

Government of India
Ministry of Jal Shakti
Department of Water Resources, RD & GR
National Dam Safety Authority

Minutes of the Regional Meeting-cum-Workshop of Eastern & North Eastern Region States/UTs held by National Dam Safety Authority on 19.11.2022 at Guwahati

A Regional Review Meeting-cum-Workshop was organized by the National Dam Safety Authority (NDSA) under the chairmanship of Shri J. Chandrashekhar Iyer, Chairman, National Dam Safety Authority (NDSA) and Member (D&R), Central Water Commission (CWC) on 19th November 2022 at Guwahati to review the various activities undertaken under the Dam Safety Act, 2021 by the State/UT Governments/dam owners of the Eastern and North Eastern for the safety of dams falling under their jurisdiction as well as to sensitize all the stakeholders about the provisions contained in the Dam Safety Act, 2021. Senior officers from Department of Water Resources, RD & GR, Ministry of Jal Shakti, CWC, NDSA and the heads of SCDS/SDSO and dam owners falling under the East & North Eastern Region participated in the meeting. The list of participants in the meeting is enclosed as **Annexure-I**.

Chairman, NDSA welcomed the participants and briefly outlined the objective of holding the regional meeting-cum-workshop. He stated that this is the fourth in the series of regional meeting-cum-workshops being held by the National Dam Safety Authority under the directions of Ministry of Jal Shakti. The Parliament of India has enacted the Dam Safety Act, 2021, which has come into force with effect from 30th December, 2021. The Act provides for surveillance, inspection, operation and maintenance of the specified dam for prevention of dam failure related disasters and to provide for institutional mechanism to ensure their safe functioning and for matters connected therewith or incidental thereto. Under the provisions of the Act, National Committee on Dam Safety has been constituted and National Dam Safety Authority has been set up at

the Central Government level. At the State Government level, State Committee on Dam Safety and State Dam Safety Organisation are to be notified. As on date 28 States & 2 UTs have constituted SCDS and 27 States & 2 UTs have established SDSO. In this region only Assam is left to establish SDSO. He requested Assam State to expedite the process to notify the SDSO. He emphasized upon the need for taking all necessary actions timely by all the SCDS and SDSO of the States/UTs as well as the Heads of CPSUs, private dam owners and other agencies, as stipulated under the Act, to ensure the safety of the specified dams under their jurisdiction. He stated that the implementation of the Act is being closely monitored at the highest level in Government of India.

Chairman, NDSA informed that this region has the maximum number of States/UTs, though the number of existing dams is only around 10% of the total dams in the country. He appreciated the efforts of SCDS and SDSO of the States in this region for completing pre-monsoon inspection of around 98% of the dams located in the region.

Shri Anand Mohan, Joint Secretary (RD & PP), DoWR, RD & GR, MoJS in his opening remarks stated that though this region has comparatively less number of dams but are equally important. We need to be particular about the safety of the dam, life & property, flora, fauna etc. We need to upkeep the dams in good health to avoid any disaster/calamity arising out of their failure. In case dam fails, water security is lost for a decade as it takes long time to construct the dam. This area has hilly terrain/topography where it is difficult to raise the structure and impound water. Whatever number of dams we have, we need to maintain them on highest priority. The States should provide adequate number of manpower and funds for maintenance of dams. He requested that all dam owners must carry out the dam inspections timely and also take corrective measures as required, immediately for ensuring the safety of dams. The States which are participating in the ongoing DRIP Scheme shall also proactively come forward and utilise the allocated funds. The dams having critical issues, may be taken up for rehabilitation on priority.

Ms Richa Misra, Member (Admin & Finance), NDSA and JS & FA, DoWR seconded the suggestions made by Chairman, NDSA and JS(RD&PP) in their opening remarks. She highlighted the importance of O&M of dams and the provisions of Dam Safety Act, 2021. She advised all the dam owners to ensure adequate funds for maintenance of dams and to comply with the provisions of Dam Safety Act, 2021.

