and pattern of silt deposition and vulnerability of catchment to erosion is required to ensure that the existing dams continue to serve the intended purpose and their life is extended beyond the service period to the extent possible and the newer ones has adequate provision for accumulation of silt so to serve better.

In January 2001, Watershed and Reservoir Sedimentation (WS&RS) Directorate of CWC published a compendium on silting of reservoirs in the country incorporating information about silting of 144 important reservoirs in the country. Since then, information on a greater number of reservoirs has become available necessitating the publication of revised edition of book incorporating information of 243 reservoirs in the country.

Reservoir capacity surveys are conducted for more realistic estimates of the rate of siltation for updating the area-capacity relationship and to provide reliable criteria for studying the implication of annual loss of storage over a definite period of time with particular reference to reduction of intended benefits in the form of irrigation potential, hydropower, flood absorption capacity and water supply for domestic and industrial uses etc; and periodic reallocation of available storage for various pool levels. It will also help in proper estimation of loss of storage at the planning stage itself besides evaluating the effectiveness of soil conservation measures carried out in the catchment area of River Valley Projects. The project authorities should regularly perform capacity surveys and send the data to Central Water Commission so that this compendium can be updated more frequently.

I take profound pleasure in presenting this third edition of Compendium on silting of reservoirs in the country. I would like to compliment Shri A. Mahendran, Member (WP&P), Shri R.K. Pachauri, Chief Engineer (EMO) and Shri Jitendra Panwar, Director (WS&RS Directorate) for their initiative and officers and staff of WS&RS Directorate for their efforts in bringing out this updated compendium. I also express my sincere thanks to various Project Authorities of State Governments, and other institutes for providing the necessary data. I hope that this publication will be useful in planning of future projects as well as better management of existing reservoirs.

(A.B. Pandya)
Chairman,CWC

PREFACE

Optimal management of water resources is the prime necessity of the time in the wake of development and growing need of the population. Realizing the need of effective and economical management of our water resources, an effective database has to be developed and updated at regular intervals to facilitate the performance overview of the sector.

A river, in fact, can be considered a body of flowing sediments as much as one of flowing water. When a river is stilled behind a dam, the sediments it contains, sink to the bottom of the reservoir. The proportion of a river's total sediment load captured by a dam – known as its "trap efficiency" – approaches unity for many projects, especially those with large reservoirs, and hence the dam gradually loses its ability to store intended amount of water. Every reservoir loses storage to sedimentation although the rate at which this happens varies widely. Capacity surveys of various reservoirs at regular intervals are considered necessary to evaluate the balance life as well as for optimal reservoir operation. The data obtained are useful to arrive at a realistic sedimentation index for planning of future projects.

Earlier a compendium on silting of reservoirs was published by Central Water Commission in Jan 1991 and Jan 2001 containing sedimentation data on 46 and 144 reservoirs respectively. Now this updated compendium contains data on 243 reservoirs as provided by the dam owners including data of 36 reservoirs capacity survey carried out by CWC to draw general inferences about rate of siltation and the remaining life of reservoirs, details of which have been incorporated in the compendium. Some data like design rate of siltation, catchment area, different reservoir levels, impoundment year and initial capacities etc. of earlier reservoirs also have been updated as per information provided by the concerned authorities. As per provided data, in some cases, loss of capacity comes out with negative sign - it needs further information on the reasons of increased capacities in subsequent surveys, which can be due to raising the height of dam, raising the FRL, de-silting of reservoir etc.

The WP&P Wing, Central Water Commission expresses thanks to all authorities of State Governments and other institutes for supplying data on capacity survey of reservoirs. I express my sincere thanks to Shri A. B.Pandya Chairman, CWC for his valuable suggestions and guidance. I compliment the officers and staff of WS&RS Directorate specially Shri Jitendra Panwar, Director for efforts in bringing out this publication, and also to officers and staff of Remote Sensing Directorate specially Shri Yogesh Paithankar, Director for helping in gathering the data of reservoirs.

This publication is an effort to provide a useful guide to administrators and planners in the water management sector.

Any suggestion for further improvement, both in the contents and coverage, will be highly appreciated.

(A.Mahendran)
Member (WP&P)

OFFICERS AND STAFF ASSOCIATED WITH THE PREPARATION OF COMPENDIUM

- Shri. R.K. Pachauri, Chief Engineer
  Environmental Management Organisation, CWC
- Shri R.K.Gupta,Chief Engineer
  Environmental Management Organisation, CWC
- Shri. W.M. Tembhurney, Chief Engineer
  Environmental Management Organisation, CWC

- Shri. Jitendra Panwar, Director
  Watershed & Reservoir Sedimentation Directorate, CWC
- Shri. Yogesh Paithankar, Director
  Director, Remote Sensing Directorate, CWC

- Shri Alok Paul Kalsi, Deputy Director
  Remote Sensing Directorate, CWC
- Shri. Prashant Kumar Gupta, Deputy Director
  Deputy Director, Remote Sensing Directorate, CWC

- Shri. Arkaprabha Majumder, Assistant Director
  Watershed & Reservoir Sedimentation Directorate, CWC
- Shri Vinod Kumar Gupta, Assistant Director - II
  Watershed & Reservoir Sedimentation Directorate, CWC

- Shri. Ashish Awasthi, Assistant Director
  Remote Sensing Directorate, CWC

Disclaimer

The data contained in this publication is as received from the State Governments / Authorities concerned. No warranty as to the accuracy, usefulness, or completeness is expressed or implied. The sole purpose of the compendium is to provide basic information about siltation data of dam to any interested party. It is in no way intended for the purpose other than mentioned above. The information given in compendium is not binding on any party and does not confer rights or restrictions to any party. CWC would be ever willing to rectify erroneous information if any, brought to its notice.

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LIST OF RESERVOIRS

COMPENDIUM OF SILTING OF RESERVOIRS IN INDIA

1. INTRODUCTION

All our developmental plans have given high priority to water resources projects involving construction of dams and creation of reservoirs for flood control, irrigation, hydropower etc. During the past, many major and medium river valley projects comprising large reservoirs have been constructed.

As the above storages are subject to silting, sedimentation of reservoirs is a matter of vital concern to all water resources development projects. Silting not only occurs in the dead storage but also encroaches into the live storage capacity which impairs the intended benefits for the reservoirs. Water storage capacity of reservoirs is reduced by the accumulating sediments. The long term efficiency of reservoirs also gets reduced considerably. Therefore, the problem of sedimentation needs careful consideration.

Soil erosion, its transportation and subsequent deposition in reservoirs is a universal phenomenon. Uncontrolled deforestation, forest-fires, over grazing, improper methods of tillage, unwise agriculture practices and other activities are mainly responsible for accelerated soil erosion. All eroded material does not get into a stream. Some particles travel for a short distance and get deposited before reaching a stream for want of sufficient velocity of water. Some may travel into the river system and get lodged in the vegetation on the banks. Some others may be carried downstream only to be deposited in the plains and finally only a portion of eroded particles enters the reservoir. Thus at a given control point on a river all the sediment produced by the upstream watershed does not get delivered. In a cascade system of reservoirs, upstream reservoirs intercept a part of the transported material and sediment inflow into the downstream reservoir reduces.

The channel and flow characteristics change considerably with the obstruction to the flow of water in a natural stream, when a dam is constructed. The depth of flow increases along a reservoir limb and the velocity decreases progressively. This results in reduction of transporting capacity of flow. The sediment brought by the stream into the reservoir starts settling down and gets deposited on the bed of the reservoir at all levels. The coarser particles settle first. The finer particles are carried in suspension and may finally settle down on the reservoir floor while some of these are passed over the spillway or through the outlets to the downstream of a dam. If the concentration is high, density current occur along the floor of the reservoir. At higher reservoir levels finer particle initially get deposited in the live storage space but successively move into the dead storage space depending on inflows due to successive floods, the drawdown of the reservoir and operation of outlets. Thus the deposit of sediment can affect the storage volume available at all levels. Loss of storage space is estimated at the planning stage and provisions are so made that the benefits of the reservoir are not adversely affected.

2. NATIONAL SYSTEM SURVEILLANCE ON THE SILTING OF RESERVOIRS

Storage reservoirs will continue to play an important role in the future development of water resources in the country. In some of the reservoirs which have been constructed, the rate of sedimentation has been higher than what has been considered at the planning stage. Some reservoirs in the world have been silted up so fast that they have become useless. It has, therefore, been considered necessary to take steps to plan the future projects on a sound basis so that the sedimentation of the reservoirs will not reduce the benefits faster than envisaged.

In order to make in depth studies and to recommend to the Government the future policies to ensure adequate silt storage and retardation of sedimentation in the reservoirs for longer life and benefits, the then Ministry of Agriculture and Irrigation (Department of Irrigation), Government of India had set up a Reservoir Sedimentation Committee in February 1978 under the Chairmanship of Member(WR), Central Water Commission. The Committee submitted its report in July 1980 and made several recommendations in consultation with various departments concerned. The report incorporating the Government of India's decisions which are mainly broad and long term measures have been circulated to all State Governments for implementation. Some of the recommendations of the Committee are:

i) The sediment observation stations in the major streams and important tributaries should be equipped with latest equipments and manned by qualified and well trained staff.
ii) Capacity surveys on regular intervals of once in 5 years for all major reservoirs should be carried out by the project authorities.
iii) Cultivation in the fore-shore is to be prohibited as per existing instructions of Govt. of India to reduce entry of silt into reservoirs. In any case, ploughing should not be allowed. However, broadcasting can be permitted to limited extent wherever possible.
iv) There should be a data bank of sediment inflow, outflow and sedimentation of reservoirs at States and Central level with easy accessibility.

Since the silting of reservoirs is of vital concern for the functioning of the projects, it is necessary that all the major/medium reservoirs are monitored regularly. For this purpose, the erstwhile Ministry of Water Resources, Government of India has declared Watershed & Reservoir Sedimentation Directorate of CWC as the nodal agency. Therefore, it is essential that all State Governments/project authorities collect inflow-outflow silt data as well as conduct hydrographic surveys at regular intervals and submit reports thereon to Central Water Commission regularly. The Watershed & Reservoir Sedimentation Directorate would compile the available data and publish the same at regular intervals.

3.0 SEDIMENTATION PLANNING

3.1 LIFE OF RESERVOIR

The problem of sedimentation of reservoirs and its effect on the useful life of reservoir is complex. The phenomenon of sedimentation and the concept of life of a reservoir and its estimation have been studied in depth over many years.

Strictly speaking reservoirs do not have a defined 'life' which denotes two functional states 'ON' and OFF. They belong to one of those systems which show gradual degradation of performance without any sudden non-functional stage. Sedimentation and consequent reduction of capacity is a gradual process, which can be classified in following phases:

Phase-1: The reservoir shows no adverse effect and is able to deliver full planned benefits.

Phase-II: The reservoir delivers progressively smaller benefits, but its continued operation for the reduced benefits is economically beneficial.

Phase-III: The sedimentation causes difficulties in operation such as jamming the passage of flow in channels or flow in canals or through turbines.

Phase-IV: The phase-III difficulties become so serious that the operation becomes impossible.

Phase-IV A: The benefits reduce to such an extent that it is not longer beneficial to operate the reservoir.

In the existing concept, the end of the Phase-I is depicted as the 'Full service Time' and the end of Phase-II is called the 'Feasible Service Time'. The beginning of phase-IV will depict the end of physical life. Similarly beginning of phase-IV (A) will depict the end of economic life. However, there are no instances of Phase-IV or IV (A) having been reached amongst the modern projects. Planning of sedimentation includes prefixing the required period of full service period and feasible service period including the sediment levels and capacities to meet these targets.

3.2 DISTRIBUTION OF SEDIMENT

Initially, the above mentioned life related concepts were vague, as the life of reservoir had been estimated differently from project to project with different assumptions. This is due to the fact that clear knowledge and data regarding the inflow of sediment into the reservoir, its distribution and the consolidation and density aspects of sediment etc. were not available in earlier periods. For instance, it was frequently assumed that all the sediment would first be deposited in the dead storage zone and would then only encroach on the live storage zone. Under this assumption the period taken for the hypothetical total sedimentation of the dead storage was considered as the life. Such an assumption has been made in most of the projects planned up to the mid sixties.

Thus, it can be taken as the normal practice of the earlier period. This assumption was proved wrong by sediment surveys of several reservoirs in the country, conducted since late fifties.

In earlier periods, the life of certain reservoirs like Krishnarajsagar and Hirakud has been worked out by the deltaic theory enunciated by Col. Ellis of Madras PWD which assumed silting up of reservoirs in three stages i.e., **i)** Forming the silt up to sill of sluices **ii)** Intermediate stage is the formation of channel by river flow **iii)** Slow deposit of silt thereafter. For computing the quantity of silt deposited, it had been assumed that the silt deposit in area is proportional to the water standing or flowing over the area.

In case of Bhakra Reservoir, silt load was estimated by suspended silt measurement and its distribution was done assuming that all the coarse silt would be deposited in head reach of reservoir, forming delta below the full reservoir level encroaching on the live storage and that the delta would gradually progress towards the dam.

3.3 SEDIMENTATION PLANNING PRACTICES

Dr. A.N. Khosla, the then chairman, Central Water Commission, had reviewed the work of reservoir sedimentation in fifties based on data available for 200 reservoirs all over the world including U.S.A., China and Africa and developed enveloping curves for annual sedimentation rate for major and minor catchments above and below 1000 sq. miles (2600 sq. kms) respectively. He concluded that the sediment rate for major catchments varies from 0.357 to 0.476 mm./year (3.57 to 4.76 Ha.m./100sq.km./yr.) and for minor catchments from 0.38 to 1.28 mm./year (3.80 to 12.80Ha.m./100sq.km./yr.). Up to 1965, these recommendations were adopted in the design of reservoirs and the sediment was assumed to get deposited at the lowest level and "life" was taken as the period required for complete sedimentation of the dead storage.

The assumption that sediment would settle within the dead storage was not supported by the experience in India or other countries. The experience of USA that sedimentation takes place throughout the reservoir and the development of methods for sediment distribution were published around early fifties. It was also realized that the sediment inflow rates need to be checked up through reservoir resurveys. Hence re-surveys in a number of projects were taken up through research schemes of CBIP. The results, indicating a considerable difference from the initial assumption, started becoming available by 1965.

After 1965, CWC started insisting that the sediment inflow rates be based on the basis of reservoir survey data. It also brought out the need for distributing the sediment throughout the reservoir. Although the earlier practices also continued, at least the more important major projects had to adopt this new approach. However, no guidance was given until then about which stage of sedimentation should be used for the working table studies.

Around 1974, CWC decided that the 50 year sedimentation position of the reservoir should be used in the simulation or working table studies for the project. Also by this time, the observed suspended sediment data from the key hydrologic network of CWC had become available in

considerable volume. CWC therefore, started insisting on the use of this measured sediment transport data also to firm up the assumption of the inflow rates of sediment, in addition to the reservoir resurvey information.

In 1980, the report of the working group on the guidelines for the preparation of detailed project report of major and medium irrigation projects was published. In this report, CWC had incorporated the above mentioned practices to make this mandatory on the state government. Also in this report the detailing of the sediment studies was linked with the expected seriousness of the sediment problem. For very serious cases, redistribution and re-estimation of trap efficiency in 10 year block was indicated.

In 1987, CWC got this practice incorporated in the BIS Code 12182 (1987) "Guidelines for determination of Effects of Sedimentation in Planning and Performance of Reservoirs" to make this the national practice. In these guidelines the general philosophy and concept of multiple life related terms was also spelt out. Also these guidelines indicate that the full service time for hydroelectric projects can be reduced to 25 years against 50 years for irrigation projects. These BIS guidelines also include notes on the need for periodic resurveys and given guidance to determine their frequency.

The present practice as incorporated in BIS: 12182(1987) has following main features:

1. The sedimentation rate is to be decided on the basis of observations of river sediment flow and reservoir surveys
2. Methodologies for trap efficiency and sediment distribution have been specified.
3. The live storage is to be so planned that the benefits do not reduce for a period of 50 years (full service time) for irrigation or 25 years for hydropower on account of sedimentation.
4. The feasible service time for irrigation projects shall not be less than 100 years after start of operation. For hydropower projects the feasible service time should not be less than 70 years.
5. For simulation, if sedimentation is not serious, the simulation studies for conditions expected at the end of the full service period may be made. If the problem is serious, studies are to be done by more realistic method. It should be sufficient to consider sediment trapped in every 10 years block, and to use the expected sedimental elevation area capacity curve at the end of each 10 year block for simulation of that block.

4.0 TECHNIQUES OF MEASUREMENT OF SEDIMENTATION

There are broadly two methods for measurement of sedimentation in reservoirs.

i) Stream flow analysis and

ii) Capacity survey

4.1 STREAM FLOW ANALYSIS

Stream flow analysis is a continuous observation process consisting of measurement of inflows and outflows with sediment sampling. Apart from the measurements, accuracy of analysis is also vital for the proper estimation of unit-mass of the deposited material from the point of view of volumetric conversion.

In this method, the sediment inflow into the reservoir including estimated bed load and the outflow there from is measured at all significant points of entry and exit. The difference gives the quantity of deposit during the period of analysis. The point of measurement should be sufficiently close to the reservoir periphery and particular care must be taken to complete outflow sampling before it meets the credible channel downstream.

The analysis consists of two main parts (1) measurement of water inflows and outflows and (2) simultaneous measurement of sediment concentration.

This method gives quantity of deposit in gravimetric terms and conversion into volumetric units calls for the estimation of the average unit mass off the deposited sediment material. A direct method of doing this is by collecting systematic samples of the deposit in an undisturbed state from all over the reservoir bed and finding out a correlation between the average dry unit mass and the fractional composition of different grains such as clay, silt and sand.

4.2 CAPACITY SURVEY

4.2.1. CONVENTIONAL METHOD

The conventional method of conducting sedimentation surveys in the reservoirs involves the use of conventional equipments e.g. theodolite, plane table, sextant, range finders, sounding rods, echo-sounder and slow moving boat etc. The depths of the reservoirs are recorded with the help of echo. With the help of data collected from the site by the above surveys the volume of silt deposited in the reservoir is calculated between the two successive surveys. The normal frequency of the surveys is supposed to be around five years interval. However, in practice it is found that the interval between two successive surveys has been varying from, 1 to 15 years or even more in some cases. This could be either due to lack of resources like equipment, man and material etc. with the project authorities or due to some other reason.

The surveys conducted conventional methods are time consuming and sometimes, they take up to three years to complete just one survey of a major reservoir (like Hirakud). Even the accuracy of the survey cannot be ascertained in realistic terms.

4.2.2. MODERN TECHNIQUES

4.2.2.1 HITECH SYSTEM

The system consists of the following components:

i) Positioning System : This includes GPS Unit in differential mode
ii) Depth Measuring Units : This consists of Echo-sounder and Transducers
iii) Computer System: This includes Plotter, Printer, Disc Drive, Monitor etc.

The survey is carried out in a rapid and efficient manner. A boat equipped with the bathymetric equipment, the GPS system mounted on board and a lap-top computer is used for bathymetric survey while its reference station is positioned in a known geographical benchmark. The survey software enables fixing of grid lines and interfacing of bathymeter and DGPS and taking X,Yand Z values at required interval/grid. Boat navigation is also controlled by the software so that boat tracks the grid line accurately. The surveys can also be carried out at random mode. The data collected is then processed and analysed using specially developed software to obtain the results in various forms e.g. point plots contour and three dimensional maps of reservoirs bed, area capacity elevation tables and cross-sections of reservoir.

DGPS hydrographic surveying allows faster data acquisition with better accuracy than any previous hydrographic survey technique. The line of sight from the base station to the boat is not necessary. The base station is set up only once per day, instead of the usual once per cross section. A DGPS survey can be completed between control points (even on opposite side of a mountain) without having to traverse or even to see the other point. Other advantages are the ability to achieve accuracy and the ability to efficiently collect large amount of data. The data collecting system with GPS is compact and can be accommodated in smaller boats.

Central Water Commission has carried out capacity survey of thirty six (36) important reservoirs in the country through consultants available in the field using this technique.

4.2.2.2. REMOTE SENSING

Remote Sensing is the art and science of collecting information about earth's feature without being in physical contact with it. Various features on earth's surface reflect or emit electromagnetic energy depending upon their characteristics. The reflected radiation depends upon physical properties of the terrain and emitted radiation depends upon temperature and emissivity. The radiations are recorded by the sensor on board satellite and are then transmitted back to the earth. Difference between features depends on the fact that response from different features like vegetation, soil, water is different and discernable. Data received at ground stations

is digitally or visually interpreted to generate thematic maps. The data from satellites such as Landsat, SPOT and IRS are more useful for mapping and monitoring the surface water bodies and other land resources based on which better water management strategies can be planned.

Reservoir sedimentation surveys are essentially based on mapping of water-spread area at the time of satellite overpass. Multi-date satellite data is needed which covers the operating level of reservoirs at close interval. Water spread area is the water level contour at that level. Using different contours, capacity between them is calculated. With the sedimentation, the water spread area of the reservoir reduces at different levels. The water spread area and the elevation information is used to calculate the volume of water stored between different levels. These capacity values are then compared with the previously calculated capacity values to find out the change in capacity between different levels.

Remote Sensing based reservoir capacity estimation has certain limitations. The capacity estimation works between MDDL and FRL only as these are the levels between which reservoirs operates. Thus changes can be estimated only in the live capacity of reservoir. For capacity estimation below MDDL corresponding to dead storage conventional hydrographic survey techniques are to be used. Availability of cloud free data throughout reservoir operations also poses limitations in the analysis. This can be overcome by combining data from different water years to get full operative range. This technique gives accurate estimates for fan shaped reservoir where there is a considerable change in water spread area with change in water level.

In the third meeting of National Natural Resources Management Systems- Standing Committee Water Resources held in June, 2000, appreciating the gravity of sedimentation problems and urgent need to tackle them, Government of India constituted a Working Group for National Action Plan for Reservoir Sedimentation Assessment using Satellite Remote Sensing under the Chairmanship of Member (WP&P), Central Water Commission, with its members drawn from various water resources organizations and from Department of Space. The recommendations of the Working Group have emerged as a result of discussions held during its three meetings and deliberations in the brainstorming sessions.

Working Group recommended for laying emphasis and high importance to carrying out reservoir sedimentation surveys in the country. While using remote sensing technique for the sedimentation survey, composite method coupling both the hydrographic technique (below MDDL) and SRS technique needs to be adopted since the latter does not cover the area of reservoir below MDDL. The periodicity of the composite reservoir sedimentation survey can be set as 10 years. It has to be complemented by mid-term survey by Satellite Remote Sensing technique every 5 years. In case of high silting reservoirs, the frequency of mid-term survey can be kept as 3 years.

It is also recommended that the reservoir sedimentation survey of the reservoirs, where no study could be undertaken so far, should be taken up by satellite remote sensing technique on top priority.

5.0 STATUS OF SEDIMENTATION SURVEYS OF RESERVOIRS

The sedimentation surveys of reservoirs in India although dates back to as early as 1870 but the systematic surveys started only in 1958 when the Central Board of Irrigation and Power undertook a coordinated scheme of reservoir sedimentation and entrusted this task to several research stations in the country viz. Karnataka Engineering Research Station, Directorate of Irrigation Research, Bhopal, Maharashtra Engineering Research Institute Nashik, U.P. Irrigation Research Institute Roorkee, Andhra Pradesh Engineering Research Laboratories Hyderabad etc. Under this scheme 28 major reservoirs have been surveyed.

Appreciating the gravity of the problem and need for taking remedial measures the State Governments have also carried out capacity surveys of reservoirs. From the VIII five year plan, Central Water Commission has started carrying out capacity survey of some reservoirs and up to the end of XI Five Year Plan, survey of thirty six (36) reservoirs in the country have been completed.

The details of such surveys in respect of 243 reservoirs of the country have been compiled and analysed by Watershed and Reservoir Sedimentation Directorate of Central Water Commission details of which are given at **Appendix I.** An abstract showing the average rate of sedimentation, percentage loss of storage and other useful information is given at **Appendix II.**

The list of reservoirs which have served more than 50 years of their useful life and those which have lost more than 25 percent of their gross storage is given at **Appendix-III** and **Appendix-IV** respectively. Vertical distributions of sediment deposit for 21 reservoirs have been given at **Appendix V**. Grain-size distribution analysis of the deposited sediments for 32 reservoirs have been given at **Appendix VI** . Region-wise list of reservoirs have been given at **Appendix VII.** Curves for sediment volume distribution have also been prepared for 28 reservoirs and given at **Appendix VIII.**

6.0 FINDINGS FROM THE CAPACITY SURVEYS

Reservoir Capacity data for 243 reservoirs have been included in Appendix I. Out of these 243 reservoirs, there has been an increase in capacity for 4 reservoirs. Hence, annual percentage loss of gross capacity of reservoirs has been calculated based on the data of 239 reservoirs. Out of 239 reservoirs, dead and live storage is known for 86 reservoirs, hence annual percentage loss of live and dead capacity of reservoirs has been calculated based on the data of 86 reservoirs. Designed rate of siltation is known for 93 reservoirs.

6.1 OBSERVED RATE OF SEDIMENTATION

It is observed that the actual rate of sedimentation is more than the design rate of sedimentation in most of the reservoirs. The variation in ninety three reservoirs with known design rate of sedimentation is given in Table 1:

Table 1: Comparison between actual and designed rate of sedimentation of reservoirs

Ratio of actual rate of sedimentation to the design rate of sedimentation	**No. of reservoirs**
Less than 1	14
1-2	21
2-3	17
3-4	11
4-5	7
Greater than 5	23

6.2 ESTIMATION OF LOSS OF STORAGE IN RESERVOIRS

Based on the sedimentation rate of 239 reservoirs, the computed average annual percentage loss in gross storage due to siltation is 0.42% and based on the sedimentation rates of 86 reservoirs the average annual percentage loss in dead and live storage is 0.494 % and 0.04% respectively.

The observed annual percentage loss in gross storage (minimum, maximum and average) is given in Table 2. The annual percentage loss in gross storage has been worked out as the average based on the data of 239 reservoirs i.e. total annual loss in gross storage of 239 reservoirs X 100/ total gross storage of 239 reservoirs.

Table- 2: Annual percentage loss of gross, live and dead storage capacity of reservoirs

Sl.No.	Description	Minimum	Maximum	Average	Remarks
1	Annual percentage loss of gross storage	0.03	3.38	0.42	Based on average data of 239 reservoirs
2	Annual percentage loss of dead storage	0.007	5.23	0.494	Based on average data of 86 reservoirs
3	Annual percentage loss of live storage	0.003	3.23	0.04	Based on average data of 86 reservoirs

6.3 TRENDS IN SEDIMENTATION OF RESERVOIRS

Dr. A.N.Khosla had observed that in the reservoirs which have small sluicing capacity with respect to normal floods and which have no reservoirs above them, the siltation rate is comparatively high in the first 15-20 years and thereafter it decreases. This is because the obstruction by the dam causes the dips and flanks of the storage basin to fill up with silt in the early years. A stage comes when the river section is adjusted to carry the normal discharge and disposal of suspended load in the area of the reservoir is harmonized with the condition of the flow. Besides, the progressive development of deltas above reservoirs helps in trapping some of the silt load. Further shrinkage and settlement of deposited silt also takes place due to weathering action and superimposed loads of additional silt load. This results in reduction in silt volume thereby reducing the sedimentation rate.

To verify the above phenomenon, 11 reservoirs data have been selected where capacity survey data after 9 to 11 years of first impoundment is available, and also subsequent more number of capacity surveys has been conducted. Analysis of results of capacity surveys of these reservoirs considering average rate of siltation at the end of every 10 years from the year of impoundment indicate that the rate of sedimentation is higher in initial period of operation of reservoir and decreases with passage of time. The percentage decrease in rate of siltation in respect of these reservoirs is given in Table 3.

Table 3: Percentage decrease in rate of siltation of reservoirs

Sl No	Name of Reservoir (State)	Rate of sedimentation (Th.Cu.m/sq.km/yr)				Total period between mid points of two blocks in years	Percentage decrease in siltation in the total period	Percentage decrease in siltation per year
		First period of 10 years	Rate of Siltation	Last period of 10 years	Rate of Siltation			
1	Panchet (Jharkhand)	1956-1966	0.973	1986-1996	0.313	30	67.83	2.261
2	Maithon (Jharkhand)	1955-1965	1.170	1984-1994	1.132	29	3.24	0.117
3	Pong (Himachal Paradesh)	1974-1984	2.558	2002-2012	1.750	28	31.58	1.128
4	Tungabhadra (Karnataka)	1953-1963	1.789	1993-2003	0.720	40	59.75	1.49
5	Hirakud (Odisha)	1957-67	0.657	1990-2000	0.377	33	42.62	1.29
6	Bhakra (Himachal Pradesh)	1958-1968	0.605	2002-2012	0.969	44	-	-

7	Lower Bhavani (Tamil Nadu)	1953-1963	0.306	1973-1983	0.246	20	19.60	0.980
8	Vaigai (Tamil Nadu)	1958-1968	0.409	2002-2012	0.1989	44	51.36	1.167
9	Matatila (Uttar Pradesh)	1956-1966	0.849	1989-1999	0.223	33	73.73	2.23
10	Dukwan (Uttar Pradesh)	1907-1917	0.042	1970-80	0.012	63	71.43	1.138
11	Damanganga (Gujarat)	1983-1993	0.549	1998-2008	0.058	15	89.43	5.96

The reduction in annual loss of gross storage capacity in 239 reservoirs is given in Table 4:

Table 4: Loss of annual gross capacity in 239 reservoirs

Range of annual gross storage capacity loss	No. of reservoir within the range	Average age of the reservoirs in years (From impoundment till last survey)
Less than 0.1%	17	53
0.1% to 0.5%	126	42
0.51% to 1.0%	62	37
More than 1.0	34	21

The pictorial representation of Annual Gross Storage Percentage Loss is given at **Figure 1**

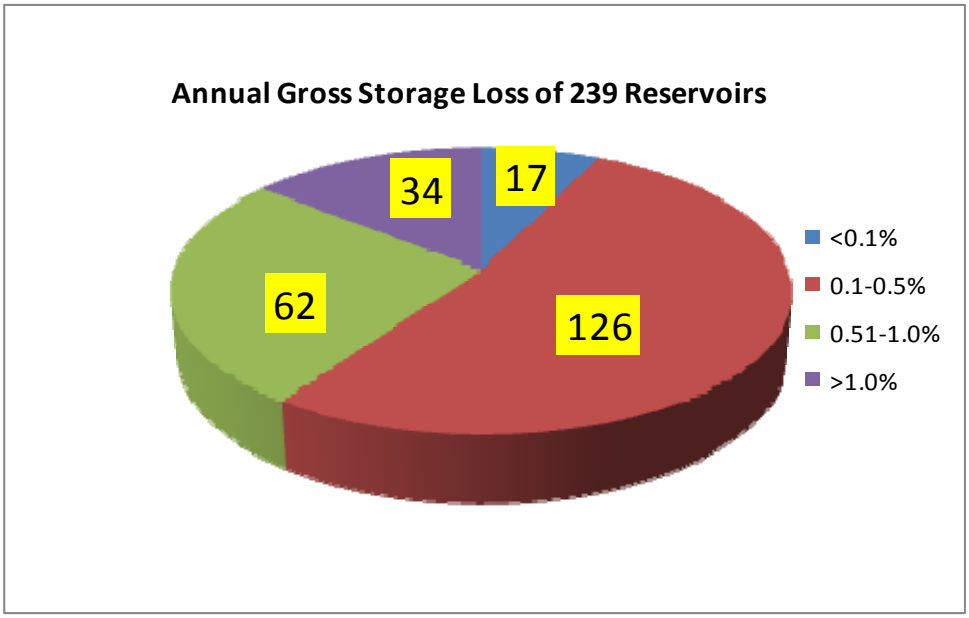


Figure 1: Annual Gross Storage loss of capacity of 239 reservoirs

The pictorial representation of Percentage Loss in Gross Storage Capacity is given at **Figure 2**

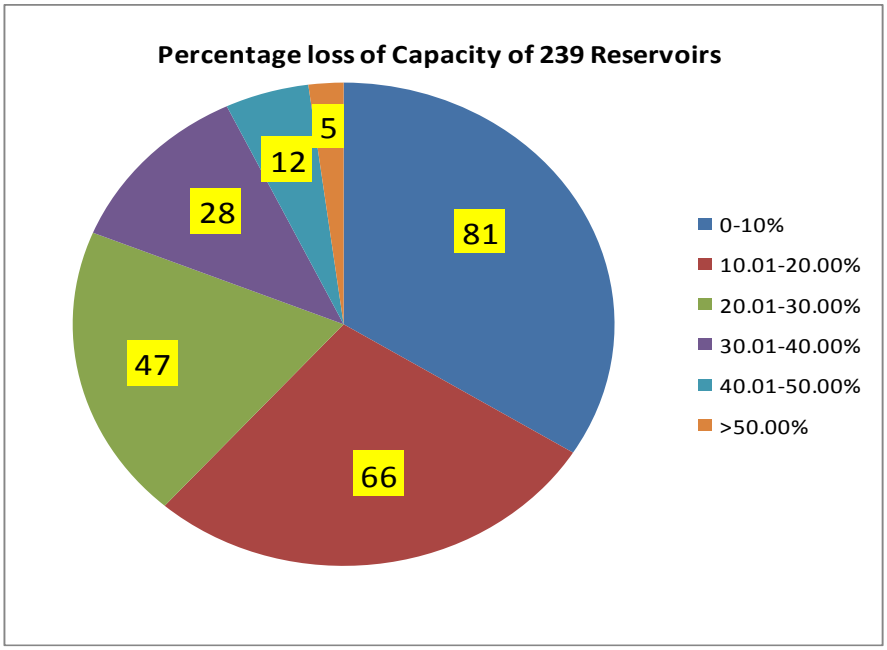


Figure 2: Percentage loss of capacity of 239 reservoirs

6.4 TRAP EFFICIENCY OF RESERVOIRS

In addition to the rate of sediment production in the catchment area the actual rate of silting of a reservoir depends on many other factors viz. trap efficiency of the reservoir, ratio of reservoir capacity to total run-off, gradation of silt, method of reservoir operation etc. The dominant factors which control the rate of silting in any storage reservoirs are:

i) The ratio of reservoir capacity to inflow, and
ii) The content of sediment in the inflow.

These two principal factors have a complete range of interplay, that is, a reservoir having a small capacity inflow ratio and small sediment content in the inflow might have the same average percentage loss of annual capacity as a reservoir having a large capacity inflow ratio and a large sediment content in the flow.

The laws of sediment deposition are the same for all types of reservoirs including stock ponds, and the factors influencing the trap efficiency of the reservoir are the same irrespective of the size of the reservoir. When the capacity of reservoir is more than its annual runoff i.e. its capacity inflow ratio being more than 1 and also taking the effect of seepage and evaporation losses, it is obvious that water is rarely spilled over such dam and hence the trap efficiency of such reservoirs must be close to 100 percent. Based on the capacity inflow ratio the reservoirs can be classified in two categories **a)** whose capacity inflow ratio is less than 1, as seasonal reservoir and **b)** those whose capacity inflow ratio exceeding 1, as carry over storage reservoir. Some of the observations made on reservoirs have shown that it appears probable that reservoirs having a very low capacity inflow ratio may alternately fill and scour, depending upon stream

flow conditions and may have a trap efficiency of zero or less during periods of scour. Even in carry over storage reservoirs, if the operation is so adjusted as to allow a major portion of the inflow through the outlets, the trap efficiency may be brought to 60 per cent with the capacity inflow ratio of 1.7 while the trap efficiency would be in the order of 90% under normal operating conditions.

The original and subsequent trap efficiency of some of the reservoirs according to Brune' trap efficiency curve is given in Table 5:

Table 5: Comparison of subsequent and original trap efficiency of reservoirs

Sl. No.	Name of the reservoir	Original trap efficiency in %age (Year)	Latest trap efficiency in %age (Year)
1	Konar(Bihar)	97(1955)	92 (1996)
2	Idduki(Kerala)	98.4(1974)	97(1999)
3	Kakki(Kerala)	98(1966)	96(1999)
4	Balimela(Orissa)	96(1972)	95(1999)
5	Bhakra (Punjab)	99.8(1996)	95.5(1996)
6	Matatila(U.P.)	90(1956)	88(1994)
7	Maithon(Bihar)	96(1955)	95(1994)

6.5 REGION WISE SEDIMENTATION RATES

The analysis of capacity survey data of 243 reservoirs shows a wide variation in sedimentation rate of reservoirs. The sedimentation rate is affected by multiple factors like hydrometeorology, physiographic and climate etc. Considering these factors, the whole country has been classified into 7 regions (**Plate-1**). Regionwise distribution of 243 reservoirs have been shown in **Plate 2-8**.The region-wise sedimentation rates in reservoirs are given in Table 6. The region-wise list of 243 reservoirs whose capacity survey data has been compiled is given at **Appendix VII.** Region wise distribution of reservoirs is shown pictorially in Figure 3.

Table 6: Average Rate of Siltation of Reservoirs (Region wise)

Sl. No.	Region	Reference of Plate Number	No. of reservoirs	Average rate of siltation	
				Th.cu.m./ sq.km/yr	Ha.m./100 sq.km/year
1	Himalayan Region (Indus, Ganga and Brahmaputra basins)	II	14	2.578	25.78
2	Indo Gangetic Plains	III	15	0.986	9.86
3	East flowing rivers upto Godavari (Excluding Ganga)	IV	5	0.759	7.59
4	Deccan Peninsular east	V			

	flowing rivers including Godavari and south Indian rivers a) Excluding reservoirs in the western ghat b) Reservoirs in the western ghat of east flowing rivers		110 5	1.108 15.523	11.08 155.23
5	West flowing rivers upto Narmada	VI	53	1.117	11.17
6.	Narmada and Tapi Basins	VII	10	1.742	17.42
7.	West flowing rivers beyond Tapi and south Indian rivers	VIII	31	3.322	33.22
	All regions		243		

It is observed that the arithmetic mean values given above are badly affected by the extreme values. In region No. 4, if the mean is worked out without bifurcating into two sub regions, the mean for 115 reservoirs will be 1.78 and this value is not representative for most of the reservoirs in the region. Similar is the case with other region, but with less variation. Hence median values (*which divide the value into two parts, one part comprising all values greater and the other all values less than the median*) have been worked out and given in Table No 7, which appears to be more representative.

Table 7: Median values of Rate of Siltation of Reservoirs (Region wise)

Sl. No.	Region	Plate	No. of reservoirs	Median values of rate of siltation	
				Th.cu.m./ sq.km/yr	Ha.m./100 sq.km/year
1	Himalayan Region (Indus, Ganga and Brahmaputra basins)	II	14	1.581	15.81
2	Indo Gangetic Plains	III	15	0.752	7.52
3	East flowing rivers upto Godavari (Excluding Ganga)	IV	5	0.678	6.78
4	Decan Peninsular east flowing rivers including Godavari and south Indian rivers	V	115	0.378	3.78
5	West flowing rivers upto Narmada	VI	53	0.861	8.61
6	Narmada and Tapi Basins	VII	10	0.651	6.51
7	West flowing rivers beyond Tapi and south Indian rivers	VIII	31	2.1325	21.325

	All regions		243	0.716	7.16

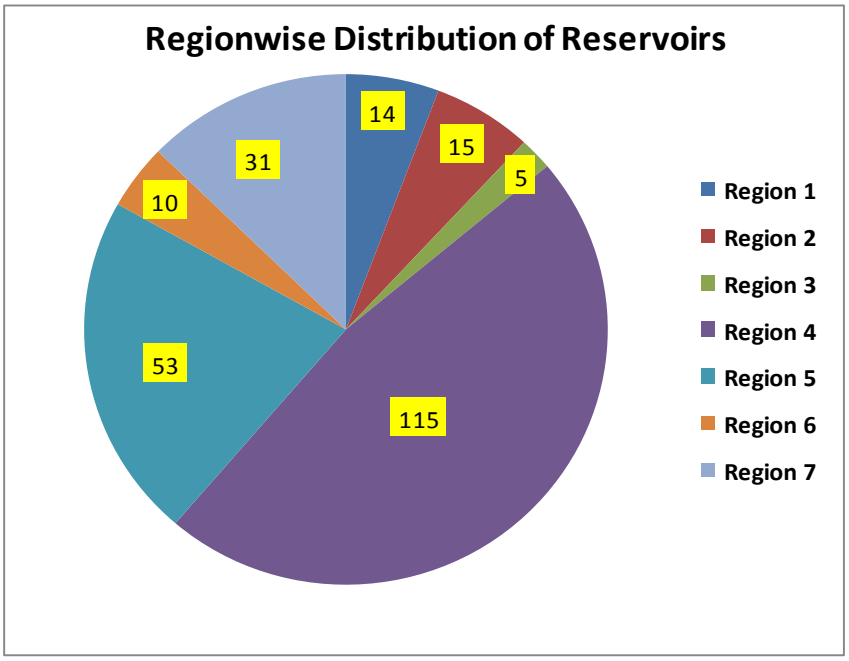


Figure 3: Region wise Distribution of 243 reservoirs

6.6 DISTRIBUTION OF SEDIMENT IN RESERVOIRS

Earlier it was believed that sediment in a reservoir always deposited in the bottom elevations of a reservoir rather than depositing throughout the full range of reservoir depth. It has now fully been established that sediment deposits throughout the depth of reservoir and reduces the capacity of reservoirs at all elevations.

Till recently it was a common practice in India to provide dead storage in a reservoir for likely sedimentation over a period of 100 years. The rate of sediment was generally based on the average annual sediment load observed in the river over a period of time. If such observations were not available at the reservoir site at the time of project planning, the sediment load/rate observed on other reservoirs in the region with similar topographical soil and hydrological characteristics was considered and an appropriate silt load was adopted for the project planning.

Studies carried out in USA, India and other countries have indicated that the entire sediment load is not deposited in dead storage space as assumed in earlier years but is spread over the entire storage space upto F.R.L. In fact, in the initial years of impoundment more encroachment is observed in the live storage space which slowly progresses towards lower levels. Further, the distribution pattern of sediment depends on several factors such as the slope of the valley, the length and shape of the reservoir, particle size of suspended sediment, capacity-inflow ratio, fluctuation in stream flow, location and size of outlets etc. Actual sediment accumulation is distributed below full reservoir level or flood pool level in case of flood storage reservoirs. The distribution pattern of sediment has been classified into four standard types of

reservoirs by Borland and Miller on the basis of reservoirs in USA and given in Table 8. The shape of reservoir is defined by depth to capacity ratio.

Table 8: Classification of Reservoirs based on M values as suggested by Borland and Miller

M value	Reservoir Type	Standard Classification
1-1.5	Gorge	IV
1.5-2.5	Hill	III
2.5-3.5	Flood Plain-Foot Hill	II
3.5-4.5	Lake	I

Here M is the reciprocal of the slope of the best fitted line obtained by plotting reservoir depth as ordinate and corresponding reservoir capacity as abscissa on log-log paper.

Figure 4 shows the classification of Reservoirs based on M values and figure 5 shows the Percent Sediment deposited versus percent reservoir depth design curves for each type of these reservoirs.

Data on percent sediment deposited versus percent reservoir depth is available for 28 reservoirs which is plotted and given in Appendix-VIII. The approximate classification of 28 reservoirs based on the percent sediment deposited versus percent reservoir depth is given in Table 9.

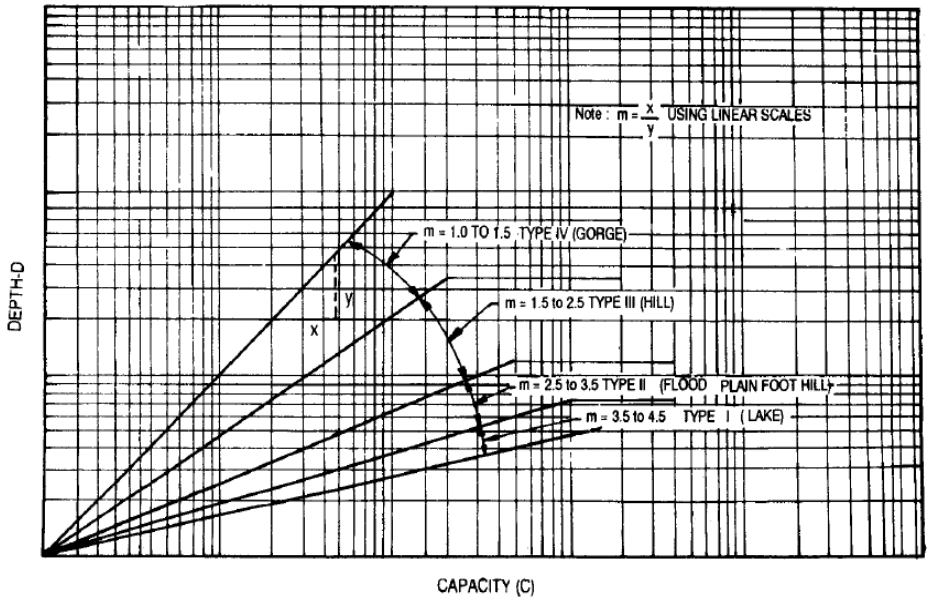


Figure 4: Classification of reservoir (Depth versus Capacity Relationship)

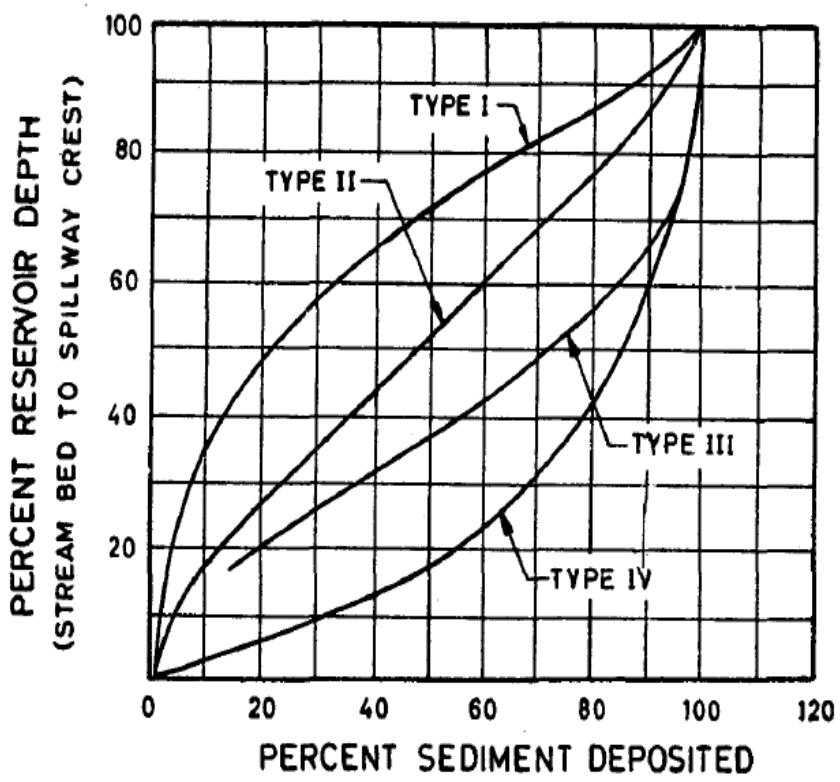


Figure5: Type curves of Percent Sediment deposited versus percent reservoir depth based on actual occurrences

Table 9: Classification of Reservoirs based on Sediment Volume Distribution

Sl. No	Reservoir	Classification
1	Dharoi (Gujarat)	Type II
2	Bhima(Maharashtra)	Type I
3	Getalsud (Odisha)	Type I
4	Gandhisagar (Madhya Pradesh)	Type I
5	Emerald Avelanche (Tamil Nadu)	Type III
6	Ravisankar Sagar (Chattisgarh)	Type II
7	Linganamakki (Kerala)	Type I
8	Rengali (Odisha)	Type I with a shift towards Type II at higher reservoir depth
9	Jayakwadi (Maharashtra)	Type I
10	Nagarjunasagar (Telengana)	Unpredictable
11	Tenughat (Jharkhand)	Type I
12	Kangsabati (West Bengal)	Type I
13	Bhadra (Karnataka)	Type II
14	Panchet (Jharkhand)	Type I
15	Ukai (Gujarat)	Type III
16	Minimata (Chattisgarh)	Type II

17	Watrak (Maharashtra)	Unpredictable
18	Ghataprabha(Karnataka)	Type II
19	Ranapratap Sagar (Rajasthan).	Unpredictable
20	Salaulim (Goa)	Unpredictable
21	Mayurakshi (West Bengal)	Type I
22	Bhavanisagar (Tamil Nadu)	Type I
23	Badua (Bihar)	Type I with a shift towards Type II at higher reservoir depth
24	Upper Kolab (Odisha)	Type I
25	Upper Wardha (Maharashtra)	Unpredictable
26	Idamayalar (Kerala)	Unpredictable
27	Idukki (Kerala)	Type I
28	Warna (Maharashtra)	Type III

6.7 DENSITY OF DEPOSITED SEDIMENTS IN RESERVOIRS

One of the important parts of reservoir sedimentation survey is the collection of data on the volume-weight of deposited sediment. This data would become of greater utility since the sediment load obtained by measurement of suspended silt from streams are usually expressed in weight, and to convert this weight into space occupied by the sediment load, a certain volume weight relationship has to be considered. The density of sediment obtained in 21 reservoirs is given in Table 10

Table 10: Density of sediments in 21 reservoirs

Sl. No.	Name of reservoir	Unit	Density	Mid value
1	Nizamsagar	Kg./Cu.m.	481-1490	986
2	Konar(Bihar)	-do-	1350-1620	1485
3	Tilaiya (Bihar)	-do-	1265-1845	1555
4	Maithon(Bihar)	-do-	513-1794	1114
5	Panchet (Bihar)	-do-	561-1764	1162
6	Pong(H.P.)	-do-	1000-1023	1012
7	Matatila(U.P.)	-do-	1230-1470	1350
8	Idduki(Kerala)	-do-	980-1038	1009
9	Kakki(Kerala)	-do-	730-834	780
10	Balimela(Orissa)	-do-	600-1230	915
11	Bhakra ({Punjab)	-do-	1202-1654	1426
12	Matatila (U.P.)	-do-	721-1330	1025
13	Mayurakshi(W.B.)	-do-	801-1121	961
14	Bhadra (Karrnataka)	-do-	1140-1910	1525
15	Idamalayar (Kerala)	-do-	1110-1900	1505
16	Upper Wardha (Maharashtra)	-do-	860-1130	995
17	Durgapur (West Bengal)	-do-	1340-1620	1480
18	Salaulim (Goa)	-do-	690-1670	1180
19	Ranapratap Sagar (Rajasthan)	-do-	680-1540	1110
20	Bhima (Maharashtra)	-do-	940-1980	1460
21	Dudhawa (Chhattisgarh)	-do-	830-1110	970

	Average of 21 reservoirs	-do-	880-1394	1191

Studies also shows that the density is predominantly affected by the percentage of clay in the samples and also that the density gradually increases with the distance from the dam. Further the data collected shows that factors such as reservoir operation, side tributaries washing into the main reservoirs etc. also influence the density.
The lower densities have been observed in the vicinity of dam under submerged conditions, while the higher densities are observed in the upstream portions of the submerged area and also in the exposed regions consequent on periodic drawdown of the reservoir.

