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**STANDING COMMITTEE ON WATER RESOURCES
(2010-2011)**

FIFTEENTH LOK SABHA

MINISTRY OF WATER RESOURCES

"THE DAM SAFETY BILL, 2010"

SEVENTH REPORT



**LOK SABHA SECRETARIAT
*NEW DELHI***

JUNE, 2011/JYAISTHA, 1933 (Saka)

SEVENTH REPORT
STANDING COMMITTEE ON WATER RESOURCES
(2010-2011)

(FIFTEENTH LOK SABHA)

MINISTRY OF WATER RESOURCES

THE DAM SAFETY BILL, 2010

Presented to Hon'ble Speaker, Lok Sabha on 04.06.2011

Presented to Lok Sabha on 17.08.2011

Laid in Rajya Sabha on 17.08.2011



LOK SABHA SECRETARIAT

NEW DELHI

JUNE, 2011/JYAISTHA, 1933 (Saka)

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COMPOSITION OF THE STANDING COMMITTEE ON WATER RESOURCES (2010-2011)

PRESENT

Shri Dip Gogoi - Chairman

MEMBERS

Lok Sabha

2. Shri Ghanshyam Anuragi
3. Shri Mahendrasinh P. Chauhan
4. Shri Sher Singh Ghubaya
5. Shri Badri Ram Jakhar
6. Shri Haribhau Jawale
7. Shri Virender Kashyap
8. Shri Ramashankar Rajbhar
9. Shri K.J.S.P. Reddy
10. Shri K.R.G. Reddy
11. Shri S.P.Y. Reddy
12. Shri Arjun Roy
13. Smt. J. Shantha
14. Shri K. Shivkumar *alias* J.K. Ritheesh
15. Smt. Annu Tandon
16. Dr. P. Venugopal (Tiruvallur)
17. Shri Sajjan Verma
18. Vacant
19. Vacant
20. Vacant
21. Vacant

Rajya Sabha

22. Shri Balwinder Singh Bhunder*
23. Shri Kumar Deepak Das*
24. Shri Anil Madhav Dave
25. Dr. Ashok S. Ganguly*
26. Shri B.S. Gnanadesikan
27. Shri Rama Chandra Khuntia
28. Shri Mangala Kisan
29. Shri Ranjitsinh Vijaysinh Mohite-Patil
30. Dr. Gyan Prakash Pilania
31. Smt. Bimla Kashyap Sood

*Nominated w.e.f. 21.09.2010.

Shri Beni Prasad Verma, MP, Chairman ceased to be the Member of the Committee w.e.f. 19.01.2011 on his appointment as MoS.

Shri Dip Gogoi, MP appointed as the Chairman of the Committee w.e.f. 24.02.2011.

SECRETARIAT

- | | | | |
|----|---------------------|---|-------------------|
| 1. | Shri N.K. Sapra | - | Secretary |
| 2. | Shri Devender Singh | - | Joint Secretary |
| 3. | Shri B.S. Dahiya | - | Director |
| 4. | Shri Joginder Singh | - | Under Secretary |
| 5. | Shri A.K. Yadav | - | Committee Officer |

INTRODUCTION

I, the Chairman, Standing Committee on Water Resources (2010-2011) having been authorized by the Committee to submit the Report on their behalf, present the Seventh Report on "The Dam Safety Bill, 2010."

2. The Bill was introduced in Lok Sabha and was referred by the Hon'ble Speaker to the Standing Committee on Water Resources on 9 September, 2010 for examining and Report.

3. In the process of examination of the Bill, the Committee took oral evidence of the representatives of the Ministry of Water Resources and Central Water Commission on 27.12.2010 and 24.03.2011. The Committee also sought written information on various aspects of the Bill from the Ministry.

4. The Committee invited the views of States/Experts/Individuals on the Bill through Memorandum. On 26.10.2010 and 03.11.2010, they also deposed before the Committee to share their views and give their suggestions on the proposed amendments.

5. The Committee considered and adopted the Report on the Bill at their sitting held on 12 May 2011.

6. The Committee wish to express their thanks to the representatives of the Ministry of Water Resources and Central Water Commission who appeared before the Committee and placed their considered views and also for furnishing written notes and information as desired by the Committee in connection with the examination of the Bill. The Committee also wish to express their thanks for tendering evidence before the Committee and furnishing inputs/suggestions by the States/Experts/Individuals on the Bill.

7. For facilitation of reference and convenience, the observations and recommendations of the Committee have been printed in bold in the body of the Report.

NEW DELHI
02 June, 2010
12 Jyaistha, 1933(Saka)

DIP GOGOI,
Chairman,
Standing Committee on Water Resources

REPORT
CHAPTER – I

A. Background

1.1 A dam is a critical infrastructure for multipurpose uses such as irrigation, power generation, flood moderation and supply of water for drinking and industrial purposes, which has been constructed with large investments. Other physical assets, such as hydro power plants, irrigation network, drinking and industrial network, municipal supplies, etc. are also linked with the dams. Thus, it becomes a national responsibility to take necessary steps to ensure the safety of dams.

1.2 An unsafe dam constitutes a hazard to human life, flora and fauna, ecology and public and private assets. Further, safety of dams is very important for safeguarding the huge investment in critical physical infrastructure and the benefits derived from the projects. . Therefore, the safety of dam is a matter of great concern to the nation.

1.3 According to the 'National Register of Large Dams -2009', compiled by the Central Water Commission (CWC), there are 5,101 large dams owned by the Union/State Governments, Public Sector Undertakings and private entities.

1.4 The need for ensuring dam safety had been engaging the attention of the Government of India for over decades. The erstwhile Ministry of Irrigation, therefore, constituted a Standing Committee in 1982, headed by the Chairman, Central Water Commission to review the existing practices and to evolve unified procedures for the safety of dams. The Standing Committee submitted its report titled, "Report on Dam Safety Procedures" in July 1986. The report elaborates the then existing procedures, their evaluation and suggestions for institutional arrangements for

dam safety at the level of the States and the Centre. One of the actions recommended in the report was enactment of a Dam Safety Legislation.

1.5 As a follow up to this recommendation, a draft "Dam Safety Bill" was prepared by CWC in 1987. The same was circulated in January 1988 to the members of the National Committee on Dam Safety (NCDS) comprising representatives from all the dam owning States and Organizations which was formed in 1987. Subsequently, the matter was pursued with the State Governments by the Ministry of Water Resources (MoWR) and the Central Water Commission. The matter was also pursued through the National Committee on Dam Safety (NCDS), and comments/suggestions were obtained from twelve member States in the NCDS, i.e. Andhra Pradesh, Bihar, Gujarat, Kamataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

1.6 Based on the comments/suggestions of the State Governments, the Draft Bill was comprehensively reviewed in CWC and a modified draft was prepared in 2002. This Draft Bill was circulated to the Principal Secretaries/Secretaries of Irrigation / Water Resources / PWD of the States. The States have responded well to the Draft Bill. The Government of Bihar enacted the Dam Safety Act, 2006 in line with the Draft Bill circulated by the Ministry and the same was published in the Bihar Gazette on 4 May 2006. The Andhra Pradesh Legislative Assembly adopted a Resolution on 24 March 2007 that the Dam Safety legislation should be regulated in the State of Andhra Pradesh by an Act of Parliament. The West Bengal Legislative Assembly also passed a Resolution on 24 July 2007 empowering the Parliament to pass the necessary Dam Safety Act.

Introduction of Dam Safety Bill, 2010 in Lok Sabha

1.7 The 'Dam Safety Bill, 2010' was introduced in Lok Sabha on 30 August 2010. The Speaker, Lok Sabha referred the said Bill to the Standing Committee on Water Resources for detailed examination and report.