Chairman, then requested Shri Sarbjit S. Bakshi, Director, NDSA Secretariat to make a brief presentation on Dam Safety activities in India and then to take up the agenda items for deliberations. The power point presentation of Director, NDSA Secretariat was followed by presentations by each of the participating States/UT of the East & North Eastern region on the circulated agenda points. The following points emerged from the deliberations.

1. STATE/UT-WISE STATUS ABOUT SPECIFIED DAMS

(as per criteria stipulated in Dam Safety Act, 2021)

The State/UT-wise status about the number of existing specified dams and those under construction, including their ownership, were presented by all the States, NHPC and NEEPCO in their power point presentation made during the meeting, which were deliberated at length. In some of the States, both, Water as well as their Energy/Power Departments, own dams. The number of specified dams informed during the presentation were found to be in variance in respect of some of the States when compared with the number in the National Register of Large Dams, 2019.

It was decided that the Head of SDSO of all the States/UTs shall compile and tabulate the details of all the specified dams in their State/UT in the format as circulated with the Agenda Note (enclosed here as Annexure - II) and communicate the same officially to Member(Technical), NDSA & Chief Engineer-Design (N&W), CWC, Sewa Bhawan, 8th Floor (S), R.K.Puram, New Delhi as well as to NDSA Secretariat, latest by **10th December 2022**.

(Action: Head of SDSO/SCDS of States/UTs)

2. STATUS ABOUT NOTIFICATION OF SCDS AND SDSO:

(Post enactment of the *Dam Safety Act, 2021*)

In the East & North Eastern Region, the establishment of SDSO in respect of the Assam State is yet to be notified. The representative from the State of Assam, CGM(Gen), APGCL informed that the matter in this regard is under process. Chairman, NDSA stated that the SCDS and SDSO were to be notified within 180 days from the date of commencement of the Act which has passed. He urged the representative of State of Assam to get SDSO notified latest by **30.11.2022**.

The Chairman, NDSA further directed all the States to convene the first meeting of SCDS **within 15 days** from the date of the meeting and report to NDSA.

(Action: State of Assam/ Chairman SCDS of all States/UTs)

3. DAM SAFETY UNIT:

The States/UTs by and large informed that Executive Engineers, Assistant Engineers, Junior Engineers along with other supporting technical/non-technical staff are posted and made responsible for operation and maintenance of each specified dam, which form the Department's Dam Safety Unit. Some of the States informed that they did not have adequate manpower, hence officers are given additional responsibility of two to three specified dams. Director, NDSA Secretariat reiterated that as per the provisions of the Act, adequate competent level of engineers is required in the Dam Safety Unit for each specified dam. The Head of SDSO shall take up this matter with their respective State/UT Government to ensure that a robust Dam Safety Unit is functional in respect of every specified dam under the Operation and Maintenance Establishment.

(Action: Head of SDSO of States/UTs, Dam Owners)

4. STATE DAM SAFETY ORGANISATION

The SDSO of States/UTs presented the activities initiated by them in accordance with the provisions of the Act. Director, NDSA Secretariat conveyed that the dam owners and SDSO have a huge mandate to fulfill under the Act for ensuring safety of dams. He conveyed that as per the Act, nothing contained therein shall be construed to absolve

an owner of a specified dam of the duties, obligations or liabilities incidental to the construction, operation, maintenance and supervision of the dam or reservoir.

Chairman, NDSA conveyed to the Heads of the State Committee on Dam Safety, State Dam Safety Organisation and dam owners to take all requisite actions and perform all the functions timely as mandated under the Act.

(Action: Head of SCDS & SDSO of States/UTs, Dam Owners)

5. SAFETY, INSPECTION AND DATA COLLECTION:

As per the information submitted by the States in the E&NE Region, the pre-monsoon inspections of 565 dams out of 578 existing specified dams (as per NRLD 2019) have been completed as per the distribution given in **Table-1**. It was informed by the SDSO/dam owners that the remaining dams would be inspected soon.