6.8 ANALYSIS OF DEPOSITED SEDIMENTS

Grain size analysis of deposited sediment has been carried out in 32 reservoirs and results are given in **Appendix-VI.** It is seen that clay/silt content is maximum near the dam and reduces towards U/S of the reservoir. Similarly percentage of sand content is least near the dam and progressively increases while proceeding U/S.

7.0 CONCLUSIONS

1. The surveys conducted during last four decades have indicated that sedimentation rates in some of the reservoirs are higher than that envisaged at the planning stage.

2. The variation in actual sedimentation rate with the rate assumed at the time of design is due to the fact that enough reliable data on Indian reservoirs was not available earlier at their planning stage. The earlier assumption that the sediment would settle within the dead storage is no longer supported by the experience gained in India as well as other countries. The hydrographic surveys have clearly indicated that the sedimentation takes place not only in dead storage but also in live storage of the reservoirs.

3. The present design practice (*followed progressively since 1965*) incorporates that the design sedimentation inflow rates be based on the basis of reservoir survey data as well as actual observed sediment inflow data available from key hydrological station /network of CWC. This practice has already been incorporated in the IS: 12185 (1987)"Guidelines of determination of effects of sedimentation on planning and performance of reservoirs", to make this a national practice.

4. Regarding apprehension about the higher rates of sedimentation in reservoirs and that they will not last for their planned life, the analysis of data collected for various reservoirs show that the sedimentation rates are not so alarming. Further it has been experienced that the sedimentation rate in reservoirs is higher during the initial period of their operation and thereafter it reduces significantly. Even some of the reservoirs having completed their planned life are still continuing to serve and provide substantial benefits.

5. DGPS enabled bathymetric survey techniques in conducting capacity surveys of reservoirs saves time and obtain more reliable results.

6. Since sedimentation study of reservoirs using remote sensing technique is fast and economical but considering its limitation that sedimentation taking place below MDDL cannot be measured, it would be appropriate to conduct hydrographic surveys at longer intervals and remote sensing based sedimentation surveys are carried out at shorter intervals to make both surveys complementary to each other.

7. It is observed that the rate of sedimentation is maximum in the reservoirs lying in West flowing rivers beyond Tapi and South Indian rivers i.e. the region No. 7. Median value of sedimentation observed in this region is 2.1325 mm/year (21.325 Ha.m./100sq.km./year).Second highest rate of sedimentation is observed in the Himalayan rivers (1.581 mm/year i.e.15.81 Ha.m./100sq./km year). In the plains of Indus and Ganga, only 0.752 mm/year (7.52 Ha.m./100sq.km /year) is observed. The rate of 0.678 mm/year (6.78 Ha.m/100sq.km/year) observed in the east flowing rivers up to Godavari. Rate of sedimentation in the reservoirs constructed in the west flowing rivers upto Narmada is 0.861 mm/year (8.61 Ha.m./100sq.km /year) and in the reservoirs lying in Narmada and Tapi basins is 0.651 mm/year (6.51 Ha.m./100sq.km /year).The least sedimentation rate of 0.378 mm/year (3.78 Ha.m./100sq.km /year) is observed in the Deccan Peninsular region.

8. It is observed that the average annual percentage loss of capacity is 0.42 in gross storages.

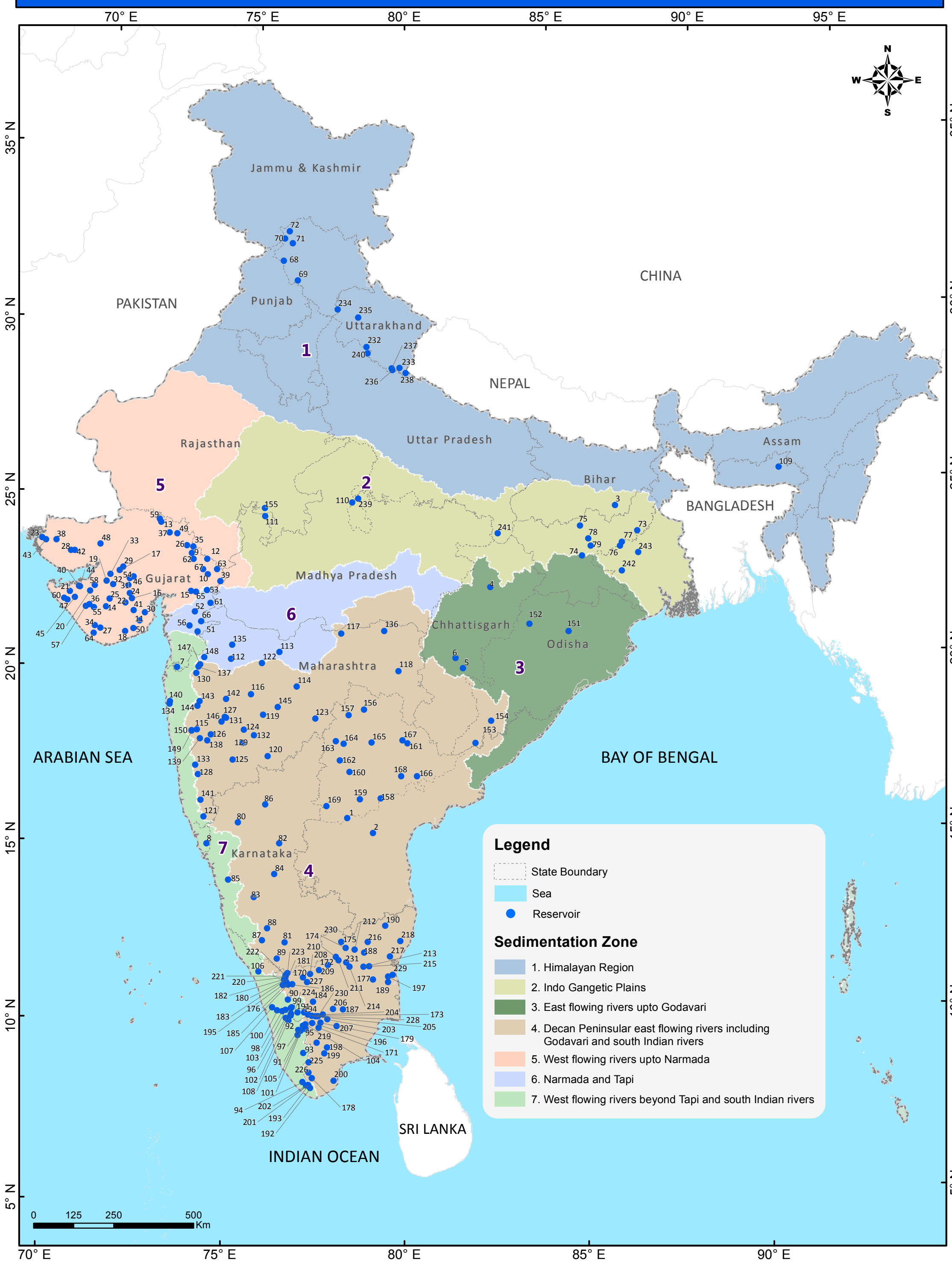
9. The average dry density of deposited sediment works out to 1191 kg/cu.m.

10. Density of deposited sediment is predominantly affected by the percentage of clay in the samples and also that the density gradually increases with the distances from the dam. The lower densities have been observed in the vicinity of dam under submerged conditions, while the higher densities are observed in the upstream portions of the submerged area and also in the exposed regions consequent on periodic drawdown of the reservoir.

11. The clay/silt content is maximum near the dam and reduces towards u/s of the reservoir. Similarly percentage of sand content is least near the dam and progressively increases while proceeding u/s.

Region Wise Distribution of Reservoirs

(Plate -I)

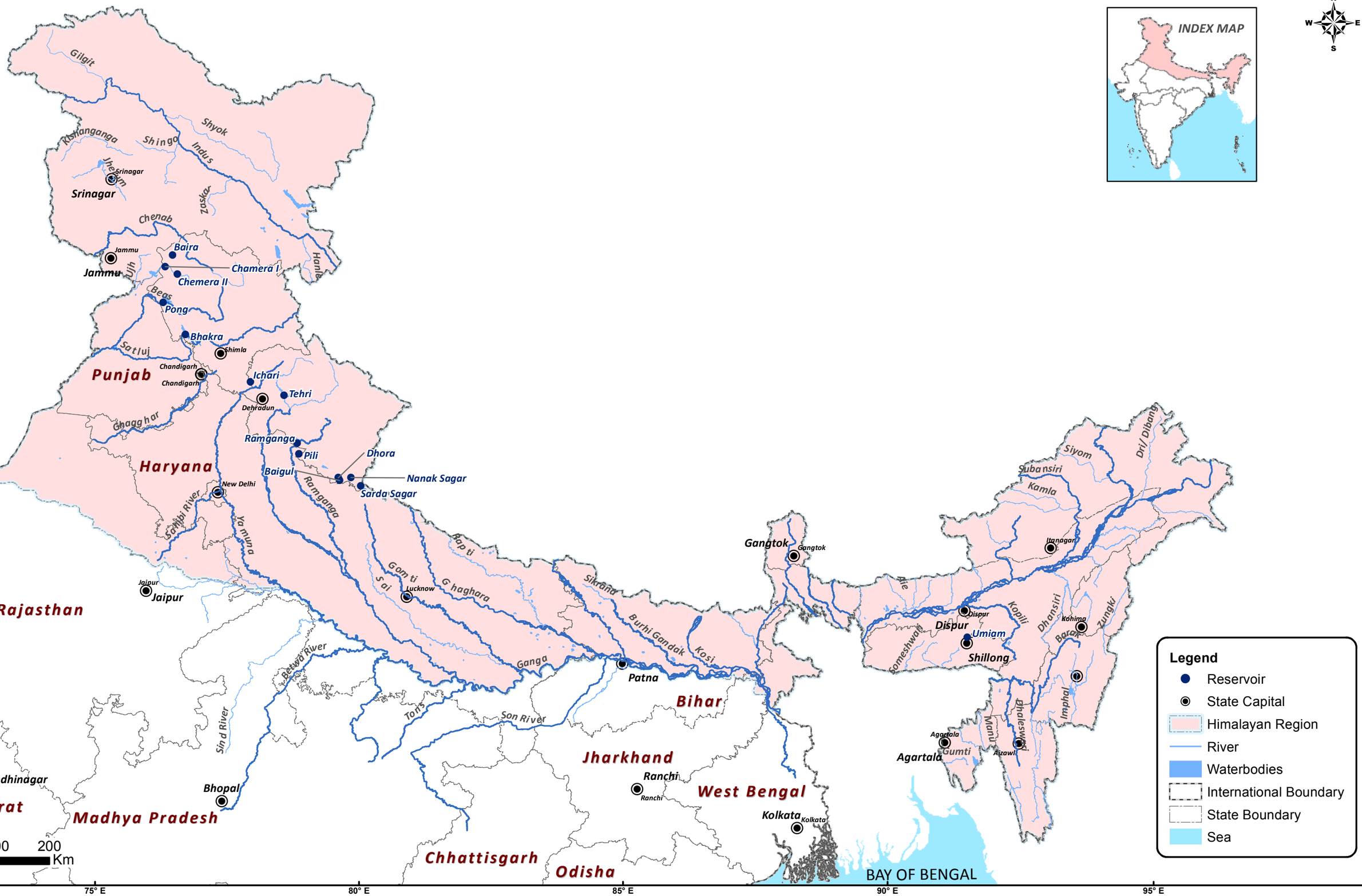


List of Reservoirs

S.No	Reservoir	S.No	Reservoir	S.No	Reservoir	S.No	Reservoir	S.No	Reservoir	S.No	Reservoir
1	Srisailam	41	Ranghola	81	Krishnaraj Sagara	121	Ghataprabha	161	Laknavaram Cheruvu	201	Chittar I
2	Cumbum	42	Rudramata	82	Tungabhadra	122	Khelna	162	Manjra Reservoir	202	Chittar II
3	Badua Minimata	43	Sanandharo	83	Bhadra	123	Manar	163	Nizam Sagar Reservoir	203	Kamraj Sagar
4	Bango	44	Sasoi	84	Basavasagara	124	Mangi	164	Pocharam Tank	204	Parappalar
5	Dudhawa	45	Vartu Wadhawan	85	Linganamakki	125	Mhaswad	165	Shanigram Tank	205	Palar poranthalar
6	Ravishankar	46	Bhogavo-II	86	Almatti	126	Nazare	166	Wira Lake	206	Kodaganar
7	Damanganga	47	Sorthi	87	Harangi	127	Visapur	167	Ramappa Cheruvu	207	Sathiiyarar
8	Salaulim	48	Suvi	88	Hemavathy	128	Warna	168	Palair	208	Perumpallam
9	Watrak	49	Dharoi	89	Kabini	129	Ujjani (Bhima)	169	Priyadarshini jurala	209	Varattupallam
10	Hadaf	50	Rajki	90	Malampuzha	130	Gangapur	170	Bhavani Sagar	210	Nagavathy
11	Shetrunji	51	Ukai	91	Idukki	131	Kolgaon	171	Vaigai	211	Thoppiyar
12	Kadana	52	Karjan	92	Idamalayar	132	Khaspur	172	Mettur	212	Pambar
13	Dantiwada	53	Sukhi Tank Wadhawan	93	Kakki	133	Shivaji Sagar	173	Amaravati Reservoir	213	Gomukhinathi
14	Bhadar(P)	54	Bhogavo	94	Neyyar	134	Powai	174	Barur	214	Anaimaduvu
15	Ajwa	55	Bhadar(S)	95	Anayirangal	135	Mukti	175	Krishnagiri	215	Manimuktha nadhi
16	Bhimdad	56	Ver II	96	Chulliar	136	Ram Sagar	176	Kundahapalam	216	Marudhanathi
17	Brahmani-I	57	Venu II	97	Kallarkutty	137	Waghad	177	Willingdon\ Yemaneri	217	Vidur Madhuranthagam
18	Dhatarwadi-I	58	Und I	98	Mangalam	138	Vir	178	Manimuttar Reservoir	218	tank
19	Demi I	59	Sipu	99	Meenkara	139	Bhatghar	179	Manjalar	219	Pilavukkal
20	Fulzar I	60	Sani	100	Peechi	140	Tulsi	180	Parson's Valley	220	Pykara
21	Ghee	61	Rami	101	Ponmudi	141	Radhanagari	181	Emerald	221	Glenmorgan (kariappa)
22	Ghelo(I)	62	Mazam	102	Poringalkuthu	142	Mula	182	Mukurthy	222	Glenmorgan (new forebay)
23	Godhatad	63	Machhannala	103	Pothundi	143	Manikdoh	183	Porthimund	223	Maravakandy
24	Goma	64	Hiren-II	104	Kundala	144	Dimbhe	184	Uppar (Tirupur) Pegumbahla	224	Parambikulam
25	Gondli	65	Deo	105	Madupatti	145	Majalgaon	185	Forebay	225	Adavinainar koil
26	Hathmati	66	Chopadvav	106	Kuttiyadi	146	Ghod	186	Pillur	226	Gadana
27	Hiren-I	67	Panam	107	Poomala	147	Karanjwan	187	Ponnaniar Sathanur	227	Guderipallam
28	Kaila	68	Pong	108	Tunakadvu	148	Chankapur	188	Reservoir	228	Kudhiraiyar
29	Kankavati	69	Bhakra	109	Umiam	149	Panshet	189	Viranam Eri	229	Perumal Tank
30	Khodiyar Limdi Bhogavo	70	Chamera I	110	Matatila	150	Varasgaon	190	Kaveripakkam Tank	230	Varadamanathi
31	(Thoriyali)	71	Chemera II	111	Gandhi Sagar	151	Rengali	191	Aliyar	231	Vaniyar
32	Machhu I	72	Baira	112	Girna	152	Hirakud	192	Perunchani Lake	232	Ramganga
33	Machhu II	73	Mayurakshi	113	Nalganga	153	Balimela	193	Pechipparai	233	Nanak Sagar
34	Madhuvanti	74	Getalsud	114	Yeldari	154	Upper Kolab	194	Tirumurthy	234	Ichari
35	Meshwo	75	Tilaiya	115	Khadakwasla	155	Ranapratap Sagar	195	Upper Bhavani	235	Tehri
36	Moj	76	Panchet	116	Jayakwadi	156	Kaddam	196	Berijam	236	Baigul
37	Mukteshwar	77	Maithon	117	Upper Wardha	157	Sriram Sagar	197	Wallajah	237	Dhora
38	Nara	78	Konar	118	Asolamendha	158	Nagarjuna Sagar	198	Anaikuttam	238	Sarda Sagar
39	Patadungri	79	Tenughat	119	Bendsura	159	Dindi Reservoir	199	Vembakottai	239	Dukwan Reservoir
40	Puna	80	Malaprabha	120	Ekruk	160	Himayat sagar	200	Kadamba	240	Pili
										241	Rihand
										242	Kangsabati
										243	Durgapur Barrage

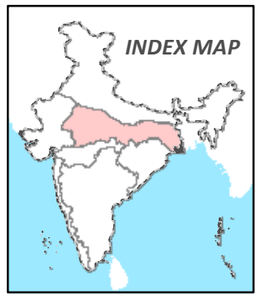
Region - 1
Himalayan Region

(Plate -II)



Region - 2
Indo Gangetic Plains

(Plate -III)



75° E 80° E 85° E

25° N 20° N

Haryana
New Delhi
Yamuna
Uttar Pradesh
Lucknow
Sikkim
Gangtok
Bihar
Jaipur
Banganga River
Morel N
Banas
Chambal River
Sind River
Betwa River
Parbati River
Kali Sindh River
Dhasan River
Sonar River
Ken River
Tons
Ganga
Son River
Kanhar River
Kiul N
Ajay N
Barakar
Damodar
Tenughat
Konar
Maithon
Panchet
Durgapur Barrage
Mayurakshi
Badua
Tilaiya
Getalsud
Kangsabati
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Dukwan Reservoir
Matatila
Ranapratap Sagar
Gandhi Sagar
Berach
Ranchi
Jharkhand
Kolkata
Madhya Pradesh
Chhattisgarh
Raipur
Odisha
BAY OF BENGAL

Legend
- Reservoir
- State Capital
- Indo Gangetic Plains
- River
- Waterbodies
- International Boundary
- State Boundary
- Sea

0 25 50 100 Km

Region - 3
East flowing rivers upto Godavari excluding Ganga

(Plate -IV)

INDEX MAP

Uttar Pradesh
Bihar
Jharkhand
West Bengal
Madhya Pradesh
Chhattisgarh
Odisha
Andhra Pradesh
BAY OF BENGAL

Ranchi
Minimata Bango
Hirakud
Rengali
Raipur
Ravishankar
Dudhawa
Bhubaneswar

Arpa
Hasdeo
Mand
Seonath
Kharun
Jonk
Ong
Lant
Tel
Bhedan
Sankh
Tajna
Karkari
Southkoel
Ib
Kharkai
Baitarani
Kairobandan
Tikra
Gantala
Brahmani
Mutkuria
Salki
Kharag
Kuaria N
Kusumi
Mahanadi
Devi
Salandi
Rebo
Kharsua R
Rushikulya
Barha N
Vamsadhara
Nagavali
Sarada
Eleru

0 25 50 100 Km

82° E
84° E
86° E
88° E
24° N
22° N
20° N
18° N
16° N

Legend

- Reservoir
- State Capital
- East flowing rivers upto Godavari
- River
- Waterbodies
- International Boundary
- State Boundary
- Sea

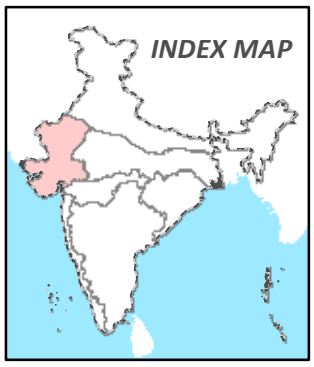
Region - 4

(Plate -V)

Decan Peninsular east flowing rivers including Godavari and south Indian rivers

Region - 5
West flowing rivers upto Narmada

(Plate -VI)



N
W
E
S

PAKISTAN

Rajasthan

Luni River
Sukri River
Sukri Nadi
Jawai River
Banas River
Sabarmati
Sipu
Dantiwada
Mukteshwar
Dharoi
Gomti
Som
Mahi
Hathmati
Meshwo
Mazam
Watrak
Kadana
Anas
Panam
Machhannala
Hadaf
Patadungri
Gandhinagar
Godhatad
Sanandharo
Nara
Suvi
Kāila
Kankawati Nadi
Gum Nadi
Aji Nadi
Kankavati
Brahmani-I
Machhu II
Wadhawan Bhogavo-II
Wadhawan Bhogavo
Demi I
Machhu I
Limdi Bhogavo (Thoriyali)
Puna
Und I
Fulzar I
Ghee
Sani
Vartu
Sorthi
Venu II
Moj
Bhadar(P)
Bhadar(S)
Gondli
Goma
Bhimdad
Ghelo(I)
Ranghola
Khodiyar
Ojat Nadi
Shetrunji
Madhuvanti
Hiren-I
Hiren-II
Rajki
Dhatarwadi-I
Gujarat
Ajwa
Deo
Madhya Pradesh
Dhadhar

ARABIAN SEA

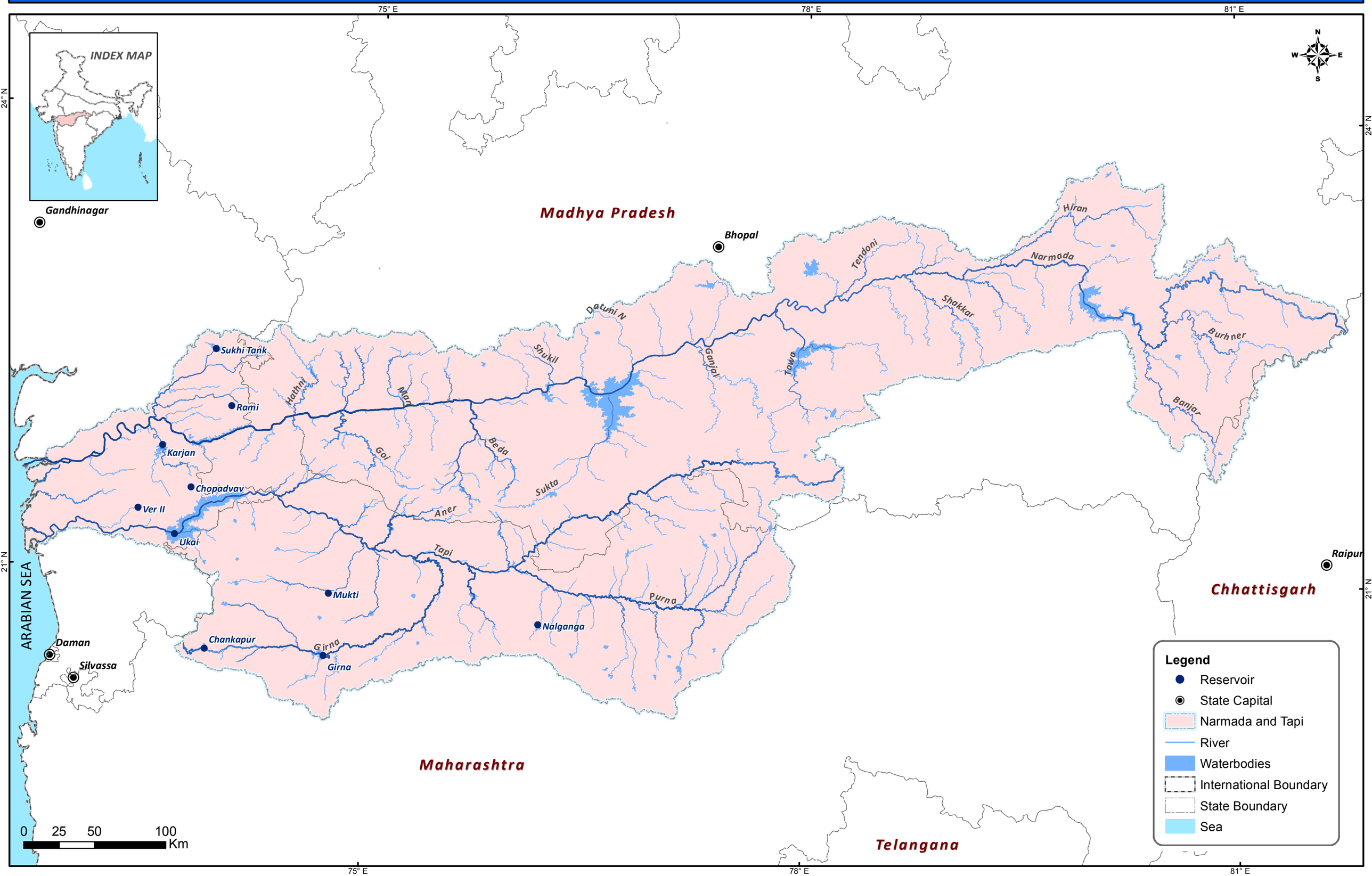
0 25 50 100 Km

Legend

- Reservoir
- State Capital
- West flowing rivers upto Narmada Zone
- River
- Waterbodies
- International Boundary
- State Boundary
- Sea

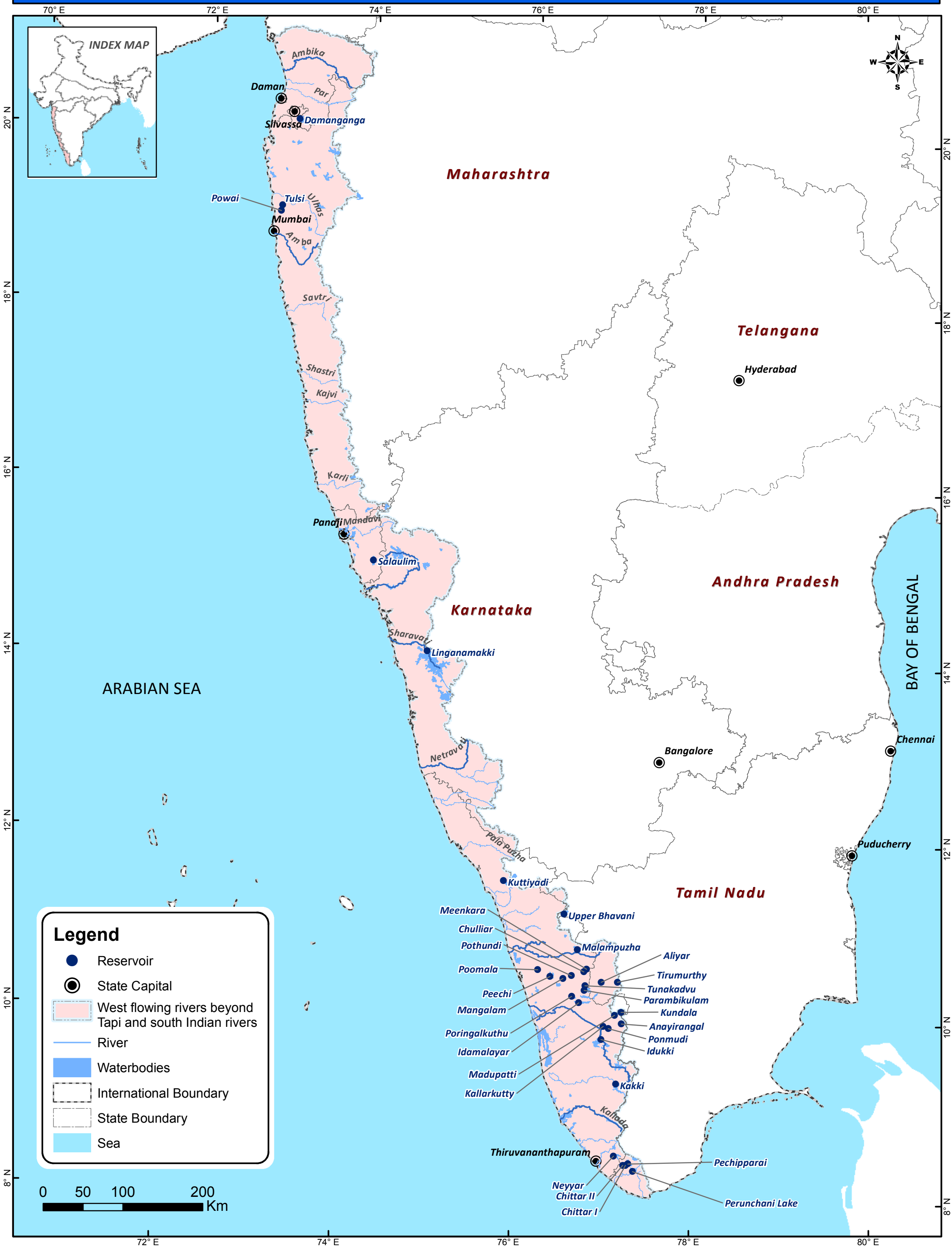
Region - 6
Narmada and Tapi Basin

(Plate -VII)



Region - 7 (Plate -VIII)

West flowing rivers beyond Tapi and south Indian rivers



Appendix-I

CUMBUM TANK

Name of State - Andhra Pradesh | Name of the District - Prakasam | Name of River - Gundukamma | Year of Impoundment - 1956
Catchment Area - 993.00 Sq.km | Reservoir Area at FRL - N.A | MDDL- N.A. | FRL - 203.2 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		105.76	-	-						FRL taken from
2	1978	22	84.15	-	-	21.61	21.61	20.43	0.99	0.98	WRIS

Average rate of silting (Th.Cum/Sq.km/yr) in 22 years 0.99
Average rate of silting (mm/yr) in 22 years 0.99
Average rate of silting (M.Cum/yr) in 22 years 0.98

SRISAILAM RESERVOIR

Name of State - Andhra Pradesh | Name of the District - Kurnool | Name of River - Krishna | Year of Impoundment - 1976
Catchment Area - 206030 Sq.km | Reservoir Area at FRL - 616.42 Sq Km | MDDL - 243.84 metre | FRL - 269.748 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1976		8724.88	7167.196	1557.684						Res. Area taken from NRLD
2	2001	25	6245.282	5133.602	1111.68	2479.60	2479.60	28.42	0.48	99.18	
3	2006	5	6632.93	-	-	-387.65	2091.95	23.98	-	-	
4	2011	5	6110.907	-	-	522.02	2613.97	29.96	0.51	104.40	

Average rate of silting (Th.Cum/Sq.km/yr) in 35 years 0.36
Average rate of silting (mm/yr) in 35 years 0.36
Average rate of silting (M.Cum/yr) in 35 years 74.68

BADUA RESERVOIR

Name of State - Bihar | Name of the District - Banka | Name of River - Badua | Year of Impoundment - 1965

Catchment Area - 480.70 Sq.km | Reservoir Area at FRL - 11.417 Sq.km | MDDL - 112.78 metre | FRL - 128.63 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		129.245	109.656	19.589						
2	2006	41	113.432	99.557	13.875	15.81	15.81	12.23	0.802	0.386	

Average rate of silting(Th.Cum/Sq.km/Yr) in 41 years 0.802

Average rate of silting (mm/yr) in 41 years 0.802

Average rate of silting (M.Cum/yr) in 41 years 0.386

DUDHWA RESERVOIR

Name of State - Chhattisgarh | Name of the District - Dhamtari (then Bastar) | Name of River - Mahanadi | Year of Impoundment - 1963

Catchment Area - 625.27 Sq.km | Reservoir Area at FRL - 44.87 Sq.km | MDDL - 409.92 metre | FRL - 425.10 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1963		288.65	284.12	4.53						
2	2011	48	260.132	259.100	1.032	28.518	28.518	9.88	0.950	0.594	

Average rate of silting(Th.Cum/Sq.km/Yr) in 48 year 0.950

Average rate of silting (mm/yr) in 48 years 0.950

Average rate of silting (M.Cum/yr) in 48 years 0.594

MINIMATA RESERVOIR

Name of State - Chhattisgarh | Name of the District - Korba | Name of River - Hasdeo | Year of Impoundment - 1990

Catchment Area - 6730 Sq.km | Reservoir Area at FRL - 184.99 Sq.km | MDDL - 329.79 metre | FRL - 359.66 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1990		3416	3045.81	370.19						
2	2001	11	3365.79	3024.27	341.52	50.21	50.21	1.47	0.678	4.565	

Average rate of silting(Th.Cum/Sq.km/Yr) in 11 year 0.678

Average rate of silting (mm/yr) in 11 years 0.678

Average rate of silting (M.Cum/yr) in 11 years 4.565

RAVISANKAR SAGAR RESERVOIR

Name of State - Chhattisgarh | Name of the District - Dhamtari | Name of River - Mahanadi | Year of Impoundment - 1979

Catchment Area - 3670 Sq.km | Reservoir Area at FRL - 95.17 Sq.km | MDDL - 336.21 metre | FRL - 348.70 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1979		909.32	766.32	143						
2	2003	24	881.12	757.12	124	28.2	28.2	3.10	0.320	1.175	

Average rate of silting(Th.Cum/Sq.km/Yr) in 24 years 0.320

Average rate of silting (mm/yr) in 24 years 0.320

Average rate of silting (M.Cum/yr) in 24 years 1.175

SALAULIM RESERVOIR

Name of State - Goa | Name of the District - South Goa | Name of River - Sanguem | Year of Impoundment - 1990

Catchment Area - 209.00 Sq.km | Reservoir Area at FRL - 29.64 Sq Km | MDDL - 20.42 metre | FRL - 41.15 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1990		234.36	227.160	7.200						
2	2011	21	192.68	190.858	1.822	41.68	41.68	17.78	9.496	1.985	Res Area taken from NRLD

Average rate of silting(Th.Cum/Sq.km/Yr) in 21 year 9.496

Average rate of silting (mm/yr) in 21 years 9.496

Average rate of silting (M.Cum/yr) in 21 years 1.985

AJWA RESERVOIR

Name of State -Gujarat | Name of the District - Vadodara | Name of River - Surya Rivulet | Year of Impoundment - 1891

Catchment Area - 177.30 Sq.km | Reservoir Area at FRL - N.A | MDDL - N.A | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1891		62.7	-	-						
2	1987	96	54.99	-	-	7.71	7.71	12.30	0.453	0.080	

Average rate of silting(Th.Cum/Sq.km/Yr) in 96 year 0.453

Average rate of silting (mm/yr) in 96 years 0.453

Average rate of silting (M.Cum/yr) in 96 years 0.080

BHADAR(P) RESERVOIR

Name of State -Gujarat | Name of the District - Panchmahal | Name of River - Bhadar/Mahi | Year of Impoundment - 1983

Catchment Area - 407.00 Sq.km | Reservoir Area at FRL - 5.07 Sq.Km | MDDL -110.95m | FRL - 123.72m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1983		46.72	39.9	6.82						
2	1995	12	35.71	31.92	3.79	11.01	11.01	23.57	2.254	0.918	
3	1999	4	32.17	29.28	2.89	3.54	14.55	31.14	2.174	0.885	
4	2009	10	30.95	29.174	1.776	1.22	15.77	33.75	0.300	0.122	

Average rate of silting(Th.Cum/Sq.km/Yr) in 26 year 1.490

Average rate of silting (mm/yr) in 26 years 1.490

Average rate of silting (M.Cum/yr) in 26 years 0.607

BHADAR(S) RESERVOIR

Name of State -Gujarat | Name of the District - Rajkot | Name of River - Bhadar | Year of Impoundment - 1964

Catchment Area - 2406.00 Sq.km | Reservoir Area at FRL - 44.00 Sq.Km | MDDL -97.56m | FRL - 107.90m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1964		237.86	223.7	14.16						
2	2004	40	146.31	145.98	0.33	91.55	91.55	38.49	0.951	2.289	

Average rate of silting(Th.Cum/Sq.km/Yr) in 40 years 0.951

Average rate of silting (mm/yr) in 40 years 0.951

Average rate of silting (M.Cum/yr) in 40 years 2.289

BHIMDAD RESERVOIR

Name of State -Gujarat | Name of the District - Bhavnagar | Name of River - Madhu (Tributary of Keri) | Year of Impoundment - 1953
Catchment Area - 109.82 Sq.km | Reservoir Area at FRL - 3.50 Sq.km | MDDL - N.A | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1953	-	11.19	-	-						
2	1974	21	10.01	-	-	1.18	1.18	10.55	0.512	0.056	
3	1986	12	6.69	-	-	3.32	4.50	40.21	2.519	0.277	

Average rate of silting(Th.Cum/Sq.km/Yr) in 33 year 1.242
Average rate of silting (mm/yr) in 33 years 1.242
Average rate of silting (M.Cum/yr) in 33 years 0.136

BRAMANI RESERVOIR

Name of State -Gujarat | Name of the District - SurendraNagar | Name of River - Bramani | Year of Impoundment - 1953
Catchment Area - 699.27 Sq.km | Reservoir Area at FRL - 19.14 Sq.km | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1953		74.95	-	-						
2	1986	33	58.33	-	-	16.62	16.62	22.17	0.720	0.504	

Average rate of silting(Th.Cum/Sq.km/Yr) in 33 year 0.720
Average rate of silting (mm/yr) in 33 years 0.720
Average rate of silting (M.Cum/yr) in 33 years 0.504

CHOPADVAV RESERVOIR

Name of State -Gujarat | Name of the District - Narmada | Name of River - Doman/Tapi | Year of Impoundment - 1985

Catchment Area - 27 Sq.km | Reservoir Area at FRL - 1.72 Sq.km | MDDL - 176.4m | FRL - 186.3m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1985		10.15	9.4	0.75						
2	1998	13	5.69	5.45	0.24	4.46	4.46	43.94	12.707	0.343	

Average rate of silting(Th.Cum/Sq.km/Yr) in 13 years 12.707

Average rate of silting (mm/yr) in 13 years 12.707

Average rate of silting (M.Cum/yr) in 13 years 0.343

DAMANGANGA RESERVOIR

Name of State -Gujarat | Name of the District - Valsad | Name of River - Damanganga | Year of Impoundment - 1983

Catchment Area - 1813 Sq.km | Reservoir Area at FRL - 51.44 Sq.km | MDDL - 61.6m | FRL - 79.86 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1983		567	502	65						
2	1992	9	558.04	492.26	65.78	8.96	8.96	1.58	0.549	0.996	
3	1996	4	557.56	500.01	57.55	0.48	9.44	1.66	0.066	0.120	
4	1999	3	525.81	464.46	61.35	31.75	41.19	7.26	5.837	10.583	
5	2008	9	524.857	478.087	46.77	0.953	42.14	7.433	0.058	0.106	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 year 0.930

Average rate of silting (mm/yr) in 25 years 0.930

Average rate of silting (M.Cum/yr) in 25 years 1.686

DANTIWADA RESERVOIR

Name of State -Gujarat | Name of the District -Banaskantha | Name of River - Banas | Year of Impoundment - 1965

Catchment Area - 2862 Sq.km | Reservoir Area at FRL - 40.47 Sq.km | MDDL - 159.90m | FRL - 184.15 meter

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		464.4	444.73	19.67						
2	1984	19	396.15	384.58	11.57	68.25	68.25	14.70	1.255	3.592	Catchment area updated as per data supplied by state
3	1991	7	408.43	408.43	0	-12.28	55.97	12.05	-	-	
4	1994	3	319.32	319.32	0	89.11	145.08	31.24	10.379	29.703	
5	2007	13	395.33	393.237	2.093	-76.01	69.07	14.87	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 42 year 0.575

Average rate of silting (mm/yr) in 42 years 0.575

Average rate of silting (M.Cum/yr) in 42 years 1.645

DEMI-1 RESERVOIR

Name of State -Gujarat | Name of the District - Rajkot | Name of River - Demi | Year of Impoundment - 1959

Catchment Area - 168.34 Sq.km | Reservoir Area at FRL - 5.44 Sq.km | MDDL - N.A | FRL - 59.44 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1959		21.52	-	-						
2	1984	25	16.55	-	-	4.97	4.97	23.09	1.181	0.199	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 year 1.181

Average rate of silting (mm/yr) in 25 years 1.181

Average rate of silting (M.Cum/yr) in 25 years 0.199

DEO RESERVOIR

Name of State -Gujarat | Name of the District - Panchmahal | Name of River - Deo/Dhadar | Year of Impoundment - 1986

Catchment Area - 259 Sq.km | Reservoir Area at FRL - 16.68 Sq.km | FRL - 89.65m metre | MDDL -80m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1986		84.09	76.33	7.76						
2	1998	12	74.26	66.92	7.34	9.83	9.83	11.69	3.163	0.819	
3	2005	7	67.946	61.352	6.594	6.314	16.144	19.20	0.348	0.902	

Average rate of silting(Th.Cum/Sq.km/Yr) in 19 years 3.281

Average rate of silting (mm/yr) in 19 years 3.281

Average rate of silting (M.Cum/yr) in 19 years 0.850

DHAROI RESERVOIR

Name of State -Gujarat | Name of the District -Mehsana | Name of River - Sabarmati | Year of Impoundment - 1976

Catchment Area - 5475 Sq.km | Reservoir Area at FRL - 107 Sq.km | FRL - 189.59 metre | MDDL - 175.77m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1976		907.83	778.31	129.52						For year 2000, data as per CWC survey has been taken
2	1990	14	760.65	689.89	70.76	147.18	147.18	16.21	1.920	10.513	
3	1991	1	745.86	673.63	72.23	16.26	163.44	18.00	2.970	16.260	
4	1992	1	838.54	747.91	90.63	-92.68	70.76	7.79	-	-	
5	1994	2	842.19	760.01	82.18	-3.65	67.11	7.39	-	-	
6	2000	6	802.207	727.4	74.807	39.983	107.093	11.80	1.217	6.664	
7	2006	6	813.137	745.482	67.655	-10.93	96.163	10.59	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 0.59

Average rate of silting (mm/yr) in 30 years 0.59

Average rate of silting (M.Cum/yr) in 30 years 3.21

DHATARWADI RESERVOIR

Name of State -Gujarat | Name of the District - Amreli | Name of River -Dhatarwadi | Year of Impoundment - 1975
Catchment Area - 429.94 Sq.km | Reservoir Area at FRL - 36.5 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1975		32.73	-	-						
2	1986	11	26.8	-	-	5.93	5.93	18.12	1.254	0.539	

Average rate of silting(Th.Cum/Sq.km/Yr) in 11 year 1.254
Average rate of silting (mm/yr) in 11 years 1.254
Average rate of silting (M.Cum/yr) in 11 years 0.539

FULZAR-1 RESERVOIR

Name of State -Gujarat | Name of the District - Jamnagar | Name of River - Und | Year of Impoundment - 1957
Catchment Area - 142.45 Sq.km | Reservoir Area at FRL - 4.37 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1957		14.9	-	-						
2	1986	29	12.23	-	-	2.67	2.67	17.92	0.646	0.092	

Average rate of silting(Th.Cum/Sq.km/Yr) in 29 year 0.646
Average rate of silting (mm/yr) in 29 years 0.646
Average rate of silting (M.Cum/yr) in 29 years 0.092

GHEE RESERVOIR

Name of State -Gujarat | Name of the District - Jamnagar | Name of River - Ghee | Year of Impoundment - 1953
Catchment Area - 129.49 Sq.km | Reservoir Area at FRL - 3.82 Sq.km | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1953		13.84	-	-						
2	1986	33	12.61	-	-	1.23	1.23	8.89	0.288	0.037	

Average rate of silting(Th.Cum/Sq.km/Yr) in 33 year 0.288
Average rate of silting (mm/yr) in 33 years 0.288
Average rate of silting (M.Cum/yr) in 33 years 0.037

GHELO-I RESERVOIR

Name of State -Gujarat | Name of the District - Amreli | Name of River - Ghelo | Year of Impoundment - 1963
Catchment Area - 103.60 Sq.km | Reservoir Area at FRL - 3.54 Sq.km | MDDL - 127.25 | FRL - 166.720

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1963		13.35	-	-						
2	1974	11	12.23	-	-	1.12	1.12	8.4	0.983	0.102	
3	1986	12	10	-	-	2.23	3.35	25.09	1.794	0.186	

Average rate of silting(Th.Cum/Sq.km/Yr) in 23 year 1.406
Average rate of silting (mm/yr) in 23 years 1.406
Average rate of silting (M.Cum/yr) in 23 years 0.146

GODHATAD RESERVOIR

Name of State -Gujarat | Name of the District - Kachchh | Name of River - Mitiariwali | Year of Impoundment - 1977
Catchment Area - 167.04 Sq.km | Reservoir Area at FRL - 3.55 Sq.km | MDDL - N.A | FRL - 23 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1977		14.7	-	-						
2	1987	10	13.98	-	-	0.72	0.72	4.90	0.431	0.072	

Average rate of silting(Th.Cum/Sq.km/Yr) in 10 year 0.431
Average rate of silting (mm/yr) in 10 years 0.431
Average rate of silting (M.Cum/yr) in 10 years 0.072

GOMA RESERVOIR

Name of State -Gujarat | Name of the District - Bhavnagar | Name of River - Goma | Year of Impoundment - 1972
Catchment Area - 155.40 Sq.km | Reservoir Area at FRL - 4.92 Sq.km | MDDL - 120.4 metre | FRL - 126.5 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1972		18.26	-	-						
2	1986	14	15.91	-	-	2.35	2.35	12.87	1.080	0.168	

Average rate of silting(Th.Cum/Sq.km/Yr) in 14 year 1.080
Average rate of silting (mm/yr) in 14 years 1.080
Average rate of silting (M.Cum/yr) in 14 years 0.168

GONDLI RESERVOIR

Name of State -Gujarat | Name of the District - Rajkot | Name of River - Gondli | Year of Impoundment - 1956
Catchment Area - 67.41 Sq.km | Reservoir Area at FRL - 2.74 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		11.35	-	-						
2	1986	30	10.11	-		1.24	1.24	10.93	0.613	0.041	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 0.613
Average rate of silting (mm/yr) in 30 years 0.613
Average rate of silting (M.Cum/yr) in 30 years 0.041

HADAF RESERVOIR

Name of State -Gujarat | Name of the District -Panchmahal | Name of River - Hadaf | Year of Impoundment - 1986
Catchment Area - 508.00 Sq.km | Reservoir Area at FRL - 7.50 Sq.km | MDDL -161.50m | FRL -166.2m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1986		32.26	25.02	7.24						
2	2000	14	22.29	15.74	6.55	9.97	9.97	30.91	1.402	0.712	
3	2009	9	22.086	17.27	4.816	0.204	10.174	31.54	0.045	0.023	

Average rate of silting(Th.Cum/Sq.km/Yr) in 23 years 0.871
Average rate of silting (mm/yr) in 23 years 0.871
Average rate of silting (M.Cum/yr) in 23 years 0.442

HATMATI RESERVOIR

Name of State -Gujarat | Name of the District -Sabarkantha | Name of River - Sabarmati | Year of Impoundment - 1971

Catchment Area - 594.95 Sq.km | Reservoir Area at FRL - 37.15 Sq.km | MDDL - N.A | FRL - 180.74 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1971		160.71	-	-						
2	1987	16	151.28	-	-	9.43	9.43	5.87	0.991	0.589	

Average rate of silting(Th.Cum/Sq.km/Yr) in 16 year 0.991

Average rate of silting (mm/yr) in 16 years 0.991

Average rate of silting (M.Cum/yr) in 16 years 0.589

HIRAN-1 RESERVOIR

Name of State -Gujarat | Name of the District - Junagadh | Name of River - Hiran | Year of Impoundment - 1966

Catchment Area - 80.91 Sq.km | Reservoir Area at FRL - 3.35 Sq.km | MDDL - 31.24 metre | FRL - 38.58 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1966		21.65	-	-						
2	1987	21	20.22	-	-	1.43	1.43	6.61	0.842	0.068	