1.8 The Dam Safety Bill seeks to enjoin responsibility on the Central Government, State Governments and owners of specified dams to set up an institutional mechanism for ensuring safety of such dams and reporting the action taken. It defines the duties and functions of these institutions in relation to perpetual surveillance, routine inspections, operation and maintenance, maintenance of logbooks, instructions, funds for maintenance and repairs, technical documentation, reporting, qualifications and training of concerned manpower etc. Provisions have been made concerning the necessity of periodical inspections, instrumentations and establishment of hydrological and seismological stations. The Bill addresses the issues of emergency action plan and disaster management, and also enlists the requirements of comprehensive dam safety evaluation.

1.9 The provisions of the proposed legislation, once enacted, shall apply to the States of Andhra Pradesh and West Bengal whose legislative Assemblies have passed statutory Resolution to that effect, the Union Territories and also to their public sector undertakings and to the Public Sector Undertakings of the Central Government. It shall also apply to such owners of the specific dams other than those owned or controlled by the Central Government or the State Government. The provisions of the proposed legislation, once enacted, shall also apply to other States if resolution to that effect is

passed by the Houses of Legislature of those States under Clause (1) of Article 252 of the Constitution.

1.10 The Dam Safety Bill, 2010, *inter-alia*, provides for –

- (a) constitution of a National Committee on Dam Safety, consisting of a Chairperson, eight members, specialists or experts in the field of dam safety and a Member-Secretary, to ensure proper surveillance, inspection, operation and maintenance of all specified dams and ensure their safe functioning;
- (b) establishment of a Central Dam Safety Organisation in the Central Water Commission to provide, *inter alia*, the technical and managerial assistance to the State Dam Safety Organisations or the State Dam Safety Cells, the Non-State Dam Safety Organisations or the Non-State Dam Safety Cells; to settle the unresolved points of issues between the State Dam Safety Organisation or State Dam Safety Cell of two States, or between the State Dam Safety Organisation or State Dam Safety Cell of a State and the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, etc.;
- (c) constitution of the State Committee on Dam Safety by the State Governments having more than twenty specified dams, to ensure proper surveillance, inspection, operation and maintenance of all specified dams in that State and to ensure their safe functioning;
- (d) establishment of the State Dam Safety Organisations in States having more than twenty specified dams to discharge such functions as may be prescribed by the concerned State Government;
- (e) establishment of the State Dam Safety Cells in States, having twenty or less than twenty number of specified dams, to discharge such functions as may be prescribed by the concerned State Government;
- (f) establishment of Non-State Dam Safety Organisations by the dam owners (other than the Central Government or State Governments) having more than ten specified dams, to discharge such functions as may be specified by the Central Dam Safety Organisation or the State Dam Safety Organisation;
- (g) establishment of Non-State Dam Safety Cell by the dam owner (other than the Central Government or State Governments), having ten or less than ten numbers of specified dams, to discharge such functions as may

be specified by the Central Dam Safety Organisation or the State Dam Safety Organisation;

- (h) an obligation upon every owner of a specified dam to establish operational and maintenance set up for undertaking pre-monsoon and post-monsoon inspections and special inspections during and after floods, earthquakes, etc.;
- (i) an obligation upon the concerned State Dam Safety Organisation, Non-State Dam Safety Organisations, State Dam Safety Cell and Non-State Dam Safety Cell to arrange for comprehensive safety evaluation of every specified dam at least once in every ten years;
- (j) an obligation upon the Central Dam Safety Organisation to forward its annual report to the National Disaster Management Authority and the State Dam Safety Organisation or State Dam Safety Cell, Non-State Dam Safety Organisation or Non-State Dam Safety Cell to forward their annual reports on safety status of dams to the concerned State Disaster Management Authority;
- (k) empowers the Central Government and the State Governments to make rules to carry out the provisions of the proposed legislation.

1.11 The Committee invited suggestions/comments from the experts, State Governments and individuals in the form of Memoranda. Apart from taking evidence of the officials of the MoWR, the Committee also took evidence of non-official experts in the field of dam safety. Written replies to the list of points were also obtained from the MoWR. A list of the experts, organizations who have given suggestions on The Dam Safety Bill, 2010 are given at **Annexure – I.**

1.12 A general scrutiny of the Bill reveals that in the event of failure of a dam or the Dam owner not obeying the directions/provisions of the Bill, the responsibility will be of the owner of the dam. However, there is no mention of the penalty to be imposed on such owner or anyone responsible for the failure of the dam causing disaster in downstream or the upstream of the dam.

1.13 During evidence the Secretary, Ministry of Water Resources accepted that there is no penalty clause in the proposed Bill. Hence, no rules can be made to provide for penalty in case of failure. There should be an enabling clause in the Bill to move further on the issues. It was also informed that while the draft of the Bill was circulated to all the State Governments the penalty clause was not there.

B. General Observations

1.14 **The Committee have examined the Bill in the light of the aforementioned facts, suggestions received from non-official experts in the field of dam safety, State Governments and individuals and the information furnished by the Ministry of Water Resources. Though the Committee have made a wide range of recommendations, they feel that many of the recommendations may not necessarily require amendment(s) in the Bill itself, as considering the need for flexibility to meet the operational exigencies, the Government may make appropriate provisions in the rules, regulations and orders framed under the legislation, once enacted. There is also scope for withdrawal of some clause(s)/sub-clause(s) which can better form part of the Rules/Guidelines to be framed in exercise of the power of delegated legislation to avoid the rigour of amending the parent legislation from time to time.**

1.15 **The Committee note that safety of dams is very important for safeguarding the huge investment in critical physical infrastructure and the benefits derived from the projects. There are 5,101 large dams as recorded in 'National Register of Large Dams – 2009' owned by the States and the Non-State entities. The**

Committee recall that the then Ministry of Irrigation (Government of India), while realizing the importance of ensuring safety of dams, had constituted a Committee in 1982 headed by the Chairman, CWC to review the existing practice and to evolve unified procedures for safety of dams. The Committee submitted its report, "Report on Dam Safety Procedure" in July 1986. Based on one of the recommendations of the Committee the draft Dam Safety Bill was prepared by CWC in 1987 and circulated in January 1998 to the Members of National Committee on Dam Safety (NCDS) which was formed in 1987 and to the dam owning States and Organisations. Suggestions were obtained from twelve Member States. Based on these suggestions/comments, the first draft was prepared in 2002 and circulated to Ministries (Irrigation/PWD) of the States. Taking into account the suggestions/comments received from various States/Organisations the Dam Safety Bill, 2010 has been introduced in August 2010 in Lok Sabha. The Committee feel that it took an undue long period to formulate the Bill on dam safety for which process was initiated long back in the year 1986 and, surprisingly, it took almost 25 years to come before the Parliament. Nevertheless, the Committee are pleased that the Bill has ultimately been introduced after due and wide ranging consultation with the stake holders and others.

1.16 The Committee note the Bill contains provision for periodical inspection of dams and emergency action plan. However, in case of any dam failure or for not following the directions provided in the Bill, there is no provision for imposition of

penalty on the owner or on the person(s) responsible for dam safety. The Committee feel that the Bill will not prove as effective as it should in the absence of any penal clause for such grave omission. The Committee are of the considered view that the statutory provision for punishment will be a deterrent and also add to the sense of responsibility among the dam owners or persons responsible for the maintenance of the dam. As the safety of dams is of paramount concern, the Committee recommend that the provision to impose penalty for dam failure and causing disaster in the downstream/upstream of dam be suitably incorporated in the Bill.

1.17 The Committee note that there is no provision in the Bill to compensate the affected people in case of any disaster taking place due to the failure of the dam. They, therefore, desire that an adequate provision be made in the Bill for compensation to the affected people.

1.18 The Committee also recommend that the concerned agencies must keep themselves abreast of the rapid strides made in the field of science and technology and adopt the latest innovations not only while constructing the new dams but keep these in view as well during periodic reviews of the dams already constructed to assure their safety.