Director, NDSA Secretariat mentioned that all the inspection reports have not been received from SDSO/dam owners in NDSA, which needs to be expedited. It has been observed that some of the dam owners were not carrying out the inspections in the format/as per the checklist as finalized & circulated by CWC for inspections of dams. The States were directed to follow unified procedure for pre and post monsoon inspection of the dams by adopting the format circulated by CWC.

Table – 1

Sl. No.	States/UT	Total No. of Large Dams completed (As per NRLD, 2019)	Nos. of Dams Inspected as reported by States
1	Arunachal Pradesh	1	4
2	Assam	3	2
3	Bihar	24	26
4	Chhattisgarh	249	249
5	Jharkhand	55	63
6	Manipur	3	5
7	Meghalaya	8	8

8	Mizoram	1	1
9	Nagaland	1	1
10	Odisha	200	173
11	Sikkim	2	2
12	Tripura	1	1
13	West Bengal	30	30
	Total	578	565

The States/UTs were advised to complete the post monsoon inspections of the specified dams latest by **31st Dec 2022** in the CWC format and submit the report to SDSO and NDSA Regional Director, Guwahati, Member (Technical), NDSA and to NDSA Secretariat, New Delhi. The SDSO shall further examine the report and present a gist of their analysis categorizing the dams in Category I, II & III as per the CWC check list/ format for inspections of dams to Member (Technical), NDSA, New Delhi and NDSA Secretariat.

Director, NDSA Secretariat mentioned that all activities related to Dam Safety, Inspection and Data collection stipulated under chapter VII of the Act need to be complied with by the dam owners/SDSO.

(Action: Head of SDSO of States/UTs, Dam Owners)

6. ANNUAL REPORT:

It was decided that all the SDSO's shall prepare and submit the annual report containing the documentation of activities in relation to Dam Safety as per relevant sections of the Act which is to be laid by the State Government in the house of State Legislature. A copy of the same shall be forwarded to the Member (Disaster & Resilience), New Delhi. Member (Disaster & Resilience), NDSA and Chief Engineer-Design (NW&S), CWC shall prepare a Consolidated Annual Report for the entire country for which States shall submit the documentation as and when sought by NDSA. A format for preparation of Annual Report shall be circulated to all States/UTs/

CPSUs/agencies by Member (Disaster & resilience), NDSA latest by **15th January 2023**.

(Action: All SDSO's / Member (Disaster & Resilience), NDSA)

7. CREATION OF NATIONAL LEVEL DATA BASE OF DAMS:

CWC had compiled from the States/UTs/dam owners the information on the large dams in India and published as a National Register of Large Dams (NRLD) in Oct 2019. After enactment of the Act, NDSA has asked the States/UTs to update the details on the specified dams.

In order to compile basic information regarding the specified dams, a form is enclosed as **Annexure-II**. The form shall be got filled up by the dam owners, and after examination, the Head of SDSO shall sign and submit the same to the Regional Director, NDSA, Guwahati and Member (Technical), NDSA, New Delhi latest by 10th December 2022.

(Action: Head of SDSO of States/UTs, Dam Owners)

8. LOG BOOK:

Director, NDSA informed that all SDSOs have to maintain a log book or database for each specified dam under their jurisdiction recording therein all activities related to the surveillance and inspection, and all the important events related to dam safety. It was further conveyed that till such time regulations are finalized by NDSA, available CWC guidelines on CWC website may be followed.

During the meeting, the presentations of the States/CPSUs revealed that manual entries are being recorded in some form in a register by some of the dam owners. These log books were prima facie pertaining to reservoir water level and meteorological information. However, no systematic recording of dam safety parameters and O&M details were being done.

Chairman, NDSA directed all the SDSOs and dam owners to ensure that a logbook is maintained in respect of all the specified dams wherein all the requisite dam safety parameters, O&M details are recorded. This should preferably be in a digital format. The

information so recorded should be available at the headquarter of the SDSO on daily basis, for centralized monitoring by SDSO.