Average rate of silting(Th.Cum/Sq.km/Yr) in 21 year 0.842

Average rate of silting (mm/yr) in 21 years 0.842

Average rate of silting (M.Cum/yr) in 21 years 0.068

HIRAN-II RESERVOIR

Name of State -Gujarat | Name of the District - Junagadh | Name of River - Hiren | Year of Impoundment - 1981

Catchment Area - 168 Sq.km | Reservoir Area at FRL - 8.00 Sq.km | MDDL - 63.03 metre | FRL - 71.27 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1981		38.58	35.02	3.56						
2	1998	17	35.15	33.9	1.25	3.43	3.43	8.89	1.201	0.202	

Average rate of silting(Th.Cum/Sq.km/Yr) in 17 years 1.201

Average rate of silting (mm/yr) in 17 years 1.201

Average rate of silting (M.Cum/yr) in 17 years 0.202

KADANA RESERVOIR

Name of State -Gujarat | Name of the District - Dungarpur | Name of River - Mahi | Year of Impoundment - 1977

Catchment Area - 25486 Sq.km | Reservoir Area at FRL - 166 Sq.km | MDDL - 114 metres | FRL - 127.7 metres

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1977		1543	1203	340						
2	1980	3	1493	1173	320	50	50	3.24	0.654	16.667	
3	1983	3	1473	1098	375	20	70	4.54	0.262	6.667	
4	2000	17	1249.26	954.68	294.58	223.74	293.74	19.04	0.516	13.16	

Average rate of silting(Th.Cum/Sq.km/Yr) in 23 year 0.501

Average rate of silting (mm/yr) in 23 years 0.501

Average rate of silting (M.Cum/yr) in 23years 12.771

KAILA RESERVOIR

Name of State -Gujarat | Name of the District - Kachch | Name of River - Kaila | Year of Impoundment - 1956
Catchment Area - 178.05 Sq.km | Reservoir Area at FRL - 3.20 Sq.km | MDDL - N.A | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		13.98	-	-						
2	1987	31	8.86	-	-	5.12	5.12	36.62	0.928	0.165	

Average rate of silting(Th.Cum/Sq.km/Yr) in 31 year 0.928
Average rate of silting (mm/yr) in 31 years 0.928
Average rate of silting (M.Cum/yr) in 31 years 0.165

KANKAVATI RESERVOIR

Name of State -Gujarat | Name of the District - SurendraNagar | Name of River -Kankavati | Year of Impoundment - 1956
Catchment Area - 207.19 Sq.km | Reservoir Area at FRL - 3.54 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		14.62	-	-						
2	1987	31	10.53	-	-	4.09	4.09	27.98	0.637	0.132	

Average rate of silting(Th.Cum/Sq.km/Yr) in 31 year 0.637
Average rate of silting (mm/yr) in 31 years 0.637
Average rate of silting (M.Cum/yr) in 31 years 0.132

KARJAN RESERVOIR

Name of State -Gujarat | Name of the District - Narmada | Name of River - Karjan/Narmada | Year of Impoundment - 1984

Catchment Area - 1404 Sq.km | Reservoir Area at FRL - 36.77 Sq.km | MDDL - 78.00 metre | FRL - 115.250 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1984		630	581	49						
2	1991	7	622.05	599.06	22.99	7.95	7.95	1.26	0.809	1.136	
3	1992	1	625.56	589.08	36.48	-3.51	4.44	0.70	-	-	
4	1993	1	615.26	577.42	37.84	10.3	14.74	2.34	7.336	10.300	
5	1998	5	580.21	531.25	48.96	35.05	49.79	7.90	4.993	7.010	
6	2005	7	545.39	522.76	22.63	34.82	84.61	13.43	0.354	4.974	
7	2013	8	538.75	514.652	24.098	6.64	91.25	14.48	0.591	0.83	

Average rate of silting(Th.Cum/Sq.km/Yr) in 29 years 2.241

Average rate of silting (mm/yr) in 29 years 2.241

Average rate of silting (M.Cum/yr) in 29 years 3.147

KHODIYAR RESERVOIR

Name of State -Gujarat | Name of the District - Amreli | Name of River - Shetrunji | Year of Impoundment - 1967

Catchment Area - 383 Sq.km | Reservoir Area at FRL - 3.60 Sq.km | MDDL - 179.830 metre | FRL - 202.69 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1967		40.35	37.52	2.83						
2	1974	7	32.21	-	-	8.14	8.14	20.17	3.036	1.163	
3	1987	13	29.94	29.94	0	2.27	10.41	25.80	0.456	2.303	
4	2001	14	33.44	33.44	0	-3.5	6.91	17.13	-	-	
5	2002	1	33.98	33.98	0	-0.54	6.37	15.79	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 35 years 0.475

Average rate of silting (mm/yr) in 35 years 0.475

Average rate of silting (M.Cum/yr) in 35 years 0.182

LIMDI BHOGAVO RESERVOIR

Name of State -Gujarat | Name of the District - SurendraNagar | Name of River - Limdi Bhogavo | Year of Impoundment - 1960
Catchment Area - 331.50 Sq.km | Reservoir Area at FRL - 9.19 Sq.km | MDDL - N.A | N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1960		30.15	-	-						
2	1974	14	24.49	-	-	5.66	5.66	18.77	1.220	0.404	
3	1986	12	22.49	-	-	2	7.66	25.41	0.503	0.167	

Average rate of silting(Th.Cum/Sq.km/Yr) in 26 year 0.889
Average rate of silting (mm/yr) in 26 years 0.889
Average rate of silting (M.Cum/yr) in 26 years 0.295

MACHHANNALA RESERVOIR

Name of State -Gujarat | Name of the District - Panchmahal | Name of River - Machhan/Mahi | Year of Impoundment - 1982
Catchment Area - 245 Sq.km | Reservoir Area at FRL -7.96 Sq.km | MDDL -271.31m | FRL - 277.64m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1982		37.91	29.16	8.75						
2	1999	17	27.12	21.2	5.92	10.79	10.79	28.46	2.591	0.635	

Average rate of silting(Th.Cum/Sq.km/Yr) in 17 years 2.591
Average rate of silting (mm/yr) in 17 years 2.591
Average rate of silting (M.Cum/yr) in 17 years 0.635

MACHHU-I RESERVOIR

Name of State -Gujarat | Name of the District - Rajkot | Name of River - Machhu | Year of Impoundment - 1958

Catchment Area - 730 Sq.km | Reservoir Area at FRL -12 Sq.km | MDDL -114.30m | FRL - 135.33m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1958		83.13	81.42	1.71						
2	1989	31	75.79	75.79	0	7.34	7.34	8.83	0.324	0.237	
3	1994	5	75.09	75.09	0	0.7	8.04	9.67	0.192	0.140	

Average rate of silting(Th.Cum/Sq.km/Yr) in 36 year 0.306

Average rate of silting (mm/yr) in 36 years 0.306

Average rate of silting (M.Cum/yr) in 36 years 0.223

MACHHU-II RESERVOIR

Name of State -Gujarat | Name of the District - Rajkot | Name of River - Machhu | Year of Impoundment - 1972

Catchment Area - 1193 Sq.km | Reservoir Area at FRL -13.96 Sq.Km | MDDL - 47.24m | FRL - 57.3m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1972		100.56	90.78	9.78						Catchment Area has been updated as per information sent by State Govt
2	1997	25	60.70	58.46	2.24	39.86	39.86	39.64	1.336	1.594	
3	2004	7	87.906	82.102	3.804	-27.21	12.65	12.58	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 32 year 0.33

Average rate of silting (mm/yr) in 32 years 0.33

Average rate of silting (M.Cum/yr) in 32 years 0.40

MADHUVANTI RESERVOIR

Name of State -Gujarat | Name of the District - Junagarh | Name of River - Madhuvanti | Year of Impoundment - 1973

Catchment Area - 45.32 Sq.km | Reservoir Area at FRL - 2.27 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1973		12.14	-	-						
2	1986	13	11.65	-	-	0.49	0.49	4.04	0.832	0.038	

Average rate of silting(Th.Cum/Sq.km/Yr) in 13 year 0.832

Average rate of silting (mm/yr) in 13 years 0.832

Average rate of silting (M.Cum/yr) in 13 years 0.038

MAZAM RESERVOIR

Name of State -Gujarat | Name of the District - Sabarkantha | Name of River - Mazam/Sabarmati | Year of Impoundment - 1984

Catchment Area - 407 Sq.km | Reservoir Area at FRL - 13.1 Sq.km | MDDL - 150.77m | FRL - 157.1m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1984		44.65	37.37	7.28						
2	1998	14	44.08	37.33	6.75	0.57	0.57	1.28	0.100	0.041	

Average rate of silting(Th.Cum/Sq.km/Yr) in 14 year 0.100

Average rate of silting (mm/yr) in 14 years 0.100

Average rate of silting (M.Cum/yr) in 14 years 0.041

MESHWO RESERVOIR

Name of State -Gujarat | Name of the District - Banaskantha | Name of River - Meshwo/Sabarmati | Year of Impoundment - 1968

Catchment Area - 259 Sq.km | Reservoir Area at FRL - 11.16 Sq.km | MDDL - 156.76m | FRL -163.07m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1968		82.12	77.25	4.87						
2	1997	29	53.13	53.07	0.06	28.99	28.99	35.30	3.860	1.000	

Average rate of silting(Th.Cum/Sq.km/Yr) in 29 year 3.860

Average rate of silting (mm/yr) in 29 years 3.860

Average rate of silting (M.Cum/yr) in 29 years 1.000

MOJ RESERVOIR

Name of State -Gujarat | Name of the District - Rajkot | Name of River -Moj/ Bhadar | Year of Impoundment - 1956

Catchment Area - 440 Sq.km | Reservoir Area at FRL - 12.03 Sq.km | MDDL -59.13m | FRL - 72.54m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		52.98	50.07	2.91						
2	1974	18	42.48	-	-	10.5	10.5	19.82	1.326	0.583	
3	1986	12	38.94	-	-	3.54	14.04	26.50	0.670	0.295	
4	1999	13	36.69	36.69	0	2.25	16.29	30.75	0.393	0.173	

Average rate of silting(Th.Cum/Sq.km/Yr) in 43 years 0.861

Average rate of silting (mm/yr) in 43 years 0.861

Average rate of silting (M.Cum/yr) in 43 years 0.020

MUKTESHWAR RESERVOIR

Name of State -Gujarat | Name of the District -Banaskantha | Name of River - Saraswati | Year of Impoundment - 1990

Catchment Area - 306 Sq.km | Reservoir Area at FRL - 5.81 Sq.Km | MDDL -193.67m | FRL - 201.65m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1990		41	32.81	8.19						
2	1994	4	37.8	28.98	8.82	3.2	3.2	7.80	2.614	0.800	
3	1998	4	31.57	25.77	5.8	6.23	9.43	23.00	5.090	1.558	
4	2007	9	31.459	26.295	5.164	0.111	9.541	23.271	0.040	0.012	

Average rate of silting(Th.Cum/Sq.km/Yr) in 17 years 1.834

Average rate of silting (mm/yr) in 17 years 1.834

Average rate of silting (M.Cum/yr) in 17 years 0.561

NARA RESERVOIR

Name of State -Gujarat | Name of the District - Kachchh | Name of River - Nara | Year of Impoundment - 1975

Catchment Area - 233.03 Sq.km | Reservoir Area at FRL - 12.13 Sq.km | MDDL - N.A | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1975		41.06	-	-						
2	1987	12	39.7	-	-	1.36	1.36	3.31	0.486	0.113	

Average rate of silting(Th.Cum/Sq.km/Yr) in 12 year 0.486

Average rate of silting (mm/yr) in 12 years 0.486

Average rate of silting (M.Cum/yr) in 12 years 0.113

PANAM RESERVOIR

Name of State -Gujarat | Name of the District - Panchmahal | Name of River - Panam/Mahi | Year of Impoundment - 1977

Catchment Area - 2314 Sq.km | Reservoir Area at FRL - 89.80 Sq.km | MDDL - 99.70m | FRL - 127.44m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1977		735.8	679.2	56.6						
2	1984	7	697.55	624.85	72.7	38.25	38.25	5.20	2.361	5.464	
3	1990	6	720.19	671.95	48.24	-22.64	15.61	2.12	-	-	
4	2004	14	544.95	511.11	33.84	175.24	190.85	25.94	0.541	12.517	
5	2012	8	580.378	555.159	25.219	-35.428	155.422	21			

Average rate of silting(Th.Cum/Sq.km/Yr) in 35 years 1.919

Average rate of silting (mm/yr) in 35 years 1.919

Average rate of silting (M.Cum/yr) in 35 years 4.441

PATADUNGARI RESERVOIR

Name of State -Gujarat | Name of the District - Dohad | Name of River - Khan | Year of Impoundment - 1974

Catchment Area - 212.38 Sq.km | Reservoir Area at FRL -10.13 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		41.06	-	-						
2	1981	7	39.04	-	-	2.02	2.02	4.92	1.359	0.289	

Average rate of silting(Th.Cum/Sq.km/Yr) in 7 years 1.359

Average rate of silting (mm/yr) in 7 years 1.359

Average rate of silting (M.Cum/yr) in 7 years 0.289

PUNA RESERVOIR

Name of State -Gujarat | Name of the District - Jamnagar | Name of River - Sasoi | Year of Impoundment - 1954
Catchment Area - 137.27 Sq.km | Reservoir Area at FRL -N.A | MDDL - N.A | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1954		13.99	-	-						
2	1986	32	9.84	-	-	4.15	4.15	29.66	0.945	0.130	

Average rate of silting(Th.Cum/Sq.km/Yr) in 32 year 0.945
Average rate of silting (mm/yr) in 32 years 0.945
Average rate of silting (M.Cum/yr) in 32 years 0.130

RAJKI RESERVOIR

Name of State -Gujarat | Name of the District -Bhavnagar | Name of River - Malan | Year of Impoundment - 1964
Catchment Area - 88.06 Sq.km | Reservoir Area at FRL - 1.97 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1964		12.02	-	-						
2	1974	10	9.94	-	-	2.08	2.08	17.30	2.362	0.208	
3	1986	12	9.23	-	-	0.71	2.79	23.21	0.672	0.059	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 year 1.440
Average rate of silting (mm/yr) in 22 years 1.440
Average rate of silting (M.Cum/yr) in 22 years 0.127

RAMI RESERVOIR

Name of State -Gujarat | Name of the District -Vadodara | Name of River - Rami/Narmada | Year of Impoundment - 1983

Catchment Area - 25 Sq.km | Reservoir Area at FRL - 1.30 Sq.km | MDDL -184.00m | FRL - 196.35m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1983		7.08	6.61	0.47						
2	1999	16	4.55	4.49	0.06	2.53	2.53	35.73	6.325	0.158	

Average rate of silting(Th.Cum/Sq.km/Yr) in 16 years 6.325

Average rate of silting (mm/yr) in 16 years 6.325

Average rate of silting (M.Cum/yr) in 16 years 0.158

RANGHOLA RESERVOIR

Name of State -Gujarat | Name of the District - Bhavnagar | Name of River -Rangholi | Year of Impoundment - 1952

Catchment Area - 370.37 Sq.km | Reservoir Area at FRL - 10.58 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1952		44.52	-	-						
2	1974	22	42.42	-	-	2.1	2.1	4.72	0.258	0.095	
3	1986	12	36.68	-	-	5.74	7.84	17.61	1.292	0.478	

Average rate of silting(Th.Cum/Sq.km/Yr) in 34 year 0.623

Average rate of silting (mm/yr) in 34 years 0.623

Average rate of silting (M.Cum/yr) in 34 years 0.231

RUDRAMATA RESERVOIR

Name of State -Gujarat | Name of the District - Kachchh | Name of River - Pur(Khari) | Year of Impoundment - 1963
Catchment Area - 383.30 Sq.km | Reservoir Area at FRL - 8.19 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1963		64.78	-	-						
2	1987	24	61.16	-	-	3.62	3.62	5.59	0.394	0.151	

Average rate of silting(Th.Cum/Sq.km/Yr) in 24 year 0.394
Average rate of silting (mm/yr) in 24 years 0.394
Average rate of silting (M.Cum/yr) in 24 years 0.151

SANANDRO RESERVOIR

Name of State -Gujarat | Name of the District - Kachchh | Name of River - Kali | Year of Impoundment - 1956
Catchment Area - 147.62 Sq.km | Reservoir Area at FRL - 3.175 Sq.km | MDDL - N.A | FRL - 59.74M

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		12.28	-	-						
2	1974	18	10.35	-	-	1.93	1.93	15.72	0.726	0.107	
3	1986	12	5.24	-	-	5.11	7.04	57.33	2.885	0.426	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 1.590
Average rate of silting (mm/yr) in 30 years 1.590
Average rate of silting (M.Cum/yr) in 30 years 0.235

SANI RESERVOIR

Name of State -Gujarat | Name of the District -Jamnagar | Name of River - Sani | Year of Impoundment - 1984

Catchment Area - 506.00 Sq.km | Reservoir Area at FRL - 18.20 Sq.km | MDDL - 13.65m | FRL - 17.35m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1984		55.08	46.15	8.93						
2	2001	17	45.45	37.85	7.6	9.63	9.63	17.48	1.120	0.566	
3	2010	9	39.016	32.174	6.842	6.434	16.064	29.16	1.413	0.715	

Average rate of silting(Th.Cum/Sq.km/Yr) in 26 years 1.221

Average rate of silting (mm/yr) in 26 years 1.221

Average rate of silting (M.Cum/yr) in 26 years 0.618

SARTHI RESERVOIR

Name of State -Gujarat | Name of the District -Junagarh | Name of River - Sorthi(Vartu) | Year of Impoundment - 1974

Catchment Area - 197.57 Sq.km | Reservoir Area at FRL - 3.30 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		10.69	-	-						
2	1986	12	7.31	-	-	3.38	3.38	31.62	1.426	0.282	

Average rate of silting(Th.Cum/Sq.km/Yr) in 12 year 1.426

Average rate of silting (mm/yr) in 12 years 1.426

Average rate of silting (M.Cum/yr) in 12 years 0.282

SASOI RESERVOIR

Name of State -Gujarat | Name of the District - Jamnagar | Name of River - Sasoi | Year of Impoundment - 1954
Catchment Area - 562.03 Sq.km | Reservoir Area at FRL - 14.68 Sq.km | MDDL - 22.25m | FRL - 28.95m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1954		51	46.75	4.25						
2	1986	32	38.97	-	-	12.03	12.03	23.59	0.669	0.376	
3	2009	23	37.97	37.969	0.001	1	13.03	25.55	0.077	0.043	

Average rate of silting(Th.Cum/Sq.km/Yr) in 55 year 0.422
Average rate of silting (mm/yr) in 55 years 0.422
Average rate of silting (M.Cum/yr) in 55 years 0.237

SHETRUNJI RESERVOIR

Name of State -Gujarat | Name of the District - Bhavnagar | Name of River - Shetrunji | Year of Impoundment - 1959
Catchment Area - 4317 Sq.km | Reservoir Area at FRL - 67.34 Sq.km | MDDL - 45.15m | FRL - 55.53

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1959		415.41	374.83	40.58						
2	1988	29	372.54	361.49	11.05	42.87	42.87	10.32	0.342	1.478	Data of year 1996 has been modified as per State 's information
3	1996	8	308.69	299.9	8.79	63.85	106.72	25.69	1.849	7.981	
4	2000	4	291.49	286.18	5.31	17.2	123.92	29.83	0.996	4.300	
5	2008	8	334.19	328.44	5.75	-42.7	81.22	19.55			

Average rate of silting(Th.Cum/Sq.km/Yr) in 49 years 0.384
Average rate of silting (mm/yr) in 49 years 0.384
Average rate of silting (M.Cum/yr) in 49 years 1.658

SIPU RESERVOIR

Name of State -Gujarat | Name of the District - Banaskantha | Name of River - Sipu/Banas | Year of Impoundment - 1992

Catchment Area - 122 Sq.km | Reservoir Area at FRL - 28.87 Sq.km | MDDL -173.50m | FRL -186.43m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1992		177.8	156	21.8						
2	1998	6	133.05	115.42	17.63	44.75	44.75	25.17	61.134	7.458	
3	2007	9	161.43	145.4	16.03	-28.38	16.37	9.21	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 15 years 8.95

Average rate of silting (mm/yr) in 15 years 8.95

Average rate of silting (M.Cum/yr) in 15 years 1.1

SUKHI RESERVOIR

Name of State -Gujarat | Name of the District - Vadodra | Name of River - Sukhi/Narmada | Year of Impoundment - 1987

Catchment Area - 412 Sq.km | Reservoir Area at FRL - 31.74 Sq.Km | MDDL -135.6 | FRL - 147.82m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1987		178.47	167.14	11.33						
2	1997	10	164.08	156.08	8.0	14.39	14.39	8.06	3.493	1.439	
3	1999	2	175.14	164.24	10.9	-11.06	3.33	1.87	-	-	
3	2005	6	177.006	167.213	9.793	-1.866	1.464	0.82	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 18 year 0.20

Average rate of silting (mm/yr) in 18 years 0.20

Average rate of silting (M.Cum/yr) in 18 years 0.08

SUVI RESERVOIR

Name of State -Gujarat | Name of the District - Kachchh | Name of River - Suvi | Year of Impoundment - 1964
Catchment Area - 160.52 Sq.km | Reservoir Area at FRL - 3.10 Sq.km | MDDL - N.A | FRL - 42.67m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1964		14.28	-	-						
2	1987	23	10.45	-	-	3.83	3.83	26.82	1.037	0.167	

Average rate of silting(Th.Cum/Sq.km/Yr) in 23 year 1.037
Average rate of silting (mm/yr) in 23 years 1.037
Average rate of silting (M.Cum/yr) in 23 years 0.167

UND-I RESERVOIR

Name of State -Gujarat | Name of the District - Jamnagar | Name of River - Und | Year of Impoundment - 1988
Catchment Area - 769.00 Sq.km | Reservoir Area at FRL - 17.69 Sq.km | MDDL - 90.1m | FRL - 97.86m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1988		72.5	65.47	7.03						
2	2010	22	69.045	65.942	3.103	3.455	3.455	4.77	0.204	0.157	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 year 0.204
Average rate of silting (mm/yr) in 22 years 0.204
Average rate of silting (M.Cum/yr) in 22 years 0.157

UKAI RESERVOIR

Name of State -Gujarat | Name of the District - Tapi | Name of River - Tapi | Year of Impoundment - 1972
Catchment Area - 62225 Sq.km | Reservoir Area at FRL - 520 Sq.km | MDDL - 82.30 m | FRL - 105.15 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1972		8510	7097	1413						
2	1979	7	8240	6852	1388	270	270	3.17	0.620	38.571	
3	1983	4	7963	6803	1160	277	547	6.43	1.113	69.250	
4	1992	9	7496.8	6615.05	881.75	466.2	1013.2	11.91	0.832	51.800	
5	2001	9	7902	7144.2	757.8	-405.2	608	7.14	-	-	
6	2003	2	7414.29	6729.9	684.39	487.71	1095.71	12.88	3.92	243.855	

Average rate of silting(Th.Cum/Sq.km/Yr) in 31 year 0.568
Average rate of silting (mm/yr) in 31 years 0.568
Average rate of silting (M.Cum/yr) in 31 years 35.345

VARTU RESERVOIR

Name of State -Gujarat | Name of the District - Jamnagar | Name of River - Vartu | Year of Impoundment - 1964
Catchment Area - 170.94 Sq.km | Reservoir Area at FRL - 3.44 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1964		13.3	-	-						
2	1986	22	11.7	-	-	1.6	1.6	12.03	0.425	0.073	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 year 0.425
Average rate of silting (mm/yr) in 22 years 0.425
Average rate of silting (M.Cum/yr) in 22 years 0.073

VENU-II RESERVOIR

Name of State -Gujarat | Name of the District - Rajkot | Name of River - Venu/Bhadar | Year of Impoundment - 1989

Catchment Area - 751 Sq.km | Reservoir Area at FRL - 6.25 Sq.km | MDDL -49.00m | FRL -55.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1989		22.58	18.8	3.78						
2	1999	10	15.32	12.86	2.46	7.26	7.26	32.15	0.967	0.726	

Average rate of silting(Th.Cum/Sq.km/Yr) in 10 years 0.967

Average rate of silting (mm/yr) in 10 years 0.967

Average rate of silting (M.Cum/yr) in 10 years 0.726

VER-II RESERVOIR

Name of State -Gujarat | Name of the District - Tapi | Name of River - Ver/Tapi | Year of Impoundment - 1984

Catchment Area - 90 Sq.km | Reservoir Area at FRL - 5.81 Sq.km | MDDL -101m | FRL -115.8m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1984		38.3	37.05	1.25						
2	1998	14	32.63	32.36	0.27	5.67	5.67	14.80	4.500	0.405	

Average rate of silting(Th.Cum/Sq.km/Yr) in 14 year 4.500

Average rate of silting (mm/yr) in 14 years 4.500

Average rate of silting (M.Cum/yr) in 14 years 0.405

WADHOVAN BHOGAVO RESERVOIR

Name of State -Gujarat | Name of the District - SurendraNagar | Name of River - Wadhovan Bhogavo | Year of Impoundment - 1960
Catchment Area - 435.10 Sq.km | Reservoir Area at FRL - 5.57 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1960		18.15	-	-						
2	1986	26	15.48	-	-	2.67	2.67	14.71	0.236	0.103	

Average rate of silting(Th.Cum/Sq.km/Yr) in 26 year 0.236
Average rate of silting (mm/yr) in 26 years 0.236
Average rate of silting (M.Cum/yr) in 26 years 0.103

WADHOVAN BHOGAVO-II RESERVOIR

Name of State -Gujarat | Name of the District - SurendraNagar | Name of River - Wadhovan Bhogavo | Year of Impoundment - 1959
Catchment Area -569.77 Sq.km | Reservoir Area at FRL - 6.13 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1959		23.36	-	-						
2	1974	15	21.8	-	-	1.56	1.56	6.68	0.183	0.104	
3	1986	12	20.39	-	-	1.41	2.97	12.71	0.206	0.118	

Average rate of silting(Th.Cum/Sq.km/Yr) in 27 year 0.193
Average rate of silting (mm/yr) in 27 years 0.193
Average rate of silting (M.Cum/yr) in 27 years 0.110

WATRAK RESERVOIR

Name of State - Gujarat | Name of the District - Sabarkantha | Name of River - Watrak | Year of Impoundment - 1984

Catchment Area - 1113.70 Sq.km | Reservoir Area at FRL - 44.75 Sq.km | MDDL - 126.39m | FRL - 136.25 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1984		177	154.35	22.65						
2	2003	19	161.6	140.552	21.048	15.4	15.4	8.70	0.728	0.811	

Average rate of silting(Th.Cum/Sq.km/Yr) in 19 year 0.728

Average rate of silting (mm/yr) in 19 years 0.728

Average rate of silting (M.Cum/yr) in 19 years 0.811

BAIRA RESERVOIR

Name of State -Himachal pradesh | Name of the District - Chamba | Name of River -Baira | Year of Impoundment - 1981

Catchment Area - 662 Sq.km | Reservoir Area at FRL - 0.15 Sq.km | MDDL - 1114 metre | FRL - 1122.20 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1981		3.75	2.48	1.27						
2	2011	30	0.59	0.51	0.08	3.16	3.16	84.27	0.159	0.105	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 0.159

Average rate of silting (mm/yr) in 30 years 0.159

Average rate of silting (M.Cum/yr) in 30 years 0.105

BHAKRA RESERVOIR

Name of State - Himachal Pradesh | Name of the District - Bilaspur | Name of River - Sutlej | Year of Impoundment - 1958

Catchment Area - 56980 Sq.km | Reservoir Area at FRL - 166.00 Sq.km | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1958		9868.00	-	-						
2	1959	1	9867.84	-	-	0.16	0.16	0.00	0.003	0.160	
3	1963	4	9724.53	-	-	143.31	143.47	1.45	0.629	35.827	
4	1965	2	9631.92	-	-	92.61	236.08	2.39	0.813	46.305	
5	1966	1	9607.71	-	-	24.21	260.29	2.64	0.425	24.210	
6	1967	1	9556.01	-	-	51.7	311.99	3.16	0.907	51.700	
7	1968	1	9523.55	-	-	32.46	344.45	3.49	0.570	32.460	
8	1969	1	9507.11	-	-	16.44	360.89	3.66	0.289	16.440	
9	1970	1	9462.41	-	-	44.7	405.59	4.11	0.784	44.700	
10	1971	1	9447.57	-	-	14.84	420.43	4.26	0.260	14.840	
11	1972	1	9417.53	-	-	30.04	450.47	4.56	0.527	30.040	
12	1973	1	9395.39	-	-	22.14	472.61	4.79	0.389	22.140	
13	1974	1	9341.83	-	-	53.56	526.17	5.33	0.940	53.560	
14	1975	1	9320.98	-	-	20.85	547.02	5.54	0.366	20.850	
15	1976	1	9285.25	-	-	35.73	582.75	5.91	0.627	35.730	
16	1977	1	9259.82	-	-	25.43	608.18	6.16	0.446	25.430	
17	1979	2	9160.32	-	-	99.5	707.68	7.17	0.873	49.750	
18	1981	2	9091.14	-	-	69.18	776.86	7.87	0.607	34.590	
19	1983	2	9034.62	-	-	56.52	833.38	8.45	0.496	28.260	
20	1984	1	9007.28	-	-	27.34	860.72	8.72	0.480	27.340	
21	1986	2	8932.94	-	-	74.34	935.06	9.48	0.652	37.170	
22	1988	2	8855.72	-	-	77.22	1012.28	10.26	0.678	38.610	
23	1990	2	8736.25	-	-	119.47	1131.75	11.47	1.048	59.735	
24	1992	2	8681.57	-	-	54.68	1186.43	12.02	0.480	27.340	
25	1994	2	8585.29	-	-	96.28	1282.71	13.00	0.845	48.140	
26	1996	2	8533.49	-	-	51.8	1334.51	13.52	0.455	25.900	
27	1998	2	8477.64	-	-	55.85	1390.36	14.09	0.490	27.925	
28	2000	2	8385.58	6715.00	1670.58	92.06	1482.42	15.02	0.808	46.030	
29	2002	2	8321.76	6668.88	1652.88	63.82	1546.24	15.67	0.560	31.910	
30	2005	3	8144.17	6603.27	1540.9	177.59	1723.83	17.47	1.039	59.197	
31	2007	2	8042.45	6511.74	1530.71	101.72	1825.55	18.50	0.893	50.860	
32	2009	2	7930.06	6437.31	1492.75	112.39	1937.94	19.64	0.986	56.195	

33	2012	3	7769.66	6271.18	1498.48	160.4	2098.34	21.26	0.938	53.467	

Average rate of silting(Th.Cum/Sq.km/Yr) in 54 years	**0.682**
Average rate of silting (mm/yr) in 54 years	**0.682**
Average rate of silting (M.Cum/yr) in 54 years	**38.858**

CHAMERA-I RESERVOIR

Name of State -Himachal pradesh | Name of the District - Chamba | Name of River - Ravi | Year of Impoundment - 1994
Catchment Area - 4725 Sq.km | Reservoir Area at FRL - 9.30 Sq.km | MDDL - 747.00 metre | FRL - 760.00 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1994		391.3	109.6	281.7						
2	2010	16	237.1	104.05	133.05	154.2	154.2	39.41	2.040	9.638	

Average rate of silting(Th.Cum/Sq.km/Yr) in 24 year 2.040
Average rate of silting (mm/yr) in 24 years 2.040
Average rate of silting (M.Cum/yr) in 24 years 9.638

CHAMERA-II RESERVOIR

Name of State -Himachal pradesh | Name of the District - Chamba | Name of River - Ravi | Year of Impoundment - 2003
Catchment Area - 2593 Sq.km | Reservoir Area at FRL - 0.23 Sq.km | MDDL - 1152 metre | FRL - 1162 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	2003		2.25	1.66	0.59						
2	2010	7	1.84	1.51	0.33	0.41	0.41	18.22	0.023	0.059	

Average rate of silting(Th.Cum/Sq.km/Yr) in 7 year 0.023
Average rate of silting (mm/yr) in 7 years 0.023
Average rate of silting (M.Cum/yr) in 7 years 0.059

PONG RESERVOIR

Name of State -Himachal pradesh | Name of the District - Kangra | Name of River - Beas | Year of Impoundment - 1974

Catchment Area -12562 Sq.km | Reservoir Area at FRL - 260.66 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		8579	-	-						
2	1980	6	8407.91	-	-	171.09	171.09	1.99	2.270	28.515	
3	1982	2	8347.33	-	-	60.58	231.67	2.70	2.411	30.290	
4	1984	2	8257.51	--	-	89.82	321.49	3.75	3.575	44.910	
5	1986	2	8159.25	-	-	98.26	419.75	4.89	3.911	49.130	
6	1988	2	8114.09		-	45.16	464.91	5.42	1.797	22.580	
7	1989	1	8088.53	-	-	25.56	490.47	5.72	2.035	25.560	
8	1990	1	8070.79	-	-	17.74	508.21	5.92	1.412	17.740	
9	1991	1	8052.86	-	-	17.93	526.14	6.13	1.427	17.930	
10	1992	1	8041.88	-	-	10.98	537.12	6.26	0.874	10.980	
11	1993	1	8033.27	-	-	8.61	545.73	6.36	0.685	8.610	
12	1994	1	8025.36	-	-	7.91	553.64	6.45	0.630	7.910	
13	1996	2	7983.04	-	-	42.32	595.96	6.95	1.684	21.160	
14	1997	1	7964.12	-	-	18.92	614.88	7.17	1.506	18.920	
15	1998	1	7942.43	-	-	21.69	636.57	7.42	1.727	21.690	
16	1999	1	7918.06	-	-	24.37	660.94	7.70	1.940	24.37	
17	2000	1	7896.04	-	-	22.02	682.96	7.96	1.753	22.02	
18	2001	1	7887.42	-	-	8.62	691.58	8.06	0.686	8.62	
19	2002	1	7871.6	-	-	15.82	707.4	8.25	1.259	15.82	
20	2003	1	7850.9	-	-	20.7	728.1	8.49	1.648	20.7	
21	2004	1	7828.99	-	-	21.91	750.01	8.74	1.744	21.91	
22	2005	1	7812.66	-	-	16.33	766.34	8.93	1.300	16.33	
23	2006	1	7789.25	-	-	23.41	789.75	9.21	1.864	23.41	
24	2007	1	7764.53	-	-	24.72	814.47	9.49	1.968	24.72	
25	2008	1	7742.49	-	-	22.04	836.51	9.75	1.754	22.04	
26	2009	1	7719.39	-	-	23.1	859.61	10.02	1.839	23.1	
27	2010	1	7699.25	-	-	20.14	879.75	10.25	1.603	20.14	
28	2012	2	7651.71	-	-	47.54	927.29	10.81	1.892	23.77	

Average rate of silting(Th.Cum/Sq.km/Yr) in 38 years 1.943

Average rate of silting (mm/yr) in 38 years 1.943

Average rate of silting (M.Cum/yr) in38 years 24.402

GETALSUD RESERVOIR

Name of State - Jharkhand | Name of the District - Ranchi | Name of River - Subarnrekha | Year of Impoundment - 1971
Catchment Area - 725.00 Sq.km | Reservoir Area at FRL - 34.40 Sq.km | MDDL - 579.09m | FRL - 590.06 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.cu.m.)			Average Annual Inflow(Mcum)	Loss of Capacity (Cumulative)		Observed Rate of Siltation		Remarks
			Gross	Live	Dead		M.Cu.m	% to original capacity	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	5	6	7	4	8	9	10	11	12
1	1971		288.63	231.89	56.74						
2	2001	30	267.57	223.48	44.09	21.06	21.06	7.30	0.968	0.702	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 0.968
Average rate of silting (mm/yr) in 30 years 0.968
Average rate of silting (M.Cum/yr) in 30 years 0.702

KONAR RESERVOIR

Name of State - Jharkhand (then Bihar) | Name of the District - Hazaribagh | Name of River - Konar | Year of Impoundment - 1955
Catchment Area - 997.15 Sq.km | Reservoir Area at FRL - 23.15 Sq.km | MDDL - 410.56 m | FRL - 425.80 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1955		281.13	220.69	60.44						
2	1996	41	209.65	175.453	34.197	71.48	71.48	25.43	1.748	1.743	

Average rate of silting(Th.Cum/Sq.km/Yr) in 41 year 1.748
Average rate of silting (mm/yr) in 41 years 1.748
Average rate of silting (M.Cum/yr) in 41 years 1.743

MAITHON RESERVOIR

Name of State - Jharkhand (then Bihar) | Name of the District - Jamtara | Name of River - Barakar | Year of Impoundment - 1955

Catchment Area - 6294 Sq.km | Reservoir Area at FRL - N.A. | MDDL - 132.56 m | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1955		1348.80	-	-						
2	1963	8	1285.70	-	-	63.10	63.10	4.68	1.253	7.887	
3	1965	2	1275.00	-	-	10.70	73.80	5.47	0.850	5.350	
4	1971	6	1239.60	-	-	35.40	109.20	8.10	0.937	5.900	
5	1979	8	1194.00	-	-	45.60	154.80	11.48	0.906	5.700	
6	1987	8	1134.00	-	-	60.00	214.80	15.93	1.192	7.500	
7	1994	7	1084.76	-	-	49.24	264.04	19.58	1.118	7.034	

Average rate of silting(Th.Cum/Sq.km/Yr) in 39 year 1.076

Average rate of silting (mm/yr) in 39 years 1.076

Average rate of silting (M.Cum/yr) in 39 years 6.770

MAYURAKSHI RESERVOIR

Name of State - Jharkhand | Name of the District - Dumka | Name of River - Mayurakshi | Year of Impoundment - 1954

Catchment Area - 1860 Sq.km | Reservoir Area at FRL - 67.50 Sq.km | MDDL - 106.38 metre | FRL - 121.31 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1954		608.20	544.40	63.8						
2	1965	11	581.42			26.78	26.78	4.40	1.309	2.435	
3	1970	5	561.01			20.41	47.19	7.76	2.195	4.082	
4	1973	3	539.99			21.02	68.21	11.22	3.767	7.007	
5	1980	7	538.30			1.69	69.9	11.49	0.130	0.241	
6	1995	15	515.61			22.69	92.59	15.22	0.813	1.513	
7	2001	6	559.49	509.63	49.86	-43.88	48.71	8.01	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 47 year 0.557

Average rate of silting (mm/yr) in 47 years 0.557

Average rate of silting (M.Cum/yr) in 47 years 1.036

PANCHET RESERVOIR

Name of State - Jharkhand (then Bihar) **Name of the District - Dhanbad** **Name of River - Damodar** **Year of Impoundment - 1956**

Catchment Area - 10966 Sq.km **Reservoir Area at FRL - 153.38 Sq.km** **MDDL - 119.48 m** **FRL -124.97 m**

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		1581.00	1344.80	236.20						
2	1962	6	1501.80	-	-	79.20	79.20	5.01	1.20	13.20	
3	1964	2	1484.30	-	-	17.50	96.70	6.12	0.80	8.75	
4	1966	2	1475.20	-	-	9.10	105.80	6.69	0.41	4.55	
5	1974	8	1435.80	-	-	39.40	145.20	9.18	0.45	4.93	
6	1985	11	1395.60	-	-	40.20	185.40	11.73	0.33	3.65	
7	1996	11	1358.09	-	-	37.51	222.91	14.10	0.31	3.41	
8	2011	15	1193.46	1088.12	105.34	164.63	387.54	24.51	1.00	10.98	

Average rate of silting(Th.Cum/Sq.km/Yr) in 55 year **0.631**

Average rate of silting (mm/yr) in 55 years **0.631**

Average rate of silting (M.Cum/yr) in 55 years **6.920**

TENUGHAT RESERVOIR

Name of State - Jharkhand **Name of the District - Bokaro** **Name of River - Damodar** **Year of Impoundment - 1970**

Catchment Area - 4481 Sq.km **Reservoir Area at FRL - 63.50 Sq.km** **MDDL - N.A** **FRL - 268.83 m**

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.cu.m.)			Average Annual Inflow(Mcum)	Loss of Capacity (Cumulative)		Observed Rate of Siltation		Remarks
			Gross	Live	Dead		M.Cu.m	% to original capacity	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	5	6	7	4	8	9	10	11	12
1	1970		592.18	330.41	211.77						At M.R.L. 260.91 m
2	2001	31	492.68	331.72	160.96	99.5	99.5	16.80	0.716	3.210	

* Gross storage capacity at FRL 268.84 is 1013.21.

Due to land acquisition problems Maintained Reservoir Level is 260.91 meter with gross storage capacity 592.18 M.cum

Average rate of silting(Th.Cum/Sq.km/Yr) in 31 year **0.716**

Average rate of silting (mm/yr) in 31 years **0.716**

Average rate of silting (M.Cum/yr) in 31 years **3.210**

TILAIYA RESERVOIR

Name of State - Jharkhand (then Bihar) | Name of the District - Hazaribagh | Name of River - Barakar | Year of Impoundment - 1953
Catchment Area - 984.20 Sq.km | Reservoir Area at FRL - 38.44 Sq.km | MDDL - 363.32m | FRL - 368.80 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1953		335.83	260.59	75.24						
2	1997	44	214.91	140.134	74.776	120.92	120.92	36.01	2.792	2.748	

Average rate of silting(Th.Cum/Sq.km/Yr) in 43 year 2.792
Average rate of silting (mm/yr) in 43 years 2.792
Average rate of silting (M.Cum/yr) in 43 years 2.748

ALMATTI RESERVOIR

Name of State -Karnataka | Name of the District - Bijapur | Name of River - Krishna | Year of Impoundment - 2001
Catchment Area - 35925 Sq.km | Reservoir Area at FRL - 493.48 Sq.km | MDDL -506.87m | FRL -519.6m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	2001		3486	2986	500						
2	2007	6	3335.66	3031.87	303.79	150.34	150.34	4.31	0.697	25.057	

Average rate of silting(Th.Cum/Sq.km/Yr) in 6 years 0.697
Average rate of silting (mm/yr) in 6 years 0.697
Average rate of silting (M.Cum/yr) in 6 years 25.057

BHASAVASAGARA RESERVOIR

Name of State -Karnataka | Name of the District - Bijapur/Raichur | Name of River - Krishna | Year of Impoundment - 1982

Catchment Area - 47850 Sq.km | Reservoir Area at FRL - 132.06 Sq.km | MDDL - 485.52m | FRL -492.25m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1982		1071.55	868.55	203						
2	1989-91	9	815.76	762.17	53.59	255.79	255.79	23.87	0.594	28.421	
3	2007	16	783.95	768.45	15.5	31.81	287.6	26.840	0.04	1.99	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 years 0.240

Average rate of silting (mm/yr) in 25 years 0.240

Average rate of silting (M.Cum/yr) in 25 years 11.504

BHADRA RESERVOIR

Name of State -Karnataka | Name of the District - Chikkamaglur | Name of River - Bhadra | Year of Impoundment - 1964

Catchment Area - 1968.40 Sq.km | Reservoir Area at FRL - 117.3 Sq.km | MDDL -631.54m | FRL -657.75m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1964		2025.87	1785.15	240.72						
2	2006	42	1964.95	1716.4	248.6	60.92	60.92	3.01	0.737	1.450	
2	2011	5	1930.125	1709.509	220.616	34.825	95.745	4.87	9.728	19.149	

Average rate of silting(Th.Cum/Sq.km/Yr) in 47 year 1.035

Average rate of silting (mm/yr) in 47 years 1.035

Average rate of silting (M.Cum/yr) in 47 years 2.037

GHATPRABHA RESERVOIR

Name of State - Karnataka | Name of the District - Belgaum | Name of River - Ghatprabha | Year of Impoundment - 1974

Catchment Area - 1411.55 Sq.km | Reservoir Area at FRL - 72.588 Sq.km | MDDL - 633.292 metre | FRL - 662.94 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.cu.m.)			Average Annual Inflow(Mcum)	Loss of Capacity (Cumulative)		Observed Rate of Siltation		Remarks
			Gross	Live	Dead		M.Cu.m	% to original capacity	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	5	6	7	4	8	9	10	11	12
1	1974		1434.136	1366.136	68						
2	2000	26	1318.612	1277.152	41.46	115.524	115.524	8.06	3.148	4.443	

Average rate of silting(Th.Cum/Sq.km/Yr) in 26 year 3.148

Average rate of silting (mm/yr) in 26 years 3.148

Average rate of silting (M.Cum/yr) in 26 years 4.443

HARANGI RESERVOIR

Name of State -Karnataka | Name of the District - Kodagu | Name of River - Harangi | Year of Impoundment - 1982

Catchment Area - 419.58 Sq.km | Reservoir Area at FRL - 19.1 Sq.km | MDDL - 849.984 metre | FRL - 871.42 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1982		240.69	228.59	12.1						
2	2009	27	217.12	207.82	9.3	23.57	23.57	9.79	2.081	0.873	

Average rate of silting(Th.Cum/Sq.km/Yr) in 27 years 2.081

Average rate of silting (mm/yr) in 27 years 2.081

Average rate of silting (M.Cum/yr) in 27 years 0.873

HEMAVATHY RESERVOIR

Name of State -Karnataka | Name of the District - Hassan | Name of River - Hemavathy | Year of Impoundment - 1979
Catchment Area - 2810 Sq.km | Reservoir Area at FRL - 91.62 Sq.km | MDDL - 872.338 m | FRL - 890.63 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1979		1050.63	1012.6	38.03						
2	2009	30	974.5	920.81	53.69	76.13	76.13	7.25	0.903	2.538	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 years 0.903
Average rate of silting (mm/yr) in 30 years 0.903
Average rate of silting (M.Cum/yr) in 30 years 2.538

KABINI RESERVOIR

Name of State -Karnataka | Name of the District -Mysore | Name of River - Kabini | Year of Impoundment - 1974
Catchment Area - 2141.90 Sq.km | Reservoir Area at FRL - 61.342 Sq.km | MDDL - 690.67m | FRL -696.16m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		552.63	443.63	109						
2	2010	36	529.57	457.14	72.43	23.06	23.06	4.17	0.30	0.641	

Average rate of silting(Th.Cum/Sq.km/Yr) in 36 year 0.30
Average rate of silting (mm/yr) in 36 years 0.30
Average rate of silting (M.Cum/yr) in 36 years 0.641

KRISHNARAJA SAGAR RESERVOIR

Name of State -Karnataka | Name of the District -Mandya | Name of River - Cauvery | Year of Impoundment - 1932

Catchment Area - 10620 Sq.km | Reservoir Area at FRL - 131 Sq.km | MDDL - 737.005m | FRL -752.49m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1932		1400.31	1275.69	124.62						
2	1986-90	58	1348.2	1262.35	85.85	52.11	52.11	3.72	0.085	0.898	
3	2009	19	1306.4	1217.28	89.12	41.8	93.91	6.71	0.21	2.2	

Average rate of silting(Th.Cum/Sq.km/Yr) in 77 year 0.115

Average rate of silting (mm/yr) in 77 years 0.115

Average rate of silting (M.Cum/yr) in 77 years 1.220

LINGANAMAKKI RESERVOIR

Name of State -Karnataka | Name of the District - Shimoga | Name of River - Sharavathy | Year of Impoundment - 1963

Catchment Area - 1991.71 Sq.km | Reservoir Area at FRL - 317.28 Sq.km | MDDL - 522.73 metre | FRL - 554.43 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The catchment area modified as per CWC survey
1	1963		4435.35	4294.04	141.31						
2	1999	36	4263.52	4198.96	64.56	171.83	171.83	3.87	2.396	4.773	

Average rate of silting(Th.Cum/Sq.km/Yr) in 36 years 2.396

Average rate of silting (mm/yr) in 36 years 2.396

Average rate of silting (M.Cum/yr) in 36 years 4.773

MALAPRABHA RESERVOIR

Name of State -Karnataka | Name of the District - Belgaum | Name of River - Malaprabha | Year of Impoundment - 1972
Catchment Area -2176 Sq.km | Reservoir Area at FRL - 130.17 Sq.km | MDDL -619.35m | FRL - 633.8m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1972		1064.049	967.189	96.86						To find the annual rate of decrease in reservoir capacity for the year 1987-91, the original capacity of the reservoir in 1979-81 has been considered.
2	1979-81	9	1239.657	1106.657	133	-	-	-			
3	1987-91	10	1161.08	1072.08	89	78.57	78.57	6.34	3.611	7.857	

Average rate of silting(Th.Cum/Sq.km/Yr) in 19 year 3.611
Average rate of silting (mm/yr) in 19 years 3.611
Average rate of silting (M.Cum/yr) in 19 years 7.857

TUNGABHADRA RESERVOIR

Name of State -Karnataka | Name of the District - Koppal | Name of River - Tungabhadra | Year of Impoundment - 1953
Catchment Area -28180 Sq.km | Reservoir Area at FRL - 378 Sq.km | MDDL - 482.19m | FRL - 497.74 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1953		3751.17	3718.34	32.83						
2	1963	10	3246.79	3239.75	7.04	504.38	504.38	13.45	1.790	50.438	
3	1972	9	3428.6	3426.53	2.07	-181.81	322.57	8.60	-	-	
4	1978	6	3332.75	3332.75	0	95.85	418.42	11.15	0.567	15.975	
5	1981	3	3275.68	3275.68	0	57.07	475.49	12.68	0.675	19.023	
6	1985	4	3166.74	3166.74	0	108.94	584.43	15.58	0.97	27.235	
7	1993	8	3157.53	3157.53	0	9.21	593.64	15.83	0.04	1.151	
8	2004	11	2954.58	2954.58	0	202.95	796.59	21.24	0.65	18.450	
9	2008	4	2855.89	2855.89	0	98.69	895.28	23.87	0.88	24.673	