1.19 The Committee note that there is no mention in the proposed Bill regarding constitution of an independent regulatory authority to keep an overview the implementation of the Dam safety measures as contemplated. They, therefore,

desire creation of such an authority to monitor and achieve the intended objectives behind the Bill.

CHAPTER – II **CLAUSE BY CLAUSE EXAMINATION**

I Preamble of the Bill

2.1 The Preamble of The Dam Safety Bill, 2010 reads as under :

“A BILL to provide for proper surveillance, inspection, operation and maintenance of all dams of certain parameters in India to ensure their safe functioning and for matters connected therewith or incidental thereto.

WHEREAS it is expedient to provide for uniform dam safety procedure which shall ensure national investment and benefits by safeguarding human life, livestock and property;

AND WHEREAS Parliament has no power to make laws for the States with respect to any of the matters aforesaid except as provided in articles 249 and 250 of the Constitution;

AND WHEREAS in pursuance of clause (1) of article 252 of the Constitution, resolutions have been passed by all the Houses of Legislatures of the States of Andhra Pradesh and West Bengal to the effect that the matters aforesaid should be regulated in those States by law made by the Parliament.”

2.2 The ‘safeguarding of human life, livestock and property’ is mentioned in the Preamble of the Bill whereas safety of aquatic life and natural resources which would also be adversely affected due to the dam failure has not found any place.

2.3 Further, the reasoning of the Ministry that the Parliament has no powers to enact a legislation on its own on the subject ‘water’ was not found convincing. When asked as to why it needs to be mentioned in the Bill, when entry 56 of the Union List provides that ‘Regulation and development of Inter State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by

Parliament to be expedient in the public interest' and such basins cover more than 92% of the country's area and almost all the dams, and why the Bill proposed to be enacted under article 252 of the Constitution, the Ministry in reply stated as follows :

“The ownership of dams and their maintenance predominantly falls in the purview of the State governments and is given effect by them. As of now ‘regulation of the safety of dams’ has not been declared by the Parliament to be expedient in public interest. Further initial efforts for dam safety legislation were directed towards enactment of appropriate legislation by respective State Governments, and accordingly the State of Bihar enacted the Dam Safety Act, 2006. Some of the States favoured the idea of a uniform central legislation on dam safety. The States of Andhra Pradesh and West Bengal have adopted resolutions in their States for an Act of Parliament and, therefore, this Bill has been proposed under Article 252 of the Constitution.”

2.4 Further during evidence before the Committee, the Secretary, Ministry of Water Resources stated:

“A lot of experts have said that we should not follow this route and we should go under entry 56 and the Union Government should enact a legislation, but this being a federal Government we thought it may be better to persuade the States to adopt this law instead of just saying that you may do it. So, we have not accepted this recommendation.”

2.5 The Ministry of Water Resources in reply to a query of the Committee in this regard submitted as follows :

“About 80% of India’s large dams are now more than 20 years old and require high level of monitoring and remedial actions concerning their safety. Due to the rapid growth of India’s population, most of these dams have serious hazard potential spanning over multiple States and hence their safety is of national importance.

The Dam Safety Bill can also be taken up under the provisions of entry 56. However this will require a much wider political consensus and may become time consuming. The present route of taking up the Bill under Article 252 has become possible after considerable efforts on the part of CWC and MOWR, and provides for an opportunity for initiating the much needed dam safety reforms.”

II Clause 2 (a) – Application of the Act

2.6 Clause 2 (a) which provides for application of the Act, reads as under :

2. The provision of this Act applies, -

(a) "In the first instance, to the whole of the States of Andhra Pradesh, West Bengal and to all the Union territories; and it shall also apply to such other State which adopts this Act by resolution passed in that behalf under clause (1) of article 252 of the Constitution."

2.7 Article 252 of the Constitution empowers Parliament of India to legislate on any subject in List II of the 7th Schedule of the Constitution provided two or more States give consent for such legislation and the resolution is adopted by their respective legislatures empowering the Parliament to pass an Act in this regard, which shall apply to those States.

Article 252 further provides that such a legislation shall also apply to those States whose Legislatures pass such a resolution.

2.8 In this connection, the Ministry informed the Committee that some of the States formed the idea of a uniform Central legislation on dam safety. When asked whether this Act would be a 'model act' for the States or the States could be at liberty to adopt the act with or without amendment, the Ministry of Water Resources submitted as under:

"States are at liberty to adopt this Dam Safety Act (as and when enacted). However, in such cases, full provisions of the Act will become applicable to them and no modification or moderation will be possible.

Alternatively, the States may choose to enact their own Dam Safety Act; and for this purpose, they may treat the Central Dam Safety Act 2010 as a model Act."

2.9 The Committee note that 'regulation of the Safety of Dams' has not yet been declared by the Parliament to be expedient in public interest. However, they are not inclined to accept the view that the Parliament has no powers to make laws for the States as stated in the Preamble of the Bill. Since, in terms of Entry

56 of the Union List of the Constitution, Parliament may declare by law if it is expedient in public interest make a law for dam safety which is apparently an inter-State matter. The Committee, therefore, desire that Preamble of the Bill be modified by deleting the sentence 'and whereas Parliament has no power to make laws for the States with respect to any of the matters aforesaid except as provided in articles 249 and 250 of the Constitution.' The Committee also desire that the words, "including safety of aquatic life and natural resources" be added after the words livestock and property in the Preamble.

2.10 According to article 252 of the Constitution, Parliament can legislate on any subject in List II of the Seventh Schedule of the Constitution provided two or more States give consent for such legislation and the resolution is adopted by their respective legislatures empowering Parliament to pass an Act in this regard which shall apply to those States. In the instant case also, the State of Andhra Pradesh and West Bengal have passed resolutions empowering the Parliament to pass the necessary Dam Safety Act. Hence, this proposed Act at the first stage will be applicable to Andhra Pradesh and West Bengal and all Union territories. The State Governments can also enact their own Dam Safety Act by treating the Central Dam Safety Act as a model act. The Committee, however, desire that after the Dam Safety Bill is passed by the Parliament, the MoWR pursue with the State Governments to adopt this Act by passing a resolution in this regard in their legislatures on priority basis given the serious objectives behind the legislation.

III Clause 3 - Definitions

2.11 Clause 3 defines certain expressions used in the Bill. The term, 'Safety assurance' is not mentioned anywhere in the Bill. The Committee feel that on the lines of 'Nuclear Safety Bill', the safety assurance which is an undertaking of pre-emptive action in order to prevent any accident, given the ecology of the dams and the impact on the dams, the definition of 'Safety Assurance' should be added and suitably incorporated in the Bill.

2.12 The Secretary, MoWR during evidence before the Committee while agreeing to the suggestion elaborated as follows :

“.....we would take this on and see how we can suitably incorporate this.”

2.13 Clause 3 (j) defines the 'inspection' and provides as under :

“ ‘*inspection*’ shall mean visual examination of all components of dam and its appurtenances and includes examination of non-overflow blocks, spillways, abutments, stilling basin, piers, bridge, downstream toe, drainage galleries, operation of mechanical systems, interior of outlet conduits, instrumentation records and record-keeping arrangements of instruments.”

2.14 In the view of the Committee the word 'visual' in this clause does not seem to be suitable as it appears that it restricts the process of examination. While doing inspection one can visually inspect the dam even by sitting at distant place or simply passing through the site and say that the inspection has been done.

2.15 When the Committee desired to know the response of the MoWR, the Secretary, MoWR during evidence, inter-alia stated :

“I find problem with this particular clause. This visual inspection can be misused..... We would just put the word examination and add a checklist so that we can say that these things must be checked during examination.”

2.16 The Committee debated at length over various definitions of the expressions used in the Bill. They, therefore, strongly feel that the definitions of 'Safety' and 'Safety Assurance' be added under Clause 3 in the Bill and the details thereof be suitably incorporated elsewhere in the Bill. They also desire that the word 'visual' may be replaced by 'on site' in the clause 3 (j) as the term 'visual' restricts the scope and process of examination and can be misused while doing the inspection. Accordingly, definition at Clause 3 (j) be modified.