(Action: Head of SDSO of States/UTs, Dam Owners)

9. INSTRUMENTATION, EMERGENCY ACTION PLAN (EAP) AND DISASTER MANAGEMENT, OPERATION AND MAINTENANCE MANUAL:

Some of the States informed that they were recording the instrumentation data in the functional instruments in the specified dams. However, in the non-instrumented dams, States stated that it is difficult for them to draw instrumentation plan as they did not have the in-house expertise in this field. Also, some of the States informed that they were not in a position to prepare the EAP on their own due to lack of expertise and want of experts. Some of the States informed that they had prepared O&M manual in-house for certain specified dams which are being used to operate the Gates.

JS (RD & PP) urged the Heads of SDSOs and dam owners to take necessary actions and facilitate the dam owners to comply with the provisions of the Act. The States/UTs were requested to upload the EAP/O&M/DM documents on the DHARMA portal & to share with the other States/UTs for lateral capacity building in the country. Member (Policy & Research), NDSA stated that login credentials for DHARMA portal would be provided to all the dam owning States/UTs.

Chairman, NDSA informed that CWC will shortly publish a Manual on Instrumentation of dams which would be useful to the dam owners and SDSO. The States were also requested to share the details of the consultants engaged by them for preparation of EAP for benefit of other States/UTs. The States/UTs were informed that CWC has also published the "*Guidelines for Developing Emergency Action Plan for Dams*" under the DRIP I scheme which can be referred. The same can be accessed through CWC website on the link for DRIP. It was suggested that the existing O&M Manuals at the project sites need to be updated as per the "*Guidelines for preparing O&M Manuals for Large Dams*" and Rule curves are to be prepared/updated for the specified dams. The

States/UTs were informed that the guidelines available on CWC web site are tabulated in **Table-2**.

(Action: Head of SDSOs/Dam Owners, Member (Disaster & Resilience), NDSA)

Table - 2

Guidelines And Manuals	
 Guidelines for Selecting and Accommodating the Inflow Design Floods for Dams	Doc. No. CDSO_GUD_DS_06_v1.0 June 2021
Operational Procedures for Assessing and Managing Environmental Impacts in Existing Dam Projects	Doc. No. CDSO_Gud_DS_08_V1.0 November 2020
Guidelines for Classifying the Hazard Potential of Dams	Doc. No. CDSO_Gud_DS_09_V1.0 November 2020
 Manual for Assessing Hydraulic Safety of Existing Dams - Volume I	Doc. No. CDSO_MAN_DS_04_v1.0 June 2021
 Manual for Assessing Hydraulic Safety of Existing Dams - Volume II	Doc. No. CDSO_MAN_DS_04_v1.0 June 2021
Manual for Assessing Structural Safety of Existing Dams	Doc. No. CDSO_MAN_DS_03 November 2020
Handbook for Assessing and Managing Reservoir Sedimentation	Doc. No. CDSO_GUD_DS_04_v1.0 February 2019
Inspection Manual for Dam Field Engineers after Seismic Events, Maithon Dam, Damodar Valley Corporation, Jharkhand	Doc. No. CDSO_MAN_DS_05_v1.0 February 2019
Guidelines for Assessing and Managing Risks Associated with Dams	Doc. No. CDSO_GUD_DS_10_v1.0 February 2019
Technical Specifications of Hydro-meteorological, Geodetic, Geotechnical and Seismic Instruments	Doc. No. CDSO_TS_DS_01_v1.0 January 2018
Inspection Manual for Dam Field Engineers After Seismic Events, Ichari Dam, Uttarakhand	Doc. No. CDSO_MAN_DS_01_v1.0 January 2018
Manual for Rehabilitation of Large Dams	Doc. No. CDSO_MAN_DS_02_v1.0 January 2018
Guidelines for Safety Inspection of Dams	Doc. No. CDSO_GUD_DS_07_v1.0 January 2018
Guidelines for Mapping Flood Risks Associated with Dams	Doc. No. CDSO_GUD_DS_05_v1.0 January 2018
Guidelines for Preparing O&M Manuals for Dams	Doc. No. CDSO_GUD_DS_03_v1.0 January 2018
Guidelines for Instrumentation of Large Dams	Doc. No. CDSO_GUD_DS_02_v1.0 January 2018
Guidelines for Developing Emergency Action Plan (EAP) for Dams	Doc. No. CDSO_GUD_DS_01_v2.0 February 2016