Average rate of silting(Th.Cum/Sq.km/Yr) in 55 year 0.578
Average rate of silting (mm/yr) in 55 years 0.578
Average rate of silting (M.Cum/yr) in 55 years 16.278

ANIYARANKAL RESERVOIR

Name of State -Kerala | Name of the District - Idukki | Name of River - Panniar | Year of Impoundment - 1964

Catchment Area -65.68 Sq.km | Reservoir Area at FRL - 4.86 Sq.km | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1964		49.84	-	-						
2	1997	33	34.43	-	-	15.41	15.41	30.92	7.110	0.467	

Average rate of silting(Th.Cum/Sq.km/Yr) in 33 year 7.110

Average rate of silting (mm/yr) in 33 years 7.110

Average rate of silting (M.Cum/yr) in 33 years 0.467

CHULLIAR RESERVOIR

Name of State -Kerala | Name of the District - Palakkad | Name of River - Bharatapuzha | Year of Impoundment - 1964

Catchment Area -27.80 Sq.km | Reservoir Area at FRL - 1.65 Sq.km | MDDL -136.55 m | FRL - 154.08 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The catchment area has been modified as per the data sent by the State Govt.
1	1964		13.7	13.667	0.033						
2	1994	30	10.601			3.099	3.099	22.62	3.469	0.103	
3	2009	15	13.225			-2.624	0.475	3.47	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 45 year 0.380

Average rate of silting (mm/yr) in 45 years 0.380

Average rate of silting (M.Cum/yr) in 45 years 0.069

IDAMALAYAR RESERVOIR

Name of State -Kerala | Name of the District - Idukki | Name of River - Idamalayar | Year of Impoundment - 1986

Catchment Area - 481.79 Sq.km | Reservoir Area at FRL - 28.30 Sq.km | MDDL - 115.00 m | FRL - 169.00 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1986		1208.23	1136.23	72						
2	2011	25	1176.187	1135.227	40.96	32.043	32.043	2.65	2.660	1.282	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 year 2.660

Average rate of silting (mm/yr) in 25 years 2.660

Average rate of silting (M.Cum/yr) in 25 years 1.282

IDUKKI RESERVOIR

Name of State -Kerala | Name of the District - Idukki | Name of River - Periyar | Year of Impoundment - 1974

Catchment Area -649.31 Sq.km | Reservoir Area at FRL - 60.63 Sq.km | MDDL - 694.94 m | FRL - 732.43 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		1998.57	1461.81	536.76						
2	1999	25	1972.72	1453.04	519.68	25.85	25.85	1.29	1.592	1.034	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 year 1.592

Average rate of silting (mm/yr) in 25 years 1.592

Average rate of silting (M.Cum/yr) in 25 years 1.034

KAKKI RESERVOIR

Name of State -Kerala | Name of the District - Pathanamthitta | Name of River - Kakki | Year of Impoundment - 1966

Catchment Area - 217.55 Sq.km | Reservoir Area at FRL -17.52 metre | MDDL - 908.30 m | FRL - 981.46 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1966		454.07	446.25	7.82						
2	1999	33	428.78	420.98	7.8	25.29	25.29	5.57	3.523	0.766	

Average rate of silting(Th.Cum/Sq.km/Yr) in 33 year 3.523

Average rate of silting (mm/yr) in 33 years 3.523

Average rate of silting (M.Cum/yr) in 33 years 0.766

KALLARKUTTY RESERVOIR

Name of State -Kerala | Name of the District - Idukki | Name of River - Mudirapuzha | Year of Impoundment - 1962

Catchment Area - 759.85 Sq.km | Reservoir Area at FRL - 0.65 Sq.km | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1962		6.8	-	-						
2	1992	30	6.052	-	-	0.748	0.748	11.00	0.033	0.025	The name of the river has been modified (Periyar to Mudirapuzha)

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 0.033

Average rate of silting (mm/yr) in 30 years 0.033

Average rate of silting (M.Cum/yr) in 30 years 0.025

KUNDALA RESERVOIR

Name of State -Kerala | Name of the District - Idukki | Name of River - Palar | Year of Impoundment - 1948

Catchment Area - 37.55 Sq.km | Reservoir Area at FRL - 0.47 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The name of the river has been modified from Periyar to Palar
1	1948		7.79	-	-						
2	1994	46	6.528	-	-	1.262	1.262	16.20	0.731	0.027	

Average rate of silting(Th.Cum/Sq.km/Yr) in 46 year 0.731

Average rate of silting (mm/yr) in 46 years 0.731

Average rate of silting (M.Cum/yr) in 46 years 0.027

KUTTIYADI RESERVOIR

Name of State -Kerala | Name of the District - Kozhikode | Name of River - Kuttiyadi | Year of Impoundment - 1972

Catchment Area - 39.00 Sq.km | Reservoir Area at FRL - 2.79 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1972		38.4	-	-						
2	1989	17	27.28	-	-	11.12	11.12	28.96	16.772	0.654	

Average rate of silting(Th.Cum/Sq.km/Yr) in 17 year 16.772

Average rate of silting (mm/yr) in 17 years 16.772

Average rate of silting (M.Cum/yr) in 17 years 0.654

MADUPETTY RESERVOIR

Name of State -Kerala | Name of the District - Idukki | Name of River - Palar | Year of Impoundment - 1967

Catchment Area - 104.90 Sq.km | Reservoir Area at FRL - 3.24 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The name of the
1	1967		55.22	-	-						river has been
2	1995	28	48.787	-	-	6.433	6.433	11.65	2.190	0.230	modified from
											Periyar to Palar

Average rate of silting(Th.Cum/Sq.km/Yr) in 28 years 2.190

Average rate of silting (mm/yr) in 28 years 2.190

Average rate of silting (M.Cum/yr) in 28 years 0.230

MALAMPUZHA RESERVOIR

Name of State -Kerala | Name of the District - Palakkad | Name of River - Bharathapuzha | Year of Impoundment - 1955

Catchment Area - 147.63 Sq.km | Reservoir Area at FRL - 24.83 Sq.km | MDDL - 91.44 m | FRL - 115.06 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The name of the
1	1955		228.4	-	-						river has been
2	1977	22	220.15	-	-	8.25	8.25	3.61	2.540	0.375	modified from
3	1990	13	208.13	-	-	12.02	20.27	8.87	6.263	0.925	Malampuzha to
4	2006	16	195.328	-	-	12.802	33.072	14.48	5.420	0.800	Bharathapuzha as

Average rate of silting(Th.Cum/Sq.km/Yr) in 51 year 4.393

Average rate of silting (mm/yr) in 51 years 4.393

Average rate of silting (M.Cum/yr) in 51 years 0.648

MANGALAM RESERVOIR

Name of State -Kerala | Name of the District - Palakkad | Name of River - Cherukunnapuzha | Year of Impoundment - 1956

Catchment Area - 48.85 Sq.km | Reservoir Area at FRL - 3.96 Sq.Km | MDDL - 69.96 m | FRL -77.88 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The name of the river has been modified from Bhartapuzha to Cherukunnapuzha
1	1956		25.47	-	-						
2	1985	29	16.5	-	-	8.97	8.97	35.22	6.332	0.309	
3	2008	23	20.3	-	-	-3.8	5.17	20.30	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 52 years 2.035

Average rate of silting (mm/yr) in 52 years 2.035

Average rate of silting (M.Cum/yr) in 52 years 0.099

MEENKARA RESERVOIR

Name of State -Kerala | Name of the District - Palakkad | Name of River - Bharathapuza | Year of Impoundment - 1960

Catchment Area - 90.70 Sq.km | Reservoir Area at FRL - 2.495 Sq.km | MDDL - 143.64 m | FRL - 156.36 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											Name of river has been corrected
1	1960		11.33	10.33	1						
2	1989	29	8.135	-	-	3.195	3.195	28.20	1.215	0.110	
3	2009	20	9.846	9.253	0.593	-1.711	1.484	13.10	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 49 years 0.334

Average rate of silting (mm/yr) in 49 years 0.334

Average rate of silting (M.Cum/yr) in 49 years 0.030

NEYYAR RESERVOIR

Name of State -Kerala | Name of the District - Thiruvananthapuram | Name of River - Neyyar | Year of Impoundment - 1964

Catchment Area - 40.00 Sq.km | Reservoir Area at FRL - 9.10 Sq.km | MDDL - 65.00 m | FRL - 84.734 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1964		96.034	85.51	10.524						
2	2011	47	88.66	86.39	2.27	7.374	7.374	7.68	3.922	0.157	

Average rate of silting(Th.Cum/Sq.km/Yr) in 47 year 3.922

Average rate of silting (mm/yr) in 47 years 3.922

Average rate of silting (M.Cum/yr) in 47 years 0.157

PEECHI RESERVOIR

Name of State -Kerala | Name of the District - Thrissur | Name of River - Manali | Year of Impoundment - 1957

Catchment Area - 107.10 Sq.km | Reservoir Area at FRL - 12.95 Sq.km | MDDL -53.34 m | FRL - 79.25 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1957		110.43	108.15	2.28						
2	1982	25	87.62	-	-	22.81	22.81	20.66	8.519	0.912	
3	1995	13	79.61	-	-	8.01	30.82	27.91	5.753	0.616	
4	2004	9	96.414	96.41	0.004	-16.804	14.016	12.69	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 47 year 2.784

Average rate of silting (mm/yr) in 47 years 2.784

Average rate of silting (M.Cum/yr) in 47 years 0.298

PONMUDI RESERVOIR

Name of State -Kerala | Name of the District - Idukki | Name of River - Panniyar | Year of Impoundment - 1962

Catchment Area - 220.52 Sq.km | Reservoir Area at FRL - 2.79 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1962		51.54	-	-						
2	1992	30	40.46	-	-	11.08	11.08	21.50	1.675	0.369	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 1.675

Average rate of silting (mm/yr) in 30 years 1.675

Average rate of silting (M.Cum/yr) in 30 years 0.369

POOMALA RESERVOIR

Name of State -Kerala | Name of the District - Thrissur | Name of River -N.A | Year of Impoundment - 1968

Catchment Area - 1.17 Sq.km | Reservoir Area at FRL - 0.13 Sq.km | MDDL -N.A | FRL - 92.96 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1968		0.58	-	-						
2	2010	42	0.569	-	-	0.011	0.011	1.90	0.224	0.0003	

Average rate of silting(Th.Cum/Sq.km/Yr) in 42 year 0.224

Average rate of silting (mm/yr) in 42 years 0.224

Average rate of silting (M.Cum/yr) in 42 years 0.0003

PORINNGALKUTHU RESERVOIR

Name of State -Kerala | Name of the District - Thrissur | Name of River - Chalakudi | Year of Impoundment - 1957

Catchment Area - 512 Sq.km | Reservoir Area at FRL - 2.85 Sq.km | MDDL - 405.69 m | FRL - 423.98 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1957		31.99	-	-						
2	1993	36	23.833	-	-	8.157	8.157	25.50	0.443	0.227	

Average rate of silting(Th.Cum/Sq.km/Yr) in 36 year 0.443

Average rate of silting (mm/yr) in 36 years 0.443

Average rate of silting (M.Cum/yr) in 36 years 0.227

POTHUNDY RESERVOIR

Name of State -Kerala | Name of the District - Palakkad | Name of River - Bharathapuzha | Year of Impoundment - 1971

Catchment Area - 30.82 Sq.km | Reservoir Area at FRL - 4.14 Sq.km | MDDL -91.44 m | FRL - 108.204 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											Name of river has been corrected
1	1971		52.38	-	-						
2	1987	16	49.935	-	-	2.445	2.445	4.67	4.958	0.153	
3	2009	23	49.109	42.875	6.234	0.826	3.271	6.24	1.165	0.036	

Average rate of silting(Th.Cum/Sq.km/Yr) in 38 years 2.721

Average rate of silting (mm/yr) in 38 years 2.721

Average rate of silting (M.Cum/yr) in 38 years 0.084

GANDHI SAGAR RESERVOIR

Name of State -Madhya Pradesh | Name of the District -Mandsaur | Name of River - Chambal | Year of Impoundment - 1960
Catchment Area - 23025 Sq.km | Reservoir Area at FRL - 72.3 Sq.km | MDDL - 381.00 m | FRL - 400.00 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1960		7746	6910	836						
2	1975	15	7413	6827	586	333	333	4.30	0.964	22.200	
3	1989	14	7323	6798	525	90	423	5.46	0.279	6.429	
4	2001	12	7226.15	6668.739	557.411	96.85	519.85	6.71	0.351	8.071	

Average rate of silting(Th.Cum/Sq.km/Yr) in 41 year 0.551
Average rate of silting (mm/yr) in 41 years 0.551
Average rate of silting (M.Cum/yr) in 41 years 12.679

ASOLAMENDHA RESERVOIR

Name of State -Maharashtra | Name of the District - Chandrapur | Name of River - Pathari | Year of Impoundment - 1918
Catchment Area - 246 Sq.km | Reservoir Area at FRL - 14.81 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The name of the river has been modified from Jadam to Pathari
1	1918		92.96	-	-						
2	1987	69	65.94	-	-	27.02	27.02	29.07	1.592	0.392	
3	1994	7	62.99	-	-	2.95	29.97	32.24	1.713	0.421	

Average rate of silting(Th.Cum/Sq.km/Yr) in 76 year 1.603
Average rate of silting (mm/yr) in 76 years 1.603
Average rate of silting (M.Cum/yr) in 76 years 0.394

BENDSURA RESERVOIR

Name of State -Maharashtra | Name of the District - Beed | Name of River - Bendsura | Year of Impoundment - 1955

Catchment Area - 188.42 Sq.km | Reservoir Area at FRL - 1.80 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1955		13.12	-	-						
2	1981	26	9.579	-	-	3.541	3.541	26.99	0.723	0.136	
3	1990	9	7.902	-	-	1.677	5.218	39.77	0.989	0.186	
4	1995	5	7.879	-	-	0.023	5.241	39.95	0.024	0.005	

Average rate of silting(Th.Cum/Sq.km/Yr) in 40 year 0.695

Average rate of silting (mm/yr) in 40 years 0.695

Average rate of silting (M.Cum/yr) in 40 years 0.131

BHATGHAR RESERVOIR

Name of State -Maharashtra | Name of the District - Pune | Name of River - Yelwandi River | Year of Impoundment - 1927

Catchment Area - 331.50 Sq.km | Reservoir Area at FRL - 37.90 Sq.km | MDDL - 578.48m | FRL - 623.28m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1927		672.65	672.65	0	-					
2	2007	80	564.06	564.06	0	108.59	108.59	16.14	4.09	1.36	

Average rate of silting(Th.Cum/Sq.km/Yr) in 80 years 4.09

Average rate of silting (mm/yr) in 80 years 4.09

Average rate of silting (M.Cum/yr) in 80 years 1.36

BHIMA RESERVOIR

Name of State -Maharashtra | Name of the District - Sholapur | Name of River - Bhima | Year of Impoundment - 1977

Catchment Area - 14858 Sq.km | Reservoir Area at FRL - 336.50 Sq.km | MDDL - 491.03m | FRL - 496.83m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1977		3320	1517.2	1802.8	-					
2	2012	35	2896.09	1408.81	1487.28	423.91	423.91	12.77	0.815	12.112	

Average rate of silting(Th.Cum/Sq.km/Yr) in 35 years 0.815

Average rate of silting (mm/yr) in 35 years 0.815

Average rate of silting (M.Cum/yr) in 35 years 12.112

CHANKAPUR RESERVOIR

Name of State - Maharashtra | Name of the District - Nashik | Name of River - Girna River | Year of Impoundment - 1913

Catchment Area - 269.00 Sq.km | Reservoir Area at FRL - 10.31 Sq.km | MDDL - 658.100 m | FRL - 672.925 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1913		79.94	76.86	3.08						
2	2009	96	62.42	62.42	0	17.52	17.52	21.92	0.678	0.183	

Average rate of silting(Th.Cum/Sq.km/Yr) in 96 years 0.678

Average rate of silting (mm/yr) in 96 years 0.678

Average rate of silting (M.Cum/yr) in 96 years 0.183

DIMBHE RESERVOIR

Name of State -Maharashtra | Name of the District - Pune | Name of River - Ghod River | Year of Impoundment - 2000

Catchment Area - 298 Sq.km | Reservoir Area at FRL - 22.02 Sq.km | MDDL - 682.75 m | FRL - 719.645 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											No Siltation
1	2000		394.85	366.52	28.33						
2	2010	10	429.39	391.52	37.87	-	-	-	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 10 years -

Average rate of silting (mm/yr) in 10 years -

Average rate of silting (M.Cum/yr) in 10 years -

EKURK RESERVOIR

Name of State -Maharashtra | Name of the District - Latur | Name of River - Adela nalla | Year of Impoundment - 1871

Catchment Area - 412 Sq.km | Reservoir Area at FRL - 17.624 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1871		94.30	-	-						
2	1923	52	78.362	-	-	15.938	15.938	16.90	0.744	0.307	
3	1991	68	67.864	-	-	10.498	26.436	28.03	0.375	0.154	

Average rate of silting(Th.Cum/Sq.km/Yr) in 120 year 0.535

Average rate of silting (mm/yr) in 120 years 0.535

Average rate of silting (M.Cum/yr) in 120 years 0.220

GANGAPUR RESERVOIR

Name of State -Maharashtra | Name of the District - Nashik | Name of River - Godavari | Year of Impoundment - 1965
Catchment Area - 357.40 Sq.km | Reservoir Area at FRL - 22.548 Sq.km | MDDL - N.A | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		212.51	-	-						
2	1997	32	163.62	-	-	48.89	48.89	23.01	4.275	1.528	

Average rate of silting(Th.Cum/Sq.km/Yr) in 32 years 4.275
Average rate of silting (mm/yr) in 32 years 4.275
Average rate of silting (M.Cum/yr) in 32 years 1.528

GIRNA RESERVOIR

Name of State -Maharashtra | Name of the District - Nashik | Name of River - Girna | Year of Impoundment - 1969
Catchment Area - 4727.30 Sq.km | Reservoir Area at FRL - 55.52 Sq.km | MDDL - 381.81m | FRL - 397.97m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The original
1	1969		608.45	523.55	84.9						capacity has been
2	1979	10	559.23	-	-	49.22	49.22	8.09	1.041	4.922	modified as per
3	2010	31	565.57	510.2	55.37	-6.34	42.88	7.05	-	-	the recent data

Average rate of silting(Th.Cum/Sq.km/Yr) in 41 years 0.221
Average rate of silting (mm/yr) in 41 years 0.221
Average rate of silting (M.Cum/yr) in 41 years 1.046

GHOD RESERVOIR

Name of State -Maharashtra | Name of the District - Ahmadnagar | Name of River - Ghod | Year of Impoundment - 1965
Catchment Area - 3586 Sq.km | Reservoir Area at FRL - 30.992 Sq.km | MDDL -541.02m | FRL -548.64 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		216.3	154.8	61.5						
2	2007	42	169.3	137.99	31.31	47	47	21.73	0.312	1.119	

Average rate of silting(Th.Cum/Sq.km/Yr) in 42 years 0.312
Average rate of silting (mm/yr) in 42 years 0.312
Average rate of silting (M.Cum/yr) in 42 years 1.119

JAYAKWADI RESERVOIR

Name of State -Maharashtra | Name of the District - Aurangabad | Name of River - Godavari | Year of Impoundment - 1976
Catchment Area - 21774 Sq.km | Reservoir Area at FRL - 350.00 Sq.km | MDDL - 455.524 m | FRL - 463.906 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1976		2909.041	2170.935	738.106						
2	1999	23	2659.24	2076.78	582.46	249.801	249.801	8.59	0.499	10.861	

Average rate of silting(Th.Cum/Sq.km/Yr) in 23 years 0.499
Average rate of silting (mm/yr) in 23 years 0.499
Average rate of silting (M.Cum/yr) in 23 years 10.861

KARANJVAN RESERVOIR

Name of State -Maharashtra | Name of the District - Nashik | Name of River - Kadwa | Year of Impoundment - 1974
Catchment Area - 248 Sq.km | Reservoir Area at FRL - N.A | MDDL - 632.47 m | FRL - 651.66 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		175.57	164.19	11.38						
2	2008	34	158.61	155.6	3.01	16.96	16.96	9.66	2.011	0.499	

Average rate of silting(Th.Cum/Sq.km/Yr) in 34 years 2.011
Average rate of silting (mm/yr) in 34 years 2.011
Average rate of silting (M.Cum/yr) in 34 years 0.499

KHADAKWASLA RESERVOIR

Name of State -Maharashtra | Name of the District - Pune | Name of River - Mutha | Year of Impoundment - 1879
Catchment Area - 501.80 Sq.km | Reservoir Area at FRL - 14.80 Sq.Km | MDDL - 574.30m | FRL - 582.47m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1879		86	56	30						Revised Capacityis found to be more than the designed hence sedimentation cannot be assessed
2	1940	61	86.08			-	-	-	-	-	
2	2007	67	87.87	63.96	23.91	-	-	-	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 128 year -
Average rate of silting (mm/yr) in 128 years -
Average rate of silting (M.Cum/yr) in 128 years -

KHASPUR RESERVOIR

Name of State -Maharashtra | Name of the District - Osmanabad | Name of River - Sina | Year of Impoundment - 1954

Catchment Area - 554.20 Sq.km | Reservoir Area at FRL - 5.68 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1954		19.82	-	-						
2	1975	21	14.466	-	-	5.354	5.354	27.01	0.460	0.255	
3	1990	15	13.58	-	-	0.886	6.24	31.48	0.107	0.059	
4	1996	6	13.483	-	-	0.097	6.337	31.97	0.029	0.016	

Average rate of silting(Th.Cum/Sq.km/Yr) in 42 year 0.272

Average rate of silting (mm/yr) in 42 years 0.272

Average rate of silting (M.Cum/yr) in 42 years 0.151

KHELNA RESERVOIR

Name of State -Maharashtra | Name of the District - Aurangabad | Name of River - Khelna | Year of Impoundment - 1964

Catchment Area - 161.60 Sq.km | Reservoir Area at FRL - 3.76 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1964		12.61	-	-						
2	1985	21	11.908	-	-	0.702	0.702	5.57	0.207	0.033	

Average rate of silting(Th.Cum/Sq.km/Yr) in 21 year 0.207

Average rate of silting (mm/yr) in 21 years 0.207

Average rate of silting (M.Cum/yr) in 21 years 0.033

KOYNA (SHIVAJISAGAR) RESERVOIR

Name of State -Maharashtra | Name of the District - Satara | Name of River - Koyna | Year of Impoundment - 1962
Catchment Area - 891.78 Sq.km | Reservoir Area at FRL - N.A | MDDL - 609.6m | FRL - 659.435m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The initial gross capacity and year of impoundment modified as intimated by project authorities.
1	1962		2980.68	2860.89	119.79						
2	2012	50	2806.889	2721.456	85.433	173.791	173.791	5.83	3.898	3.476	

Average rate of silting(Th.Cum/Sq.km/Yr) in 50 years 3.898
Average rate of silting (mm/yr) in 50 years 3.898
Average rate of silting (M.Cum/yr) in 50 years 3.476

KOLGAON RESERVOIR

Name of State -Maharashtra | Name of the District - Ahmadnagar | Name of River - Hanga | Year of Impoundment - 1956
Catchment Area - 55.74 Sq.km | Reservoir Area at FRL - N.A | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		2.87	-	-						
2	1975	19	1.69	-	-	1.18	1.18	41.11	1.114	0.062	
3	1983	8	1.527	-	-	0.163	1.343	46.79	0.366	0.020	
4	1988	5	1.496	-	-	0.031	1.374	47.87	0.111	0.006	

Average rate of silting(Th.Cum/Sq.km/Yr) in 32 year 0.770
Average rate of silting (mm/yr) in 32 years 0.770
Average rate of silting (M.Cum/yr) in 32 years 0.043

MAJALGAON RESERVOIR

Name of State -Maharashtra | Name of the District - Beed | Name of River - Sindhfana | Year of Impoundment - 1987
Catchment Area - 3840 Sq.km | Reservoir Area at FRL - 78.13 Sq.Km | MDDL -426.11m | FRL - 431.80m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1987		454	312	142						
2	2010	23	408.08	292.76	115.32	45.92	45.92	10.11	0.520	1.997	

Average rate of silting(Th.Cum/Sq.km/Yr) in 23 years 0.520
Average rate of silting (mm/yr) in 23 years 0.520
Average rate of silting (M.Cum/yr) in 23 years 1.997

MANAR RESERVOIR

Name of State -Maharashtra | Name of the District - Nanded | Name of River - Manar | Year of Impoundment - 1969
Catchment Area - 1585.08 Sq.km | Reservoir Area at FRL -N.A | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1969		138.35	-	-						
2	1999	30	119.624	-	-	18.726	18.726	13.54	0.394	0.624	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 0.394
Average rate of silting (mm/yr) in 30 years 0.394
Average rate of silting (M.Cum/yr) in 30 years 0.624

MANGI RESERVOIR

Name of State -Maharashtra | Name of the District - Solapur | Name of River - Kanola | Year of Impoundment - 1955
Catchment Area - 304.00 Sq.km | Reservoir Area at FRL - 4.00 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1955		33.839	-	-						
2	1984	29	30.739	-	-	3.1	3.1	9.16	0.352	0.107	
3	1989	5	30.528	-	-	0.211	3.311	9.78	0.139	0.042	
4	1995	6	30.404	-	-	0.124	3.435	10.15	0.068	0.021	

Average rate of silting(Th.Cum/Sq.km/Yr) in 40 year 0.282
Average rate of silting (mm/yr) in 40 years 0.282
Average rate of silting (M.Cum/yr) in 40 years 0.086

MANIKDOH RESERVOIR

Name of State -Maharashtra | Name of the District - Pune | Name of River - Kukadi | Year of Impoundment - 1984
Catchment Area - 129 Sq.km | Reservoir Area at FRL - 18.43 Sq.km | MDDL - 670m | FRL - 711.25m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1984		308.06	288.25	19.81						
2	2006	22	273.53	261.62	11.91	34.53	34.53	11.21	12.167	1.570	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 years 12.167
Average rate of silting (mm/yr) in 22 years 12.167
Average rate of silting (M.Cum/yr) in 22 years 1.570

MHASWAD RESERVOIR

Name of State -Maharashtra | Name of the District - Satara | Name of River - Man | Year of Impoundment - 1888
Catchment Area - 1243.20 Sq.km | Reservoir Area at FRL - N.A | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1888		86.94	-	-						
2	1974	86	42.31	-	-	44.63	44.63	51.33	0.417	0.519	
3	1990	16	41.7	-	-	0.61	45.24	52.04	0.031	0.038	

Average rate of silting(Th.Cum/Sq.km/Yr) in 102 year 0.357
Average rate of silting (mm/yr) in 102 years 0.357
Average rate of silting (M.Cum/yr) in 102 years 0.444

MUKTI RESERVOIR

Name of State -Maharashtra | Name of the District - Dhule | Name of River - Moti nala | Year of Impoundment - 1893
Catchment Area - 88.60 Sq.km | Reservoir Area at FRL - NA | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1893		9.68	-	-						
2	1952	59	9.06	-	-	0.62	0.62	6.40	0.119	0.011	
3	1977	25	8.68	-	-	0.38	1	10.33	0.172	0.015	
4	1986	9	6.96	-	-	1.72	2.72	28.10	2.157	0.191	
5	1991	5	6.87	-	-	0.09	2.81	29.03	0.203	0.018	

Average rate of silting(Th.Cum/Sq.km/Yr) in 98 year 0.324
Average rate of silting (mm/yr) in 98 years 0.324
Average rate of silting (M.Cum/yr) in 98 years 0.029

MULA RESERVOIR

Name of State -Maharashtra | Name of the District - Ahmadnagar | Name of River - Mula | Year of Impoundment - 1972

Catchment Area - 2275.86 Sq.km | Reservoir Area at FRL - 53.60 Sq.km | MDDL - 534.01 m | FRL - 552.30m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1972		738.02	609.34	128.68						
2	2008	36	696.45	585.094	111.356	41.57	41.57	5.63	0.507	1.155	

Average rate of silting(Th.Cum/Sq.km/Yr) in 36 years 0.507

Average rate of silting (mm/yr) in 36 years 0.507

Average rate of silting (M.Cum/yr) in 36 years 1.155

NALGANGA RESERVOIR

Name of State -Maharashtra | Name of the District -Buldhana | Name of River - Nalganga | Year of Impoundment - 1963

Catchment Area - 315.98 Sq.km | Reservoir Area at FRL - 10.99 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1963		76.201	-	-						
2	1985	22	71.863	-	-	4.338	4.338	5.69	0.624	0.197	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 year 0.624

Average rate of silting (mm/yr) in 22 years 0.624

Average rate of silting (M.Cum/yr) in 22 years 0.197

NAZARE RESERVOIR

Name of State -Maharashtra | Name of the District - Pune | Name of River -Karha | Year of Impoundment - 1974
Catchment Area - 397.82 Sq.km | Reservoir Area at FRL - N.A | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		16.17	-	-						
2	1986	12	14.633	-	-	1.537	1.537	9.51	0.322	0.128	

Average rate of silting(Th.Cum/Sq.km/Yr) in 12 year 0.322
Average rate of silting (mm/yr) in 12 years 0.322
Average rate of silting (M.Cum/yr) in 12 years 0.128

PANSHET RESERVOIR

Name of State -Maharashtra | Name of the District - Pune | Name of River -Ambi | Year of Impoundment - 1968
Catchment Area - 120.30 Sq.km | Reservoir Area at FRL - 14.87 Sq.Km | MDDL - 597.50m | FRL - 636.27m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1968-69		310.62	301.445	9.175						
2	2007-08	39	282.19	276.358	5.832	28.43	28.43	9.15	6.060	0.73	

Average rate of silting(Th.Cum/Sq.km/Yr) in 39 years 6.060
Average rate of silting (mm/yr) in 39 years 6.060
Average rate of silting (M.Cum/yr) in 39 years 0.73

POWAI RESERVOIR

Name of State -Maharashtra | Name of the District -Mumbai Suburban | Name of River -Local Nala | Year of Impoundment - 1890

Catchment Area - 6.61 Sq.km | Reservoir Area at FRL - 2.23 Sq.km | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1890		5.45	-	-						
2	1996	106	4.39	-	-	1.06	1.06	19.45	1.513	0.010	

Average rate of silting(Th.Cum/Sq.km/Yr) in 106 year 1.513

Average rate of silting (mm/yr) in 106 years 1.513

Average rate of silting (M.Cum/yr) in 106 years 0.010

RADHNAGARI RESERVOIR

Name of State -Maharashtra | Name of the District -Kolhapur | Name of River - Bhogavati | Year of Impoundment - 1908

Catchment Area - 108.80 Sq.km | Reservoir Area at FRL - 17.99 Sq.km | MDDL -566.14m | FRL - 590.98m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1908		236.79	219.97	16.82						
2	2011	103	208.82	203.07	5.75	27.97	27.97	11.81	2.50	0.272	

Average rate of silting(Th.Cum/Sq.km/Yr) in 103 years 2.50

Average rate of silting (mm/yr) in 103 years 2.50

Average rate of silting (M.Cum/yr) in 103 years 0.272

RAMSAGAR RESERVOIR

Name of State -Maharashtra | Name of the District - Nagpur | Name of River -Sur | Year of Impoundment - 1914
Catchment Area - 212.35 Sq.km | Reservoir Area at FRL - 21.30 Sq.km | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1914		117.18	-	-						
2	1987	73	102.4	-	-	14.78	14.78	12.61	0.953	0.202	

Average rate of silting(Th.Cum/Sq.km/Yr) in 73 year 0.953
Average rate of silting (mm/yr) in 73 years 0.953
Average rate of silting (M.Cum/yr) in 73 years 0.202

TULSHI RESERVOIR

Name of State -Maharashtra | Name of the District - Kolhapur | Name of River - Tulshi | Year of Impoundment - 1978
Catchment Area - 34.92 Sq.km | Reservoir Area at FRL - 5.20 Sq.km | MDDL - 591.31m | FRL -616.98m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1978		98.29	91.92	6.37						The revised Capacity is more than original capacity hence siltation cannot be estimated
2	2011-12	33	102.10	93.16	8.94	-	-	-	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 33 years -
Average rate of silting (mm/yr) in 33 years -
Average rate of silting (M.Cum/yr) in 33 years -

UPPER WARDHA RESERVOIR

Name of State - Maharashtra | Name of the District - Amravati | Name of River - Wardha | Year of Impoundment - 1993

Catchment Area - 4302 Sq.km | Reservoir Area at FRL - 97.48 Sq.km | MDDL - 332.30 m | FRL - 342.50 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1993		802.98	612.51	190.47						
2	2011	18	755.49	578.03	177.46	47.49	47.49	5.91	0.613	2.638	

Average rate of silting(Th.Cum/Sq.km/Yr) in 18 year 0.613

Average rate of silting (mm/yr) in 18 years 0.613

Average rate of silting (M.Cum/yr) in 18 years 2.638

VARASGAON RESERVOIR

Name of State - Maharashtra | Name of the District - Pune | Name of River - Mose | Year of Impoundment - 1986

Catchment Area - 130 Sq.km | Reservoir Area at FRL - 18.60 Sq.km | MDDL - 600.50 m | FRL - 639.50 metre

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1986		375.361	363.189	12.172						
2	2007	21	373.239	361.232	12.007	2.122	2.122	0.57	0.777	0.101	

Average rate of silting(Th.Cum/Sq.km/Yr) in 21 year 0.777

Average rate of silting (mm/yr) in 21 years 0.777

Average rate of silting (M.Cum/yr) in 21 years 0.101

VIR RESERVOIR

Name of State -Maharashtra | Name of the District - Pune | Name of River - Nira | Year of Impoundment - 1965
Catchment Area - 1756 Sq.km | Reservoir Area at FRL -32.67 Sq.Km | MDDL - 562.33m | FRL - 579.85m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		278.5	266.39	12.11						
2	2008	43	239.145	236.005	3.14	39.355	39.355	14.13	0.521	0.915	

Average rate of silting(Th.Cum/Sq.km/Yr) in 43 years 0.521
Average rate of silting (mm/yr) in 43 years 0.521
Average rate of silting (M.Cum/yr) in 43 years 0.915

VISAPUR RESERVOIR

Name of State -Maharashtra | Name of the District - Ahmadnagar | Name of River - Hanga | Year of Impoundment - 1937
Catchment Area - 412.00 Sq.km | Reservoir Area at FRL - N.A | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1937		42.76	-	-						
2	1974	37	26.41	-	-	16.35	16.35	38.24	1.073	0.442	
3	1983	9	26.12	-	-	0.29	16.64	38.91	0.078	0.032	
4	1988	5	25.21	-	-	0.91	17.55	41.04	0.442	0.182	

Average rate of silting(Th.Cum/Sq.km/Yr) in 51 year 0.835
Average rate of silting (mm/yr) in 51 years 0.835
Average rate of silting (M.Cum/yr) in 51 years 0.344

WAGHAD RESERVOIR

Name of State - Maharashtra | Name of the District - Nashik | Name of River - Kolvan River | Year of Impoundment - 1978
Catchment Area - 119 Sq.km | Reservoir Area at FRL - 10.90 Sq.km | MDDL - 650.50 m | FRL - 668.50 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1978		75.1	70.85	4.25						
2	2011	33	67.72	65.18	2.54	7.38	7.38	9.83	1.879	0.224	

Average rate of silting(Th.Cum/Sq.km/Yr) in 33 years 1.879
Average rate of silting (mm/yr) in 33 years 1.879
Average rate of silting (M.Cum/yr) in 33 years 0.224

WARNA RESERVOIR

Name of State -Maharashtra | Name of the District - Sangli | Name of River - Warna | Year of Impoundment - 1984
Catchment Area - 301.00 Sq.km | Reservoir Area at FRL - 45.59 Sq.km | MDDL - 588.20m | FRL - 626.90m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1984		974.188	779.348	194.84						
2	2003	19	925.04	764.44	160.6	49.148	49.148	5.05	8.594	2.587	

Average rate of silting(Th.Cum/Sq.km/Yr) in 43 years 8.594
Average rate of silting (mm/yr) in 43 years 8.594
Average rate of silting (M.Cum/yr) in 43 years 2.587

YELDARI RESERVOIR

Name of State -Maharashtra | Name of the District - Parbhani | Name of River - Purna | Year of Impoundment - 1968

Catchment Area - 7329.70 Sq.km | Reservoir Area at FRL - 101.54 Sq.km | MDDL - 447.75m | FRL - 461.772m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1968		934.44	809.77	124.67						
2	1983	15	849.5	-	-	84.94	84.94	9.09	0.773	5.663	
3	2011	28	800.1	743.76	56.34	49.4	134.34	14.38	0.241	1.764	

Average rate of silting(Th.Cum/Sq.km/Yr) in 43 years 0.426

Average rate of silting (mm/yr) in 43 years 0.426

Average rate of silting (M.Cum/yr) in 43 years 3.124

UMIUM RESERVOIR

Name of State -Meghalaya | Name of the District - Ri Bhoi | Name of River - Umium | Year of Impoundment - 1965

Catchment Area - 221.5 Sq.km | Reservoir Area at FRL - 40.00 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		181.42	-	-						
2	1990	25	166.98	-	-	14.44	14.44	7.96	2.608	0.578	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 year 2.608

Average rate of silting (mm/yr) in 25 years 2.608

Average rate of silting (M.Cum/yr) in 25 years 0.578

BALIMELA RESERVOIR

Name of State -Odisha | Name of the District - Malkangiri | Name of River - Machkund (Godavari) | Year of Impoundment - 1972

Catchment Area - 4908 Sq.km | Reservoir Area at FRL - 169.08 Sq.km | MDDL -438.91m | FRL - 462.07m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1972		3610	2676	934						
2	1999	27	3327.5	2536.56	790.94	282.5	282.5	7.83	2.132	10.463	

Average rate of silting(Th.Cum/Sq.km/Yr) in 27 year 2.132

Average rate of silting (mm/yr) in 27 years 2.132

Average rate of silting (M.Cum/yr) in 27 years 10.463

HIRAKUD RESERVOIR

Name of State -Odisha | Name of the District - Sambalpur | Name of River - Mahanadi | Year of Impoundment - 1957

Catchment Area - 83395 Sq.km | Reservoir Area at FRL - 727 Sq.km | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1957		8105.00	5842.88	2262.12						
2	1979	22	6934.26	5287.802	1646.455	1170.74	1170.74	14.44	0.638	53.216	
3	1981	2	6626.41	5109.19	1517.22	307.85	1478.59	18.24	1.846	153.924	
4	1986	5	6613.76	5105.534	1508.229	12.65	1491.24	18.40	0.030	2.529	
5	1991	5	6210.00	4946.8	1263.28	403.76	1895.00	23.38	0.968	80.753	
6	2000	9	5894.795	4821.893	1072.902	315.21	2210.21	27.27	0.420	35.023	

Average rate of silting(Th.Cum/Sq.km/Yr) in 43 year 0.616

Average rate of silting (mm/yr) in 43 years 0.616

Average rate of silting (M.Cum/yr) in 43 years 51.400

RENGALI RESERVOIR

Name of State -Odisha | Name of the District - Angul | Name of River - Rengali | Year of Impoundment - 1982
Catchment Area - 25250 Sq.km | Reservoir Area at FRL - 362.07 Sq.km | MDDL -109.72m | FRL - 123.50m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1982		4494.77	3505.9	988.87						
2	2006	24	3749.75	3130.51	619.24	745.02	745.02	16.58	1.229	31.043	

Average rate of silting(Th.Cum/Sq.km/Yr) in 27 year 1.229
Average rate of silting (mm/yr) in 27 years 1.229
Average rate of silting (M.Cum/yr) in 27 years 31.043

UPPER KOLAB RESERVOIR

Name of State -Odisha | Name of the District - Koratpur | Name of River - Kolab | Year of Impoundment - 1986
Catchment Area - 1630 Sq.km | Reservoir Area at FRL - 113.50 Sq.km | MDDL -844.00m | FRL - 858.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1986		1215	935	280						
2	2011	25	1073.95	859.19	214.76	141.05	141.05	11.61	3.461	5.642	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 year 3.461
Average rate of silting (mm/yr) in 25 years 3.461
Average rate of silting (M.Cum/yr) in 25 years 5.642

RANAPRATAP SAGAR RESERVOIR

Name of State - Rajasthan | Name of the District -Chittaurgarh | Name of River - Chambal | Year of Impoundment - 1970
Catchment Area - 25305 Sq.km | Reservoir Area at FRL - 199.00 Sq.km | MDDL - 343.00m | FRL - 352.80m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1970		3128.11	1715.74	1412.37						
2	2011	41	2889.52	1715.74	1173.78	238.59	238.59	7.63	0.230	5.819	

Average rate of silting(Th.Cum/Sq.km/Yr) in 7 years 0.230
Average rate of silting (mm/yr) in 7 years 0.230
Average rate of silting (M.Cum/yr) in 7 years 5.819

ADAVINAINAR KOIL RESERVOIR

Name of State -Tamil Nadu | Name of the District -Thirunelveli | Name of River - Hanumannathi | Year of Impoundment -2003
Catchment Area - 15.54 Sq.km | Reservoir Area at FRL - 0.3527 Sq.km | MDDL - 206.80m | FRL - 247.0m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	2003		4.928	4.928	0						
2	2010	7	4.840	4.840	0	0.09	0.09	1.79	0.809	0.013	

Average rate of silting(Th.Cum/Sq.km/Yr) in 7 years 0.809
Average rate of silting (mm/yr) in 7 years 0.809
Average rate of silting (M.Cum/yr) in 7 years 0.013

ALIYAR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Coimbatore | Name of River - Aliyar | Year of Impoundment - 1962

Catchment Area - 195.00 Sq.km | Reservoir Area at FRL - 6.475 Sq.km | MDDL - N.A | FRL - 320.04m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											Capacity data has been modified as per the data sent by State Government
1	1962		112.754	-	-						
2	1986	24	107.382	-	-	5.372	5.372	4.76	1.148	0.224	
3	1994	8	108.262	-	-	-0.880	4.492	3.98	-	-	
4	2004	10	103.414	-	-	4.848	9.340	8.28	2.486	0.485	

Average rate of silting(Th.Cum/Sq.km/Yr) in 42 year 1.140

Average rate of silting (mm/yr) in 42 years 1.140

Average rate of silting (M.Cum/yr) in 42 years 0.222

AMARAVATHY RESERVOIR

Name of State -Tamil Nadu | Name of the District - Tirupur | Name of River - Amaravathy | Year of Impoundment - 1958

Catchment Area - 839.16 Sq.km | Reservoir Area at FRL - 8.495 Sq.km | MDDL -N.A | FRL - 358.14m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1958		117.163	114.541	2.622						
2	1986	28	100.32	-	-	16.843	16.843	14.38	0.717	0.602	
3	1994	8	97.32	-	-	3	19.843	16.94	0.447	0.375	
4	2004	10	96.5	-	-	0.82	20.663	17.64	0.098	0.082	
5	2013	9	94.58	-	-	1.92	22.583	19.27	0.254	0.213	

Average rate of silting(Th.Cum/Sq.km/Yr) in 55 years 0.489

Average rate of silting (mm/yr) in 55 years 0.489

Average rate of silting (M.Cum/yr) in 55 years 0.411

ANAIKUTTAM RESERVOIR

Name of State -Tamil Nadu | Name of the District - Virudhunagar | Name of River -Arjuna | Year of Impoundment - 1990

Catchment Area - 795.265 Sq.km | Reservoir Area at FRL - 1.9889 Sq.km | MDDL - 87.50m | FRL - 95.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1990		3.602	3.452	0.15						
2	2014	24	3.259	3.259	0	0.343	0.343	9.53	0.018	0.014	

Average rate of silting(Th.Cum/Sq.km/Yr) in 24 year 0.018

Average rate of silting (mm/yr) in 24 years 0.018

Average rate of silting (M.Cum/yr) in 24 years 0.014

ANAIMADUVU RESERVOIR

Name of State -Tamil Nadu | Name of the District -Salem | Name of River -Anaimaduvu | Year of Impoundment - 1993

Catchment Area - 145.02 Sq.km | Reservoir Area at FRL - 1.067 Sq.Km | MDDL - N.A | FRL - 416.50m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1993		7.56	7.42	0.14						
2	2013	20	7.247	-	-	0.313	0.313	4.14	0.108	0.016	

Average rate of silting(Th.Cum/Sq.km/Yr) in 20 years 0.108

Average rate of silting (mm/yr) in 20 years 0.108

Average rate of silting (M.Cum/yr) in 20 years 0.016

BARUR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Krishnagiri | Name of River - Pannaiyar | Year of Impoundment - 1919
Catchment Area - 35.07 Sq.km | Reservoir Area at FRL - N.A | MDDL - N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1919		7.04	-	-						
2	1986	67	6.86	-	-	0.18	0.18	2.56	0.077	0.003	

Average rate of silting(Th.Cum/Sq.km/Yr) in 67 year 0.077
Average rate of silting (mm/yr) in 67 years 0.077
Average rate of silting (M.Cum/yr) in 67 years 0.003

BHAVANI SAGAR

Name of State -Tamil Nadu | Name of the District - Erode | Name of River - Bhavani | Year of Impoundment - 1953
Catchment Area - 4134.50 Sq.km | Reservoir Area at FRL - 77.670 Sq.Km | MDDL - 256.06m | FRL -278.89m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											catchment area, Original capacity and capacity in year 1964 has been modified as per State's information.
1	1953		928.896	907.798	21.098						
2	1964	11	975.18	-	-	-46.284	-46.284	-4.98	-	-	
3	1971	7	909.64	-	-	65.54	19.256	2.07	2.265	9.363	
4	1977	6	896.88	-	-	12.76	32.016	3.45	0.514	2.13	
5	1983	6	895.03	-	-	1.85	33.866	3.65	0.075	0.308	
6	2006	23	735.82	725.94	9.88	159.21	193.076	20.79	1.674	6.922	

Average rate of silting(Th.Cum/Sq.km/Yr) in 53 years 0.881
Average rate of silting (mm/yr) in 53 years 0.881
Average rate of silting (M.Cum/yr) in 53 years 3.643

BERIJAM LAKE

Name of State -Tamil Nadu | Name of the District -Dindigul | Name of River - N.A | Year of Impoundment - 1911
Catchment Area - 7.77 Sq.km | Reservoir Area at FRL - 0.415 Sq.km | MDDL - 2135.73m | FRL - 2144.27m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1911		2.195	2.195	0						
2	1987	76	1.804	1.804	0	0.391	0.391	17.81	0.662	0.005	

Average rate of silting(Th.Cum/Sq.km/Yr) in 76 years 0.662
Average rate of silting (mm/yr) in 76 years 0.662
Average rate of silting (M.Cum/yr) in 76 years 0.005

CHITTAR-I RESERVOIR

Name of State -Tamil Nadu | Name of the District -Kanniyakumari | Name of River - Chittar | Year of Impoundment - 1970
Catchment Area - 22.01 Sq.km | Reservoir Area at FRL - 2.93 Sq.km | MDDL - 62.797m | FRL - 81.99m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1970		17.28	11.13	6.15						
2	1997	27	14.43	11.13	3.3	2.85	2.85	16.49	4.796	0.106	

Average rate of silting(Th.Cum/Sq.km/Yr) in 27 years 4.796
Average rate of silting (mm/yr) in 27 years 4.796
Average rate of silting (M.Cum/yr) in 27 years 0.106

CHITTAR-II RESERVOIR

Name of State -Tamil Nadu | Name of the District -Kanniyakumari | Name of River - Chittar | Year of Impoundment - 1972

Catchment Area - 26.16 Sq.km | Reservoir Area at FRL - 4.15 Sq.km | MDDL - 64.01m | FRL - 81.99m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1972		28.59	17	11.59						
2	1998	26	23.81	17	6.81	4.78	4.78	16.72	7.028	0.184	
3	2010	12	22.66	17	5.66	1.15	5.93	20.742	3.663	0.096	

Average rate of silting(Th.Cum/Sq.km/Yr) in 38 years 5.965

Average rate of silting (mm/yr) in 38 years 5.965

Average rate of silting (M.Cum/yr) in 38 years 0.156

EMRALD AVLANCHE RESERVOIR

Name of State -Tamil Nadu | Name of the District - Nilgiries | Name of River - Kundah | Year of Impoundment - 1961

Catchment Area - 58.534 Sq.km | Reservoir Area at FRL - 3.95 Sq.km | MDDL - 1943.10m | FRL - 1985.80m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1961		156.750	152.800	3.95						
2	1981	20	145.700	145.700	0	11.05	11.05	7.05	9.439	0.553	
3	2000	19	149.574	-	-	-3.874	7.176	4.58	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 39 years 3.143

Average rate of silting (mm/yr) in 39 years 3.143

Average rate of silting (M.Cum/yr) in 39 years 0.184

GADANA RESERVOIR

Name of State -Tamil Nadu | Name of the District -Tirunelveli | Name of River - Gadana | Year of Impoundment - 1971

Catchment Area - 46.46 Sq.km | Reservoir Area at FRL - 0.797 Sq.km | MDDL - 106.68m | FRL - 132.58m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1971		9.969	9.969	0						
2	2003	32	8.126	8.126	0	1.843	1.843	18.49	1.240	0.058	

Average rate of silting(Th.Cum/Sq.km/Yr) in 32 years 1.240

Average rate of silting (mm/yr) in 32 years 1.240

Average rate of silting (M.Cum/yr) in 32 years 0.058

GLENMORGAN (NEW FOREBAY)