IV. Clause 4 – Constitution of National Committee

2.17 Clause 4 which provides for Constitution of National Committee on Dam Safety reads as under :

“With effect from such date as the Central Government may, by notification, appoint, there shall be constituted, for the purposes of this Act, a National Committee to be known as the “National Committee on Dam Safety” consisting of the following members, namely:—

- (a) Chairman, Central Water Commission – *ex officio*, Chairperson;
- (b) Member, Design and Research Wing, Central Water Commission — *ex officio*, Vice- Chairperson;
- (c) Member (Hydro), Central Electricity Authority—*ex officio*, Member;
- (d) Commissioner (Projects), Ministry of Water Resource – *ex officio*, Member;
- (e) Director General, Geological Survey of India – *ex officio*, Member;
- (f) Director General, Indian Meteorological Department – *ex officio*, Member;
- (g) Scientist E, Ministry of Environment and Forests — *ex officio*, Member;
- (h) Engineer-in-Chief or equivalent officer of Irrigation Department of States having specified dams – *ex officio*, Members;
- (i) Engineer-in-Chief or equivalent Officer of other Dam owning Organisations with specified dams — *ex officio*, Members;
- (j) Specialists or experts in the field of dam safety to be nominated by the Central Government—Members; and
- (k) Chief Engineer, Central Dam Safety Organisation, Central Water Commission—*ex officio*, Member Secretary.”

2.18 Elaborating on the number of Members of NCDS, representation of the States and recording of decisions by vote on the question of dam safety, the Secretary, Ministry of Water Resources deposed :

“I would like to say something which the Standing Committee can consider. This NCDS is a 50-Member Committee and this Committee has representatives of all the State Governments. This Committee is supposed to supervise, inspect and monitor. It passes decisions by vote. Safety is absolute. It cannot be decided by majority and where two State Governments are represented. Then there may be two views on a dam. Safety should be absolute and safety should be something that it is not questionable. Perhaps, role of this Committee should be advisory where people come with technical papers and have discussion. Instead of big Committee, may be a small professional Committee should be there.”

2.19 In response to the reply of Ministry, the Committee suggested why not there should be a Core Technical Committee having technical experts which can take the decision after getting all the inputs. It would also help in avoiding the influence of the vested interests in the National Committee. To this suggestion Secretary, MoWR responded positively and stated that he will look into this suggestion.

2.20 When asked about the role of Technical Core Committee which is a professional Committee and as to its areas of functioning vis-à-vis NCDS, the Secretary, MoWR stated as under :

“The Bill will say that is what the role of NCDS and this is what the role of the Core Technical Committee. We will try and put members of NCDS. May be they need some outside experts because all the expertise is not available. So, in the Core Technical Committee, if they need to get some outside safety expert or some outside dam expert, they must have all those flexibility so that their recommendations carry weight of international opinion also behind them.”

2.21 Surprisingly, the Committee noticed that representation of the National Institute of Hydrology, the Central Soil and Material Research Station and the Central Water and Power Research Station was found missing from the list of Members of NCDS. Their

contribution in the construction or planning of a dam cannot be neglected. These technical expert bodies are there for a long time having vast experience of handling issues involved in dam safety and maintenance and need representation in the NCDS.

When asked to comment on this, the Ministry in reply stated that they agree to the suggestion.

2.22 The Committee further suggested for inclusion of experts in the field of earthquake and flood risk management from National Disaster Management Authority in the National Committee on Dam Safety to which Ministry of Water Resources agreed to.

2.23 The Committee note that according to the provisions made in the Clause 4, the membership of National Committee on Dam Safety would go beyond 50. Further, having representatives of all States having specified dams would also provide a chance to groups of vested interests or those States which are not going to benefit from the project, to influence the decision of the NCDS. To restrict the number of persons in NCDS, it is suggested to make the representatives of only those 5 or 7 States which have the largest number of specified dams. Moreover, if a Core Technical Committee (CTC) consisting of only technical experts is formed it would be of much help in arriving at a viable and unbiased final decision. The Core Technical Committee would have both the responsibility as well as the accountability on record for which they have to stand by. The Committee would like the Ministry to make provision to this effect in the Bill. They also desire that the respective roles of CTC and NCDS need to be well defined. The Committee also desire that the representation of the National

Institute of Hydrology, the Central Soil and Materials Research Station, Central Water and Power Research Station and the National Disaster Management Authority in the National Committee on Dam Safety be suitably indicated in the Bill.

V Clause 6 (1) – Meetings of the National Committee on Dam Safety

2.24 Clause 6 (1) which deals with the meetings of the National Committee on Dam Safety reads as follows :

“(1) The National Committee shall meet at such times and places and shall observe such rules of procedure in regard to the transaction of business at its meetings (including quorum at such meetings) as may be prescribed by the Central Government:

Provided that the National Committee shall meet at least twice in a year:

Provided further that the National Committee may invite,—

(a) the representative of the owner of a specified dam in such meetings where his dam is taken up for deliberation;

(b) such specialists or experts in Dam Safety, as it may consider appropriate, for the discharge of its functions.”

2.25 Considering the fact that during monsoon season, all the dams of India operate in full scale, hence incur operational vulnerability and invite attention or detailed monitoring of the dam. Besides, slow compliance in inter-State data sharing for early warning on release of water from dam has been an issue in the past. The representatives of the Ministry shared the concern of the Committee during evidence.

2.26 The Committee note that the proposed Bill provides for meeting of the National Committee on Dam Safety to take place at least twice a year. However, keeping in view the operation of the dams during monsoon season and slow compliance in inter-State data sharing for early warning on release of water from

dams has been an issue in the past, the Committee feel that one meeting of the National Committee be held before the onset of monsoon season. It will also help dam owners in making necessary preparations for management of the dams during monsoon when maximum water is available at the dam sites. The Committee, therefore, recommend that provision for such a meeting be made accordingly in the Bill.

VI Clause 8 (2) (d) & (e) –Functions of National Committee; and Functions of CDSO Clause 11(1) (e)

2.27 Clause 8 (2) (d) & (e) which deals with the functions of National Committee reads as under :

“(2) Without prejudice to the provisions contained in sub-section (1), the functions of the National Committee shall include,—.....
(d) to analyse the causes of failures in cases of major dam failures and suggest changes in the plan philosophy, specifications, construction, operation and maintenance practices in order to avoid re-occurrence of such failures;
(e) to evolve comprehensive dam safety management approach as an integration of dam safety evaluation, risk assessment and risk management.”

2.28 Further, some of the Members desired that the word ‘assurance’ be added at the end of 8 (2) (e). This will give an impression that the guarantee is given in a way that the dam is safe.

2.29 Clause 11 (1) (e) reads as under:

“(1) The Central Dam Safety Organisation shall,-
(e) maintain the records of major dam failures in the country.”

2.30 The Committee note that the word ‘failure’ connotes a very limited ramification. There may be ‘incidents’ which may occur without failure of the dam and can be

controlled through intervention. The dam incidents, therefore, need to be defined to cover or include :

- (a) any structural damage to the dam and appurtenant works;
- (b) any unusual readings of instruments in the dam;
- (c) any unusual leakage through the dam body;
- (d) any change in the leakage regime;
- (e) any boiling or artesian conditions noticed below an earth dam;
- (f) any stoppage or reduction in leakage from the foundations or dam face into the drainage gallery, for rigid dams with such a gallery;
- (g) any incidence of malfunctioning or inappropriate operation of gates;
- (h) occurrence of any flood, the peak of which exceeds 70% of the proper or necessary design flood, or of the available flood discharge capacity;
- (i) occurrence of a flood, which resulted in encroachment on the available freeboard, or the freeboard as necessary as per good design practice;
- (j) any erosion in the near vicinity, up to 1 km., downstream of the spillway, waste weir, etc;
- (k) any unusual or surreptitious movement in or around the dam site which may raise safety concerns or impinge on the safety and security of the dam;
- (l) any other incidence, which, an alert dam engineer can relate to Dam Safety concerns;

2.31 The Ministry in a written reply accepted the suggestion for inclusion of 'incident' in clauses 8 (2) (d) and 11 (1) (e) of the Bill.