10. HYDRO-METEOROLOGICAL STATIONS, EARLY WARNING SYSTEM, SEISMOLOGICAL STATIONS:

Some of the States informed that hydro-meteorological stations were established in the vicinity of some of the specified dams and Early Warning System (EWS) for some of the dams. However, other States/dam owners stated they need to install EWS for their dams. SDSOs/dam owners were requested to take appropriate actions for establishing these stations at the earliest as per the provision of the Act.

(Action: Head of SDSOs/Dam Owners, Member (Disaster & Resilience), NDSA)

11. RISK ASSESSMENT STUDIES, ASSESSMENT OF VULNERABILITY OF DAMS AND HAZARD CLASSIFICATION, COMPREHENSIVE DAM SAFETY EVALUATION:

Member (Regulation), NDSA Secretariat requested the States/dam owners to present the actions taken by them in regard to risk assessment studies, vulnerability

assessment and hazard classification of dams as well as comprehensive dam safety evaluation. Most of the States expressed that these studies have not been conducted for most of their dams, primarily due to lack of system expertise and want of expert individuals/agencies in the desired field for carrying out these studies. It was informed that the existing Guidelines published by CWC under the DRIP Phase I Scheme could be followed till such time the Regulations are in place. He added that as these studies are to be carried out in a time bound manner as per the Act, expeditious actions need to be taken by SDSO/Dam owners.

Member (Technical), NDSA suggested SDSOs/dam owners to immediately prepare a road map for carrying out these studies in respect of their dams and share the details of the independent panel of experts/ organizations which the States/UTs/CPSUs are considering for engaging for carrying out these studies. The Chairman, NDSA informed that training on Rapid Risk Assessment of Dams is being organized by World Bank and CWC soon for which the States have been requested to nominate their officers.

(Action: Head of SDSOs/Dam Owners; Member (Regulation), NDSA)

12.RECORD OF MAJOR DAM FAILURES IN THE STATE/UT:

Member (Disaster & Resilience), NDSA requested SDSO/Dam owners to maintain a record of major dam incidents of each specified dam under their jurisdiction, and make available to NDSA, information as and when sought. The SDSO shall report the event of any dam failure under their jurisdiction to Member (Technical), NDSA and any other information sought by NDSA in this regard.

(Action: Head of SDSOs/Dam Owners, Member (Technical), NDSA)

13.COORDINATION AND OVERALL SUPERVISION OF REHABILITATION PROGRAMS BEING EXECUTED IN THE STATES THROUGH CENTRALLY OR EXTERNALLY AIDED FUNDING:

The participating States in DRIP also made a brief presentation about the activities undertaken in the DRIP-I programme and the ongoing activities under DRIP-II & III Programme. The rehabilitation and improvement works being carried out by them and the stage of award of new works were presented.

JS (RD&PP) advised the participating DRIP States to expedite the activities and make full utilization of the financial allocations made against each of the State.

(Action: Concerned DRIP Implementing Agencies; Member (Disaster & Resilience), NDSA)

14. LIST OF INDIVIDUAL EXPERTS IN DAM SAFETY ENGINEERING IN THE STATE/UTS AND OF AGENCIES FOR INVESTIGATION, DESIGN, CONSTRUCTION AND ALTERATION OF THE SPECIFIED DAMS:

The Heads of SCDS/SDSO/Dam Owners/CPSUs were requested to provide a list of names with resume of individual Experts (retired/freelancers) and Consultancy agencies in the field of Dam Safety Engineering and related aspects as available with them and also the names of executing agencies which have proven track record of successfully executing dam rehabilitation and related works. NDSA shall generate a country-wide database which should serve as a reference for NDSA and SDSO activities/studies/assignments. The first list of individual experts along with their bio-data and list of suitable agencies along with their credentials may be made available to NDSA Secretariat latest by **15th December 2022**. The Regional Directors of NDSA shall coordinate with the heads of SCDS and SDSO to expedite the inputs to NDSA Secretariat.