Name of State -Tamil Nadu | Name of the District -Nilgiries | Name of River - Glenmorgan Stream | Year of Impoundment - 1976

Catchment Area - 12.43 Sq.km | Reservoir Area at FRL - 0.31 Sq.km | MDDL - 1962.90 m | FRL - 1972.10 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1976		5.85	5.85	0						
2	1998	22	3.55	3.55	0	2.30	2.30	39.32	8.411	0.105	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 years 8.411

Average rate of silting (mm/yr) in 22 years 8.411

Average rate of silting (M.Cum/yr) in 22 years 0.105

GLENMORGAN (KARIAPPA)

Name of State -Tamil Nadu | Name of the District -Nilgiries | Name of River - Glenmorgan Stream | Year of Impoundment - 1930
Catchment Area - 2.59 Sq.km | Reservoir Area at FRL - N.A | MDDL -N.A | FRL - 2018.69 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1930		0.74	0.74	0						
2	2013	83	0.70	0.70	0	0.04	0.04	5.41	0.186	0.0005	

Average rate of silting(Th.Cum/Sq.km/Yr) in 83 years 0.186
Average rate of silting (mm/yr) in 83 years 0.186
Average rate of silting (M.Cum/yr) in 83 years 0.0005

GOMUKHINATHI

Name of State -Tamil Nadu | Name of the District -Villupuram | Name of River- Gomuki(Vellar) | Year of Impoundment - 1965
Catchment Area -292.67 Sq.km | Reservoir Area at FRL - 3.60 Sq.Km | MDDL - N.A | FRL - 183.18m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		15.86	15.86	0						
2	2002	37	12.947	-	-	2.913	2.913	18.37	0.269	0.079	

Average rate of silting(Th.Cum/Sq.km/Yr) in 37 years 0.269
Average rate of silting (mm/yr) in 37 years 0.269
Average rate of silting (M.Cum/yr) in 37 years 0.079

GUNDERIPALLAM RESERVOIR

Name of State -Tamil Nadu | Name of the District -Erode | Name of River - Gunderipallam | Year of Impoundment - 1979

Catchment Area - 72.23 Sq.km | Reservoir Area at FRL - 0.61 Sq.km | MDDL - N.A | FRL - 300.09 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1979		3.06	3.06	0						
2	2010	31	2.76	-	-	0.30	0.30	9.80	0.134	0.010	

Average rate of silting(Th.Cum/Sq.km/Yr) in 31 years 0.134

Average rate of silting (mm/yr) in 31 years 0.134

Average rate of silting (M.Cum/yr) in 31 years 0.010

KADAMBA TANK

Name of State -Tamil Nadu | Name of the District -Tuticorin | Name of River - Thamirabarani | Year of Impoundment - 1904

Catchment Area -N.A | Reservoir Area at FRL - 0.0743 Sq.km | MDDL - 7.11 m | FRL - 8.96m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1904		9.58	9.58	-						
2	2005	101	9.329	9.329	-	0.25	0.25	2.62	-	0.002	

Average rate of silting(Th.Cum/Sq.km/Yr) in 101 years -

Average rate of silting (mm/yr) in 101 years -

Average rate of silting (M.Cum/yr) in 101 years 0.002

KAMARAJ SAKAR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Nilgiries | Name of River - Kundah | Year of Impoundment - 1963

Catchment Area -44.035 Sq.km | Reservoir Area at FRL - 0.85 Sq.km | MDDL - 2127.46m | FRL - 2145.51m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1963		26.62	23.11	3.51						
2	2002	39	19.790	19.790	0	6.83	6.83	25.66	3.977	0.175	

Average rate of silting(Th.Cum/Sq.km/Yr) in 39 years 3.977

Average rate of silting (mm/yr) in 39 years 3.977

Average rate of silting (M.Cum/yr) in 39 years 0.175

KAVERIPAKKAM RESERVOIR

Name of State -Tamil Nadu | Name of the District - Vellore | Name of River - Palar | Year of Impoundment - 1902

Catchment Area -157.99 Sq.km | Reservoir Area at FRL - 16.06 Sq.km | MDDL -N.A | FRL - 137.70m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1902		41.73	41.73	0						
2	1989	87	37.22	-	-	4.51	4.51	10.81	0.328	0.052	
3	1996	7	36.93	-	-	0.29	4.80	11.50	0.262	0.041	

Average rate of silting(Th.Cum/Sq.km/Yr) in 94 year 0.323

Average rate of silting (mm/yr) in 94 years 0.323

Average rate of silting (M.Cum/yr) in 94 years 0.051

KODAGANAR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Dindigul | Name of River - Kodaganar | Year of Impoundment - 1977

Catchment Area - 1670.00 Sq.km | Reservoir Area at FRL - 4.124 Sq.km | MDDL -192.00m | FRL -200.25m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1977		12.291	12.291	0						
2	2007	30	10.136	10.136	0	2.155	2.155	17.53	0.043	0.072	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 years 0.043

Average rate of silting (mm/yr) in 30 years 0.043

Average rate of silting (M.Cum/yr) in 30 years 0.072

KRISHNAGIRI RESERVOIR

Name of State -Tamil Nadu | Name of the District -Krishnagiri | Name of River - Ponnaiyar | Year of Impoundment - 1957

Catchment Area - 5428.00 Sq.km | Reservoir Area at FRL - 12.46 Sq.km | MDDL - N.A | FRL - 483.11m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1957		68.20	66.1	2.1						
2	1976	19	50.47	-	-	17.73	17.73	26.00	0.172	0.933	
3	1981	5	47.78	-	-	2.69	20.42	29.94	0.099	0.538	
4	1983	2	47.18	-	-	0.6	21.02	30.82	0.055	0.300	
5	2006	23	39.7	-	-	7.48	28.5	41.79	0.060	0.325	

Average rate of silting(Th.Cum/Sq.km/Yr) in 49 years 0.107

Average rate of silting (mm/yr) in 49 years 0.107

Average rate of silting (M.Cum/yr) in 49 years 0.582

KUDHIRAIYAR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Dindigul | Name of River - Kudhiraiyar | Year of Impoundment - 1990

Catchment Area - 71.40 Sq.km | Reservoir Area at FRL - 0.733 Sq.Km | MDDL -N.A | FRL - 386.38m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1990		7.36	7.36	0						
2	2002	12	7.31	-	-	0.05	0.05	0.68	0.058	0.004	

Average rate of silting(Th.Cum/Sq.km/Yr) in 12 year 0.058

Average rate of silting (mm/yr) in 12 years 0.058

Average rate of silting (M.Cum/yr) in 12 years 0.004

KUNDAH RESERVOIR

Name of State -Tamil Nadu | Name of the District - Nilgiries | Name of River - Kundah | Year of Impoundment - 1960

Catchment Area - 113.96 Sq.km | Reservoir Area at FRL - 2.103 Sq.Km | MDDL -1609.34m | FRL - 1624.60m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The original gross capacity has been modified as per the data sent by State Govt
1	1960		1.76	1.56	0.2						
2	1977	17	0.78	0.78	0	0.98	0.98	55.68	0.506	0.058	
3	1982	5	0.65	0.65	0	0.13	1.11	63.07	0.228	0.026	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 year 0.443

Average rate of silting (mm/yr) in 22 years 0.443

Average rate of silting (M.Cum/yr) in 22 years 0.050

MADHURANTHAGAM TANK

Name of State -Tamil Nadu | Name of the District -Kancheepuram | Name of River -Killivaru(Palar) | Year of Impoundment - 1798

Catchment Area -34.82 Sq.km | Reservoir Area at FRL - 9.76 Sq.Km | MDDL - N.A | FRL - 31.049m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1798		17.25	17.25	0						
2	2005	207	16.08	-	-	1.17	1.17	6.78	0.162	0.006	

Average rate of silting(Th.Cum/Sq.km/Yr) in 207 years 0.162

Average rate of silting (mm/yr) in 207 years 0.162

Average rate of silting (M.Cum/yr) in 207 years 0.006

MANIMUKTHA NADHI

Name of State -Tamil Nadu | Name of the District -Villupuram | Name of River -Manimuktha(Vellar) | Year of Impoundment - 1970

Catchment Area - 478.72 Sq.km | Reservoir Area at FRL - 7.37 Sq.Km | MDDL - N.A | FRL - 36.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1970		20.88	20.88	0						
2	2012	42	18.276	-	-	2.604	2.604	12.47	0.130	0.062	

Average rate of silting(Th.Cum/Sq.km/Yr) in 42 years 0.130

Average rate of silting (mm/yr) in 42 years 0.130

Average rate of silting (M.Cum/yr) in 42 years 0.062

MANIMUTHAR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Thirunelveli | Name of River - Tamirabarani | Year of Impoundment - 1958

Catchment Area - 161.62 Sq.km | Reservoir Area at FRL - 9.40 Sq.km | MDDL -73.152m | FRL -109.12m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1958		159.734	159.502	0.232						
2	1980	22	155.41	155.41	0	4.324	4.324	2.71	1.216	0.197	
3	1988	8	154.2207	154.2207	0	1.1893	5.5133	3.45	0.920	0.149	
4	2006	18	149.448	149.448	0	4.773	10.286	6.439	1.641	0.26515	

Average rate of silting(Th.Cum/Sq.km/Yr) in 48 years 1.326

Average rate of silting (mm/yr) in 48 years 1.326

Average rate of silting (M.Cum/yr) in 48 years 0.214

MANJALAR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Theni | Name of River - Manjalar | Year of Impoundment - 1967

Catchment Area - 119.139 Sq.km | Reservoir Area at FRL - 1.968 Sq.km | MDDL- 288.95m | FRL - 306.324m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1967		13.759	13.759	0						
2	1992	25	10.632	10.632	0	3.127	3.127	22.73	1.050	0.125	
3	1996	4	10.369	10.369	0	0.263	3.39	24.64	0.552	0.066	
4	2009	13	9.447	9.447	0	0.922	4.312	31.34	0.594	0.071	

Average rate of silting(Th.Cum/Sq.km/Yr) in 42 years 0.860

Average rate of silting (mm/yr) in 42 years 0.860

Average rate of silting (M.Cum/yr) in 42 years 0.103

MARAVAKANDY RESERVOIR

Name of State -Tamil Nadu | Name of the District -Nilgiries | Name of River - Pykara | Year of Impoundment - 1947

Catchment Area -20.72 Sq.km | Reservoir Area at FRL - 1.98 Sq.Km | MDDL - 908.20m | FRL - 914.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1947		0.959	0.822	0.137						
2	2004	57	0.608	0.608	0	0.351	0.351	36.60	0.297	0.008	

Average rate of silting(Th.Cum/Sq.km/Yr) in 57 years 0.297

Average rate of silting (mm/yr) in 57 years 0.297

Average rate of silting (M.Cum/yr) in 57 years 0.008

MARUDHANATHI RESERVOIR

Name of State -Tamil Nadu | Name of the District -Dindigul | Name of River - Marudhanadhi | Year of Impoundment - 1979

Catchment Area - 53.315 Sq.km | Reservoir Area at FRL -0.6596 Sq.km | MDDL - 307.848m | FRL - 327.355m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1979		5.338	5.112	0.226						
2	1998	19	5.220	5.220	0	0.118	0.118	2.21	0.117	0.006	
3	2010	12	4.927	4.927	0	0.293	0.411	7.70	0.458	0.024	

Average rate of silting(Th.Cum/Sq.km/Yr) in 31 years 0.249

Average rate of silting (mm/yr) in 31 years 0.249

Average rate of silting (M.Cum/yr) in 31 years 0.013

METTUR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Salem | Name of River - Cauvery | Year of Impoundment - 1934

Catchment Area - 42200 Sq.km | Reservoir Area at FRL - 138.75 Sq.km | MDDL -N.A | FRL - 240.80m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1934		2708.764	2646.744	62.02						
2	1978	44	2264.32	-	-	444.444	444.444	16.41	0.239	10.101	
3	1984	6	2175.432	-	-	88.89	533.33	19.69	0.351	14.815	
4	2004	20	1994.192	-	-	181.24	714.572	26.38	0.215	9.062	

Average rate of silting(Th.Cum/Sq.km/Yr) in 70 years 0.242

Average rate of silting (mm/yr) in 70 years 0.242

Average rate of silting (M.Cum/yr) in 70 years 10.208

MUKURTHY RESERVOIR

Name of State -Tamil Nadu | Name of the District - Nilgiries | Name of River - Pykara | Year of Impoundment - 1938

Catchment Area - 25.25 Sq.km | Reservoir Area at FRL - 3.64 Sq.Km | MDDL -2076.20m | FRL - 2098.70m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1938		50.98	50.71	0.27						
2	1993	55	34.585	34.585	0	16.395	16.395	32.16	11.806	0.298	
3	2006	13	31.99	31.99	0	2.595	18.99	37.250	7.906	0.200	

Average rate of silting(Th.Cum/Sq.km/Yr) in 68 years 11.060

Average rate of silting (mm/yr) in 68 years 11.060

Average rate of silting (M.Cum/yr) in 68 years 0.279

NAGAVATHY RESERVOIR

Name of State -Tamil Nadu | Name of the District -Dharmapuri | Name of River -Nagavathi | Year of Impoundment - 1985

Catchment Area - 105.357 Sq.km | Reservoir Area at FRL - 1.18 Sq.Km | MDDL -N.A | FRL - 354.50m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1985		4.652	4.652	0						
2	2012	27	4.175	-	-	0.477	0.477	10.25	0.168	0.018	

Average rate of silting(Th.Cum/Sq.km/Yr) in 27 years 0.168

Average rate of silting (mm/yr) in 27 years 0.168

Average rate of silting (M.Cum/yr) in 27 years 0.018

PALAR PORANTHALAR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Dindigul | Name of River - Palar and Poranthalar | Year of Impoundment - 1978

Catchment Area - 259.00 Sq.km | Reservoir Area at FRL - 5.18 Sq.Km | MDDL -N.A | FRL - 339.85m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1978		43.19	43.19	0						
2	2000	22	41.63	-	-	1.56	1.56	3.61	0.274	0.071	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 years 0.274

Average rate of silting (mm/yr) in 22 years 0.274

Average rate of silting (M.Cum/yr) in 22 years 0.071

PAMBAR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Krishnagiri | Name of River -Pambar | Year of Impoundment - 1983

Catchment Area - 1736 Sq.km | Reservoir Area at FRL - 1.78 Sq.Km | MDDL - N.A | FRL - 321.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1983		7.93	7.02	0.91						
2	2013	30	7.54	-	-	0.39	0.39	4.92	0.007	0.013	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 years 0.007

Average rate of silting (mm/yr) in 30 years 0.007

Average rate of silting (M.Cum/yr) in 30 years 0.013

PARAMBIKULAM RESERVOIR

Name of State -Tamil Nadu | Name of the District -Coimbatore | Name of River - Parambikulam | Year of Impoundment - 1967

Catchment Area - 230.50 Sq.km | Reservoir Area at FRL - 20.72 Sq.Km | MDDL - N.A | FRL - 556.26m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1967		504.66	379.71	124.95						
2	2013	46	442.298	-	-	62.362	62.362	12.36	5.882	1.356	

Average rate of silting(Th.Cum/Sq.km/Yr) in 46 years 5.882

Average rate of silting (mm/yr) in 46 years 5.882

Average rate of silting (M.Cum/yr) in 46 years 1.356

PARAPPALAR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Dindigul | Name of River - Nangangi | Year of Impoundment - 1974

Catchment Area - 72.88 Sq.km | Reservoir Area at FRL - 1.145 Sq.Km | MDDL - 527.305m | FRL - 554.74m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		5.606	5.606	0						
2	2003	29	4.021	4.021	0	1.5849	1.5849	28.27	0.750	0.055	

Average rate of silting(Th.Cum/Sq.km/Yr) in 29 years 0.750

Average rate of silting (mm/yr) in 29 years 0.750

Average rate of silting (M.Cum/yr) in 29 years 0.055

PARSON VALLEY RESERVOIR

Name of State -Tamil Nadu | Name of the District - Nilgiries | Name of River -Kundah | Year of Impoundment - 1966

Catchment Area - 14.50 Sq.km | Reservoir Area at FRL - 1.67 Sq.km | MDDL -2199.51m | FRL - 2209.83m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											[illegible] has been modified as per the data sent by State Government
1	1966		19.25	17.19	2.06						
2	1988	22	12.7	12.7	0	6.55	6.55	34.03	20.533	0.298	
3	1995	7	11	11	0	1.7	8.25	42.86	16.749	0.243	

Average rate of silting(Th.Cum/Sq.km/Yr) in 29 years 19.620

Average rate of silting (mm/yr) in 29 years 19.620

Average rate of silting (M.Cum/yr) in 29 years 0.284

PECHIPARAI RESERVOIR

Name of State -Tamil Nadu | Name of the District - Kanniyakumari | Name of River - Kodaiyar | Year of Impoundment - 1907

Catchment Area - 172.00 Sq.km | Reservoir Area at FRL - 14.57 Sq.km | MDDL -87.48m | FRL -92.05m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											Dam was originally impounded in year 1907 with a capacity 126.43 Mcm. FRL was raised subsequently in 1971,which is taken as the base
1	1907		126.43	This data has not been considered for calculations							
2	1971		150.27	123.23	27.04						
3	1992	21	143.813	123.23	20.583	6.457	6.457	4.30	1.788	0.307	
4	1996	4	123.652	123.23	0.422	20.161	26.618	17.71	29.304	5.040	
5	2009	13	109.895	109.895	0	13.757	40.375	26.87	6.153	1.058	
6	2013	4	106.775	106.775	0	3.12	43.495	28.94	4.535	0.78	

Average rate of silting(Th.Cum/Sq.km/Yr) in 106 years 6.021

Average rate of silting (mm/yr) in 106 years 6.021

Average rate of silting (M.Cum/yr) in 106 years 1.036

PEGUMBAHALLA RESERVOIR

Name of State -Tamil Nadu | Name of the District - Nilgiries | Name of River - Kundah | Year of Impoundment - 1966

Catchment Area - 41.44 Sq.km | Reservoir Area at FRL - 2.052 Sq.Km | MDDL -834.86m | FRL - 869.30m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The original capacity has been modified as per the data sent by state government
1	1966		1.07	1.03	0.04						
2	1976	10	0.80	0.80	0	0.27	0.27	25.23	0.652	0.027	
3	1982	6	0.63	0.63	0	0.17	0.44	41.12	0.684	0.028	

Average rate of silting(Th.Cum/Sq.km/Yr) in 16 years 0.664

Average rate of silting (mm/yr) in 16 years 0.664

Average rate of silting (M.Cum/yr) in 16 years 0.028

PERUMAL TANK

Name of State -Tamil Nadu | Name of the District -Cuddalore | Name of River- Paravahar | Year of Impoundment - 1961

Catchment Area -504.59 Sq.km | Reservoir Area at FRL - 13.1156 Sq.Km | MDDL - N.A | FRL - 5.445m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1961		17.767	17.767	0						
2	1998	37	14.987	-	-	2.78	2.78	15.65	0.149	0.075	

Average rate of silting(Th.Cum/Sq.km/Yr) in 37 years 0.149

Average rate of silting (mm/yr) in 37 years 0.149

Average rate of silting (M.Cum/yr) in 37 years 0.075

PERUMPALLAM RESERVOIR

Name of State -Tamil Nadu | Name of the District - Erode | Name of River - Perumpallam Odai | Year of Impoundment - 1990

Catchment Area - 44.53 Sq.km | Reservoir Area at FRL - 0.65 Sq.Km | MDDL -N.A | FRL - 312.40m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1990		3.28	3.28	0						
2	2012	22	3.146	-	-	0.134	0.134	4.09	0.137	0.006	

Average rate of silting(Th.Cum/Sq.km/Yr) in 22 years 0.137

Average rate of silting (mm/yr) in 22 years 0.137

Average rate of silting (M.Cum/yr) in 22 years 0.006

PERUNCHANI RESERVOIR

Name of State -Tamil Nadu | Name of the District - Kanniyakumari | Name of River - Kodayar | Year of Impoundment - 1953

Catchment Area - 160.27 Sq.km | Reservoir Area at FRL - 9.63 Sq.km | MDDL - 69.8m | FRL - 91.44m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											1969 data has been taken as the base. Catchment area modified as per state information
1	1953		65.03	This data has not neen considered for calculations							
2	1969		81.787	-	-						
3	1995	26	77	77	0	4.787	4.787	5.85	1.149	0.184	
4	2012	17	69.1	69.1	0	7.9	12.687	15.512	2.90	0.465	

Average rate of silting(Th.Cum/Sq.km/Yr) in 59 years 1.841

Average rate of silting (mm/yr) in 59 years 1.841

Average rate of silting (M.Cum/yr) in 59 years 0.295

PILAVUKKAL PERIYAR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Virudhunagar | Name of River - Periyar | Year of Impoundment - 1976

Catchment Area - 36.00 Sq.km | Reservoir Area at FRL-0.76 Sq.Km | MDDL -190.00m | FRL - 204.52m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1976		5.437	5.437	0						
2	2013	37	5.173	5.173	0	0.264	0.264	4.86	0.198	0.007	

Average rate of silting(Th.Cum/Sq.km/Yr) in 37 year 0.198

Average rate of silting (mm/yr) in 37 years 0.198

Average rate of silting (M.Cum/yr) in 37 years 0.007

PILLUR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Coimbatore | Name of River - Bhavani | Year of Impoundment - 1967

Catchment Area - 1191.40 Sq.km | Reservoir Area at FRL -2.103 Sq.Km | MDDL -396.25m | FRL - 426.72m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1967		44.4	34.97	9.43						
2	1982	15	27.13	27.13	0	17.27	17.27	38.90	0.966	1.151	
3	2013	31	25.91	25.91	0	1.22	18.49	41.64	0.033	0.039	

Average rate of silting(Th.Cum/Sq.km/Yr) in 46 year 0.337

Average rate of silting (mm/yr) in 46 years 0.337

Average rate of silting (M.Cum/yr) in 46 years 0.402

PONNANIYAR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Trichy | Name of River - Ponnaniyar | Year of Impoundment - 1974

Catchment Area - 87.02 Sq.km | Reservoir Area at FRL - 0.61 Sq.km | MDDL -233.17m | FRL -250.30m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		3.389	3.389	0						
2	1990	16	2.524	2.524	0	0.865	0.865	25.52	0.621	0.054	
3	1995	5	2.308	2.308	0	0.216	1.081	31.90	0.496	0.043	

Average rate of silting(Th.Cum/Sq.km/Yr) in 21 year 0.592

Average rate of silting (mm/yr) in 21 years 0.592

Average rate of silting (M.Cum/yr) in 21 years 0.051

PORTHIMUND RESERVOIR

Name of State -Tamil Nadu | Name of the District -Nilgiries | Name of River -Kundah | Year of Impoundment - 1966

Catchment Area - 10.55 Sq.km | Reservoir Area at FRL - 2.84 Sq.km | MDDL -2184.56m | FRL - 2220.50m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											The original capacity has been modified as per data sent by state government
1	1966		60	45.73	14.27						
2	1990	24	56.451	45.73	10.721	3.549	3.549	5.92	14.017	0.148	
3	1996	6	47.893	45.73	2.163	8.558	12.107	20.18	135.20	1.43	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 years 38.253

Average rate of silting (mm/yr) in 30 years 38.253

Average rate of silting (M.Cum/yr) in 30 years 0.404

PYKARA RESERVOIR

Name of State -Tamil Nadu | Name of the District -Nilgiries | Name of River -Pykara | Year of Impoundment - 1954

Catchment Area - 38.10 Sq.km | Reservoir Area at FRL -4.48 Sq.km | MDDL -2045.21m | FRL - 2072.90m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1954		56.7	54.52	2.28						
2	2001	47	36.78	36.78	0	19.92	19.92	35.13	11.124	0.424	
3	2010	9	35.17	35.17	0	1.61	21.53	37.97	4.70	0.18	

Average rate of silting(Th.Cum/Sq.km/Yr) in 56 years 10.091

Average rate of silting (mm/yr) in 56 years 10.091

Average rate of silting (M.Cum/yr) in 56 years 0.384

SATHANUR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Thiruvannamalai | Name of River - Ponnaiyar | Year of Impoundment - 1957

Catchment Area - 10826.10 Sq.km | Reservoir Area at FRL - 20.10 Sq.km | MDDL -203.00m | FRL - 222.20m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1957		234.828	234.828	0						
2	1977	20	211.651	-	-	23.177	23.177	9.87	0.107	1.159	
3	1982	5	207.302	-	-	4.349	27.526	11.72	0.080	0.870	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 years 0.102

Average rate of silting (mm/yr) in 25 years 0.102

Average rate of silting (M.Cum/yr) in 25 years 1.101

SATHIYARAR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Madurai | Name of River -Sathiyar | Year of Impoundment - 1965

Catchment Area - 95.71 Sq.km | Reservoir Area at FRL - 0.361 Sq.km | MDDL - 222.50m | FRL - 231.343m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		1.586	1.334	0.252						
2	2010	45	1.129	1.129	0	0.457	0.4574	28.84	0.106	0.010	

Average rate of silting(Th.Cum/Sq.km/Yr) in 45 years 0.106

Average rate of silting (mm/yr) in 45 years 0.106

Average rate of silting (M.Cum/yr) in 45 years 0.010

THIRUMURTHY RESERVOIR

Name of State -Tamil Nadu | Name of the District - Tirupur | Name of River - Palar | Year of Impoundment - 1967

Catchment Area - 80.29 Sq.km | Reservoir Area at FRL - 3.88 Sq.km | MDDL -N.A | FRL - 407.52m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1967		54.80	49.39	5.41						
2	1987	20	51.21	-	-	3.59	3.59	6.55	2.236	0.180	
3	1994	7	49.533	-	-	1.677	5.267	9.61	2.984	0.240	
4	2009	15	47.804	-	-	1.729	6.996	12.77	1.436	0.115	

Average rate of silting(Th.Cum/Sq.km/Yr) in 42 years 2.075

Average rate of silting (mm/yr) in 42 years 2.075

Average rate of silting (M.Cum/yr) in 42 years 0.167

THUNAKADAVU RESERVOIR

Name of State -Tamil Nadu | Name of the District -Coimbatore | Name of River - Thunakadavu | Year of Impoundment - 1965

Catchment Area - 43.36 Sq.km | Reservoir Area at FRL - 1.74 Sq.km | MDDL- N.A | FRL - 593.50m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		15.76	9.9	5.86						
2	2013	48	13.15	-	-	2.61	2.61	16.56	1.254	0.054	

Average rate of silting(Th.Cum/Sq.km/Yr) in 48 years 1.254

Average rate of silting (mm/yr) in 48 years 1.254

Average rate of silting (M.Cum/yr) in 48 years 0.054

THOPPIYAR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Dharmapuri | Name of River -Thoppiyar | Year of Impoundment - 1987

Catchment Area - 276.90 Sq.km | Reservoir Area at FRL - 1.20 Sq.Km | MDDL - N.A | FRL - 363.60m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1987		8.456	8.456	0						
2	2012	25	7.955	-	-	0.501	0.501	5.92	0.072	0.020	

Average rate of silting(Th.Cum/Sq.km/Yr) in 25 years 0.072

Average rate of silting (mm/yr) in 25 years 0.072

Average rate of silting (M.Cum/yr) in 25 years 0.020

UPPAR RESERVOIR

Name of State -Tamil Nadu | Name of the District - Erode | Name of River - Uppar | Year of Impoundment - 1968

Catchment Area - 903.56 Sq.km | Reservoir Area at FRL - 4.53 Sq.km | MDDL -N.A | FRL - 276.15m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1968		16.2	14.926	1.274						
2	1991	23	10.049	-	-	6.151	6.151	37.97	0.296	0.267	
3	1995	4	9.294	-	-	0.755	6.906	42.63	0.209	0.189	

Average rate of silting(Th.Cum/Sq.km/Yr) in 27 year 0.283

Average rate of silting (mm/yr) in 27 years 0.283

Average rate of silting (M.Cum/yr) in 27 years 0.256

UPPER BHAVANI RESERVOIR

Name of State -Tamil Nadu | Name of the District - Nilgiries | Name of River - Bhavani River | Year of Impoundment - 1965

Catchment Area - 33.57 Sq.km | Reservoir Area at FRL - 4.77 Sq.km | MDDL -2249.42m | FRL - 2276.88m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		101.2	85.2	16						
2	1985	20	97.48	85.2	12.28	3.72	3.72	3.68	5.541	0.186	

Average rate of silting(Th.Cum/Sq.km/Yr) in 20 year 5.541

Average rate of silting (mm/yr) in 20 years 5.541

Average rate of silting (M.Cum/yr) in 20 years 0.186

VAIGAI RESERVOIR

Name of State -Tamil Nadu | Name of the District - Madurai | Name of River - Vaigai | Year of Impoundment - 1958

Catchment Area - 2255.127 Sq.km | Reservoir Area at FRL - 24.201 Sq.km | MDDL - 257.556m | FRL - 279.197m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1958		194.785	193.329	1.456						
2	1976	18	178.191	178.191	0	16.594	16.594	8.52	0.409	0.922	
3	1981	5	172.439	172.439	0	5.752	22.346	11.47	0.510	1.150	
4	1983	2	172.380	172.380	0	0.059	22.405	11.50	0.013	0.029	
5	2000	17	167.206	167.206	0	5.174	27.579	2.66	0.135	0.304	
6	2012	12	162.72	162.72	0	4.486	32.065	16.46	0.166	0.374	

Average rate of silting(Th.Cum/Sq.km/Yr) in 54 years 0.263

Average rate of silting (mm/yr) in 54 years 0.263

Average rate of silting (M.Cum/yr) in 54 years 0.594

VANIYAR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Dharmapuri | Name of River -Vaniyar(Pennaiyar) | Year of Impoundment - 1983
Catchment Area - 107.76 Sq.km | Reservoir Area at FRL - 10.93 Sq.Km | MDDL - N.A | FRL - 471.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1983		11.836	11.486	0.35						
2	2010	27	11.151	-	-	0.685	0.685	5.79	0.235	0.025	

Average rate of silting(Th.Cum/Sq.km/Yr) in 27 years 0.235
Average rate of silting (mm/yr) in 27 years 0.235
Average rate of silting (M.Cum/yr) in 27 years 0.025

VARADAMANATHI RESERVOIR

Name of State -Tamil Nadu | Name of the District - Dindigul | Name of River - Varadamanathi | Year of Impoundment - 1978
Catchment Area - 74.07 Sq.km | Reservoir Area at FRL - 0.39 Sq.km | MDDL -N.A | FRL- 371.26m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											No sedimentation
1	1978		3.06	3.06	0						
2	1998	20	3.14	-	-	-	-	-	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 20 years -
Average rate of silting (mm/yr) in 20 years -
Average rate of silting (M.Cum/yr) in 20 years -

VARATTUPALLAM RESERVOIR

Name of State -Tamil Nadu | Name of the District - Erode | Name of River - Varattupallam | Year of Impoundment - 1980

Catchment Area - 66.82 Sq.km | Reservoir Area at FRL - 0.89 Sq.km | MDDL -N.A | FRL - 315.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1980		3.94	3.94	0						
2	2010	30	3.61	-	-	0.33	0.33	8.38	0.165	0.011	

Average rate of silting(Th.Cum/Sq.km/Yr) in 30 year 0.165

Average rate of silting (mm/yr) in 30 years 0.165

Average rate of silting (M.Cum/yr) in 30 years 0.011

VEERANAM RESERVOIR

Name of State -Tamil Nadu | Name of the District - Cuddalore | Name of River - Coleroon | Year of Impoundment - 1923

Catchment Area - 427.35 Sq.km | Reservoir Area at FRL - 38.85 Sq.km | MDDL -N.A | FRL - 13.870m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1923		40.805	40.805	0						
2	1991	68	27.744	-	-	13.061	13.061	32.01	0.449	0.192	

Average rate of silting(Th.Cum/Sq.km/Yr) in 68 year 0.449

Average rate of silting (mm/yr) in 68 years 0.449

Average rate of silting (M.Cum/yr) in 68 years 0.192

VEMBAKOTTAI RESERVOIR

Name of State -Tamil Nadu | Name of the District - Virudhunagar | Name of River -Vaippar | Year of Impoundment -1989

Catchment Area - 1593.55 Sq.km | Reservoir Area at FRL - 4.6769 Sq.km | MDDL - 80.50m | FRL - 87.50m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1989		11.29	11.275	0.015						
2	2013	24	10.168	10.168	0	1.122	1.122	9.94	0.029	0.047	

Average rate of silting(Th.Cum/Sq.km/Yr) in 24 years 0.029

Average rate of silting (mm/yr) in 24 years 0.029

Average rate of silting (M.Cum/yr) in 24 years 0.047

VIDUR RESERVOIR

Name of State -Tamil Nadu | Name of the District -Villupuram | Name of River -Varahanadhi | Year of Impoundment - 1959

Catchment Area -1298.00 Sq.km | Reservoir Area at FRL - 7.77 Sq.Km | MDDL - N.A | FRL - 37.795m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1959		17.732	17.732	0						
2	2009	50	14.64	-	-	3.092	3.092	17.44	0.048	0.062	

Average rate of silting(Th.Cum/Sq.km/Yr) in 50 years 0.048

Average rate of silting (mm/yr) in 50 years 0.048

Average rate of silting (M.Cum/yr) in 50 years 0.062

WALAJA RESERVOIR

Name of State -Tamil Nadu | Name of the District - Cuddalore | Name of River - Vellar | Year of Impoundment - 1923

Catchment Area - 191.577 Sq.km | Reservoir Area at FRL - 4.56 Sq.km | MDDL -N.A | FRL - 11.43m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1923		2.568	2.568	0						
2	1997	74	1.671	-	-	0.897	0.897	34.93	0.063	0.012	

Average rate of silting(Th.Cum/Sq.km/Yr) in 74 year 0.063

Average rate of silting (mm/yr) in 74 years 0.063

Average rate of silting (M.Cum/yr) in 74 years 0.012

WILLINGDON RESERVOIR

Name of State -Tamil Nadu | Name of the District - Cuddalore | Name of River - Periya Odai (Vellar) | Year of Impoundment - 1924

Catchment Area - 2849.50 Sq.km | Reservoir Area at FRL - 15.54 Sq.km | MDDL - N.A. | FRL - 72.06m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1924		71.46	60.01	11.45						
2	1985	61	55.32	-	-	16.14	16.14	22.59	0.093	0.265	
3	1991	6	52.032	-	-	3.288	19.428	27.19	0.192	0.548	

Average rate of silting(Th.Cum/Sq.km/Yr) in 67 years 0.102

Average rate of silting (mm/yr) in 67 years 0.102

Average rate of silting (M.Cum/yr) in 67 years 0.290

DINDI RESERVOIR

Name of State - Telengana (then Andhra Pradesh) Name of the District - Nalgonda Name of River - Dindi Year of Impoundment - 1943
Catchment Area - 3919.96 Sq.km Reservoir Area at FRL - N.A MDDL -N.A FRL - 396.55 m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1943		73.83	-	-						
2	1976	33	71.62	-	-	2.21	2.21	2.99	0.02	0.07	

Average rate of silting (Th.Cum/Sq.km/yr) in 33 years 0.02
Average rate of silting (mm/yr) in 33 years 0.02
Average rate of silting (M.Cum/yr) in 33 years 0.07

HIMAYATSAGAR RESERVOIR

Name of State - Telengana (then Andhra Pradesh) Name of the District - Rangareddy Name of River - Eesa Year of Impoundment - 1927
Catchment Area - 1307.94 Sq.km Reservoir Area at FRL - N.A MDDL - 526.09m FRL - 537.52m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1927		107.79	-	-						
2	1976	49	79.16	-	-	28.63	28.63	26.56	0.447	0.58	

Average rate of silting (Th.Cum/Sq.km/yr) in 49 years 0.447
Average rate of silting (mm/yr) in 49 years 0.447
Average rate of silting (M.Cum/yr) in 49 years 0.58

KADDAM RESERVOIR

Name of State - Telengana (then Andhra Pradesh) | Name of the District - Adilabad | Name of River - Kaddam | Year of Impoundment - 1958

Catchment Area - 2656.25 Sq.km | Reservoir Area at FRL - N.A | MDDL - 207.26m | FRL - 213.21m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1958		124.43	-	-						
2	1977	19	78.179	-	-	46.251	46.251	37.17	0.916	2.43	

Average rate of silting (Th.Cum/Sq.km/yr) in 19 years 0.916

Average rate of silting (mm/yr) in 19 years 0.916

Average rate of silting (M.Cum/yr) in 19 years 2.430

LAKHNAVARAM LAKE

Name of State - Telengana (then Andhra Pradesh) | Name of the District - Warangal | Name of River - Lakhnavaram | Year of Impoundment - 1909

Catchment Area - 268.06 Sq.km | Reservoir Area at FRL - N.A | MDDL - 86.78m | FRL - 97.240m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1909		60.42	-	-						
2	1975	66	41.58	-	-	18.84	18.84	31.18	1.065	0.29	

Average rate of silting (Th.Cum/Sq.km/yr) in 66 years 1.065

Average rate of silting (mm/yr) in 66 years 1.065

Average rate of silting (M.Cum/yr) in 66 years 0.290

MANJIRA RESERVOIR

Name of State - Telengana (then Andhra Pradesh) | Name of the District - Medak | Name of River - Manjira | Year of Impoundment - 1966

Catchment Area - 16770.25 Sq.km | Reservoir Area at FRL - N.A | MDDL -N.A | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1966		50.94	-	-						
2	1977	11	32.20	-	-	18.74	18.74	36.79	0.102	1.70	

Average rate of silting (Th.Cum/Sq.km/yr) in 11 years 0.102

Average rate of silting (mm/yr) in 11 years 0.102

Average rate of silting (M.Cum/yr) in 11 years 1.700

NAGARJUNA SAGAR

Name of State - Telengana | Name of the District - Nalgonda | Name of River - Krishna | Year of Impoundment - 1967

Catchment Area - 215185 Sq.km | Reservoir Area at FRL - 295.19 Sq.km | MDDL - 149.00m | FRL - 179.83m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1967		11553	6840	4713						
2	2001	34	9309.56	6158.19	3151.37	2243.44	2243.44	19.42	0.307	65.984	
3	2009	8	8836.045	6042.490	2793.555	473.51	2716.96	23.52	0.275	59.19	

Average rate of silting (Th.Cum/Sqkm/yr) in 42 years 0.301

Average rate of silting (mm/yr) in 42 years 0.301

Average rate of silting (M.Cum/yr) in 42 years 64.689

NIZAMSAGAR RESERVOIR

Name of State - Telengana (then Andhra Pradesh) | Name of the District- Nizamabad | Name of River - Manjira | Year of Impoundment - 1930

Catchment Area - 21694 Sq.km | Reservoir Area at FRL - 14.286 Sq.km | MDDL - 415.75m | FRL - 428.25m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1930		841.18	-	-						
2	1967	37	402.91	-	-	438.27	438.27	52.10	0.546	11.85	
3	1975	8	363.7	-	-	39.21	477.48	56.76	0.226	4.90	
4	1992	17	332.52	-	-	31.18	508.66	60.47	0.085	1.83	

Average rate of silting (Th.Cum/Sq.km/yr) in 62 years 0.378

Average rate of silting (mm/yr) in 62 years 0.378

Average rate of silting (M.Cum/yr) in 62 years 8.204

PALAIR RESERVOIR

Name of State - Telengana (then Andhra Pradesh) | Name of the District - Khammam | Name of River - Palair | Year of Impoundment - 1928

Catchment Area - 1686.71 Sq.km | Reservoir Area at FRL - N.A | MDDL - 126.89m | FRL - 133.90m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1928		56.56	-	-						
2	1977	49	55.35	-	-	1.21	1.21	2.14	0.015	0.025	

Average rate of silting (Th.Cum/Sq.km/yr) in 49 years 0.015

Average rate of silting (mm/yr) in 49 years 0.015

Average rate of silting (M.Cum/yr) in 49 years 0.025

POCHARAM RESERVOIR

Name of State - Telengana (then Andhra Pradesh) | Name of the District - Medak | Name of River - Aliaru Stream | Year of Impoundment - 1922

Catchment Area - 673.40 Sq.km | Reservoir Area at FRL - N.A | MDDL - 441.35m | FRL - 446.23m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1922		16.85	-	-						
2	1978	56	13.067	-	-	3.783	3.783	22.45	0.100	0.068	

Average rate of silting (Th.Cum/Sq.km/yr) in 56 years 0.100

Average rate of silting (mm/yr) in 56 years 0.100

Average rate of silting (M.Cum/yr) in 56 years 0.068

PRIYADARSHINI JURALA PROJECT

Name of State -Telengana | Name of the District - Mahaboobnagar | Name of River - Krishna | Year of Impoundment -1996

Catchment Area - 82471 Sq.km | Reservoir Area at FRL - N.A | MDDL - N.A | FRL - 318.516m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1996		338.103	192.273	145.83						
2	2012	16	273.44	168.476	104.964	64.663	64.663	19.13	0.049	4.041	

Average rate of silting(Th.Cum/Sq.km/Yr) in 16 year 0.049

Average rate of silting (mm/yr) in 16 years 0.049

Average rate of silting (M.Cum/yr) in 16 years 4.041

RAMAPPA LAKE

Name of State - Telengana (then Andhra Pradesh) | Name of the District - Warangal | Name of River - Manair | Year of Impoundment - 1919

Catchment Area - 183.89 Sq.km | Reservoir Area at FRL - N.A | MDDL - 192.3m | FRL - 202.97m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1919		82.48	-	-						
2	1975	56	79.82	-	-	2.66	2.66	3.23	0.258	0.048	

Average rate of silting (Th.Cum/Sq.km/yr) in 56 years 0.258

Average rate of silting (mm/yr) in 56 years 0.258

Average rate of silting (M.Cum/yr) in 56 years 0.048

SHANIGRAM TANK

Name of State - Telengana (then Andhra Pradesh) | Name of the District - Karimnagar | Name of River - Siddipet | Year of Impoundment - 1891

Catchment Area - 321.00 Sq.km | Reservoir Area at FRL - N.A | MDDL -N.A | FRL - N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1891		29.08	-	-						
2	1972	81	26.13	-	-	2.95	2.95	10.14	0.113	0.036	

Average rate of silting (Th.Cum/Sq.km/yr) in 81 years 0.113

Average rate of silting (mm/yr) in 81 years 0.113

Average rate of silting (M.Cum/yr) in 81 years 0.036

SRIRAMSAGAR RESERVOIR

Name of State - Telengana (then Andhra Pradesh) **Name of the District - Nizamabad** **Name of River - Godavari** **Year of Impoundment - 1970**
Catchment Area - 54054 Sq.km **Reservoir Area at FRL - 334.84 Sq.km** **MDDL - 322.50m** **FRL - 332.537m**

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
											Catchment area has been modified as per data sen tby project authorities.
1	1970		3171.94	-	-						
2	1984	14	2377.37	-	-	794.57	794.57	25.05	1.050	56.755	
3	1994	10	2557.25	2002.44	554.81	-179.88	614.69	19.38	-	-	
4	2013	19	2268.267	1827.759	440.484	288.983	903.673	28.49	0.281	15.21	

Average rate of silting (Th.Cum/Sq.km/yr) in 43 years **0.389**
Average rate of silting (mm/yr) in 43 years **0.389**
Average rate of silting (M.Cum/yr) in 43 years **21.016**

WYRA RESERVOIR

Name of State - Telengana (then Andhra Pradesh) **Name of the District - Khammam** **Name of River - Wyra** **Year of Impoundment - 1929**
Catchment Area - 709.66 Sq.km **Reservoir Area at FRL - N.A** **MDDL - N.A** **FRL - N.A**

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1929		24.66	-	-						The name of the river has been corrected
2	1977	48	14.88	-	-	9.78	9.78	39.66	0.287	0.204	

Average rate of silting (Th.Cum/Sq.km/yr) in 48 years **0.287**
Average rate of silting (mm/yr) in 48 years **0.287**
Average rate of silting (M.Cum/yr) in 48 years **0.204**

DHUKWAN RESERVOIR

Name of State - Uttar Pradesh | Name of the District - Jhansi | Name of River - Betwa | Year of Impoundment - 1907

Catchment Area - 21340 Sq.km | Reservoir Area at FRL - 6.423 Sq.km | MDDL -N.A | FRL -N.A

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1907		106.45	-	-						
2	1937	30	79.34	-	-	27.11	27.11	25.47	0.042	0.904	
3	1942	5	79.3	-	-	0.04	27.15	25.50	0.0004	0.008	
4	1947	5	73.03	-	-	6.27	33.42	31.40	0.059	1.254	
5	1952	5	66.18	-	-	6.85	40.27	37.83	0.064	1.370	
6	1980	28	59.03	-	-	7.15	47.42	44.55	0.012	0.255	

Average rate of silting(Th.Cum/Sq.km/Yr) in 73 year 0.030

Average rate of silting (mm/yr) in 73 years 0.030

Average rate of silting (M.Cum/yr) in 73 years 0.650

MATATILA RESERVOIR

Name of State - Uttar Pradesh | Name of the District - Lalitpur | Name of River - Betwa | Year of Impoundment - 1956

Catchment Area - 20720 Sq.km | Reservoir Area at FRL - 143.43 Sq.km | MDDL - 295.66m | FRL - 308.48m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1956		1132.7	1019.4	113.3						
2	1962	6	985.76	-	-	146.94	146.94	12.97	1.182	24.490	
3	1964	2	964.04	-	-	21.72	168.66	14.89	0.524	10.860	
4	1966	2	956.77	-	-	7.27	175.93	15.53	0.175	3.635	
5	1969	3	948.25	-	-	8.52	184.45	16.28	0.137	2.840	
6	1971	2	903.23	-	-	45.02	229.47	20.26	1.086	22.510	
7	1975	4	882.87	-	-	20.36	249.83	22.06	0.246	5.090	
8	1984	9	784.3	-	-	98.57	348.4	30.76	0.529	10.952	
9	1990	6	748.72	-	-	35.58	383.98	33.90	0.286	5.930	
10	1994	4	763.51	743.71	19.8	-14.79	369.19	32.59	-	-	
11	1999	5	702.33			61.18	430.37	38.00	0.591	12.236	

Average rate of silting(Th.Cum/Sq.km/Yr) in 43 year 0.483

Average rate of silting (mm/yr) in 43 years 0.483

Average rate of silting (M.Cum/yr) in 43 years 10.009

PILI RESERVOIR

Name of State - Uttar Pradesh | Name of the District - Bijnor | Name of River - Pili,Dhara & Baneli | Year of Impoundment - 1962

Catchment Area - 162.00 Sq.km | Reservoir Area at FRL - 7.80 Sq.km | MDDL -N.A | FRL -257.86m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1962		55.265	54.275	0.99						
2	1991	29	42.21	42.21	0	13.055	13.055	23.62	2.779	0.45	
3	2011	20	39.2	39.2	0	3.01	16.065	29.07	0.929	0.15	

Average rate of silting(Th.Cum/Sq.km/Yr) in 49 year 2.024

Average rate of silting (mm/yr) in 49 years 2.024

Average rate of silting (M.Cum/yr) in 49 years 0.328

RIHAND RESERVOIR

Name of State - Uttar Pradesh | Name of the District - Sonebhadra | Name of River - Rihand | Year of Impoundment - 1962

Catchment Area - 13333 Sq.km | Reservoir Area at FRL - 377.01 Sq.km | MDDL -N.A | FRL -268.224m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1962		10608.32	8979.94	1628.38						
2	1995	33	9324.81	8009.94	1314.87	1283.51	1283.51	12.10	2.917	38.89	
3	2003	8	9019.99	7633.59	1386.4	304.82	1588.33	14.97	0.286	38.10	

Average rate of silting(Th.Cum/Sq.km/Yr) in 41 year 2.906

Average rate of silting (mm/yr) in 41 years 2.906

Average rate of silting (M.Cum/yr) in 41 years 38.740

BAIGUL RESERVOIR

Name of State - Uttarakhand | Name of the District - Udham singh Nagar | Name of River - Baigul | Year of Impoundment - 1968

Catchment Area - 302.00 Sq.km | Reservoir Area at FRL - 18.93 Sq.km | MDDL -N.A | FRL -208.790m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1968		86.68	78.36	8.32						
2	1992	24	70.725	65.225	5.5	15.955	15.955	18.41	2.201	0.665	
3	2005	13	65.42	65.42	0	5.305	21.26	24.53	1.351	0.408	

Average rate of silting(Th.Cum/Sq.km/Yr) in 37 year 1.903

Average rate of silting (mm/yr) in 37 years 1.903

Average rate of silting (M.Cum/yr) in 37years 0.575

DHORA RESERVOIR

Name of State - Uttarakhand | Name of the District - Udham singh Nagar | Name of River - Dhora and Katna | Year of Impoundment - 1962

Catchment Area - 134.68 Sq.km | Reservoir Area at FRL - 11.45 Sq.km | MDDL -N.A | FRL -216.41m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1962		54.809	50.987	3.822						
2	1991	29	45.645	44.395	1.25	9.164	9.164	16.72	2.346	0.316	
3	2005	14	43.61	42.94	0.67	2.035	11.199	20.43	1.079	0.145	

Average rate of silting(Th.Cum/Sq.km/Yr) in 43 year 1.934

Average rate of silting (mm/yr) in 43 years 1.934

Average rate of silting (M.Cum/yr) in 43 years 0.260

ICHARI RESERVOIR

Name of State - Uttarakhand (then Uttar Pradesh) | Name of the District - Dehradun | Name of River - Tons | Year of Impoundment - 1966