2.32 The Ministry in a written reply also agreed to include the definition of 'Dam Incident' under clause 3 (f).

2.33 The Committee note that an 'incident' can occur without failure of the dam and may have been controlled by timely human intervention. The incident can

also lead to failure if not attended to in time. They, therefore, desire that the word 'failure' be replaced by 'incident' in Clause 8 (2) (d) and Clause 11(1) (e). They also desire that the 'incident' also be defined suitably after Clause 3 (f). The Committee further desire that word 'assurance' be suitably incorporated in Clause 8 (2) (e) after the words 'risk assessment and risk management' as suggested by the Committee elsewhere in this report and suitably defined in the Bill.

VII Clause 9 – Establishment of Central DSO

Clause 9 provides for establishment of Central DSO which reads as under:

2.34 "The Central Government shall, for the purposes of this Act, by notification, establish a separate division under the Ministry of Water Resources, in the Central Water Commission, an Organisation to be known as the "Central Dam Safety Organisation" to be headed by an officer not below the rank of Chief Engineer."

2.35 The Committee observe that there needs to be quality enrichment in the Dam Safety Organisation, may be, to include some national experts of repute in the field of dam construction. When asked to comment, the Ministry in a written reply stated :

"The requirement of necessary expertise will be addressed by the CWC/ MoWR while constituting the CDSO."

VIII Clause 10 – Appointment of Employees of CDSO

2.36 The Clause 10 deals with the appointment of employees of the Central Dam Safety Organisation reads as under :

"(1) The Central Government shall, for the purpose of enabling the Central Dam Safety Organisation to perform its functions under this Act, provide such number of officers, and other employees as it may consider necessary.

(2) The functions, powers and terms and conditions of service of the employees appointed under sub-section (1) shall be such as may be prescribed by the Central Government.”

2.37 The Committee note that the Bill has not specified expertise required for a person to be a Member of the Central Dam Safety Organisation anywhere. However, such requirement of expertise has been prescribed for the Members of State/Non-State Dam Safety Organisations and State/Non State Dam Safety Cells. Hence, the Bill be modified accordingly.

2.38 The Ministry in a written comment furnished in this regard stated that the suggestion is acceptable and accordingly a new Clause may be added under Section 10 above the Clause 10 (1) as mentioned below :

“The Central Dam Safety Organisation shall consist of persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydro-mechanical engineering, hydrology, geo-technical investigation and instrumentation or such other fields as the Central Government may consider appropriate.”

2.39 The Committee note that while the expertise required to be a Member of the States/Non-States Dam Safety Organisations/Cell has been specified in different clauses, the requisite expertise for appointment of the Members of the Central Dam Safety Organisation has not been specified. The Committee recommend that a clause/sub-clause specifying the requisite expertise of the Members of CDSO be included in the Bill at the appropriate place.

IX Clause 11 (1) (c) and 11 (1) (d) - Functions of Central Dam Safety Organisation

2.40 Clause 11 (1) (c) and 11 (1) (d) which deal with functions of Central Dam Safety Organisation reads as follows :

“11 (1) The Central Dam Safety Organisation shall,—
(c) maintain liaison with the State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, of each State and the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, of each dam owning Organisation for standardisation of dam safety related data and practices, and related technical or managerial assistance;
(d) publish and update from time to time the standardised guidelines and checklists or format or proforma for routine inspection and detailed investigations of dams and appurtenances.”

2.41 The Committee were informed that the National Disaster Management Authority's interim report to Cabinet Secretariat on Crisis Management Plan for Dam Safety, prepared on the basis of the deliberations made with the representatives of State Governments, has proposed a framework for national level early warning system. This is required for exchange of real time hydrological and meteorological data and operation of reservoirs among concerned States. However, the Bill has no such provision.

2.42 When asked, the Ministry of Water Resources accepted the suggestion and agreed to make suitable modification. They also informed that for Early Warning System the requirement of observations Stations in the catchment area has been taken up in Clause 33.

2.43 The Committee note that the National Disaster Management Authority's interim report to the Cabinet Secretariat on Crisis Management Plan for Dam Safety, prepared on the basis of the deliberations made by representatives of State Governments has proposed a framework for national level early warning system. This is required for exchange of real time hydrological and

meteorological data and operation of reservoirs by the dam owners. Keeping in view the high utility of the proposed early warning system, the Committee recommend that provision in the Bill be made for setting up of a National Level Early Warning System accordingly.

X Clause 28(1) – Construction or operation or alteration of dams

2.44 Clause 28(1) which deals with the construction or operation or alteration of dams reads as under :

“All new specified dams shall be investigated, designed and constructed by the organisations recognised for the said purpose.”

2.45 The Committee feel that the organizations which shall investigate, design and construct all the new specified dams should be recognized and or accredited by the CDSO or the concerned SDSO for the said purpose. By recognizing such bodies there will be more agencies to choose from who can execute the assigned work efficiently.

2.46 Accordingly, when the Committee desired to know as to which body is doing accreditation, the Secretary, MoWR during evidence stated that at the moment there is no such body.

2.47 Another representative of the Ministry during evidence elaborated on the issue as under :

“We are empowering the Central Dam Safety Organisation at the Central Level to recognize such bodies which can do investigation, design or construction.”

2.48 The Ministry in their comments furnished to the Committee agreed with the suggestions to modify the Clause 28 (1).

2.49 It is noticed that there is no mention of the standards or practices to be used in designing or evaluating the safety of the dams except that the functions of the National Committee include “to monitor and evaluate dam safety practices in various States and suggest improvements to bring dam safety practices in conformity with latest international practices consistent with Indian conditions”. However, there is need to add relevant standard codes and guidelines of the Indian standards to be followed and reasons, if any, for departure be recorded. It has been observed that the State standards are less stringent than the BIS Standards and they do not follow the BIS standard.

2.50 The Ministry in a written reply agreed to add a Clause below 28 (2) as under :

“Every organization referred to in sub-section (1) shall for the purpose of designing or evaluating the safety of the dam make use of the relevant standard codes and guidelines of the Bureau of Indian Standards, and record the reasons for departure, if any.”

2.51 The Committee are of the considered view that the ‘accreditation’ of all the organizations which will investigate, design and construct all specified dams is necessary to enable the owner of the dam to have more agencies to choose for the purpose. The Committee, therefore, desire that “and or accredited by the Central or the State Dam Safety Organization or the State Government” be added before “for the said purpose” in clause 28 (1).

2.52 The Committee notice that there is no mention of standards or practices to be followed in designing or evaluating the safety of the dams in the Bill. The Committee are apprehensive that in the absence of prescribed standards, different

agencies/State Governments would adopt/ follow different standards. The Committee recommend for the inclusion of a new Clause making it mandatory for use of the standard codes and guidelines fixed by the Bureau of Indian Standards and furnishing of reasons if any departure is made in the design or dam safety evaluation.

XI Clause 31 (2) – Periodical Inspection

Clause 31 (2) reads as under :

“Without prejudice to sub-section (1), every owner of a specified dam shall undertake special inspections, of each of his dams to be undertaken by the engineers referred to in sub section (1), during and after floods, after earthquake, and if any sign of distress or unusual behaviour is noticed in the dam, appurtenance or reservoir fringes.”

The clause specifies the special inspection of a dam to be done by the engineers. However, competency of the engineer has not been mentioned anywhere which is very important for the person authorised to do the inspection. Further, apart from earthquake, flood, other natural calamities, etc. can also be the cause of damage to dams.