(Action: Head of SCDS/ SDSOs/Dam Owners/Regional Directors of NDSA/NDSA Secretariat)

15. ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR

- i) The participating States/UTs were informed that the first batch of Students of M. Tech. program in Dam Safety conducted by IIT Roorkee and IISc Bengaluru will be passing out in June 2023. All the States/CPSUs were requested to consider engaging these students in Dam Safety activities.

(Action: States/CPSUs/Agencies)

The Regional Meeting-cum-Workshop ended with thanks to the Chair and all the participants.

**REGIONAL REVIEW MEETING-CUM-WORKSHOP OF EAST & NORTH EASTERN
REGION STATES/UTs HELD BY THE NATIONAL DAM SAFETY AUTHORITY ON
19.11.2022 AT GUWAHATI**

List of Participants

NDSA Members

- | | | |
|---|----------------------------|-----------------------------------------------------------------|
| 1 | Shri J Chandrashekhar Iyer | Chairman NDSA and Member (D&R), CWC |
| 2 | Ms. Richa Misra | Member (Admin & Fin), NDSA and JS & FA, MoJS |
| 3 | Sh. Vivek Tripathi | Member (Regulation), NDSA and Chief Engineer, CWC |
| 4 | Sh. Anil Jain | Member (Disaster & Resilience), NDSA and
Chief Engineer, CWC |

NDSA Secretariat

- | | | |
|---|----------------------|----------------------------------------------|
| 5 | Sh. Sarbjit S Bakshi | Director, NDSA Secretariat and Director, CWC |
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Special Invitees

- | | | |
|---|------------------|-------------------------------------------------|
| 6 | Sh Anand Mohan | Joint Secretary (RD & PP), MoJS |
| 7 | Sh R. Shimray | Chief Engineer, CWC |
| 8 | Sh. Sudhir Kumar | Director, NDSA, E&NE Region |
| 9 | Sh. Manoj Kumar | Sr. Joint Commissioner (PR Wing), DoWR, RD & GR |

States and CPSUs

- | | | |
|----|-----------------------|--------------------------------------------------------------------------------|
| 10 | Sh Vipin Gupta | E.D.NHPC ,SLP |
| 11 | Sh H.N.Sayanarayana | GGM, NHPC, Loktak Power Station |
| 12 | Sh R Kumar Gupta | GGM, NTPC |
| 13 | Sh R.M.Sonown | ED(C), NEEPCO |
| 14 | Sh Sitangshu Dhar | GM(E) |
| 15 | Sh Debajit Das | Dy. General Manager(C) |
| 16 | Sh Aman Chaudhary | Dy. General Manager(Mech) |
| 17 | Sh Amiya kumar Bera | Director DSO/WB |
| 18 | Sh Manash Chakrobarty | Chief Engineer(D&R), I&W Department, West Bengal |
| 19 | Sh Mahitosh Das | Chief Engineer ,Govt of Tripura |
| 20 | Sh Er Biswajit Saha | E.E, PWD (W.R), Member Secretary, SDSO |
| 21 | Sh Anil Khanna | Director Technical, TPGL, Tripura |
| 22 | Sh Tiken Ch Basumstay | CGM(Gen), APGCL |
| 23 | Sh Saurav Saikia | GM(civil), APGCL |
| 24 | Sh Akshay Talukdar | GMM(PP&T), APGCLN |
| 25 | Sh Rakesh Kumar | C.E, Central Design Research & Quality Control, WRD,
Bihar & Chairman, SDSO |
| 26 | Sh Indrajeet Vikey | Engineer In Chief, Chhattisgarh |
| 27 | Sh R.K.Nagaria | Chief Engineer Mahanadi project, WRD, Raipur,
Chhattisgarh |