Catchment Area - 4913.00 Sq.km | Reservoir Area at FRL - 1.13 Sq.km | MDDL -N.A | FRL - 644.75m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1966		11.55	11.55	0						
2	1977	11	8.45	8.45	0	3.1	3.1	26.84	0.06	0.28	
3	1982	5	5.39	5.39	0	3.06	6.16	53.33	0.12	0.61	
4	2003	21	6.09	6.09	0	-0.7	5.46	47.27	-	-	

Average rate of silting(Th.Cum/Sq.km/Yr) in 37 year 0.030

Average rate of silting (mm/yr) in 37 years 0.030

Average rate of silting (M.Cum/yr) in 37 years 0.148

NANAK SAGAR RESERVOIR

Name of State - Uttarakhand | Name of the District - Udham singh Nagar | Name of River - Deoha | Year of Impoundment - 1962

Catchment Area - 570.00 Sq.km | Reservoir Area at FRL - 35.93 Sq.km | MDDL - N.A | FRL -217.00m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1962		209.8	200.5	9.3						
2	1992	30	189.067	183.252	5.815	20.733	20.733	9.88	1.212	0.691	
3	2008	16	180.5	175.58	4.92	8.567	29.3	13.97	0.939	0.535	

Average rate of silting(Th.Cum/Sq.km/Yr) in 46 year 1.117

Average rate of silting (mm/yr) in 46 years 1.117

Average rate of silting (M.Cum/yr) in 46 years 0.637

SARDA SAGAR RESERVOIR

Name of State - Uttarakhand | Name of the District - Udham singh Nagar | Name of River - Sarda | Year of Impoundment - 1962

Catchment Area - 127.00 Sq.km | Reservoir Area at FRL - 46.14 Sq.km | MDDL -N.A | FRL -183.704m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1962		493.16	364.67	128.49						
2	1991	29	406.28	330.01	76.27	86.88	86.88	17.62	23.59	2.996	
3	2009	18	377.13	307.64	69.49	29.15	116.03	23.53	12.752	1.62	

Average rate of silting(Th.Cum/Sq.km/Yr) in 47 year 19.439

Average rate of silting (mm/yr) in 47 years 19.439

Average rate of silting (M.Cum/yr) in 47 years 2.469

RAMGANGA RESERVOIR

Name of State - Uttarakhand | Name of the District - Pauri Garwal | Name of River - Ramganga,Sona and Madalti | Year of Impoundment - 1974

Catchment Area - 3134 Sq.km | Reservoir Area at FRL - 78 Sq.km | MDDL -N.A | FRL - 365.30m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1974		2590.72	2195.5	395.22						The capacity data have been modified as per the data sent by State Government
2	1988	14	2508.01	2273.088	234.922	82.71	82.71	3.19	1.89	5.91	
3	1997	9	2480.25	2270.144	210.106	27.76	110.47	4.26	0.98	3.08	
4	2008	11	2456.47	2260.04	196.43	23.78	134.25	5.18	0.690	2.162	

Average rate of silting(Th.Cum/Sq.km/Yr) in 34 year 1.260

Average rate of silting (mm/yr) in 34 years 1.260

Average rate of silting (M.Cum/yr) in 34 years 3.949

TEHRI DAM RESERVOIR

Name of State - Uttarakhand | Name of the District - Tehri | Name of River - Bhagirathi River &Bhilangana River | Year of Impoundment - 2005

Catchment Area - 7511 Sq.km | Reservoir Area at FRL -43.37 Sq.km | MDDL -740m | FRL - 830m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	2005		3548.512	2632.303	916.209						
2	2008	3	3527.504	2616.822	910.682	21.01	21.01	0.59	0.932	7.003	

Average rate of silting(Th.Cum/Sq.km/Yr) in 3 years 0.932

Average rate of silting (mm/yr) in 3 years 0.932

Average rate of silting (M.Cum/yr) in 3 years 7.003

DURGAPUR BARRAGE

Name of State - West Bengal | Name of the District - Burdwan | Name of River - Damodar | Year of Impoundment - 1955

Catchment Area - 2295 Sq.km | Reservoir Area at FRL - N.A | MDDL - 63.40m | FRL - 64.40m

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.cu.m.)			Average Annual Inflow(Mcum)	Loss of Capacity (Cumulative)		Observed Rate of Siltation		Remarks
			Gross	Live	Dead		M.Cu.m	% to original capacity	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	5	6	7	4	8	9	10	11	12
1	1955		11.85	6.1	5.75						
2	2011	56	6.437	3.939	2.498	5.413	5.413	45.68	0.042	0.097	

Average rate of silting(Th.Cum/Sq.km/Yr) in 56 year 0.042

Average rate of silting (mm/yr) in 56 years 0.042

Average rate of silting (M.Cum/yr) in 56 years 0.097

KANGSABATI RESERVOIR

Name of State - West Bengal | **Name of the District - Bankura** | **Name of River - Kangsabati** | **Year of Impoundment - 1965**

Catchment Area - 3626 Sq.km | **Reservoir Area at FRL - 113.00 Sq.km** | **MDDL - 120.39m** | **FRL - 134.13m**

S. No	Year of Survey	Period (Years)	Reservoir Capacity(M.Cum)			Loss of Capacity (M.Cum)			Observed Rate of Siltation Since Last Survey		Remarks
			Gross	Live	Dead	Since Last Survey	Cumulative	% Cumulative	(Th.Cum/SqKm/yr)	(M.Cum/yr)	
1	2	3	4	5	6	7	8	9	10	11	12
1	1965		1053.65	925.18	128.47						
2	2006	41	941.926	849.700	92.226	111.724	111.724	10.60	0.752	2.725	

Average rate of silting(Th.Cum/Sq.km/Yr) in 41 year **0.752**

Average rate of silting (mm/yr) in 41 years **0.752**

Average rate of silting (M.Cum/yr) in 41 years **2.725**

APPENDIX-II

RATE OF SILTING IN VARIOUS RESERVOIRS IN INDIA

Sl. No.	Name of Reservoir	Name of River	Year of first impound-ment	Catchment Area in Sq.Km.	Storage Capacity in M.Cu.m.	Designed Rate of Siltation (Th.Cu.m/ Sq.km./Yr	Total Number Of surveys (year of last survey)	Observed Rate of siltation Th.Cu.m./ Sq.km./yr	Total loss of capacity up to the last survey	Percent-age loss of capacity up to the last survey	Percentage annual loss of capacity	Percentage loss of live storage up to the last survey	Percentage Loss of dead storage up to the last survey
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	ANDHRA PRADESH												
1	Cumbum Tank	Gundukarmma	1956	993	105.76	N.A.	1(1978)	0.99	21.61	20.43	0.93	-	-
2	Srisailam	Krishna	1976	206030	8724.88	0.079	3(2011)	0.36	2613.97	29.96	1.20	18.66	28.63
	BIHAR												
3	Badua	Badua	1965	480.7	129.245	0.357	1(2006)	0.802	15.81	12.23	0.30	9.2	29.2
	CHHATTISGARH												
4	Dudhwa	Mahanadi	1963	625.27	288.65	N.A.	1(2011)	0.95	28.518	9.88	0.21	8.81	77.22
5	Minimata	Hasdeo	1990	6730	3416	0.55	1(2001)	0.678	50.21	1.47	0.13	0.71	7.74
6	Ravishankar sagar	Mahanadi	1979	3670	909.32	0.389	1(2003)	0.32	28.2	3.1	0.13	1.2	13.28
	GOA												
7	Salaulim	Sanguem	1990	209	234.36	N.A.	1(2011)	9.496	41.68	17.78	0.85	15.98	74.69
	GUJARAT												
8	Ajwa	Suya Rivulet	1891	177.3	62.7	N.A.	1(1987)	0.453	7.71	12.3	0.13		
9	Bhadar(P)	Bhadar	1983	407	46.72	0.357	3(2009)	1.49	15.77	33.75	1.30	26.88	74
10	Bhadar(S)	Bhadar	1964	2406	237.86	N.A.	1(2004)	0.951	91.55	38.49	0.96	34.74	98
11	Bhimdad	Madhu	1953	109.82	11.19	0.143	2(1986)	1.242	4.5	40.21	1.22	-	
12	Bramani	Bramani	1953	699.27	74.95	0.72	1(1986)	0.72	16.62	22.17	0.67	-	
13	Chopadvav	Doman	1985	27	10.15	0.357	1(1998)	12.707	4.46	43.94	3.38	42	68
14	Damanganga	Damanganga	1983	1813	567	0.56	4(2008)	0.93	42.14	7.433	0.30	4.76	28
15	Dantiwada	Banas	1965	2862	464.4	0.361	4(2007)	0.575	69.07	14.87	0.35	11.57	89.35
16	Demi-I	Demi	1959	168.34	21.52	N.A.	1(1984)	1.181	4.97	23.09	0.92	-	
17	Deo	Deo	1986	259	84.09	0.333	2(2005)	3.281	16.144	19.2	0.96	19.62	15
18	Dharoi	Sabarmati	1976	5475	907.83	0.357	6(2006)	0.59	96.163	10.59	0.35	4.21	47.76
19	Dhatarwadi	Dhatarwadi	1975	429.94	32.73	0.19	1(1986)	1.254	5.93	18.12	1.65	-	

Sl. No.	Name of Reservoir	Name of River	Year of first impound-ment	Catchment Area in Sq.Km.	Storage Capacity in M.Cu.m.	Designed Rate of Siltation (Th.Cu.m/ Sq.km./Yr	Total Number Of surveys (year of last survey)	Observed Rate of siltation Th.Cu.m./ Sq.km./yr	Total loss of capacity up to the last survey	Percent-age loss of capacity up to the last survey	Percentage annual loss of capacity	Percentage loss of live storage up to the last survey	Percentage Loss of dead storage up to the last survey
1	2	3	4	5	6	7	8	9	10	11	12	13	14
20	Fulzar-I	Und	1957	142.45	14.9	N.A.	1(1986)	0.646	2.67	17.92	0.62	-	
21	Ghee	Ghee	1953	129.49	13.84	N.A.	1(1986)	0.288	1.23	8.89	0.27	-	-
22	Ghelo-I	Ghelo	1963	103.6	13.35	0.375	2(1986)	1.406	3.35	25.09	1.09	-	-
23	Godhatad	Mitiariwali	1977	167.04	14.7	0.9	1(1987)	0.431	0.72	4.9	0.49	-	-
24	Goma	Goma	1972	155.4	18.26	0.152	1(1986)	1.08	2.35	12.87	0.92	-	-
25	Gondli	Gondli	1956	67.41	11.35	N.A.	1(1986)	0.613	1.24	10.93	0.36	-	-
26	Hadaf	Hadaf	1986	508	32.26	0.335	2(2009)	0.871	10.174	31.54	1.37	31	33.48
27	Hathmati	Sabarmati	1971	594.95	160.71	0.238	1(1987)	0.991	9.43	5.87	0.37	-	-
28	Hiran-I	Hiran	1966	80.91	21.65	0.837	1(1987)	0.842	1.43	6.61	0.31	-	-
29	Hiran-II	Hiran	1981	168	38.58	0.191	1(1998)	1.201	3.43	8.89	0.52	3.19	64
30	Kadana	Mahi	1977	25486	1543	0.13	3(2000)	0.501	293.74	19.04	0.83	20.64	13.34
31	Kaila	Kaila	1956	178.05	13.98	0.238	1(1987)	0.928	5.12	36.62	1.18	-	-
32	Kankavati	Kankavati	1956	207.19	14.62	0.19	1(1987)	0.637	4.09	27.98	0.90	-	-
33	Karjan	Karjan	1984	1404	630	0.476	6(2013)	2.241	91.25	14.48	0.50	11.42	50.82
34	Khodiyar	Shetrunji	1967	383	40.35	0.071	4(2002)	0.475	6.37	15.79	0.45		
35	Limbdi-Bhogavo	Limbdi-Bhogavo	1960	331.5	30.15	N.A.	2(1986)	0.889	7.66	25.41	0.98	-	=
36	Machhanala	Mahi	1982	245	37.91	0.335	1(1999)	2.591	10.79	28.46	1.67	27.29	32.34
37	Machhu-I	Machhu	1958	730	83.13	0.74	2(1994)	0.306	8.04	9.67	0.27		
38	Machhu-II	Machhu	1972	1193	100.56	0.476	2(2004)	0.33	12.65	12.58	0.39	9.6	61
39	Madhuvanti	Madhuvanti	1973	45.32	12.14	0.833	1(1986)	0.832	0.49	4.04	0.31	-	-
40	Mazam	Mazam/Sabarmati	1984	407	44.65	0.357	1(1998)	0.1	0.57	1.28	0.09	0.107	7.28
41	Meshwo	Meshwo/Sabarmati	1968	259	82.12	0.0857	1(1997)	3.86	28.99	35.3	1.22	31.3	98
42	Moj	Bhadar(s)	1956	440	52.98	0.338	3(1999)	0.861	16.29	30.75	0.70	-	-
43	Mukteshwar	Sarswati	1990	306	41	0.357	3(2007)	1.834	9.541	23.271	1.37	19.85	37
44	Nara	Nara	1975	233.03	41.06	0.19	1(1987)	0.486	1.36	3.31	0.28	-	-
45	Panam	Panam/Mahi	1977	2314	735.8	0.356	4(2012)	1.919	155.422	21	0.6	18.26	55.4

Sl. No.	Name of Reservoir	Name of River	Year of first impound-ment	Catchment Area in Sq.Km.	Storage Capacity in M.Cu.m.	Designed Rate of Siltation (Th.Cu.m/ Sq.km./Yr	Total Number Of surveys (year of last survey)	Observed Rate of siltation Th.Cu.m./ Sq.km./yr	Total loss of capacity up to the last survey	Percent-age loss of capacity up to the last survey	Percentage annual loss of capacity	Percentage loss of live storage up to the last survey	Percentage Loss of dead storage up to the last survey
1	2	3	4	5	6	7	8	9	10	11	12	13	14
46	PataDungri	Khan	1974	212.38	41.06	N.A.	1(1981)	1.359	2.02	4.92	0.70	-	-
47	Puna	Sasoi	1954	137.27	13.99	N.A.	1(1986)	0.945	4.15	29.66	0.93	-	-
48	Rajki	Malan	1964	88.06	12.02	0.195	2(1986)	1.44	2.79	23.21	1.06	-	-
49	Rami	Narmada	1983	25	7.08	0.19	1(1999)	6.325	2.53	35.73	2.23	32	87
50	Ranghola	Rangholi	1952	370.37	44.52	0.143	2(1986)	0.623	7.84	17.61	0.52	-	-
51	Rudramata	Khari	1963	383.3	64.78	0.19	1(1987)	0.394	3.62	5.59	0.23	-	-
52	Sanandro	Kali	1956	147.62	12.28	0.238	2(1986)	1.59	7.04	57.33	1.91	-	-
53	Sani	Sani	1984	506	55.08	N.A.	2(2010)	1.221	16.064	29.16	1.12	30.28	23
54	Sarthi	Vartu	1974	197.57	10.69	N.A.	1(1986)	1.426	3.38	31.62	2.64	-	-
55	Sasoi	Sasoi	1954	562.03	51	0.1743	2(2009)	0.422	13.03	25.55	0.57	-	-
56	Shetrunji	Shetrunji	1959	4317	415.41	0.476	4(2008)	0.384	81.22	19.55	0.40	12.37	85
57	Sipu	Banas	1992	122	177.8	0.72	2(2007)	8.95	16.37	9.21	0.61	6.8	26
58	Sukhi	Sukhi	1987	412	178.47	0.476	3(2005)	0.2	1.464	0.82	0.05		
59	Suvi	Suvi	1964	160.52	14.28	0.238	1(1987)	1.037	3.83	26.82	1.17	-	-
60	Und-I	Und	1988	769	72.5	0.0064	1(2010)	0.204	3.455	4.77	0.22		
61	Ukai	Tapi	1972	62225	8510	0.149	5(2003)	0.568	1095.71	12.88	0.42	5.17	51
62	Vartu	Vartu	1964	170.94	13.3	0.194	1(1986)	0.425	1.6	12.03	0.55	-	-
63	Venu-II	Bhadar	1989	751	22.58	0.48	1(1999)	0.967	7.26	32.15	3.22	31.6	35
64	Ver-II	Tapi	1984	90	38.3	0.2	1(1998)	4.5	5.67	14.8	1.06	12.65	78.4
65	WadhawanBhogavo	WadhawaBhogavo	1960	435.1	18.15	N.A.	1(1986)	0.236	2.67	14.71	0.57	-	-
66	WadhawanBhogavo-II	WadhawaBhogavo	1959	569.77	23.36	0.762	2(1986)	0.193	2.97	12.71	0.47	-	-
67	Watrak	Watrak	1984	1113.7	177	0.203	1(2003)	0.728	15.4	8.7	0.46	9	7
	HIMACHAL PRADESH												
68	Baira	Baira	1981	662	3.75	N.A.	1(2011)	0.159	3.16	84.27	2.81	80	93
69	Bhakra	Sutlej	1958	56980	9868	0.429	32(2012)	0.682	2098.34	21.26	0.39		
70	Chamera-I	Ravi	1994	4725	391.3	1.5	1(2010)	2.04	154.2	39.41	2.46	-	-

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1	2	3	4	5	6	7	8	9	10	11	12	13	14
71	Chamera-II	Ravi	2003	2593	2.25	N.A.	1(2010)	0.023	0.41	18.22	2.60	-	-
72	Pong	Beas	1974	12562	8579	2.013	27(2012)	1.943	927.29	10.81	0.28		
	JHARKHAND												
73	Getalsud	Subarnarekha	1971	725	288.63	0.78	1(2001)	0.968	21.06	7.3	0.24	3.65	22.29
74	Konar	Konar	1955	997.15	281.13	0.619	1(1996)	1.748	71.48	25.43	0.62	20.6	43.3
75	Maithon	Barakar	1955	6294	1348.8	0.905	6(1994)	1.076	264.04	19.58	0.50	-	-
76	Mayurakshi	Mayurakshi	1954	1860	608.2	0.375	6(2001)	1.059	48.71	8.01	0.16	6.29	
77	Panchet	Damadar	1956	10966	1581	0.667	7(2012)	0.631	387.54	24.51	0.44	19	55.4
78	Tenughat	Damodar	1970	4481	592.18	0.473	1(2001)	0.716	99.5	16.8	0.54	12.8	24
79	Tilaiya	Barakar	1953	984.2	335.83	0.76	1(1997)	2.792	120.92	36.01	0.84	46.22	0.616
	Karnataka												
80	Almatti	Krishna	2001	35925	3486	N.A.	1(2007)	0.697	150.34	4.31	0.72		
81	Basavasagara	Krishna	1982	47850	1071.55	0.0184	2(2007)	0.24	287.6	26.84	1.07	11.52	93
82	Bhadra	Bhadra	1964	1968.4	2025.87	N.A.	2(2011)	1.035	95.745	4.87	0.10	4.237	8.35
83	Ghataprabha	Ghatraprabha	1974	1411.55	1434.136	0.405	1(2000)	3.148	115.524	8.06	0.31	6.51	39
84	Harangi	Harangi	1982	419.58	240.69	N.A.	1(2009)	2.081	23.57	9.79	0.36	9.1	23.14
85	Hemvathy	Hemavathy	1979	2810	1050.63	N.A.	1(2009)	0.903	76.13	7.25	0.24		
86	Kabini	Kabini	1974	2141.9	552.63	N.A.	1(2010)	0.3	23.06	4.17	0.12		
87	Krishnaraja Sagar	Cauvery	1932	10620	1400.31	N.A.	2(2009)	0.115	93.91	6.71	0.09	4.57	28.48
88	Linganamakki	Sharavathy	1964	1991.71	4435.35	0.71	1(1999)	2.396	171.83	3.87	0.11	2.2	54.31
89	Malaprabha	Malaprabha	1972	2176	1064.05	0.432	2(1991)	3.611	78.57	6.34	0.33		
90	Tungabhadra	TungaBhadra	1953	28180	3751.17	0.429	8(2008)	0.578	895.28	23.87	0.43		
	KERALA												
91	Anayirankal	Panniar	1964	65.68	49.84	N.A.	1(1997)	7.11	15.41	30.92	0.94	-	-
92	Chulliar	Bharatpuzha	1964	27.8	13.7	N.A.	2(2009)	0.38	0.475	3.47	0.077	-	-
93	Idamalayar	Idamalayar	1986	481.79	1208.23	N.A.	1(2011)	2.66	32.043	2.65	0.11	0.088	43.11
94	Idukki	Periyar	1974	649.31	1998.57	N.A.	1(1999)	1.592	25.85	1.29	0.05	0.6	3.18

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1	2	3	4	5	6	7	8	9	10	11	12	13	14
95	Kakki	Kakki	1966	217.55	454.07	N.A.	1(1999)	3.523	25.29	5.57	0.17	5.66	0.26
96	Kallarkutty	Mudhirapuzzha	1962	759.85	6.8	N.A.	1(1992)	0.033	0.748	11	0.37	-	-
97	Kundala	Palar	1948	37.55	7.79	N.A.	1(1994)	0.731	1.262	16.2	0.35	-	-
98	Kuttiyadi	Kuttiyadi	1972	39	38.4	N.A.	1(1989)	16.772	11.12	28.96	1.7	-	-
99	Madupetty	Palar	1967	104.9	55.22	N.A.	1(1995)	2.19	6.433	11.65	0.42	-	-
100	Malampuzha	Bharatpuzha	1967	147.63	228.4	N.A.	3(2006)	4.393	33.072	14.48	0.284		
101	Mangalam	Cherrukunapuzha	1956	48.85	25.47	N.A.	2(2008)	2.035	5.17	20.3	0.39		
102	Meenkara	Meenkara	1960	90.7	11.33	N.A.	2(2009)	0.334	1.484	13.1	0.27	-	-
103	Neyyar	Neyyar	1964	40	96.034	N.A.	1(2011)	3.922	7.374	7.68	0.16	-	-
104	Peechi	Manali	1957	107.1	110.43	N.A.	3(2004)	2.784	14.016	12.69	0.27		
105	Ponmudi	Panniyar	1962	220.52	51.54	N.A.	1(1992)	1.675	11.08	21.5	0.72	-	-
106	Poomala		1968	1.17	0.58	N.A.	1(2010)	0.224	0.011	1.9	0.05	-	-
107	Porinngalkuthu	Chalakudi	1957	512	31.99	N.A.	1(1993)	0.443	8.157	25.5	0.71	-	-
108	Pothundi	Bharatpuzha	1971	30.82	52.38	N.A.	2(2009)	2.721	3.271	6.24	0.16	-	-
	MADHYA PRADESH												
109	Gandhi Sagar	Chambal	1960	23025	7746	0.405	3(2001)	0.551	519.85	6.71	0.163	3.49	33.4
	MAHARASHTRA												
110	Asolamendha	Pathari	1918	246	92.96	1.603	2(1994)	1.603	29.97	32.24	0.42	-	-
111	Bendsura	Bendsura	1955	188.42	13.12	0.302	3(1995)	0.695	5.241	39.95	1.00	-	-
112	Bhatghar	Yelwandi	1927	331.5	672.65	N.A.	1(2007)	4.09	108.59	16.14	0.20		
113	Bhima	Bhima	1977	14858	3320	N.A.	1(2012)	0.815	423.91	12.77	0.36	7.14	17.5
114	Chankapur	Girna	1913	269	79.94	N.A.	1(2009)	0.678	17.52	21.92	0.23	18.78	100
115	Dimbhe	Ghod	2000	298	394.85	N.A.	1(2010)						
116	Ekurk	Adelanalla	1871	412	94.3	0.154	2(1991)	0.535	26.436	28.03	0.23	-	-
117	Gangapur	Godavari	1965	357.4	212.51	0.335	1(1997)	4.275	48.89	23.01	0.72	-	-
118	Girna	Girna	1969	4727.3	608.45	0.18	2(2010)	0.221	42.88	7.05	0.17	2.54	35
119	Ghod	Ghod	1965	3586	216.3	N.A.	1(2007)	0.312	47	21.73	0.52	10.85	49

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1	2	3	4	5	6	7	8	9	10	11	12	13	14
120	Jayakwadi	Godavari	1976	21774	2909.04	N.A.	1(1999)	0.499	249.801	8.59	0.37	4.34	21.09
121	Karanjvan	Kadwa	1974	248	175.57	N.A.	1(2008)	2.011	16.96	9.66	0.28	5.24	74
122	Khadakwasla	Mutha	1879	501.8	86	N.A.	2(2007)						
123	Khaspur	Sina	1954	554.2	19.82	0.12	3(1996)	0.272	6.337	31.97	0.76		
124	Khelna	Khelna	1964	161.6	12.61	0.126	1(1985)	0.207	0.702	5.57	0.27		
125	Kolgaon	Hanga	1956	55.74	2.87	0.114	3(1988)	0.77	1.374	47.87	1.50	-	-
126	Koyna	Koyna	1962	891.78	2980.68	N.A.	1(2012)	3.898	173.791	5.83	0.12	4.87	29
127	Majalgaon	Sindfana	1987	3840	454	N.A.	1(2010)	0.52	45.92	10.11	0.44	6.16	18.7
128	Manar	Manar	1969	1585.08	138.35	0.167	1(1999)	0.394	18.726	13.54	0.45		
129	Mangi	Kanola	1955	304	33.839	0.05	3(1995)	0.282	3.435	10.15	0.25	-	-
130	Manikdoh	Kukadi	1984	129	308.06	N.A.	1(2006)	12.167	34.53	11.21	0.51	9.3	40
131	Mhaswad	Man	1888	1243.2	86.94	0.176	2(1990)	0.357	45.24	52.04	0.51	-	-
132	Mukti	Motinala	1893	88.6	9.68	0.007	4(1991)	0.324	2.81	29.03	0.30	-	-
133	Mula	Mula	1972	2275.86	738.02	N.A.	1(2008)	0.507	41.57	5.63	0.16	4	13.46
134	Nalganga	Nalganga	1963	315.98	76.201	0.19	1(1985)	0.624	4.338	5.69	0.26		
135	Nazare	Karha	1974	397.82	16.17	0.238	1(1986)	0.322	1.537	9.51	0.79		
136	Panshet	Ambi	1968	120.3	310.62	N.A.	1(2008)	6.06	28.43	9.15	0.23	8.32	36.42
137	Powai	Local nala	1890	6.61	5.45	N.A.	1(1996)	1.513	1.06	19.45	0.18	-	-
138	Radhnagri	Bhogavati	1908	108.8	236.79	N.A.	1(2011)	2.5	27.97	11.81	0.11	8	66
139	Ramsagar	Sur	1914	212.35	117.18	0.206	1(1987)	0.953	14.78	12.61	0.17	-	-
140	Tulshi	Tulshi	1978	34.92	98.29	N.A.	1(2012)						
141	Upperwardha	Wardha	1993	4302	802.98	0.642	1(2011)	0.613	47.49	5.91	0.33	5.62	7
142	Varasgaon	Musa	1986	130	375.361	N.A.	1(2007)	0.777	2.122	0.57	0.03		
143	Vir	Nira	1965	1756	278.5	N.A.	1(2008)	0.521	39.355	14.13	0.33	11.4	74
144	Visapur	Hanga	1937	412	42.76	0.357	3(1988)	0.835	17.55	41.04	0.80	-	-
145	Waghad	Kolvan	1978	119	75.1	N.A.	1(2011)	1.88	7.38	9.83	0.30	8	40
146	Warna	Warna	1984	301	974.188	N.A.	1(2003)	8.594	49.148	5.05	0.27	2	18

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147	Yeldari	Puma	1968	7329.7	934.44	0.357	2(2011)	0.426	134.34	14.38	0.33	8.15	55
	MEGHALAYA												
148	Umium	Umium	1965	221.5	181.42	N.A.	1(1990)	2.608	14.44	7.96	0.32	-	-
	ODISHA												
149	Balimela	Machkund	1972	4908	3610	10.46	1(1999)	2.132	282.5	7.83	0.29	5.2	15.32
150	Hirakud	Mahanadi	1957	83395	8105	0.25	5(2000)	0.616	2210.21	27.27	0.63	17.47	52.57
151	Rengali	Rengali	1982	25250	4494.77	N.A.	1(2006)	1.229	745.02	16.58	0.69	10.71	37.38
152	Upper Kolab	Kolab	1986	1630	1215	N.A.	1(2011)	3.461	141.05	11.61	0.46	8.11	23.3
	RAJASTHAN												
153	Ranapratap Sagar	Chambal	1970	25305	3128.11	N.A.	1(2011)	0.23	238.59	7.63	0.186	0	16.89
	TAMIL NADU												
154	Adavinainar Koil	Hanumannathi	2003	15.54	4.928	N.A.	1(2010)	0.809	0.09	1.79	0.26		
155	Aliyar	Aliyar	1962	195	112.754	N.A.	3(2004)	1.14	9.34	8.28	0.197		
156	Amaravathy	Amaravathy	1958	839.16	117.163	N.A.	4(2013)	0.489	22.583	19.27	0.350	-	-
157	Anaikuttam	Arjuna	1990	795.265	3.602	N.A.	1(2014)	0.018	0.343	9.53	0.397		
158	Anaimaduvu	Anaimaduvu	1993	145.02	7.56	N.A.	1(2013)	0.108	0.313	4.14	0.207		
159	Barur Tank	Pannaiyar	1919	35.07	7.04	N.A.	1(1986)	0.077	0.18	2.56	0.04	-	-
160	Berijam		1911	7.77	2.195	N.A.	1(1987)	0.662	0.391	17.81	0.23	-	-
161	Bhavanisagar	Bhavani	1953	4134.5	928.896	N.A.	5(2006)	0.881	193.076	20.79	0.39		
162	Chittar-I	Chittar	1970	22.01	17.28	N.A.	1(1997)	4.796	2.85	16.49	0.61		
163	Chittar-II	Chittar	1972	26.16	28.59	N.A.	2(2010)	5.965	5.93	20.742	0.55		
164	EmeraldAvalanchi	Kundah	1961	58.534	156.75	N.A.	2(2000)	3.143	7.176	4.58	0.22		
165	Gadana	Gadana	1971	46.46	9.969	N.A.	1(2003)	1.24	1.843	18.49	0.58		
166	Glennmorgan (FB)	Glennmorgan (Stream)	1976	12.43	5.85	N.A.	1(1998)	8.411	2.3	39.32	1.79		

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1	2	3	4	5	6	7	8	9	10	11	12	13	14
167	Glennmorgan (Kariappa)	Glennmorgan (Stream)	1930	2.59	0.74	N.A.	1(2013)	0.186	0.04	5.41	0.07		
168	Gomukhinathi	Gomukhi (Vellar)	1965	292.67	15.86	N.A.	1(2002)	0.269	2.913	18.37	0.50		
169	Gunderipallam	Gunderipallam	1979	72.23	3.06	N.A.	1(2010)	0.134	0.3	9.8	0.32		
170	Kadamba Tank	Thamirabarani	1904	N.A	9.58	N.A.	1(2005)		0.25	2.62	0.03		
171	Kamraj Sakar	Kundah	1963	44.035	26.62	N.A.	1(2002)	3.977	6.83	25.66	0.66		
172	Kaveripakkam	Palar	1902	157.99	41.73	N.A.	2(1996)	0.323	4.803	11.509	0.12	-	-
173	Kodaganar	Kodaganar	1977	1670	12.291	N.A.	1(2007)	0.043	2.155	17.53	0.58		
174	Krishnagiri	Ponnaiyar	1957	5428	68.2	N.A.	4(2006)	0.107	28.5	41.79	0.85	-	-
175	Kudhiraiyar	Kudhiraiyar	1990	71.4	7.36	N.A.	1(2002)	0.058	0.05	0.68	0.06		
176	Kundah	Kundah	1960	113.96	1.76	N.A.	2(1982)	0.443	1.11	63.07	2.87	-	-
177	Madhuranthagam	Killivaru	1798	34.82	17.25	N.A.	1(2005)	0.162	1.17	6.78	0.03		
178	Manimukthanadi	Manimuktha	1970	478.72	20.88	N.A.	1(2012)	0.13	2.604	12.47	0.30		
179	Manimuthar	Thamirabarani	1958	161.62	159.734	N.A.	3(2006)	1.326	10.286	6.439	0.13	-	-
180	Manjalar	Manjalar	1967	119.139	13.759	N.A.	3(2009)	0.86	4.312	31.34	0.75	-	-
181	Maravakandy	Pykara	1947	20.72	0.959	N.A.	1(2004)	0.297	0.351	36.6	0.64		
182	Marudhanathi	Marudhanathi	1979	53.315	5.338	N.A.	2(2010)	0.249	0.411	7.7	0.25		
183	Mettur	Cauvery	1934	42200	2708.764	N.A.	3(2004)	0.242	714.572	26.38	0.38	-	-
184	Mukurthy	Pykara	1938	25.25	50.98	N.A.	2(2006)	11.06	18.99	37.25	0.55	-	-
185	Nagavathy	Nagavathy	1985	105.357	4.652	N.A.	1(2012)	0.168	0.477	10.25	0.38		
186	Palar Poranthalar	Palar and Poranthalar	1978	259	43.19	N.A.	1(2000)	0.274	1.56	3.61	0.16		
187	Pambar	Pambar	1983	1736	7.93	N.A.	1(2013)	0.007	0.39	4.92	0.16		
188	Parambikulum	Parambikulum	1967	230.5	504.66	N.A.	1(2013)	5.882	62.362	12.36	0.27		
189	Parappalar	Nangangi	1974	72.88	5.606	N.A.	1(2003)	0.75	1.5849	28.27	0.97		
190	Parson' Valley	Kundah	1966	14.5	19.25	N.A.	2(1995)	19.62	8.25	42.86	1.48	-	-
191	Pechipparai	Kodaiyar	1907	172	126.43	N.A.	5(2013)	6.021	43.495	28.94	0.34	-	-

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1	2	3	4	5	6	7	8	9	10	11	12	13	14
192	Pegumbahalla	Kundah	1966	41.42	1.07	N.A.	2(1982)	0.664	0.44	41.12	2.57	-	-
193	Perumal Tank	Paravahar	1961	504.59	17.767	N.A.	1(1998)	0.149	2.78	15.65	0.42		
194	Perumpallam	Perumpallam Odai	1990	44.53	3.28	N.A.	1(2012)	0.137	0.134	4.09	0.19		
195	Perunchani	Kodayar	1953	160.27	65.03	N.A.	3(2012)	1.841	12.687	15.512	0.26	-	-
196	Pillavukkal Periyar	Periyar	1976	36	5.437	N.A.	1(2013)	0.198	0.264	4.86	0.13		
197	Pillur	Bhavani	1967	1191.4	44.4	N.A.	2(2013)	0.337	18.49	41.64	0.91	-	-
198	Ponnaniyar	Ponnaniyar	1974	87.02	3.389	N.A.	2(1995)	0.592	1.081	31.9	1.52	-	-
199	Porthimund	Kundah	1966	10.55	60	N.A.	2(1996)	38.253	12.107	20.18	0.67	-	-
200	Pykara	Pykara	1954	38.1	56.7	N.A.	2(2010)	10.091	21.53	37.97	0.68		
201	Sathanur	Ponnaniyar	1957	10826.1	234.828	N.A.	2(1982)	0.102	27.526	11.72	0.47	-	-
202	Sathiyarar	Sathiyarar	1965	95.71	1.586	N.A.	1(2010)	0.106	0.4574	28.84	0.64		
203	Thirumurthy	Palar	1967	80.29	54.8	N.A.	3(2009)	2.075	6.996	12.77	0.30	-	-
204	Thunakadavu	Thunakadavu	1965	43.36	15.76	N.A.	1(2013)	1.254	2.61	16.56	0.35		
205	Thoppiyar	Thoppiyar	1987	276.9	8.456	N.A.	1(2012)	0.072	0.501	5.92	0.24		
206	Uppar Dam	Uppar	1968	903.56	16.2	N.A.	2(1995)	0.283	6.906	42.63	1.58	-	
207	Upper Bhawani	Bhavani	1965	33.57	101.2	N.A.	1(1985)	5.541	3.72	3.68	0.18	-	-
208	Vaigai	Vaigai	1958	2255.127	194.785	N.A.	5(2012)	0.263	32.065	16.46	0.30	-	-
209	Vaniyar	Vaniyar	1983	107.76	11.836	N.A.	1(2010)	0.235	0.685	5.79	0.21		
210	Varadamanathi	Varadamanathi	1978	74.07	3.06	N.A.	1(1998)						
211	Varattupallam	Varattupallam	1980	66.82	3.94	N.A.	1(2010)	0.165	0.33	8.38	0.28		
212	Veeranam	Coleroon	1923	427.35	40.805	N.A.	1(1991)	0.449	13.061	32.01	0.47	-	-
213	Vembakottai	Vaippar	1989	1593.55	11.29	N.A.	1(2013)	0.029	1.122	9.94	0.41		
214	Vidur	Varahanadi	1959	1298	17.732	N.A.	1(2009)	0.048	3.092	17.44	0.35		
215	Wallajah	Vellar	1923	191.577	2.568	N.A.	1(1997)	0.063	0.897	34.93	0.47	-	-
216	Wellingdon	Vellar	1924	2849.5	71.46	N.A.	2(1991)	0.102	19.428	27.19	0.41	-	-
	TELENGANA												
217	Dindi	Dindi	1943	3919.96	73.83	N.A.	1(1976)	0.02	2.21	2.99	0.09	-	

Sl. No.	Name of Reservoir	Name of River	Year of first impound-ment	Catchment Area in Sq.Km.	Storage Capacity in M.Cu.m.	Designed Rate of Siltation (Th.Cu.m/ Sq.km./Yr	Total Number Of surveys (year of last survey)	Observed Rate of siltation Th.Cu.m./ Sq.km./yr	Total loss of capacity up to the last survey	Percent-age loss of capacity up to the last survey	Percentage annual loss of capacity	Percentage loss of live storage up to the last survey	Percentage Loss of dead storage up to the last survey
1	2	3	4	5	6	7	8	9	10	11	12	13	14
218	Himayatsagar	Easa	1927	1307.94	107.79	N.A.	1(1976)	0.447	28.63	26.56	0.54	-	
219	Kaddam	Kaddam	1958	2656.25	124.43	N.A.	1(1977)	0.916	46.251	37.17	1.96	-	
220	Lakhamvaram Lake	Lakhamvaram	1909	268.06	60.42	N.A.	1(1975)	1.065	18.84	31.18	0.47	-	82.5
221	Manjira	Manjira	1966	16770.25	50.94	N.A.	1(1977)	0.102	18.74	36.79	3.34	-	
222	Nagarjuna sagar	Krishna	1967	215185	11553	0.215	2(2009)	0.301	2716.96	23.52	0.56	11.65	40.72
223	Nizamsagar	Manjara	1930	21694	841.18	0.238	3(1992)	0.378	508.66	60.47	0.98		
224	Palair	Palair	1928	1686.71	56.56	N.A.	1(1977)	0.015	1.21	2.14	0.04	-	
225	Pocharam	Aliaru	1922	673.4	16.85	N.A.	1(1978)	0.1	3.783	22.45	0.40	-	
226	Priyadarshini Jurala	Krishna	1996	82471	338.103	N.A.	1(2012)	0.049	64.663	19.13	1.20	12.37	28.06
227	Ramappa lake	Manair	1919	183.89	82.48	N.A.	1(1975)	0.258	2.66	3.23	0.06	-	
228	Shanigram tank	Siddipet	1891	321	29.08	N.A.	1(1972)	0.113	2.95	10.14	0.13	-	
229	Sriramsagar	Godavari	1970	54054	3171.94	0.357	3(2013)	0.389	903.673	28.49	0.66		
230	Wyra	Wyra	1929	709.66	24.66	N.A.	1(1977)	0.287	9.78	39.66	0.83	-	
	UTTAR PRADESH												
231	Dhukwan	Betwa	1907	21340	106.45	0.042	5(1980)	0.03	47.42	44.55	0.61	-	
232	Matatila	Betwa	1956	20720	1132.7	0.133	10(1999)	0.483	430.37	38	0.88		
233	Pili	Pili	1962	162	55.265	N.A.	2(2011)	2.024	16.065	29.07	0.59	28	100
234	Rihand	Rihand	1962	13333	10608.32	N.A.	2(2003)	2.906	1588.33	14.97	0.37	15	14.86
	UTTARAKHAND												
235	Baigul	Baigul		302	86.68	N.A.	2(2005)	1.903	21.26	24.53	0.66	16.51	100
236	Dhora	Dhora	1962	134.68	54.809	N.A.	2(2005)	1.934	11.199	20.43	0.48	15	82
237	Ichari	Tons	1966	4913	11.55	N.A.	3(2003)	0.03	5.46	47.27	1.28		
238	Nanak Sagar	Deoha	1962	570	209.8	N.A.	2(2008)	1.117	29.3	13.97	0.30	12.42	47
239	Sarda Sagar	Sarda	1962	127	493.16	N.A.	2(2009)	19.439	116.03	23.53	0.50	15.63	46
240	Ramganga (Kalagarh)	Ramganga	1974	3134	2590.72	0.425	3(2008)	1.26	134.25	5.18	0.15	-	
241	Tehri Dam	Bhagirathi	2005	7511	3548.512	N.A.	1(2008)	0.932	21.01	0.59	0.20	0.58	0.6
	WEST BENGAL												
242	Durgapur Barrage	Damodar	1955	2295	11.85	N.A.	1(2011)	0.042	5.413	45.68	0.63	35.412	56.55
243	Kangsabati	Kangsabati	1965	3626	1053.65	N.A.	1(2006)	0.752	111.724	10.6	0.51	8.15	28.21

APPENDIX-III

LIST OF RESERVOIRS WHICH HAVE SERVED MORE THAN 50 YEARS OF THEIR USEFUL LIFE

Sl. No.	Name of Reservoir	Name of State	Initial Storage Capacity in M.Cu.m.	Year of first impound-ment	Year of last Survey	Total loss of capacity up to the last survey M.Cu.m	Percent-age loss of capacity up to the last survey	Observed Rate of siltation Th.Cu.m./ Sq.km./yr	Remarks
1	2	3	4	5	6		8	9	10
1	Ajwa	Gujarat	62.7	1891	1987	7.71	12.3	0.453	
2	Sasoi	Gujarat	51	1954	2009	13.03	25.55	0.422	
3	Bhakra	Himachal Pradesh	9868	1958	2012	2098.34	21.26	0.682	
4	Panchet	Jharkhand	1581	1956	2011	387.54	24.51	0.631	
5	Krishnaraja Sagar	Karnataka	1400.31	1932	2009	93.91	6.71	0.115	
6	Tungabhadra	Karnataka	3751.17	1953	2008	895.28	23.87	0.578	
7	Malampuzha	Kerala	228.4	1955	2006	33.072	14.48	4.393	
8	Mangalam	Kerala	25.47	1956	2008	5.17	20.3	2.035	
9	Asolamendha	Maharashtra	92.96	1918	1994	29.97	32.24	1.603	
10	Bhatghar	Maharashtra	672.65	1927	2007	108.59	16.14	4.09	
11	Chankapur	Maharashtra	79.94	1913	2009	17.52	21.92	0.678	
12	Ekurk	Maharashtra	94.3	1871	1991	26.436	28.03	0.535	
13	Khadakwasla	Maharashtra	86	1879	2007				
14	Koyna	Maharashtra	2980.68	1962	2012	173.791	5.83	3.898	
15	Mhaswad	Maharashtra	86.94	1888	1990	45.24	52.04	0.357	
16	Mukti	Maharashtra	9.68	1893	1991	2.81	29.03	0.324	
17	Powai	Maharashtra	5.45	1890	1996	1.06	19.45	1.513	
18	Radhnagari	Maharashtra	236.79	1908	2011	27.97	11.81	2.5	
19	Ramsagar	Maharashtra	117.18	1914	1987	14.78	12.61	0.953	
20	Visapur	Maharashtra	42.76	1937	1988	17.55	41.04	0.835	
21	Amaravathy	Tamil Nadu	117.163	1958	2013	22.583	19.27	0.489	
22	Barur Tank	Tamil Nadu	7.04	1919	1986	0.18	2.56	0.077	
23	Berijam	Tamil Nadu	2.195	1911	1987	0.391	17.81	0.662	
24	Glenmorgan(Kariappa)	Tamil Nadu	0.74	1930	2013	0.04	5.41	0.186	
25	Kadamba Tank	Tamil Nadu	9.58	1904	2005	0.25	2.62	-	

Sl. No.	Name of Reservoir	Name of State	Initial Storage Capacity in M.Cu.m.	Year of first impound-ment	Year of last Survey	Total loss of capacity up to the last survey M.Cu.m	Percent-age loss of capacity up to the last survey	Observed Rate of siltation Th.Cu.m./ Sq.km./yr	Remarks
1	2	3	4	5	6		8	9	10
26	Kaveripakkam	Tamil Nadu	41.73	1902	1996	4.8	11.500	0.323	
27	BhavaniSagar	Tamil Nadu	928.896	1953	2006	193.076	20.79	0.881	
28	Madhuranthagam Tank	Tamil Nadu	17.25	1798	2005	1.17	6.78	0.162	
29	Maravakandy	Tamil Nadu	0.959	1947	2004	0.351	36.6	0.297	
30	Mettur	Tamil Nadu	2708.764	1934	2004	714.572	26.38	0.242	
31	Mukurthy	Tamil Nadu	50.98	1938	2006	18.99	37.25	11.06	
32	Pechipparai	Tamil Nadu	126.43	1907	2013	43.495	28.94	6.021	
33	Perunchani	Tamil Nadu	65.03	1953	2012	12.687	15.512	1.841	
34	Pykara	Tamil Nadu	56.7	1954	2010	21.53	37.97	10.091	
35	Vaigai	Tamil Nadu	194.785	1958	2012	32.065	16.46	0.263	
36	Veeranam	Tamil Nadu	40.805	1923	1991	13.061	32.01	0.449	
37	Vidur	Tamil Nadu	17.732	1959	2009	3.092	17.44	0.048	
38	Walaja	Tamil Nadu	2.568	1923	1997	0.897	34.93	0.063	
39	Willingdon	Tamil Nadu	71.46	1924	1991	19.428	27.19	0.102	
40	Lakhamvaram Lake	Telengana	60.42	1909	1975	18.84	31.18	1.065	
41	Nizamsagar	Telengana	841.18	1930	1992	508.66	60.47	0.378	
42	Pocharam	Telengana	16.85	1922	1978	3.783	22.45	0.1	
43	Ramappa lake	Telengana	82.48	1919	1975	2.66	3.23	0.258	
44	Shanigram tank	Telengana	29.08	1891	1972	2.95	10.14	0.113	
45	Dhukwan	Uttar Pradesh	106.45	1907	1980	47.42	44.55	0.03	
46	Durgapur Barrage	West Bengal	11.85	1955	2011	5.413	45.68	0.042	

ANNEXURE-IV

LIST OF RESERVOIRS WHICH HAVE LOST MORE THAN 25% OF THEIR GROSS STORAGE

Sl. No.	Name of Reservoir	Name of State	Initial Storage Capacity in M.Cu.m.	Year of first impound-ment	Year of Last Survey	Percentage loss of capacity up to the last survey	Percentage loss of capacity per Annum	Remarks
1	2	3	4	5	6	8	9	10
1	Srisailam	ANDHRA PRADESH	8724.88	1976	2011	29.96	0.86	
2	Bhadar(P)	GUJARAT	46.72	1983	2009	33.75	1.30	
3	Bhadar(S)	GUJARAT	237.86	1964	2004	38.49	0.96	
4	Bhimdad	GUJARAT	11.19	1953	1986	40.21	1.22	
5	Chopadvav	GUJARAT	10.15	1985	1998	43.94	3.38	
6	Ghelo-I	GUJARAT	13.35	1963	1986	25.09	1.09	
7	Hadaf	GUJARAT	32.26	1986	2009	31.54	1.37	
8	Kaila	GUJARAT	13.98	1956	1987	36.62	1.18	
9	Kankavati	GUJARAT	14.62	1956	1987	27.98	0.90	
10	Limbdi-Bhogavo	GUJARAT	30.15	1960	1986	25.41	0.98	
11	Machhannala	GUJARAT	37.91	1982	1999	28.46	1.67	
12	Meshwo	GUJARAT	82.12	1968	1997	35.30	1.22	
13	Moj	GUJARAT	52.98	1955	1999	30.75	0.70	
14	Puna	GUJARAT	13.99	1954	1986	29.66	0.93	
15	Rami	GUJARAT	7.08	1983	1999	35.73	2.23	
16	Sanandro	GUJARAT	12.28	1956	1986	57.33	1.91	
17	Sani	GUJARAT	55.08	1984	2010	29.16	1.12	
18	Sarthi	GUJARAT	10.69	1974	1986	31.62	2.64	
19	Sasoi	GUJARAT	51.00	1954	2009	25.55	0.46	
20	Suvi	GUJARAT	14.28	1964	1987	26.82	1.17	
21	Venu-II	GUJARAT	22.58	1989	1999	32.15	3.22	
22	Baira	HIMACHAL PRADESH	3.75	1981	2011	84.27	2.81	
23	Chamera-I	HIMACHAL PRADESH	391.30	1994	2010	39.41	2.46	
24	Konar	JHARKHAND	281.13	1955	1996	25.43	0.62	
25	Tilaiya	JHARKHAND	335.83	1953	1997	36.01	0.82	