2.53 The Committee note that clause 31 (2) provides for special inspection of dams by the engineers during or after the flood, earthquake, etc. However, the Committee foresee that there can be other natural calamities which can damage the dam and engineers should also be competent enough to undertake such inspections. They, therefore, recommend that instead of ‘engineers’, the word ‘competent engineers’ be added to the clause and provision also made for special

inspection after a natural calamities to detect any possible danger or threat to the health or safety of the dam.

XII Clause 34 (1) & (2) – Installation of seismological stations

2.54 Clause 34 (1) & (2) which deals with the Installation of seismological stations under Chapter VII where provisions for safety, inspection and data collection, reads as under :

“(1) Every owner of a specified dam, in the case of specified dam being of thirty meters height or above or specified dam being falling in the seismic zone III or above, shall establish a seismological station in the vicinity of each such dam.

(2) Every owner of specified dam shall collect, compile, process and store data referred to in sub-section (1) at a suitable location.”

2.55 On the question of reservoir induced seismicity and the need for establishing seismological station in the vicinity of certain type of dams, another expert opined as follows :

“Even though the term ‘Reservoir Induced Seismicity’ is often used by seismologists, seismic activity of a very low magnitude was seen to be associated with very few dams in our country. Secondly, association / link between creation of storage reservoir and seismicity around them was not established for reservoirs such as Koyna dam (1967), Bhatsa dam (1983) & Lower Terna dam (Killari earthquake -1993) occurred in the Maharashtra State. In the vicinity of several very large dams constructed during the last century in our country, seismic activity was not noticed after impoundment of water in them.

Hence making it obligatory to establish a seismological station in the vicinity of all specified dams falling in zone III and at all dams above 30 m. height, appears to be unscientific and unwarranted.”

The Ministry in its written comments furnished to the Committee, welcomed the suggestion.

2.56 The Committee note that the Government has accepted the suggestion partly and, therefore, they recommend the Ministry of Water Resources to modify the Clause 34 (1) by adding 'recording Micro and Strong Motion Earthquakes' at the end of Clause 34 (1). The Committee would also urge the Ministry to reconsider the concern of experts as to the need for establishment of seismological stations in the vicinity of all the specified dams falling in Zone III and at all dams above 30 m. height while reformulating the Bill.

(XIII) Clause 37 (1) – Obligation for Comprehensive Dam Safety Evaluation

2.57 Clause 37 (1) on Comprehensive Dam Safety Evaluation, reads as under :

“The State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, or the concerned Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall, at least once in ten years, arrange for comprehensive safety evaluation of every specified dam falling under their control either through their own engineers or by an independent panel of experts for the purpose of determining the conditions of the specified dam and reservoir.

Provided that the first comprehensive safety evaluation for each existing specified dam shall be conducted within five years after the coming into force of this Act.”

2.58 The Bill provides for Dam Safety Evaluation after a gap of certain period either through their own engineers or by an independent panel of experts.

2.59 In response to the suggestion of the Committee to remove the word “either through their own engineers or” from the Bill, the Ministry in a written reply stated that the provision in the Bill concerning the issue has been framed judiciously and as such no change may be required in the clause.

2.60 The Committee note that the Bill provides for Comprehensive Dam Safety Evaluation of each dam by the owner of the dam either through their own engineers or by an independent panel of experts. The Committee feel that any Member who is in any way directly or indirectly connected with the maintenance or ownership of the dam at any stage should not be associated with the evaluation of the dam safety. The Committee, therefore, recommend that the word “either through their own engineer or” be deleted from the clause. It may also be provided that as far as possible the majority of the experts should be in the service of State or the Union Government.

XIV Clause 42 (1) – Measures for Safety of Dams located outside the territory of India

2.61 Clause 42(1) provides for the measure to be taken for safety of dams located outside the territory of India, reads as under :

“Where a dam is located outside the territory of India and the Central Dam Safety Organisation *suo motu* or on receipt of information from any person or organisation or authority or source *prima facie* is of the opinion that measures are required to be taken to ensure safety of such dams and failure of which may endanger the life and property of people located in India, it shall in writing submit an intimation thereof to the Central Government indicating therein the likely damages which may arise due to failure of such dams and the safety measures required to be taken in respect of such dam.”

2.62 Keeping in view the past experience of floods caused in parts of India due to failure of dam/barrage located in Nepal, one of the expert suggested that the ‘dam’ referred to at the beginning of this clause should include “a dam created due to landslide/glacial flow of debris, etc.” In the view of the experts it was essential as the

other country may not be able to consider the damage/safety of the other country due to various reasons.

2.63 The Ministry while furnishing its comments stated that the suggestion is acceptable and can be included in the Bill. The Secretary, MoWR during the evidence further elaborated as under :

“If a dam is being constructed in the neighbouring country, then we have to see that it is not going to affect us badly. Glaciers leave debris causing landslide that leads to blockage of water. Considering these things we are putting this amendment.”

2.64 The Committee are in agreement with the suggestion which is also acceptable to the Ministry for further elaboration of ‘dam’ safety measures under Clause 42 (1) so as to include the dams created in the neighbouring countries due to landslide or glacial flow of debris which may endanger the life and property in India. They, therefore, recommend that the necessary modifications be carried out accordingly in the Bill.

2.65 After taking into account the suggestions and considered views of the experts, written as well as oral, the Committee recommend consideration of certain further additions and alteration in various clauses of the Bill so as to make it more broad based and to remove ambiguities as follows :

(i) In Clause 3 (c), sub clause (vi) be amended to read as "(v) other associated structures acting integrally with dam body **including the reservoir and its rim.**" sub-clause (ii) deleted and the subsequent sub-clauses renumbered accordingly.

(ii) In clause 3(e) the following **explanation** be added :

"For the purpose of this clause, dam includes barrage, weir and similar water impounding structures but excludes :-

- (a) water conveyance structures such as canal , aqueduct and navigation channel.
- (b) flow regulation structures such as flood embankment, dike and guide bund".

(iii) In clause 3(f) the following explanation be added at the end of the sentence :

"and the environment including fauna, flora and riverine ecology.
The term **Environment** may also be defined in the Bill."

(iv) Clause 3(h) be amended to read as :

"documentation" shall mean all permanent records concerning investigation, design, construction, operation, performance, maintenance, **major repair (if any), alteration (if any), enlargement (if any)** and safety of dams and includes design memorandum, construction drawings, geological reports, reports of 33 specialized studies simulating structural and hydraulic response of the dam, changes made in design and drawings, quality control records, emergency action plan, operation and maintenance manual, instrumentation readings, inspection and testing reports, operational reports, and dam safety review reports;"

(v) Clause 3(j) be amended to read as :

"inspection" shall mean visual examination of all components of dam and its appurtenances and includes examination of non-overflow blocks, spillways, abutments, stilling basin, piers, bridge, downstream toe, drainage galleries, operation of mechanical systems (**including_gates and its components, drive units, cranes**), interior of outlet conduits, instrumentation records and record-keeping arrangements of instruments"

(vi) In Clause 8(2)(d) the words "re -occurrence" may be amended as "re-currence".

(vii) Clause 8(3) be amended to read as :

The knowledge and information collected or generated by the National Committee on Dam Safety shall be disseminated by the Central Dam Safety Organisation to all State Dam Safety Organisations or State Dam

Safety Cells, as the case may be, and Non-State Dam Safety Organisations or Non-State Dam Safety Cells, as the case may be, for **the purposes of enhancing awareness and** achieving uniform standards in dam safety practices.

- (viii) Clauses 15 (2), 16 (2), 17 (3), 18 (3), 46 (2) (b) & (c), 47 (2) (a) & (b) be amended to read as :

The words '**constitution and functions**' be replaced by '**organisational structure and work procedures**'.

- (ix) Clauses 16 and 18 be deleted.