28	Sh Sanjay Kumar	Chief Engineer, Design, WRD Jharkhand & Chairman SDSO
29	Sh Rohit Ahanthem	S.E, WRD, Chairman SDSO Manipur
30	Sh Chitam Changthan	EE, WRD, Manipur, Member SDSO, Manipur
31	Sh Edward Syemlee	AEE, Hydro Planning, MEPGCL, Union cum Head, SDSO Meghalaya
32	Sh Adelyne Sun	SE (Environment & Design) Dam Safety officer, SDSO, Meghalaya
33	Sh K Zohmingliana	SE,(PHED) Chairman, SDSO
34	Sh P.Ramdinthaer	AE(PHED), Member SDSO
35	Sh Sibassish Padhi	CE, Dam Safety, Odisha
36	Mrs.Aruna Kishore Das	Additional Director, Dam Safety(central) Odisha
37	Sh Rabi Narayana Sharma	Chief Engineer, Power Department, Govt of Sikkim
38	Sh V.Ibito khimo	AD-2,HAD,CWC,Guwahati
39	Sh Sunil Kumar Meena	JE,MBSD,CWC, Guwahati

Annexure-II

SALIENT INFORMATION OF EACH SPECIFIED DAM

The following *Salient Information* shall be provided in *HARD COPY* and *SOFT COPY* by each dam owner through *State Dam Safety Organization* on each specified dam under its jurisdiction:

S.No.	Information
1	Name of the State or UT in which the Dam is Located
2	Name of the Dam
3	Full Address of the Dam
	Latitude: _____ °N Longitude: _____ °E
4	Name of the Dam Owner
5	Full Address of the Dam Owner
6	Commissioning of the Dam
	Date of Commissioning of the Dam : _____
7	Material with which the Dam was Constructed
8	Salient Features of the Dam
	Height (m) (above deepest foundation level) : _____
	Length of the crest (m) : _____
	Bottom width (m) : _____
	Top width (m) : _____
	Capacity of the reservoir (in m ³)
	(a) Active Storage : _____
	(b) Dead Storage : _____
	Max Flood Discharge (in m ³)
	(a) Design Flood : _____
	(b) Observed Flood : _____
	Specially difficult Foundation problems : Yes or No
	Unusual Dam Design : Yes or No
9	Inspection Galleries in the Dam
	Number : _____
	Elevation of Galleries (m) : _____
	Are all Galleries Dry? : Yes or No
10	Gates

	Method of Operation of Gates : <i>Hydraulic or Electric</i>
	Size of each Gate :
	Number of Gates :
	Number of Gates in working condition :
11	Operation & Maintenance Manual : Yes or No
	Was an <i>Operation & Maintenance Manual</i> prepared? : Yes or No
	If No , by when is the same likely to be prepared?
12	Silting of Reservoir
	Does the Reservoir get silted? : Yes or No
	If Yes , what percentage of the reservoir capacity is lost? :
13	Leakage through the Dam Body
	Peak Water leakage (<i>in m³</i>) :
14	Structural Safety Assessment
	Was <i>Structural Safety Assessment</i> performed? : Yes or No
	If Yes , was the Dam found to be safe? : Yes or No
	If No , was the Dam retrofitted? : Yes or No
	If Yes , when was it retrofitted? :
	If Yes , what was the retrofit measure adopted? :
15	Dam Break Analysis
	Was <i>Dam Break Analysis</i> performed? : Yes or No
	If YES , were <i>Disaster Management Plans</i> prepared? : Yes or No
16	Emergency Action Plan
	Was an <i>Emergency Action Plan</i> prepared? : Yes or No
	If Yes , was it shared with the SDMA and DDMA? : Yes or No