Sl. No.	Name of Reservoir	Name of State	Initial Storage Capacity in M.Cu.m.	Year of first impound-ment	Year of Last Survey	Percentage loss of capacity up to the last survey	Percentage loss of capacity per Annum	Remarks
1	2	3	4	5	6	8	9	10
26	Bhasavasagara	KARNATAKA	1071.55	1982	2007	26.84	1.07	
27	Anayirankal	KERALA	49.84	1964	1997	30.92	0.94	
28	Kuttiyadi	KERALA	38.40	1972	1989	28.96	1.70	
29	Porinngalkuthu	KERALA	31.99	1957	1993	25.50	0.71	
30	Asolamendha	MAHARASHTRA	92.96	1918	1994	32.24	0.42	
31	Bendsura	MAHARASHTRA	13.12	1955	1995	39.95	1.00	
32	Ekurk	MAHARASHTRA	94.30	1871	1991	28.03	0.23	
33	Khaspur	MAHARASHTRA	19.82	1954	1996	31.97	0.76	
34	Kolgaon	MAHARASHTRA	2.87	1956	1988	47.87	1.50	
35	Mhaswad	MAHARASHTRA	86.94	1888	1990	52.04	0.51	
36	Mukti	MAHARASHTRA	9.68	1893	1991	29.03	0.30	
37	Visapur	MAHARASHTRA	42.76	1937	1988	41.04	0.80	
38	Hirakud	ODISHA	8105.00	1957	2000	27.27	0.63	
39	Glennmorgan (New Forebay)	TAMIL NADU	5.85	1976	1998	39.32	1.79	
40	Kamaraj Sakar	TAMIL NADU	26.62	1963	2002	25.66	0.66	
41	Krishnagiri	TAMIL NADU	68.20	1957	2006	41.79	0.85	
42	Kundah	TAMIL NADU	1.76	1960	1982	63.07	2.87	
43	Manjalar	TAMIL NADU	13.759	1967	2009	31.34	0.75	
44	Maravakandy	TAMIL NADU	0.959	1947	2004	36.60	0.64	
45	Mettur	TAMIL NADU	2708.76	1934	2004	26.38	0.38	
46	Mukurthy	TAMIL NADU	50.98	1938	2006	37.25	0.55	
47	Parappalar	TAMIL NADU	5.606	1974	2003	28.27	0.97	
48	Parson' Valley	TAMIL NADU	19.250	1966	1995	42.86	1.48	
49	Pechiparai	TAMIL NADU	126.430	1907	2013	29.92	0.28	
50	Pegumbahalla	TAMIL NADU	1.070	1966	1982	28.94	1.81	
51	Pillur	TAMIL NADU	44.40	1966	2013	41.64	0.89	
52	Ponnaniyar	TAMIL NADU	3.389	1974	1995	31.90	1.52	
53	Pykara	TAMIL NADU	56.70	1954	2010	37.97	0.68	

Sl. No.	Name of Reservoir	Name of State	Initial Storage Capacity in M.Cu.m.	Year of first impound-ment	Year of Last Survey	Percentage loss of capacity up to the last survey	Percentage loss of capacity per Annum	Remarks
1	2	3	4	5	6	8	9	10
54	Sathiyarar	TAMIL NADU	1.586	1965	2010	28.84	0.64	
55	Uppar Dam	TAMIL NADU	16.20	1968	1995	42.63	1.58	
56	Veeranam	TAMIL NADU	40.805	1923	1991	32.01	0.47	
57	Walaja	TAMIL NADU	2.568	1923	1997	34.93	0.47	
58	Willingdon	TAMIL NADU	71.46	1924	1991	27.19	0.41	
59	Himayatsagar	TELENGANA	107.79	1927	1976	26.56	0.54	
60	Kaddam	TELENGANA	124.43	1958	1977	37.17	1.96	
61	Lakhamvaram Lake	TELENGANA	60.42	1909	1975	31.18	0.47	
62	Manjira	TELENGANA	50.94	1966	1977	36.79	3.34	
63	Nizamsagar	TELENGANA	841.18	1930	1992	60.47	0.98	
64	SriramSagar	TELENGANA	3171.94	1970	2013	28.49	0.66	
65	Wyra	TELENGANA	24.66	1929	1977	39.66	0.83	
66	Dhukwan	UTTAR PRADESH	106.45	1907	1980	44.55	0.61	
67	Pili	UTTAR PRADESH	55.265	1962	2011	29.07	0.59	
68	Matatila	UTTAR PRADESH	1132.70	1956	1999	38.00	0.88	
69	Ichari	UTTARAKHAND	11.55	1966	2003	47.27	1.28	
70	Durgapur Barrage	WEST BENGAL	11.85	1955	2011	45.68	0.82	

APPENDIX-V

VERTICAL DISTRIBUTION OF SEDIMENT DEPOSIT

Percentage Depth	Percentage sediment deposit										
	Bhakara	Balimela	Hirakud	Panchet	Maithon	Matatila	Pong	Konar	Nizamsagar	Tilaiya	Tungabhadra
Top 10 % of the reservoir depth	1.00	25.00	29.00	20.00	3.50	42.10	6.00	20.00	10.50	22.00	1.30
10 to 20 %	2.00	11.00	5.00	2.00	12.50	3.50	6.00	22.00	15.00	21.00	5.70
20to 30 %	16.50	9.00	4.00	3.20	20.00	6.80	16.00	15.00	17.00	15.00	7.70
30 to 40 %	22.00	8.00	4.00	5.00	19.50	5.80	30.00	13.00	16.30	12.00	10.80
40 to 50%	21.50	7.00	4.00	10.50	14.50	7.90	20.00	12.50	11.90	9.00	13.20
50 to 60 %	14.20	7.00	7.00	13.50	11.00	8.10	9.00	8.00	8.60	7.00	16.30
60 to 70 %	11.00	8.00	9.00	15.00	8.50	9.10	7.00	5.00	7.00	5.00	19.00
70 to 80 %	6.40	12.00	14.00	15.50	4.50	11.20	3.00	2.00	5.50	4.00	13.40
80 to 90 %	3.80	8.00	14.00	15.00	5.00	3.40	2.00	1.30	2.00	3.00	8.60
Bottom 10 % of the reservoir depth	1.00	5.00	10.00	0.30	1.00	2.10	1.00	0.70	6.00	2.00	4.00

VERTICAL DISTRIBUTION OF SEDIMENT DEPOSIT

Percentage Depth	Percentage Sediment deposit										
	Upper Kolab	Ranapratap Sagar	Bhadra	Bhima	Durgapur	Idamalayar	Upper Wardha	Salaulim	Dudhwa	Watrak	
Top 10% of the reservoir depth	12.00	1.0	18.50	20.00	45.00	Nil	38.00	1.00	16	0.08	
10 to 20 %	27.00	1.50	10.00	11.00	43.00	Nil	22.00	2.00	11.50	0.05	
20 to 30 %	13.00	2.50	10.00	11.00	5.00	Nil	20.00	9.00	9.00	0.03	
30 to 40 %	10.00	3.0	10.00	11.00	3.00	Nil	11.00	23.00	9.50	0.32	
40 to 50 %	9.00	6.50	9.00	14.50	1.50	Nil	2.50	27.00	10.0	0.49	
50 to 60 %	10.00	10.5	9.00	14.50	1.10	10.00	2.00	20.00	10.0	7.56	
60 to 70 %	7.00	25.0	9.00	11.00	0.80	38.00	1.50	11.50	14.0	14.80	
70 to 80 %	6.50	35.5	9.50	4.00	0.30	29.00	1.00	4.00	12.50	19.92	
80 to 90 %	3.50	10.0	9.50	2.00	0.20	13.00	1.00	1.50	5.00	22.96	
Bottom 10 % of the reservoir depth	2.00	4.50	5.50	1.00	0.10	10.00	1.00	1.00	1.50	33.82	

APPENDIX-VI

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.NO.	Name of reservoir	Sample No (distance in km From dam)	Grain Size Distribution (%)			
			Clay (size less than 0.002 mm)	Silt (Size 0.002 to 0.075 mm)	Sand (size 0.075 to 4.75mm)	Gravel (size More than 4.75mm)
1	Balimela	1 (1.75)	48	50	02	0
		2 (9,0)	47	52	01	0
		3 (20.0)	45	54	01	0
		4 (27.0)	31	67	02	0
		5 (38.0)	31	67	02	0
		6 (42.5)	0	01	99	0
2	Tilaiya	1 (0.5)	76	21.5	2.5	0
		2 (5.5)	84	14	02	0
		3 (10.5)	73	25	02	0
		4 (15.5)	55	42.5	2.5	0
		5 (23.0)	02	8.5	89.5	0
3	Linganmakki	1 (0.75)	11	39	42	08
		2 (7.0)	20	40	38	02
		3 (18.0)	15	43	41	01
		4 (26.0)	10	39	47	04
		5 (33.0)	07	33	53	07
		6 (45.0)	00	01	91	08
4	Matatila	1 (0.6)	57	24	19	0
		2 (3.6)	59	33	08	0
		3 (6.0)	37	29	34	0
		4 (9.6)	41	25	34	0
5	Idukki	1 (0.75)	06	03	91	0
		2 (4.30)	14	09	77	0
		3 (9.70)	09	06	85	0
		4 (12.80)	05	03	92	0
		5 (14.15)	05	07	88	0

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.No.	**Name of Reservoir**	Sample No(distance in km from dam)	Grain size Distribution (%)			
			Clay(size less than 0.002 mm)	Silt (size 0.002 to 0.075)	Sand (size 0.075 to 4.75 mm)	Gravel (size More than 4.75 mm)
6	Bhadra	**1 (0.5)**	9	83	8	0
		2 (6.1)	10	81	9	0
		3 (4.2)	6	81	13	0
		4 (9.6)	4	51	45	0
		5 (11.4)	3	41	54	2
		6 (21.7)	0	34	66	0
		7 (17.2)	6	60	34	0
		8 (18.3)	9	83	8	0
		9 (8.0)	4	62	34	0
		10(3.5)	9	82	9	0
7	Panchet	1 (4.625)	43	47	10	0
		2 (8.75)	20	71	9	0
		3 (5.875)	31	38	31	0
		4 (3.5)	22	39	36	3
		5 (2.5)	17	41	40	2
		6 (1.0)	25	62	13	0
		7 (1.75)	30	36	34	0
		8 (4.5)	34	48	18	0
		9 (6.53)	24	60	16	0
		10 (2.25)	13	47	40	0
8	Upper Kolab	1(0)	0	20	68	12
		2 (3.0)	6	17	73	4
		3 (3.0)	10	17	55	18
		4 (4.5)	8	35	42	15
		5 (9.75)	12	34	54	0
		6 (13.5)	0	15	81	4
		7 (19.5)	12	35	51	2
		8 (17.25)	6	17	45	32
		9 (9.0)	8	39	51	2
		10 (19.0)	14	48	38	0

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.No.	Name of Reservoir	Sample No. (Distance in km. From dam)	Grain size Distribution (%)			
			Clay (size Less than 0.002mm)	Silt (size 0.002 to 0.075 mm)	Sand (size 0.075 to 4.75 mm)	Gravel (size More than 4.75 mm)
9	Idamalayar	1 (11.5)	0	7	87	6
		2 (15.9)	0	18	72	10
		3 (0.780)	3	59	38	0
		4 (7.80)	0	18	81	1
		5 (4.08)	1	33	66	0
		6 (9.9)	0	22	72	6
		7 (1.62)	1	25	74	0
		8(6.0)	1	33	64	2
		9 (4.20)	0	4	91	5
		10 (3.78)	2	56	33	9
10	Bhima	1 (0.675)	19	50	20	11
		2 (10.575)	7	58	20	15
		3 (9.675)	26	68	4	2
		4 (13.5)	10	57	24	9
		5 (17.325)	28	64	6	2
		6 (22.5)	0	13	72	15
		7 (13.15)	0	13	32	55
		8 (37.8)	0	38	57	5
		9 (42.3)	2	30	38	30
		10 (47.475)	11	53	31	5
11	Dudhwa	S-1 (1)	32	31	37	0
		S-2 (2)	38	61	1	0
		S- 3 (4)	49	50	1	0
		S-4 (8)	31	32	37	0
		S-5 (9)	70	29	1	0
		S-6 (10)	71	29	0	0
		S-7 (11)	15	11	73	1
		S-8 (13)	67	32	1	0
		S-9 (17)	37	28	35	0
		S-10 (18)	17	15	66	2

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.No.	Name of Reservoir	Sample No (Distance in km. From dam)	Grain Size Distribution (%)			
			Clay (size Less than 0.002mm)	Silt (size 0.002 to 0.075mm)	Sand (size 0.075 to 4.75 mm)	Gravel (size More than 4.75 mm)
12	Durgapur	1(4.84)	0	3	97	0
		2 (5.0)	0	2	98	0
		3 (3.6)	0	2	98	0
		4 (2.8)	0	1	99	0
		5 (2.5)	0	11	89	0
		6 (1.5)	0	41	59	0
		7 (0.84)	0	5	95	0
		8 (2.08)	0	1	90	9
		9 (2.76)	0	5	95	0
		10 (4.04)	0	6	94	0
13	Ranapratap Sagar	1(0)	36	56	8	0
		2 (0)	35	59	6	0
		3 (0)	37	56	7	0
		4 (6.6)	34	57	9	0
		5 (6.9)	39	56	5	0
		6(7.5)	36	56	8	0
		7 (17.7)	0	2	98	0
		8 (15.75)	35	58	7	0
		9 (15.45)	35	55	8	2
		10 (3.3)	34	56	10	0
14	Salaulim	1 (7.8)	0	3	83	14
		2 (7.41)	15	29	41	15
		3 (5.64)	29	33	28	10
		4 (3.90)	37	49	14	0
		5 (4.2)	40	52	8	0
		6 (3.0)	40	55	5	0
		7 (1.35)	40	55	5	0
		8 (0.1)	41	52	7	0
		9 (1.26)	25	53	22	0
		10 (0.10)	41	53	6	0

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.No.	Name of Reservoir	Sample No (distance in km from dam)	Grain Size Distribution (%)			
			Clay (size Less then 0.002 mm)	Silt (Size 0.002 to 0.075 mm)	Sand (Size 0075 to 4.75 mm)	Gravel (size More than 4.75 mm)
15	Badua	1	35	58	7	0
		2	35	61	4	0
		3	0	3	97	0
		4	0	5	93	2
		5	34	56	10	0
		6	36	59	5	0
		7	0	14	84	2
		8	30	53	9	8
		9	0	2	98	0
		10	0	15	83	2
16	Minimata	1	18	50	31	1
		2	0	25	75	0
		3	0	2	92	6
		4	0	14	86	0
		5	36	55	9	0
		6	38	54	8	0
		7	37	56	7	0
		8	43	52	5	0
		9	40	48	12	0
		10	35	48	16	1
		11	0	2	86	12
		12	40	51	9	0
		13	0	20	77	3
		14	0	3	96	1
17	Ukai	1	36	56	8	0
		2	35	59	6	0
		3	37	56	7	0
		4	34	57	9	0
		5	39	56	5	0
		6	36	56	8	0
		7	0	2	98	0
		8	35	58	7	0
		9	35	55	8	2
		10	34	56	10	0

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.No.	Name of Reservoir	Sample No. (distance in km from dam)	Grain Size Distribution (%)			
			Clay (size Less than 0.002mm)	Silt (Size 0.002 to 0.075mm)	Sand (Size 0.075 to 4.75 mm)	Gravel (size More than 4.75 mm)
18	Rengali	1	28.29	26.08	45.63	0
		2	22.59	1.79	75.62	0
		3	99.83	0.04	0.13	0
		4	99.94	0.02	0.04	0
		5	62.07	18.93	19.00	0
		6	77.04	4.45	18.51	0
		7	23.63	2.63	73.74	0
		8	61.68	13.86	24.55	0
		9	99.72	0.06	0.22	0
		10	32.47	4.81	63.34	0
19	Kangsabati	1	17.89	7.09	75.02	0
		2	14.90	0.40	84.70	0
		3	17.38	2.91	79.71	0
		4	18.44	1.52	80.04	0
		5	23.43	7.69	68.88	0
		6	54.02	4.34	41.64	0
		7	90.08	4.36	5.56	0
		8	14.89	0.89	84.22	0
		9	17.45	2.68	79.87	0
		10	20.87	2.34	76.79	0
20	Getalsud	1	35	55	10	0
		2	38	56	6	0
		3	36	55	9	0
		4	14	42	36	8
		5	34	56	10	0
		6	15	48	37	0
		7	0	03	91	6
		8	0	21	69	10
		9	19	49	32	0
		10	16	48	34	2

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.No.	Name of Reservoir	Sample No. (distance in km from dam)	Grain Size Distribution			
			Clay (size Less than 0.002mm)	Silt (size 0.002 to 0.075 mm)	Sand (size 0.075 to 4.75 mm)	Gravel (size More than 4.75 mm)
21	Gandhisagar	1	0	0	58	42
		2	18	68	4	10
		3	50	46	4	0
		4	8	80	12	0
		5	2	74	24	0
		6	28	70	2	0
		7	29	69	2	0
		8	30	68	2	0
		9	18	72	8	2
		10	19	73	6	2
22	Jayakwadi	1	38	58	4	0
		2	40	58	2	0
		3	41	57	2	0
		4	38	58	4	0
		5	38	60	2	0
		6	30	68	2	0
		7	20	62	12	0
		8	20	64	14	0
		9	32	62	6	0
		10	13	57	24	0
23	Watrak	1	39	57	4	0
		2	23	36	41	0
		3	6	28	36	30
		4	6	29	25	40
		5	21	63	16	0
		6	11	43	45	1
		7	20	60	20	0
		8	31	47	22	0
		9	20	60	20	0
		10	20	65	16	0
		11	32	57	11	0

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.No.	Name of Reservoir	Sample No. (distance in km from dam)	Grain Size Distribution			
			Clay (size Less than 0.002mm)	Silt (size 0.002 to 0.075 mm)	Sand (size 0.075 to 4.75 mm)	Gravel (size More than 4.75 mm)
24	Dharoi	1	37	58	5	0
		2	0	4	96	0
		3	36	57	7	0
		4	37	52	11	0
		5	39	57	4	0
		6	17	49	34	0
		7	0	2	60	38
		8	0	2	73	25
		9	15	47	38	0
		10	14	44	42	0
25	Mayurakshi	1	42	53	5	0
		2	38	58	4	0
		3	35	59	6	0
		4	43	54	3	0
		5	36	59	5	0
		6	37	57	6	0
		7	0	15	84	1
		8	0	8	90	2
		9	0	2	94	4
		10	0	4	96	0
26	Bhavanisagar	1	66.48	13.05	20.47	0
		2	79.89	14.30	5.81	0
		3	45.85	5.01	49.14	0
		4	38.28	28.0	33.72	0
		5	30.73	6.30	62.97	0
		6	64.95	11.73	23.32	0
		7	63.66	21.53	14.81	0
		8	59.12	7,50	33.38	0
		9	57.89	4.02	43.87	0
		10	47.46	17.54	21.55	0
27	Konar	1	22	73	05	0
		2	02	96	02	0
		3	26	71	03	0
		4	43	55	02	0
		5	61	39	00	0

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.NO.	Name of Reservoir	Sample No. (distance in km from dam)	Grain size Distribution (%)			
			Clay (size Less than 0.002 mm)	Silt (size 0.002 to 0.075 mm)	Sand (size 0.075 to 4.75 mm)	Gravel (size More than 4.75 mm)
28	Tenughat	1	44	49	7	0
		2	34	57	9	0
		3	32	58	10	0
		4	0	4	96	0
		5	0	1	90	9
		6	0	3	96	1
		7	0	2	92	6
		8	0	2	98	0
		9	35	57	8	0
		10	0	2	94	4
		11	0	2	93	5
		12	0	3	94	3
		13	0	2	90	8
29	Ravisankar Sagar	1	39	57	4	0
		2	23	36	41	0
		3	1	33	36	30
		4	1	34	26	39
		5	21	63	16	0
		6	11	43	45	1
		7	20	60	20	0
		8	31	47	22	0
		9	29	51	20	0
		10	19	66	15	0
		11	33	56	11	0
30	Ghataprabha	1	0	3	83	14
		2	15	29	41	15
		3	29	33	28	10
		4	37	49	14	0
		5	40	52	8	0
		6	40	53	7	0
		7	40	55	5	0
		8	41	52	7	0
		9	43	52	5	0
		10	34	56	10	0
		11	29	59	12	0
		12	25	53	22	0
		13	41	53	6	0

GRAIN SIZE ANALYSIS OF THE DEPOSITED SEDIMENTS

SL.NO.	Name of Reservoir	Sample No.(distance in km from dam)	Grain size Distribution (%)			
			Clay (size Less than 0.002 mm)	Silt (size 0.002 to 0.075 mm)	Sand (size 0.075 to 4.75 mm)	Gravel (size More than 4.75 mm)
31	Emerald-Avalanchi	1	20	76	4	0
		2	25	70	5	0
		3	20	80	0	0
		4	12	20	66	2
		5	7	15	76	2
		6	12	10	78	0
		7	32	66	2	0
		8	22	68	2	0
		9	10	18	70	0
		10	8	04	86	2
32	Warna	1	34	12	54	0
		2	35	10	55	0
		3	100	0	0	0
		4	92	8	0	0
		5	92	8	0	0
		6	94	6	0	0
		7	22	5	73	0
		8	82	11	7	0
		9	93	3	0	0
		10	65	26	9	0

APPENDIX-VII

REGION-WISE LIST OF RESERVOIRS

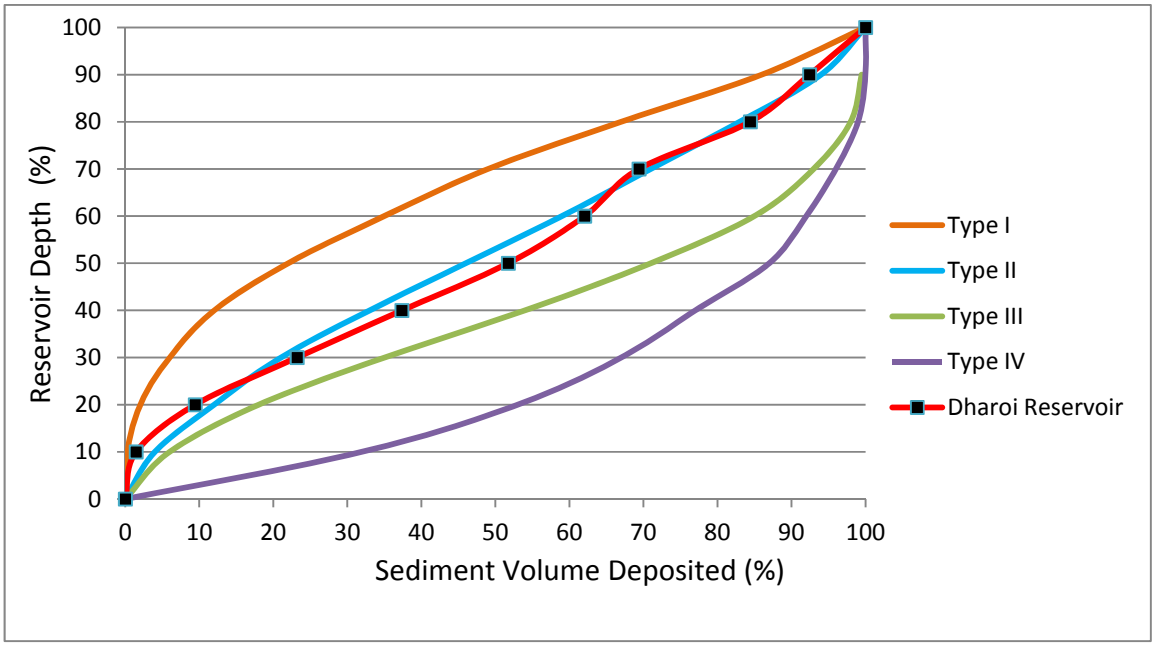
REGION-4A(DECCAN PENISULAR EAST FLOWING RIVERS INCLUDING GODAVARIEXCLDING RESERVOIR IN THE WESTWRN GHAT)

90	Malampuzha/Kerala	73
98	Mangalam/Kerala	74
99	Meenkara/Kerala	74
94	Neyyar/Kerala	75
100	Peechi/Kerala	75
101	Ponmudi/Kerala	76
107	Poomala/Kerala	76
102	Poringalkuthu/Kerala	77
103	Pothundi/Kerala	77
108	Tunakadvu/Tamil Nadu	125
134	Powai/Maharashtra	92
140	Tulsi/Maharashtra	93
191	Aliyar/Tamil Nadu	101
201	Chittar I/Tamil Nadu	104
202	Chittar II/Tamil Nadu	105
224	Parambikulam/Tamil Nadu	117
193	Pechipparai/Tamil Nadu	119
192	Perunchani /Tamil Nadu	121
194	Tirumurthy/Tamil Nadu	125