- (x) In Clause 31 (3) (a) the words "in accordance with the" be added after sub-section (2) and before checklist

- (xi) In Clause 35 (2) the following amendments be incorporated :

"(a) The risk assessment studies must be carried out at suitable interval between five and ten years. It is felt that period of 20 years for the risk assessment studies is too long.

(b) Emergency action plan is very important and therefore, this needs to be prepared within two years."

- (xii) In Clause 37 (3) (b) the following explanation be added :

"Instead of 'more than 15 meters or storage capacity more than 60 Mcum', it may be 'more than 30 meters or storage capacity more than 60 Mcum'."

- (xiii) Clause 39 (1) be amended to read as :

" The State Dam Safety Organisation or State Dam Safety Cell, as the case may be, shall report the results of the comprehensive safety evaluation undertaken under section 37 or 38, directly **to the State Committee on Dam Safety.**"

- (xiv) In Clause 43 necessary provisions be incorporated in the Bill for the officials, workers etc to have rights to enter into the forest and wild life sanctuary area for dam maintenance. Many dams are located in the forest area. To carry out

dam safety maintenance and rehabilitation measures in the dam site, men, materials and machinery are to be taken to the dam site through forest area.

- (xv) In Clause 47 power to make regulations should rest with the National Committee and not with Central DSO.
- (xvi) In Clause 48 (1) the restriction of period for two years is not required. Any changes required to be modified in this Act while implementation be carried out then and there without any time frame.

Subject to the aforementioned recommendations and observations, the Committee recommend that the Bill be passed.

NEW DELHI
02 June, 2011
12 Jyaistha, 1933(Saka)

DIP GOGOI,
Chairman,
Standing Committee on Water Resources

Annexure - I

LIST OF STATE GOVERNMENTS/EXPERTS/INDIVIDUALS WHO HAVE GIVEN SUGGESTIONS/COMMENTS ON 'THE DAM SAFETY BILL, 2010'

STATE GOVERNMENT

Government of Gujarat
Government of Tamil Nadu
Government of Bihar

EXPERTS AND OTHERS

Dr. M.A. Chitale, Former Secretary, MoWR
Shri C.D. Thatte, Former Secretary, MoWR and former Chairman, CWC
Shri M.S. Reddy, Former Secretary, MoWR and former Chairman, CWC
Shri Z. Hassan, Former Secretary, MoWR and former Chairman, CWC
Shri A.D. Mohile, Former Chairman, CWC

Shri S.K. Das, Former Chairman, CWC
Shri S.K. Sengupta, Retd. Chief Engineer, Dam Safety Organisation, CWC
Shri S.C. Sinha, Retd. Chief Engineer
Dr. R.S. Varshney, Retd. Secretary General, ICID
Shri M.S. Billore, Former Secretary (Irrigation) and Advisor, Government of Madhya Pradesh
Shri V.M. Ranade, Former Secretary (Irrigation), Government of Maharashtra
Dr. B.S. Nadagoudar, Former Director of Extension Education, University of Agricultural Sciences, Karnataka
Prof. M. Pandu Ranga Rao, Ph.D. Retd. Professor of Engineering Geology, NIT, AP.
Shri S.P.Y. Reddy, MP (Lok Sabha)
Dr. Binoy Kumar Das
Shri C.S. Parthasarathy
Shri V.D. Suresh
Shri S.R. Rengan
Shri A.K. Balakrishnan
Shri Raj Kachroo

ANNEXURE – II

As INTRODUCED IN LOK SABHA ON 30 AUGUST 2010

THE DAM SAFETY BILL, 2010

ARRANGEMENT OF CLAUSES

CHAPTER I PRELIMINARY

CLAUSES

1. Short title, extent and commencement.
2. Application of Act.
3. Definitions.

CHAPTER II NATIONAL COMMITTEE ON DAM SAFETY

4. Constitution of National Committee.
5. Tenure of specialists or experts as Members of National Committee.

6. Meetings.
7. Vacancies, etc., not to invalidate proceedings of the National Committee.
8. Functions of National Committee.

CHAPTER III CENTRAL DAM SAFETY ORGANISATION

9. Establishment of Central Dam Safety Organisation.
10. Appointment of employees.
11. Functions of Central Dam Safety Organisation.

CHAPTER IV STATE COMMITTEE ON DAM SAFETY

12. State Committee on Dam Safety.
13. Functions of State Committee.
14. Functions of State Committee to be discharged by National Committee in certain cases.

CHAPTER V

STATE DAM SAFETY ORGANISATION, STATE DAM SAFETY CELL, NON-STATE DAM SAFETY ORGANISATION AND NON-STATE DAM SAFETY CELL

A. State Dam Safety Organisation

15. Establishment of State Dam Safety Organisation.

B. State Dam Safety Cell

16. Establishment of the State Dam Safety Cell in certain cases.

C. Non-State Dam Safety Organisation

17. Establishment of Non-State Dam Safety Organisation.

D. Non-State Dam Safety Cell

18. Establishment of Non-State Dam Safety Cell.

CHAPTER VI DUTIES AND FUNCTIONS IN RELATION TO SAFETY OF DAMS

19. Surveillance and inspection.
20. Maintenance of Log Books.
21. Instructions on safety of specified dams.
22. Funds for maintenance and repairs.
23. Technical documentation.
24. Reporting.

25. Individual responsible for safety of specified dams to be qualified.
26. Jurisdiction of State Dam Safety Organisation or State Dam Safety Cell and Central Dam Safety Organisation.
27. Cost of investigation to be borne by dam owner.
28. Construction or operation or alteration of dams.
29. Initial filling of reservoirs.
30. Responsibility of dam owner.

**CHAPTER VII
SAFETY, INSPECTION AND DATA COLLECTION**

31. Periodical inspection.
32. Instrumentations to be installed in every specified dam.
33. Establishment of hydro-meteorological station.
34. Installations of seismological station.

**CHAPTER VIII
EMERGENCY ACTION PLAN AND DISASTER MANAGEMENT**

35. Obligation for emergency action plan and disaster management.
36. Assistance to other disaster management authorities.

**CHAPTER IX
COMPREHENSIVE DAM SAFETY EVALUATION**

37. Obligation for comprehensive dam safety evaluation.
38. Compulsory evaluation in certain cases.
39. Reports of comprehensive evaluation.

**CHAPTER X
MISCELLANEOUS**

40. Annual report of safety status of dams.
41. Safety measures in respect of dams other than specified dams.
42. Measures of safety of dams located outside territory of India.
43. Effect of Act on other laws.
44. Power of Central Government to give directions.
45. Power of Central Government to make rules.
46. Power of State Government to make rules.
47. Power to make regulations.
48. Power to remove difficulties.
49. Rules and regulations to be laid before Parliament and State Legislature.

AS INTRODUCED IN LOK SABHA

Bill No. 108 of 2010

THE DAM SAFETY BILL, 2010

A

BILL

to provide for proper surveillance, inspection, operation and maintenance of all dams of certain parameters in India to ensure their safe functioning and for matters connected therewith or incidental thereto.

WHEREAS it is expedient to provide for uniform dam safety procedure which shall ensure national investment and benefits by safeguarding human life, livestock and property;

AND WHEREAS Parliament has no power to make laws for the States with respect to any of the matters aforesaid except as provided in articles 249 and 250 of the Constitution;

AND WHEREAS in pursuance of clause (1) of article 252 of the Constitution, resolutions have been passed by all the Houses of Legislatures of the States of Andhra Pradesh and West Bengal to the effect that the matters aforesaid should be regulated in those States by law made by the Parliament;

BE it enacted by Parliament in the Sixty-first Year of the Republic of India as follows:—

CHAPTER I

PRELIMINARY

Short title,
extent and
commencement.