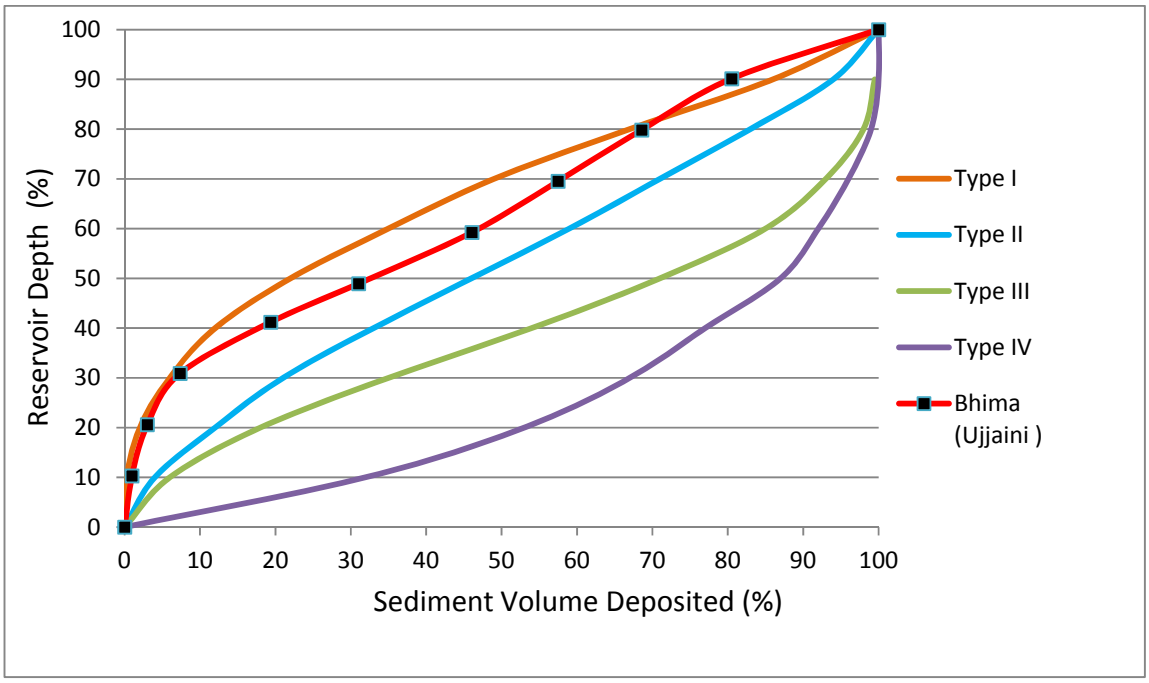
APPENDIX-VIII

Sediment Volume Distribution Curves

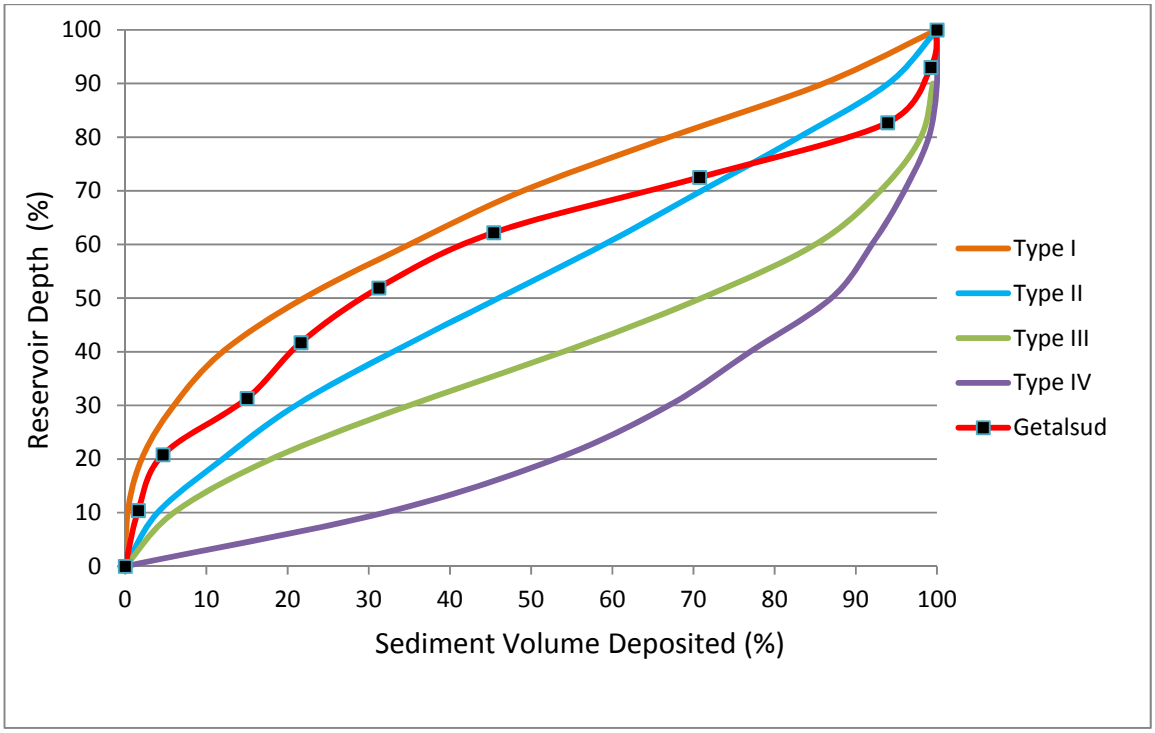
i) Dharoi Reservoir



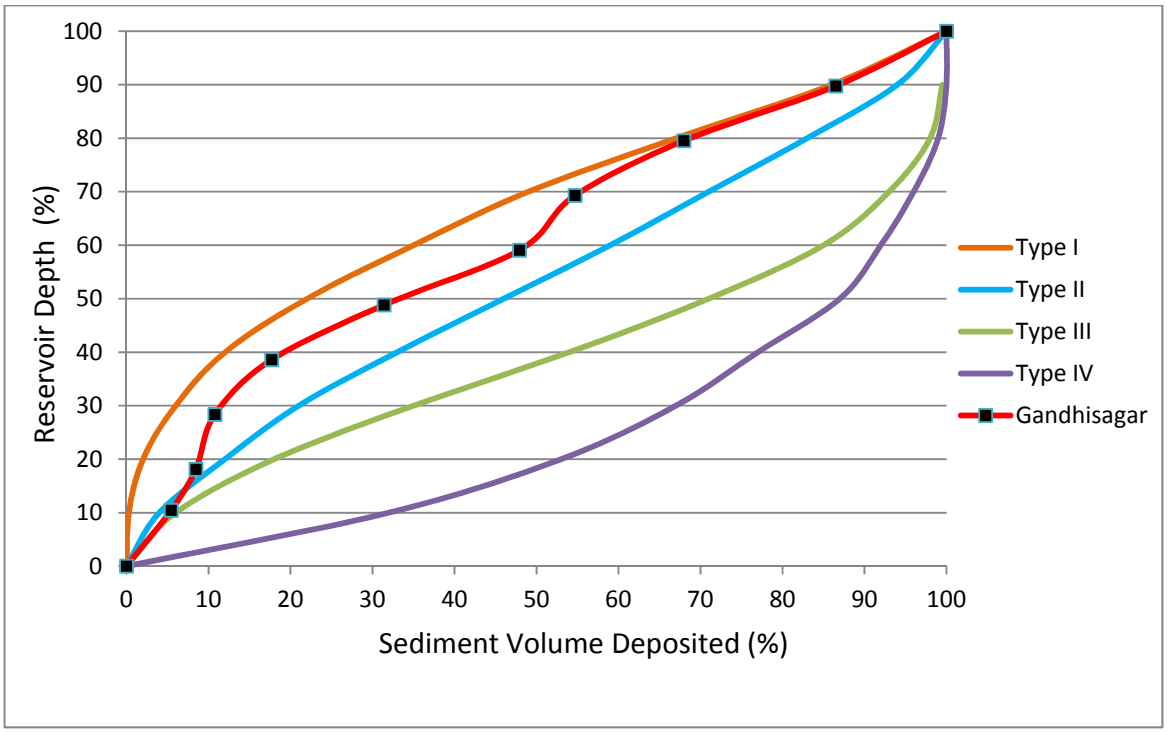
ii) Bhima Reservoir



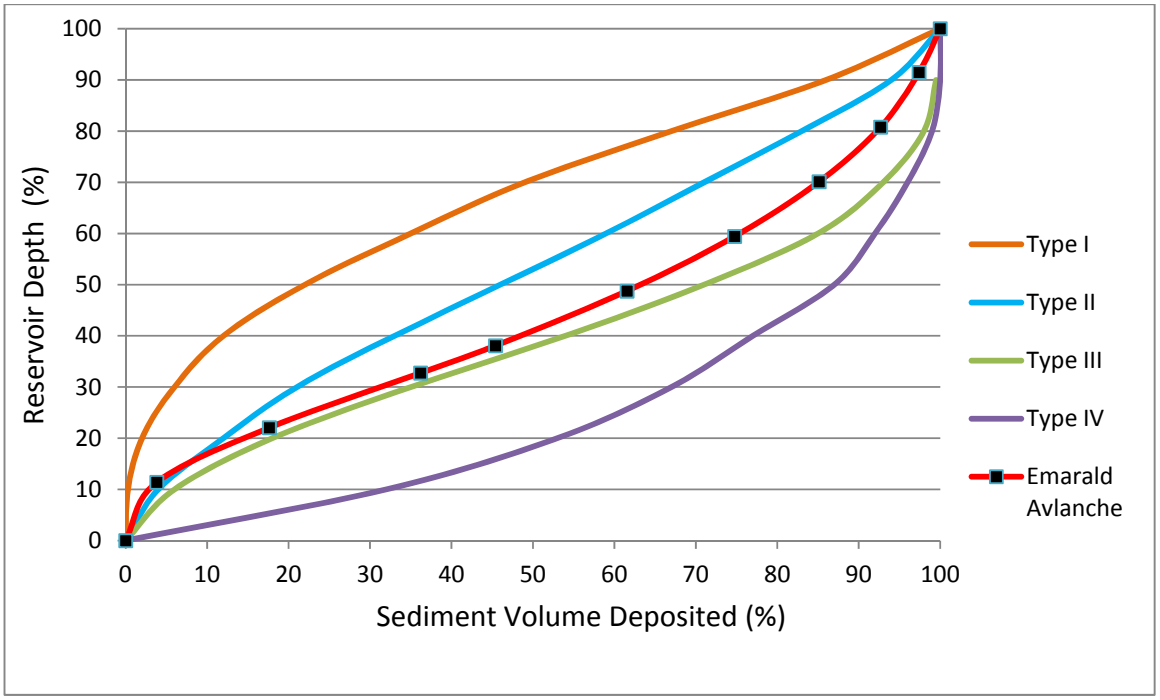
iii) Getalsud Reservoir



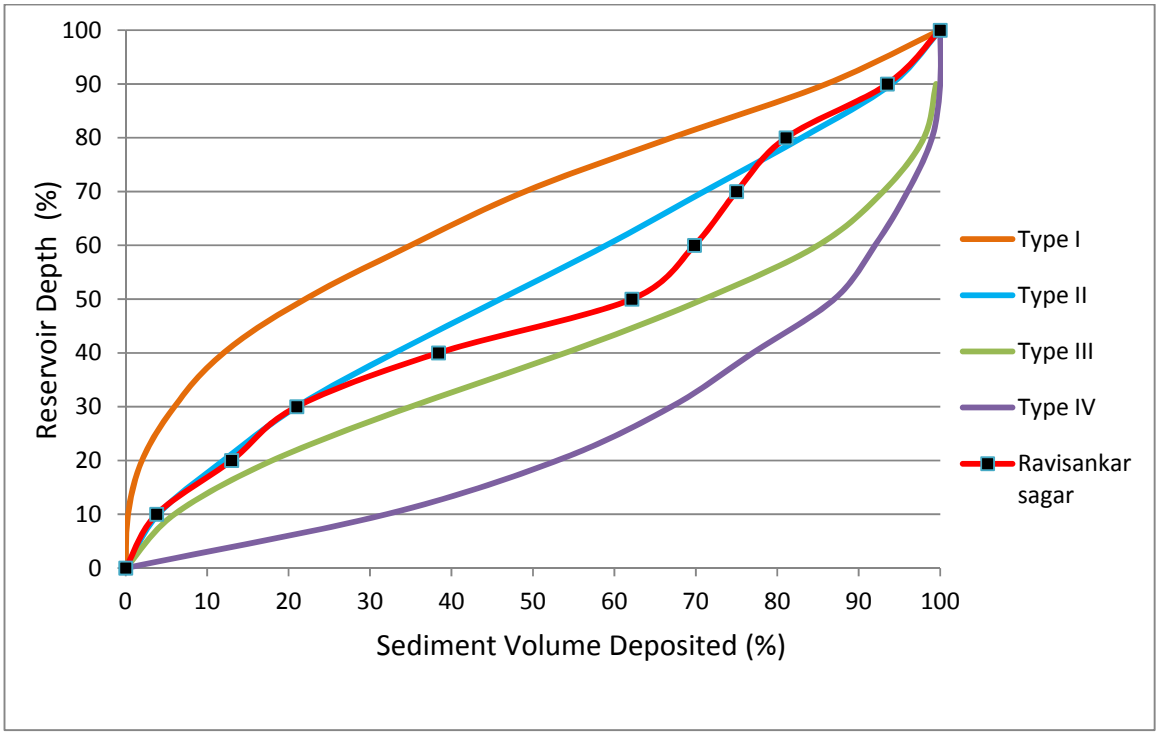
iv) Gandhisagar Reservoir



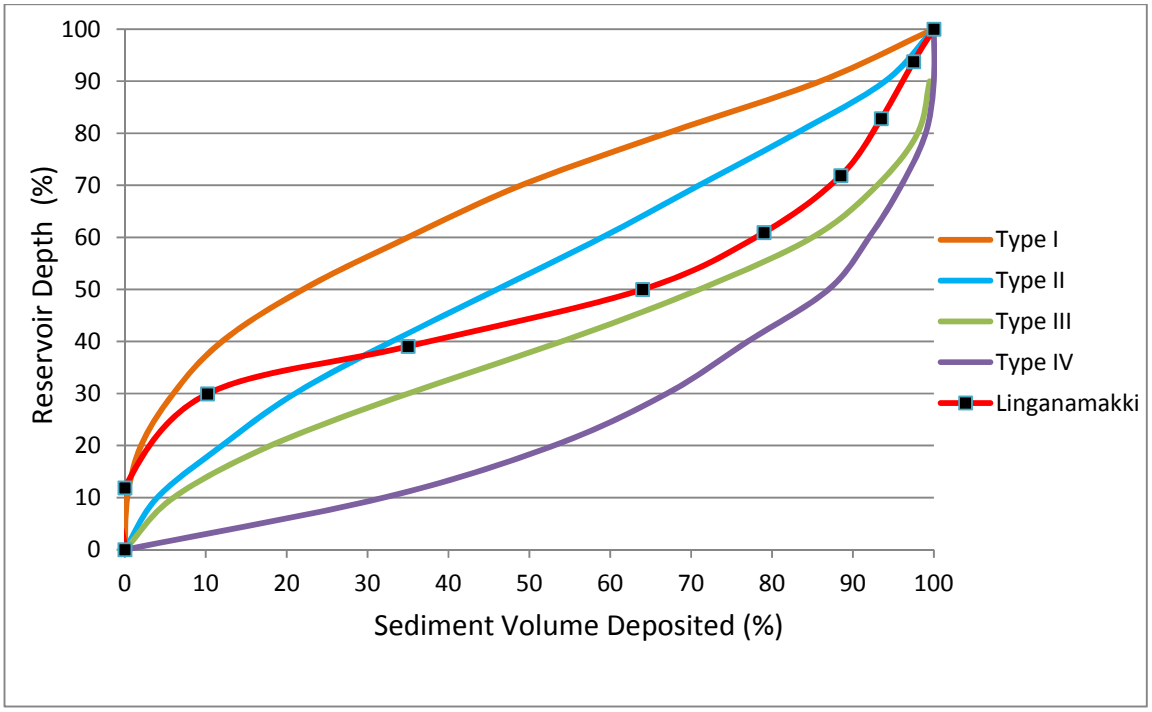
v) Emerald Avelanche



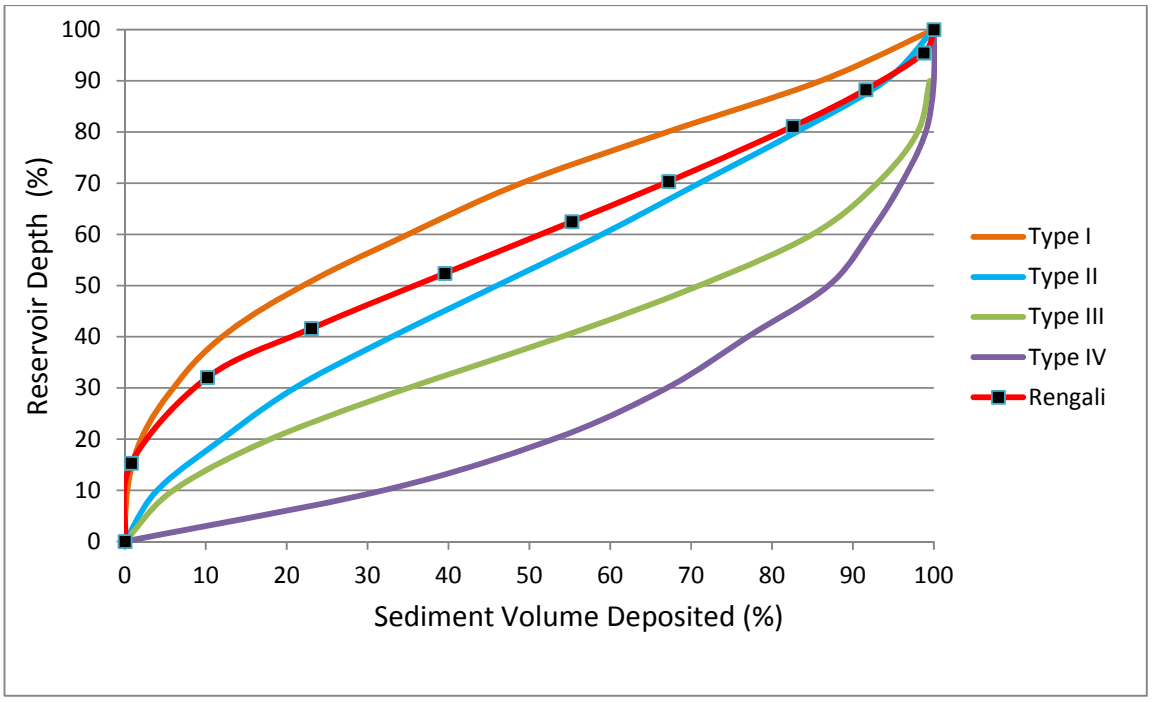
vi) Ravisankarsagar Reservoir



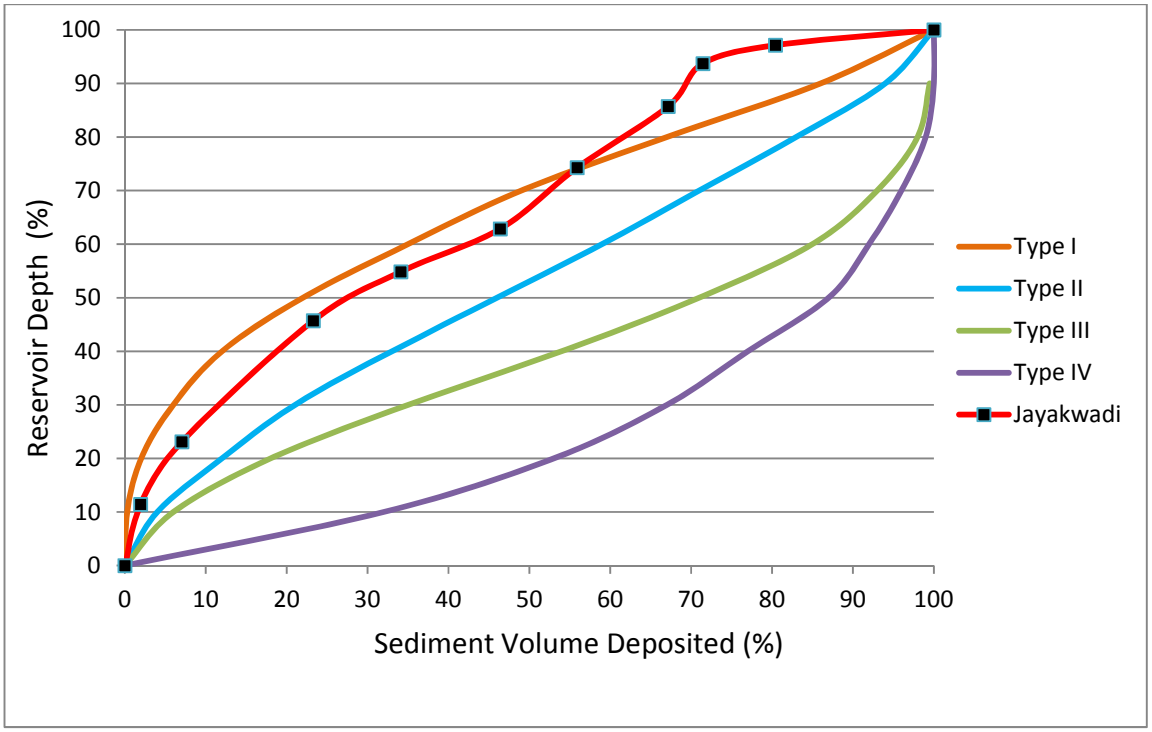
vii) Linganamakki Reservoir



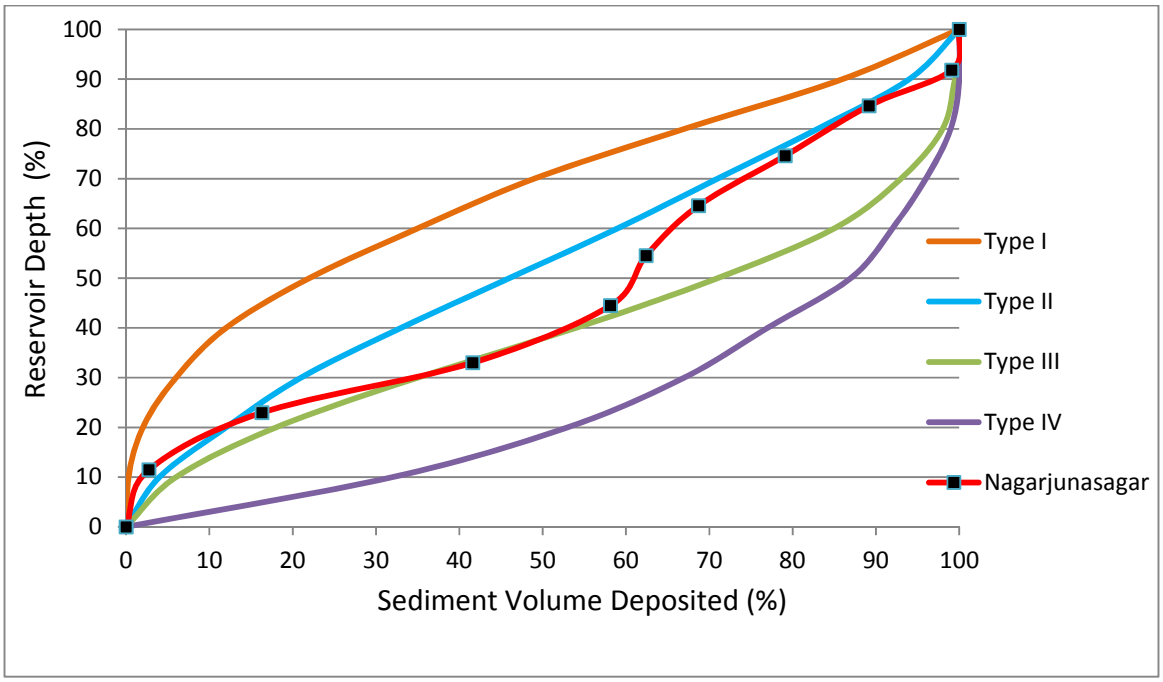
viii) Rengali Reservoir



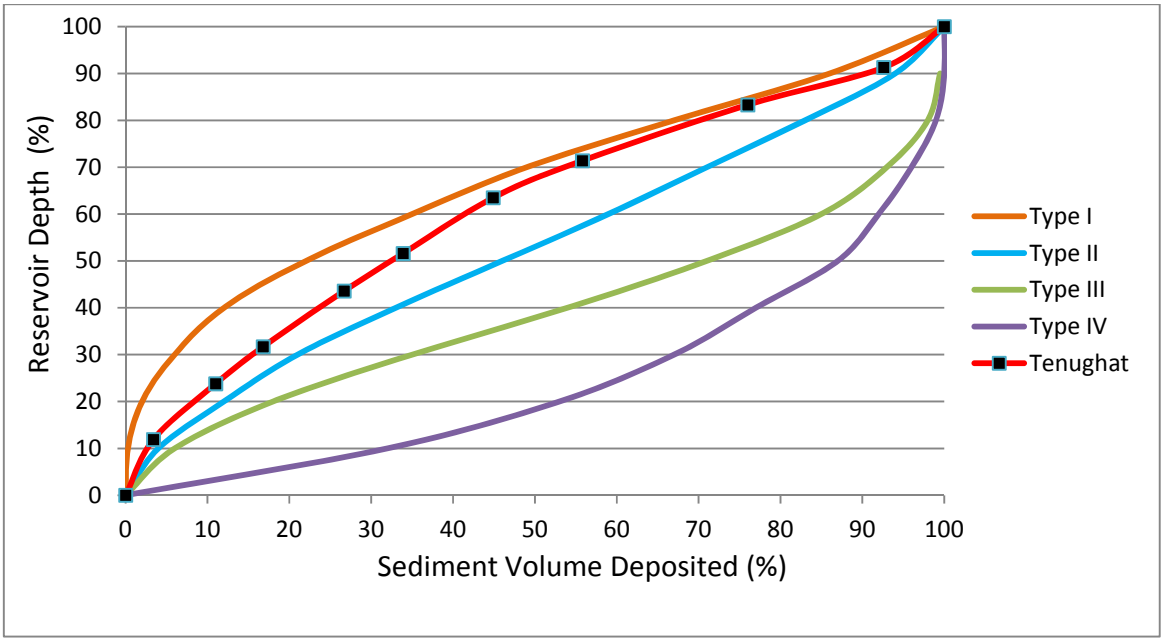
ix) Jayakwadi Reservoir



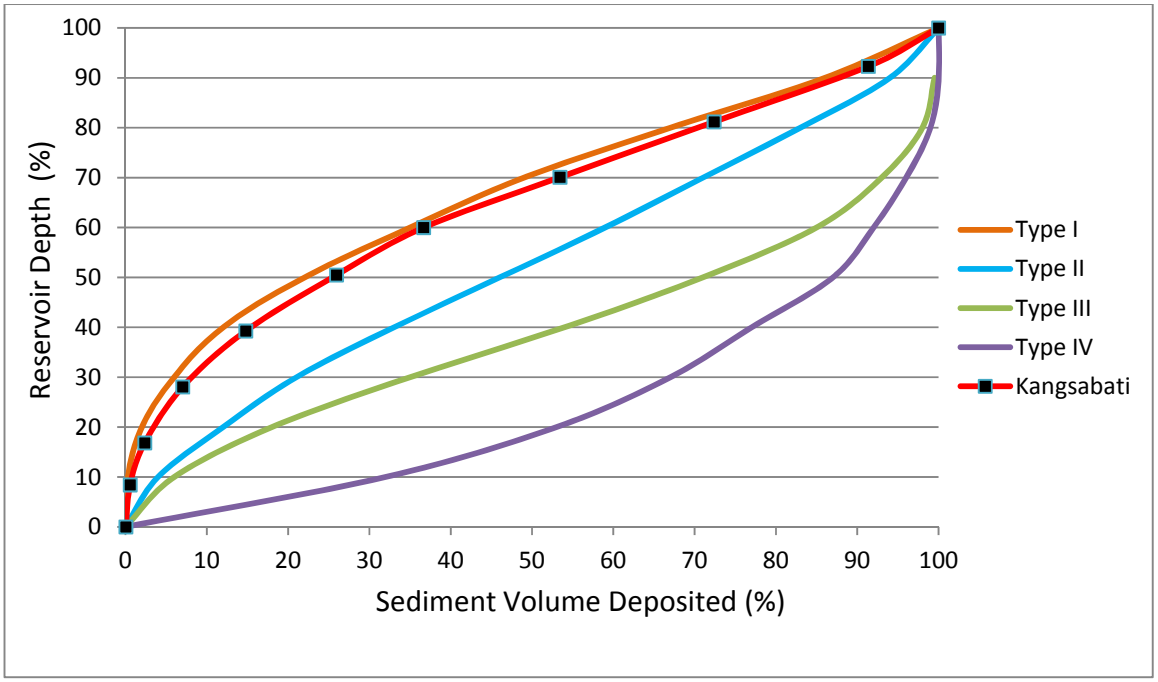
x) Nagarjunasagar Reservoir



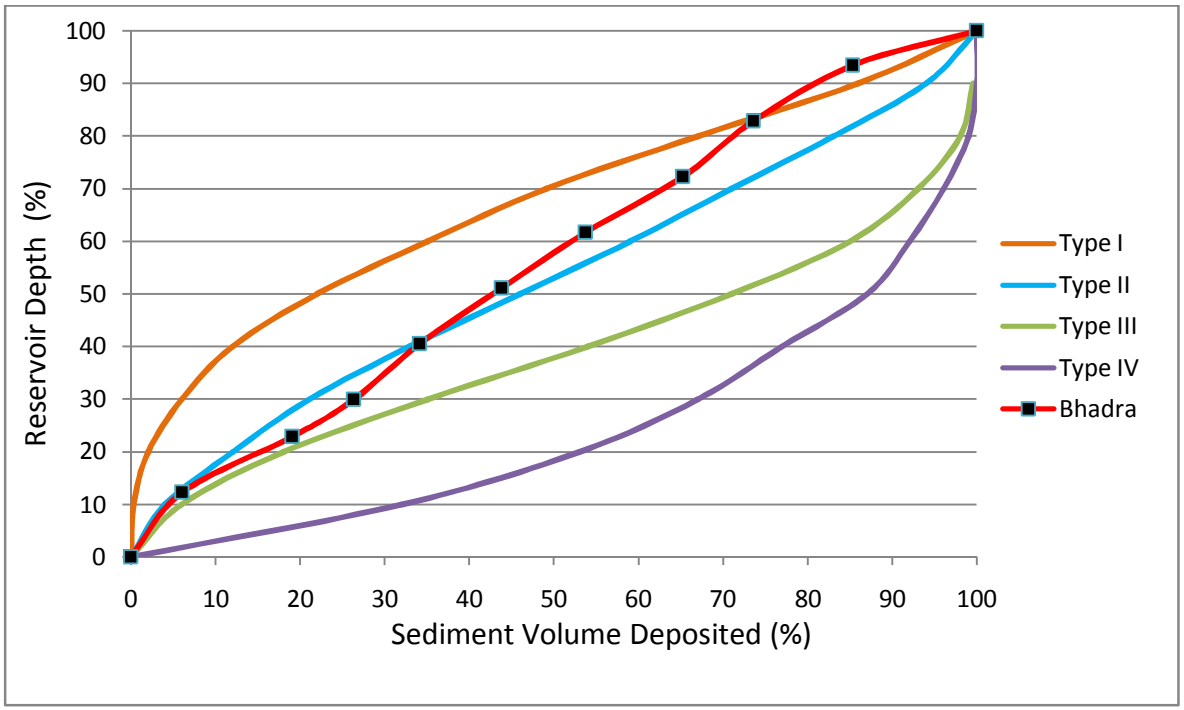
xi) Tenughat Reservoir



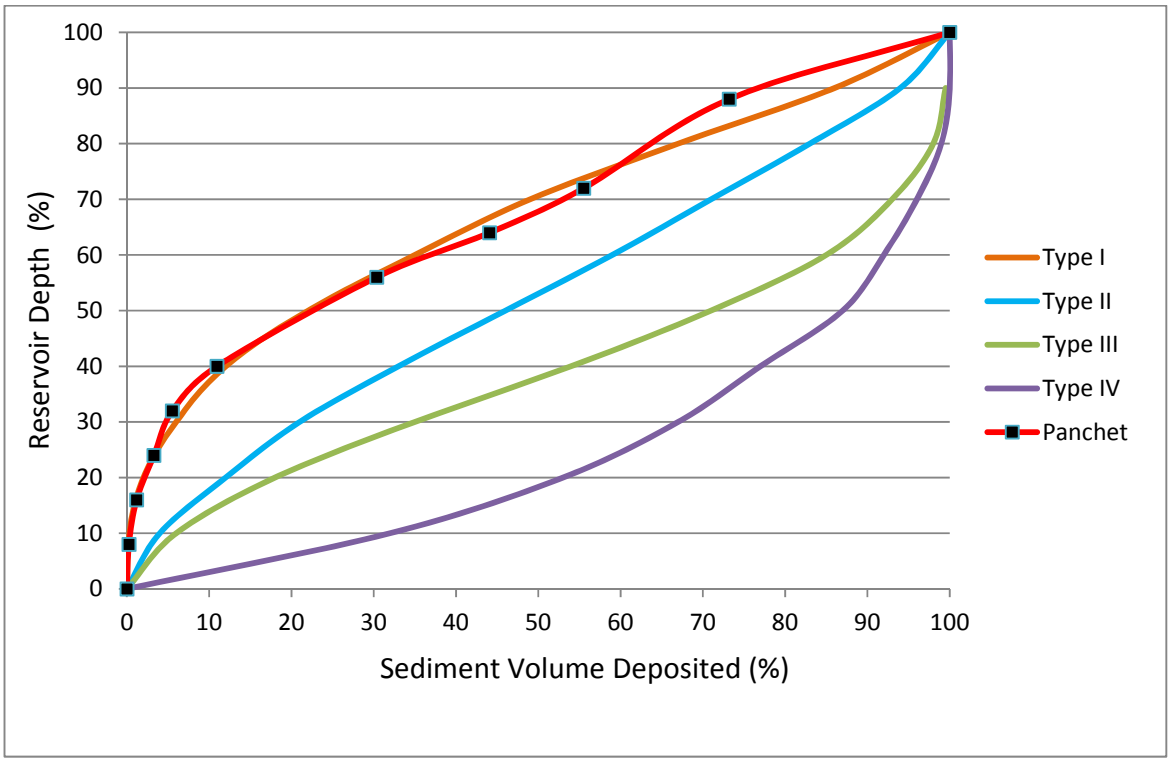
xii) Kangsabati Reservoir



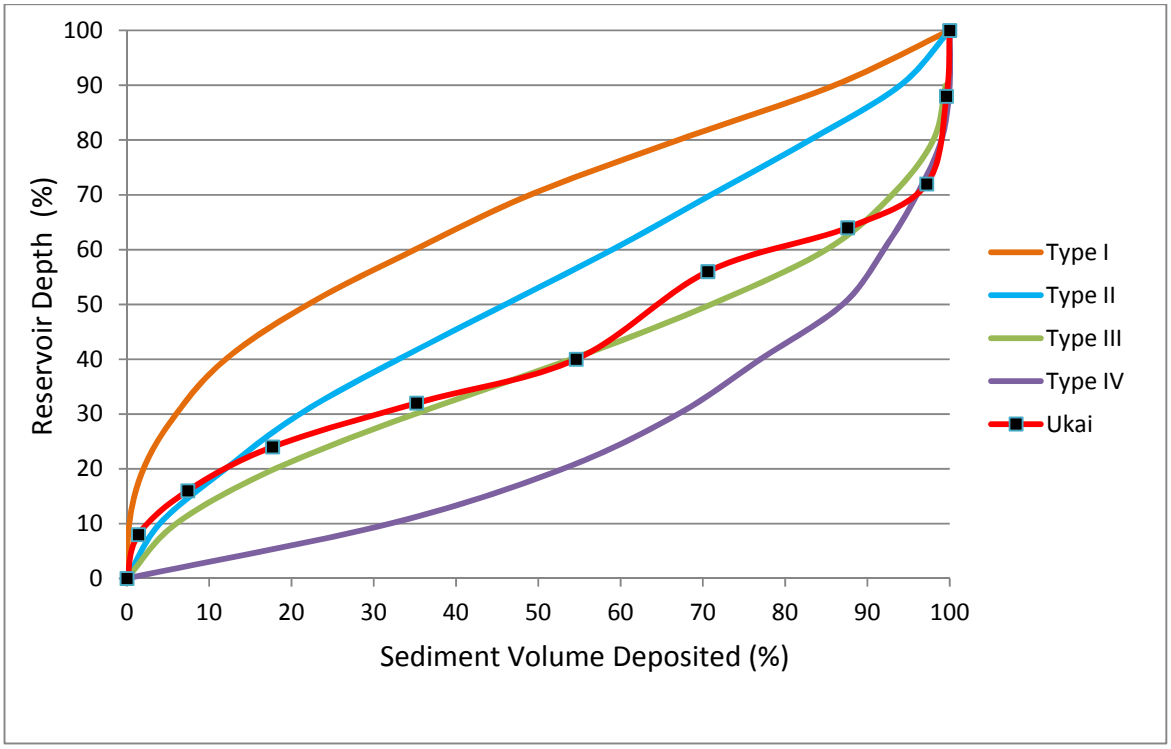
xiii) Bhadra Reservoir



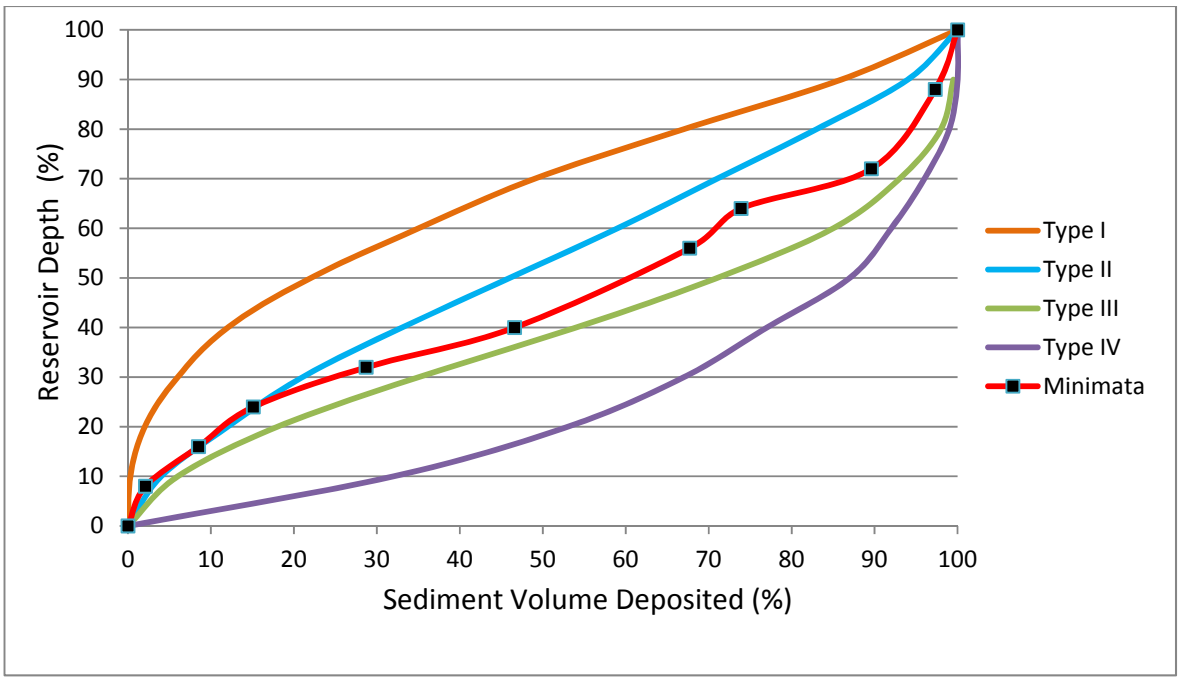
xiv) Panchet Reservoir



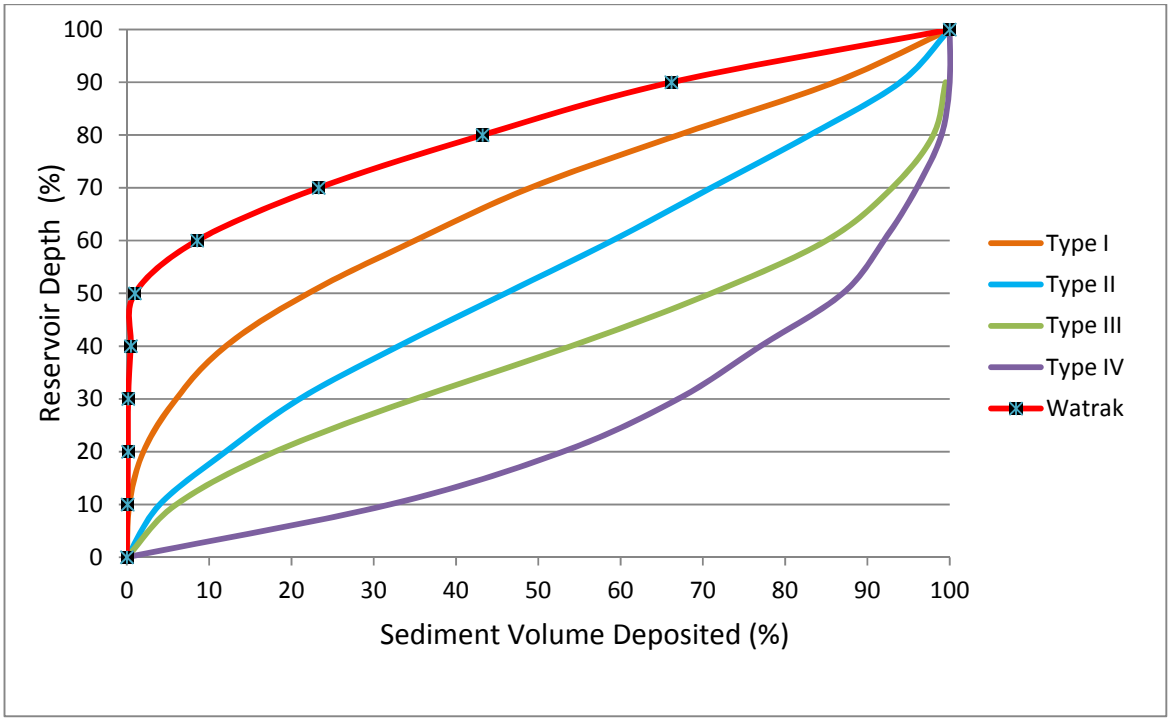
xv) Ukai Reservoir



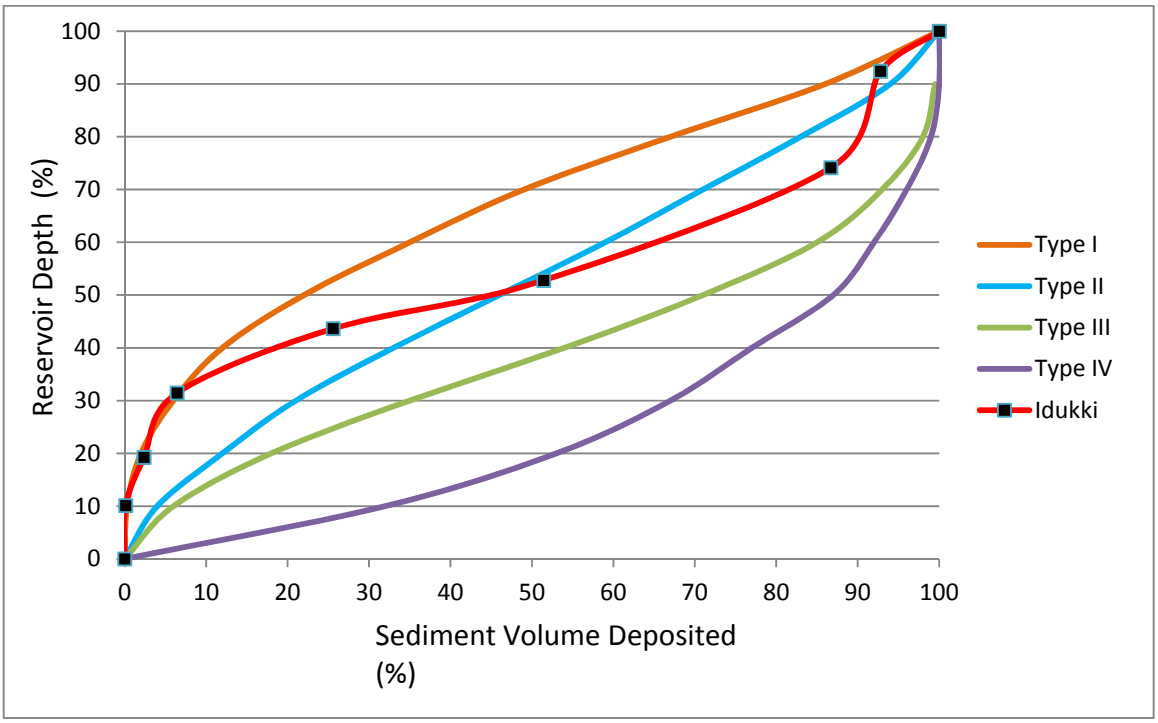
xvi) Minimata Reservoir



xvii) Watrak Reservoir



xviii) Idukki Reservoir



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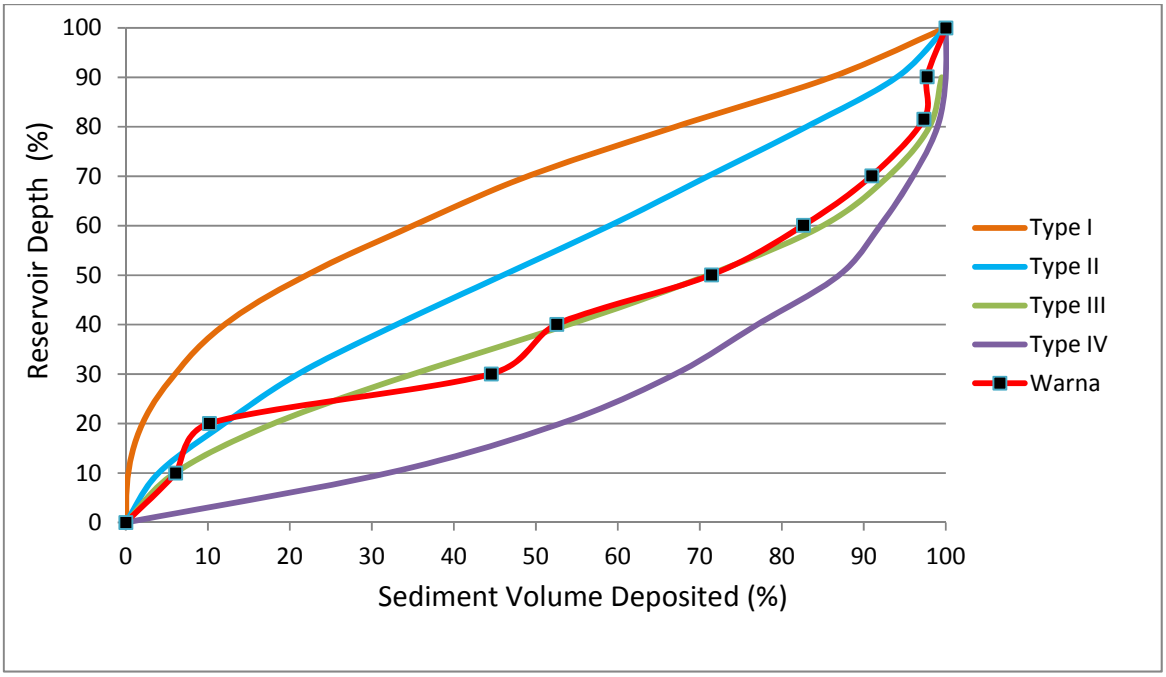
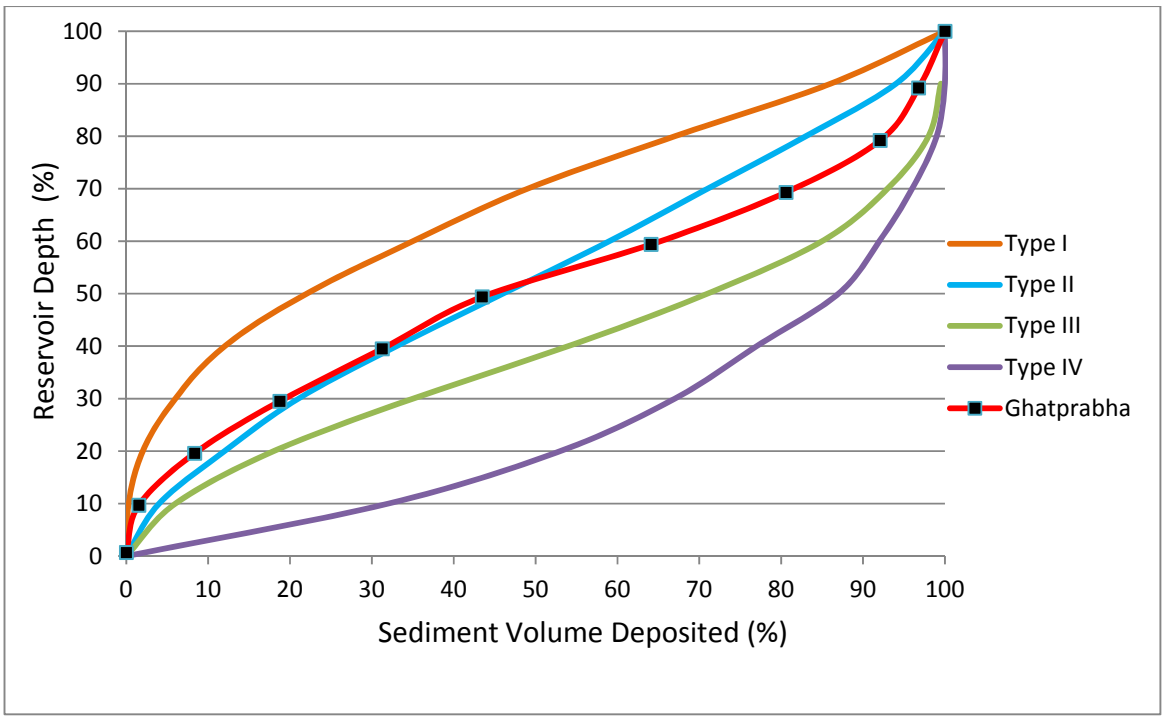
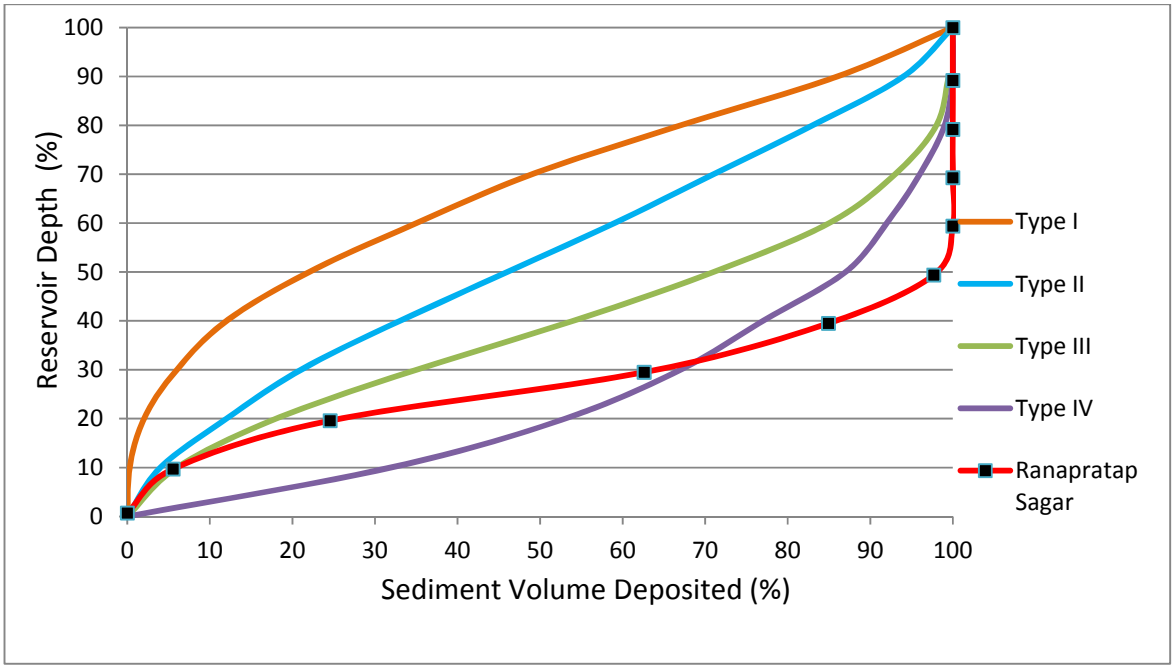


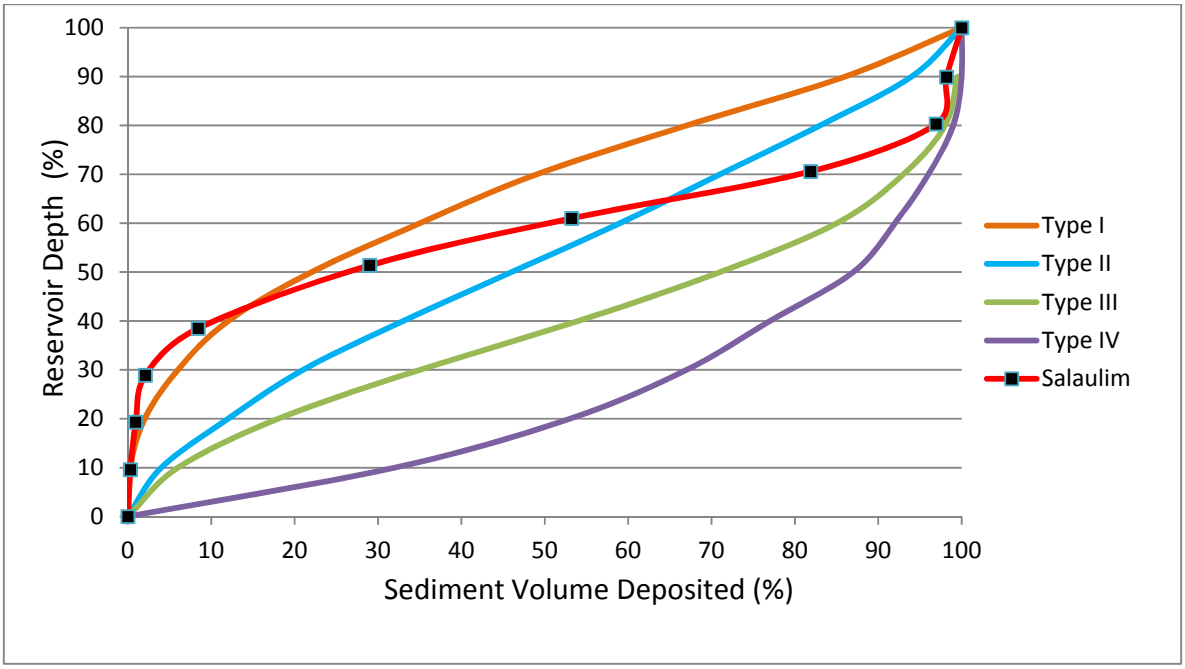
xx) Ghataprabha Reservoir



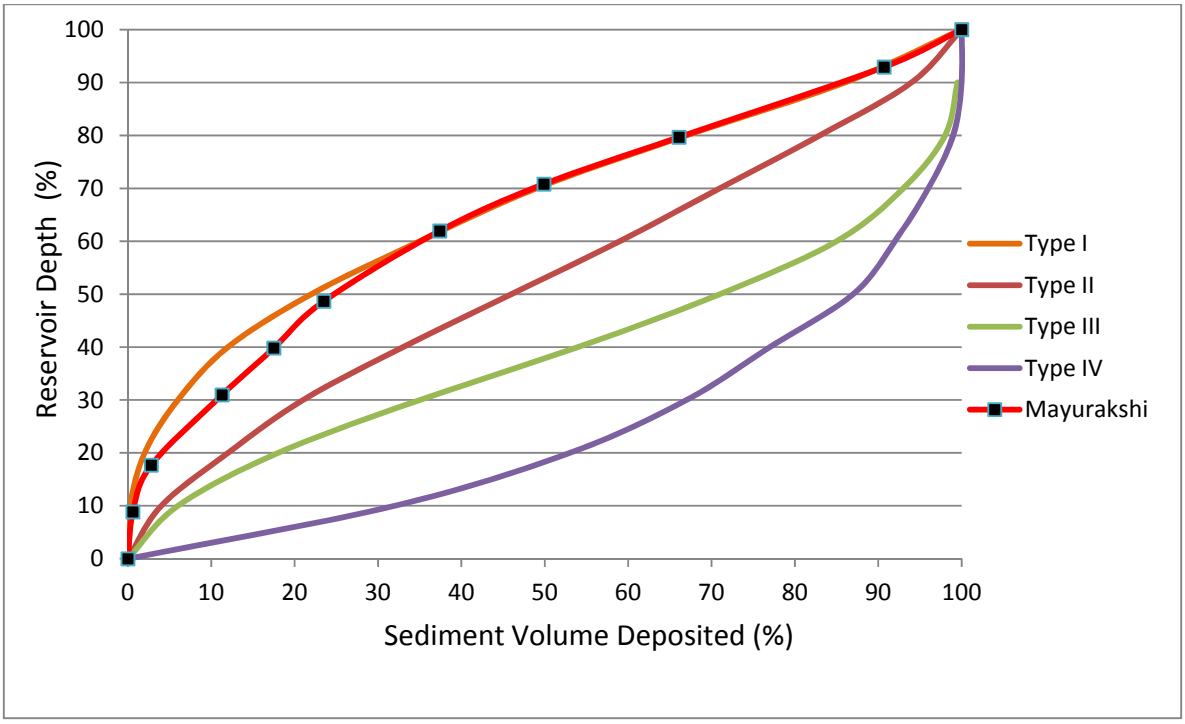
xxi) Ranapratapsagar Reservoir



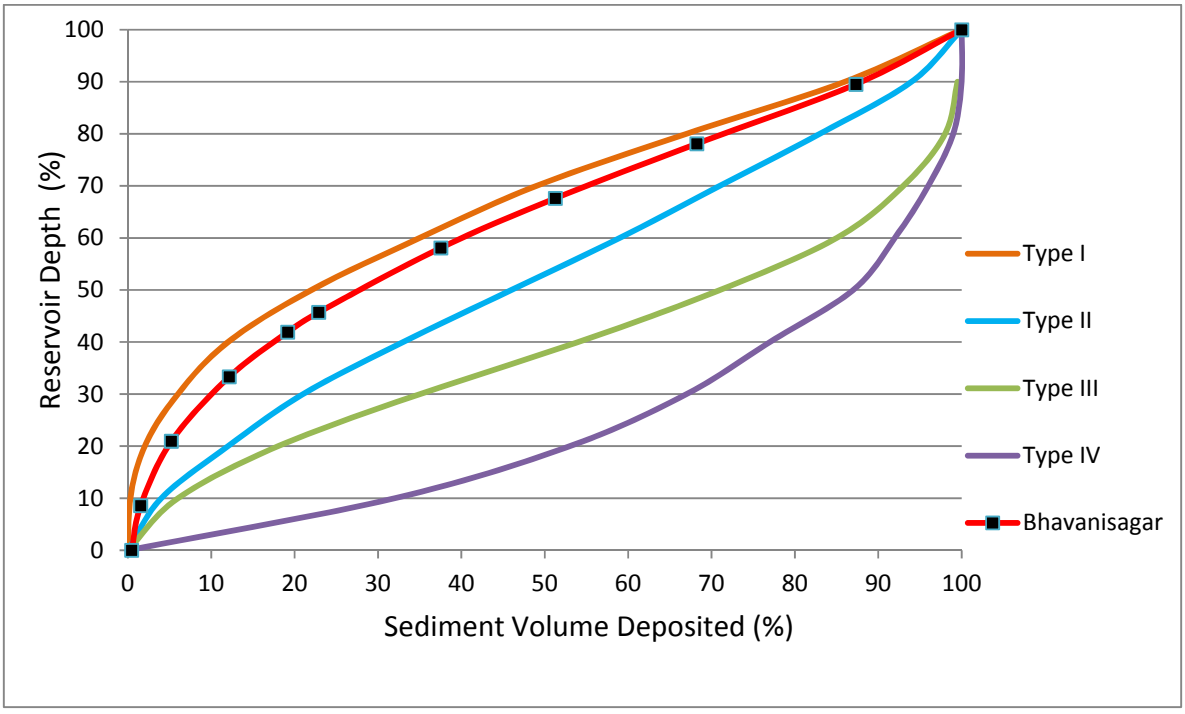
xxii) Salaulim Reservoir



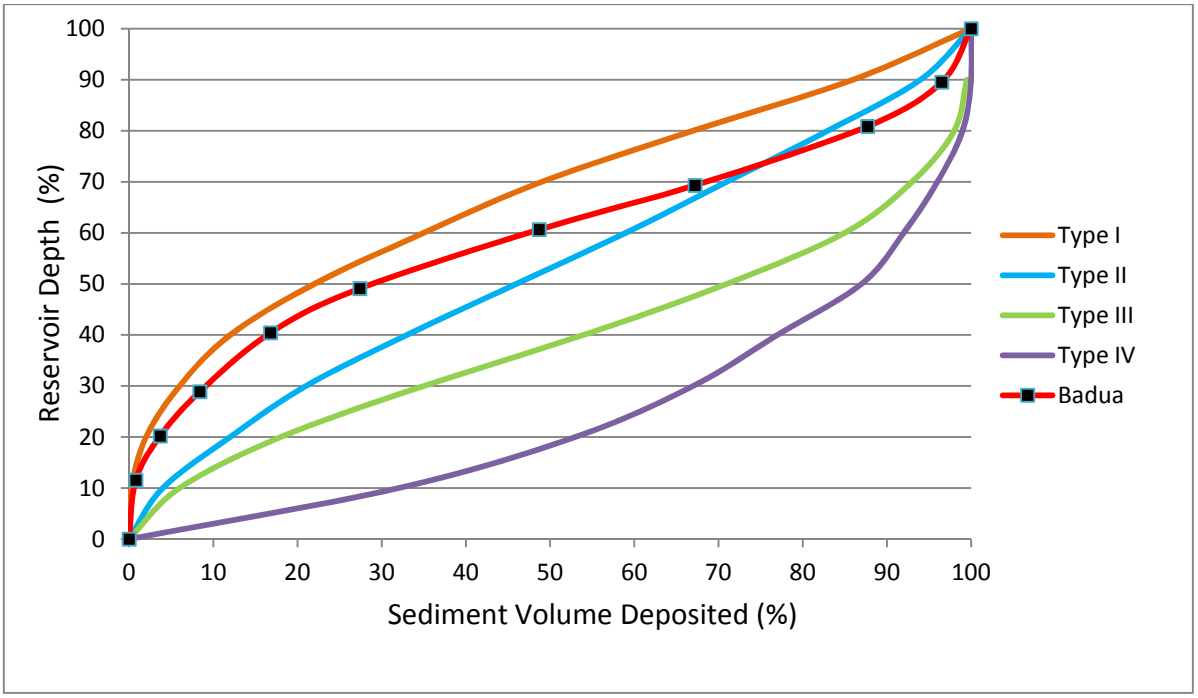
xxiii) Mayurakshi Reservoir



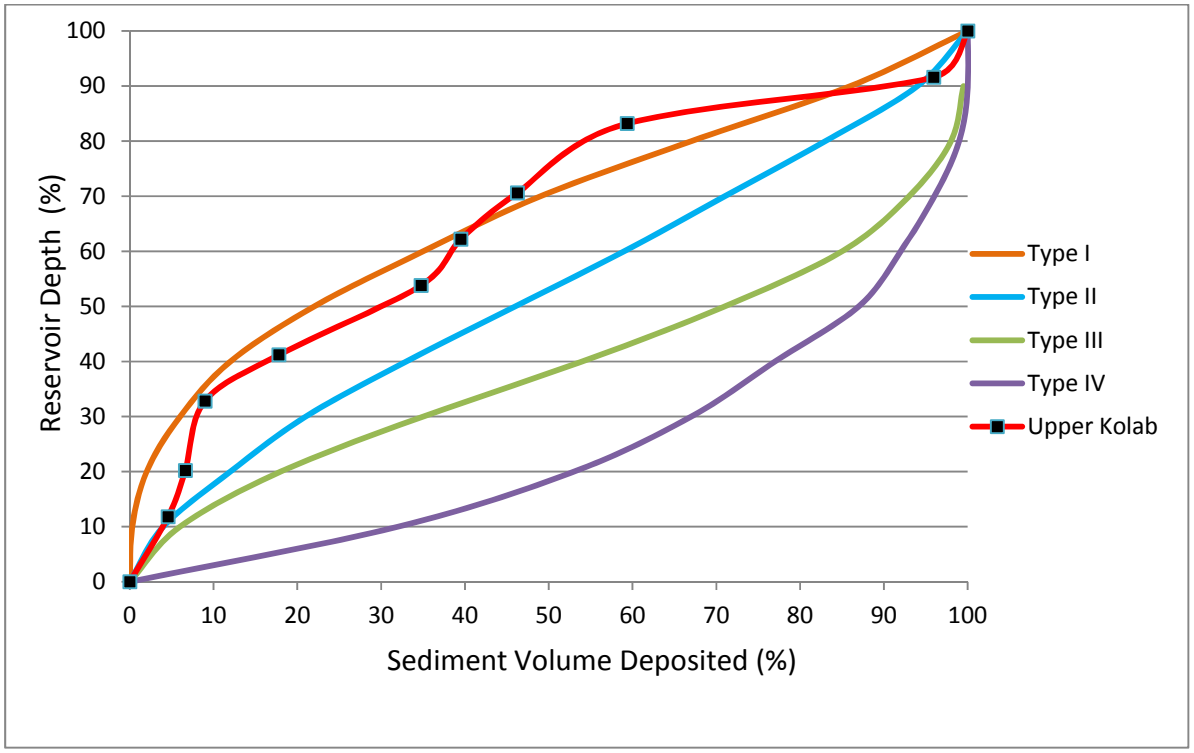
xxiv) Bhavanisagar Reservoir



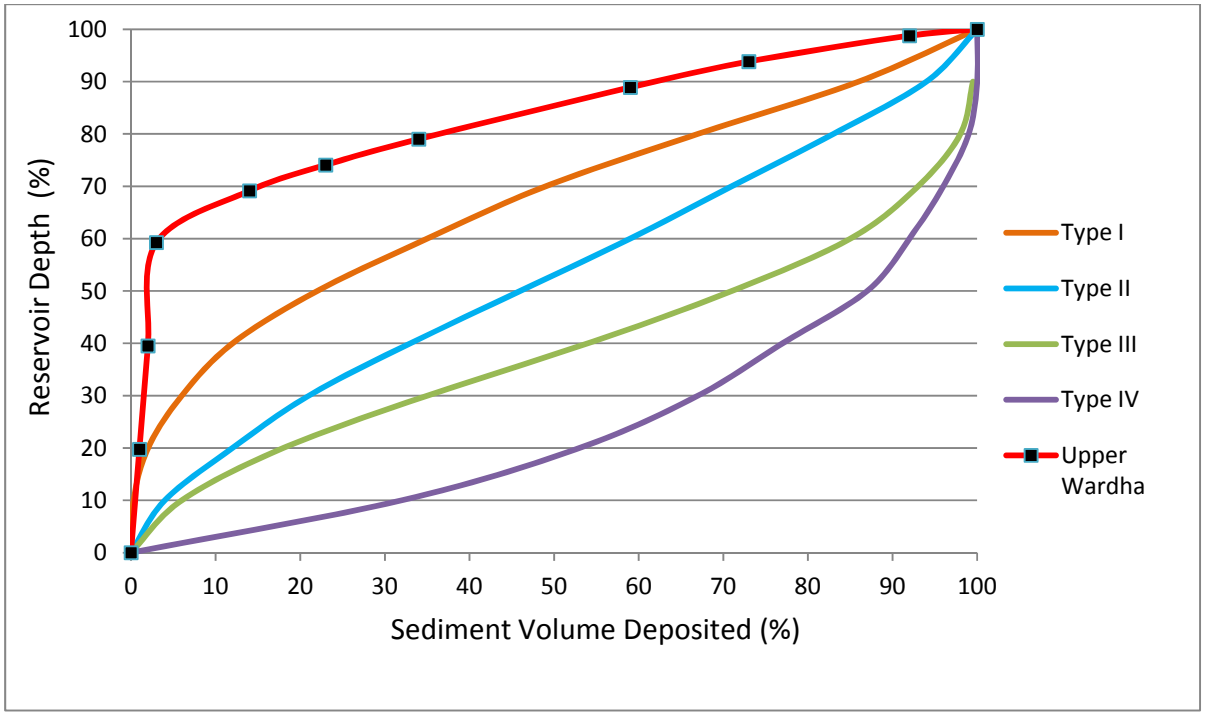
xxv) Badua Reservoir



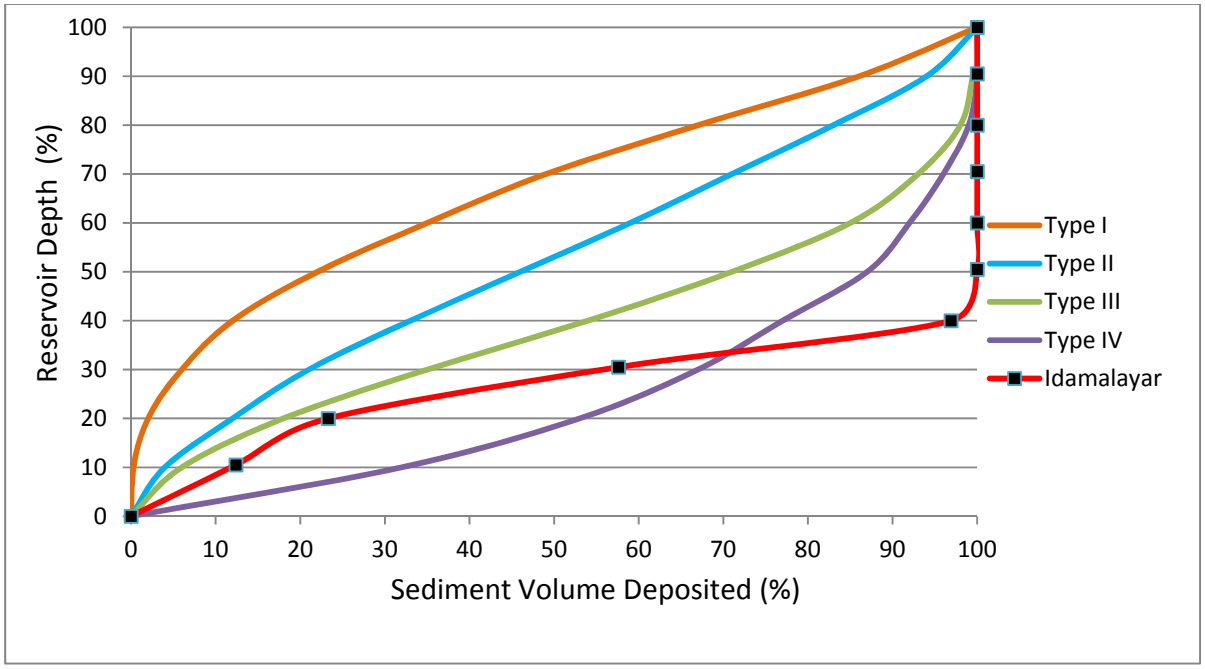
xxvi) Upper Kolab Reservoir



xxvii) Upper Wardha Reservoir



xxviii) Idamayalar Reservoir



ABBREVIATIONS

Cu.km.	Cubic kilometre
Th.Cu.m.	Thousand cubic metre
M.Cu.m.	Million Cubic metre
Ha.m.	Hectare metre
Sq.km.	Square kilometre
mm	Millimetre
Cm	Centimetre
m	Metre
Yr.	Year
N.A.	Not Available
C.A.	Catchment Area
F.R.L.	Full Reservoir Level
GPS	Global Positioning System
MDDL	Maximum Drawdown Level
FRL	Full Reservoir Level
WRIS	Water Resource Information System
NRLD	National Register of Large Dams
SRS	Satellite Remote Sensing
NA	Not Available

REFERENCES

i) Compendium on Silting of Reservoirs in India (Jan 2001) – Central Water Commission, New Delhi, (publication no. 113/2001),

ii) Impact of siltation on the useful life of large reservoirs (Jan. 1997) – Indian National Committeee on Hydrology Secretariat (publication no. INCOH/SAR-11/97), National Institute of Hydrology, Roorkee.

iii) Capacity of Storage Reservoirs (Revised Edition-1995) – Central Board of Irrigation and Power, New Delhi (publication no. 89)

iv) Report of Reservoir Sedimentation Committee (July-1985) constituted by the Ministry of Agriculture and Irrigation (Department of Irrigation) on 4th February 1978.

v) I.S 12182 (1987) – Guidelines for Determination of Effects of Sedimentation in Planning and Performance of Reservoirs.

vi) I.S.5477 (Part I):1999- Fixing the Capacities of Reservoirs- Methods, Part-1 General Requirements.

vii) I.S.5477 (Part II):1994- Fixing the Capacities of Reservoirs- Methods, Part-2 Dead Storage.

viii) I.S.5477 (Part III):2002- Fixing the Capacities of Reservoirs- Methods, Part-3 Live Storage.

ix) Life of Reservoir – Technical Report No. 19 (Sept. 1980), Central Board of Irrigation and Power, New Delhi.

x) Capacity Survey report of various reservoirs

xi) Final Report – Capacity Survey of Tenughat Reservoir (Volume-1), Environment Management Organisation, Central Water Commission,New Delhi.

xii) Sedimentation Assessment of Pechipparai Reservoir, Tamil Nadu through Satellite Remote Sensing (March 2014)- Remote Sensing Directorate, Central Water Commission, Government of India, New Delhi.

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