1. (1) This Act may be called the Dam Safety Act, 2010.
(2) It shall come into force in the States of Andhra Pradesh, West Bengal and in all the Union territories, on such date as the Central Government may, by notification in the Official Gazette, appoint and in any other State, which adopts this Act under clause (1) of article 252 of the Constitution, on the date of such adoption; and any reference in this Act to the commencement of this Act shall, in relation to any State or Union territory, means the date on which this Act comes into force in such State or Union territory.

2. The provisions of this Act applies,—
(a) in the first instance, to the whole of the States of Andhra Pradesh, West Bengal and to all the Union territories; and it shall also apply to such other State which adopts this Act by resolution passed in that behalf under clause (1) of article 252 of the Constitution;
(b) to every owner of a specified dam, being public sector undertaking or institution or a body owned or controlled by the Central Government or the State Government, as the

Application of
Act.

case may be, to which this Act shall apply as per sub-clause (a);
(c) to every owner of a specified dam, being undertaking or company or institution or a body other than those owned or controlled by the State Government or the Central Government, as the case may be.

3. In this Act, unless the context otherwise requires,—

Definitions.

- (a) “alteration of dam” means only such alterations or repairs as may directly affect the safety of the dam or reservoir;
- (b) “annual report” shall mean a report giving therein the activities of the organisation or cell concerned and the safety status of the specified dams falling under their control or jurisdiction during each financial year;
- (c) “appurtenant work” means the structures being,—
 - (i) spillways, either in the dam or separate therefrom;
 - (ii) reservoir and its rim;
 - (iii) low level outlet works and water conduits such as tunnels, pipelines or penstocks, either through the dam or its abutments or reservoir rim;
 - (iv) hydro-mechanical equipments including gate, valve, hoist, elevators;
 - (v) energy dissipation and river training works; and
 - (vi) other associated structures acting integrally with dam body;
- (d) “Central Dam Safety Organisation” means the Organisation established under section 9;
- (e) “dam” means any artificial barrier including appurtenant works constructed across rivers or tributaries thereof with a view to impound or divert water;
- (f) “dam failure” shall mean such failures in the structures or operation of a dam which may lead to uncontrolled release of impounded water resulting in downstream flooding affecting the life and property of the people;
- (g) “distress condition” shall mean the occurrence or potential development of such conditions in the dam or appurtenance or its reservoir or reservoir rim, which if left unattended to, may impede the safe operation of dam for its intended benefits or may pose unacceptable risks to the life and property of people downstream;
- (h) “documentation” shall mean all permanent records concerning investigation, design, construction, operation, performance, maintenance and safety of dams and includes design memorandum, construction drawings, geological reports, reports of specialised studies simulating structural and hydraulic response of the dam, changes made in design and drawings, quality control records, emergency action

plan, operation and maintenance manual, instrumentation readings, inspection and testing reports, operational reports, and dam safety review reports;

(i) "enlargement of dam" means any change in the scope of an existing dam or reservoir, which raises water storage elevation or increases the volume of water impounded by the dam;

(j) "inspection" shall mean visual examination of all components of dam and its appurtenances and includes examination of non-overflow blocks, spillways, abutments, stilling basin, piers, bridge, downstream toe, drainage galleries, operation of mechanical systems, interior of outlet conduits, instrumentation records and record-keeping arrangements of instruments;

(k) "investigation" shall mean detailed examination, analysis or scrutiny of a specific problem pertaining to the dam and its appurtenances or a part thereof, and includes laboratory testing, *in situ* testing, geological exploration, model testing and mathematical simulation of the problem;

(l) "National Committee" means the National Committee on Dam Safety

constituted under section 4;

(m) "New specified dam" means,—

(a) a specified dam which is constructed after the commencement of this Act;

(b) a dam not being a specified dam existing on or before such

commencement and whose height is increased or altered or modified on or after such commencement so as to fall within the definition of specified dam under this Act;

(n) "Non-State Dam Safety Cell" means the Dam Safety Cell established under section 18;

(o) "Non-State Dam Safety Organisation" means the Dam Safety Organisation established under section 17;

(p) "notification" means a notification published in the Official Gazette; 1 of 1956.

(q) "owner of dam" means the Central Government or a State Government or public sector undertaking or local authority or company and any or all of such persons or organisations, who own, control, operate, or maintain a specified dam;

(r) "prescribed" means prescribed by rules made by the Central Government or, as the case may be, by the State Government under this Act;

(s) "public sector undertaking" means,—

(i) a Government company as defined in section 617 of the Companies

Act, 1956;

- (ii) a corporation (including a co-operative society) established by or under a Central, Provincial or State Act, which is owned, controlled or managed by the Government;
- (t) “regulations” means the regulations made by the Central Dam Safety Organisation under this Act;
- (u) “remedial measures” shall mean such structural or non-structural measures, which may be required in relation to the dam or appurtenance or reservoir or reservoir rim or catchment area of reservoir, for the purpose of removing or reducing the distress condition of the dam;
- (v) “Reservoir” shall mean any water spread which contains impounded water;
- (w) “specified dam” means a large dam which is,—
 - (i) above fifteen meters in height, measured from the lowest portion of the general foundation area to the crest; or
 - (ii) between ten meters to fifteen metres in height and satisfies at least one of the following, namely:—
 - (A) the length of crest is not less than five hundred metres; or
 - (B) the capacity of the reservoir formed by the dam is not less than one million cubic metres; or
 - (C) the maximum flood discharge dealt with by the dam is not less than two thousand cubic metres per second; or
 - (D) the dam has specially difficult foundation problems; or
 - (E) the dam is of unusual design;
- (x) “State” means the State to which the provisions of this Act applies in accordance with the provisions of sub-section (2) of section 1;
- (y) “State Committee” means the State Committee on Dam Safety constituted under sub-section (1) of section 12;
- (z) “State Dam Safety Cell” means the State Dam Safety Cell constituted under section 16;
- (za) “State Dam Safety Organisation” means the State Dam Safety Organisation constituted under section 15.

CHAPTER II

NATIONAL COMMITTEE ON DAM SAFETY

Constitution of National Committee.

4. With effect from such date as the Central Government may, by notification, appoint, there shall be constituted, for the purposes of this Act, a National Committee to be known as the “National Committee on Dam Safety” consisting of the following members, namely:—
- (a) Chairman, Central Water Commission – *ex officio*,

Chairperson;
 (b) Member, Design and Research Wing, Central Water Commission — *ex officio*, Vice- Chairperson;
 (c) Member (Hydro), Central Electricity Authority—*ex officio*, Member;
 (d) Commissioner (Projects), Ministry of Water Resource – *ex officio*, Member;
 (e) Director General, Geological Survey of India – *ex officio*, Member;
 (f) Director General, Indian Meteorological Department – *ex officio*, Member;
 (g) Scientist E, Ministry of Environment and Forests — *ex officio*, Member;
 (h) Engineer-in-Chief or equivalent officer of Irrigation Department of States having specified dams – *ex officio*, Members;
 (i) Engineer-in-Chief or equivalent Officer of other Dam owning Organisations with specified dams — *ex officio*, Members;
 (j) Specialists or experts in the field of dam safety to be nominated by the Central Government—Members; and
 (k) Chief Engineer, Central Dam Safety Organisation, Central Water Commission—*ex officio*, Member Secretary.

5. The tenure of specialists or experts as Members of National Committee shall be valid for a period of three years from the date of notification issued under that section.

Tenure of specialists or experts as Members of National Committee.

6. (1) The National Committee shall meet at such times and places and shall observe such rules of procedure in regard to the transaction of business at its meetings (including quorum at such meetings) as may be prescribed by the Central Government:

Meetings.

Provided that the National Committee shall meet at least twice in a year:

Provided further that the National Committee may invite,—

- (a) the representative of the owner of a specified dam in such meetings where his dam is taken up for deliberation;
- (b) such specialists or experts in Dam Safety, as it may consider appropriate, for the discharge of its functions.

(2) The Chairperson or, if for any reason, is unable to attend a meeting of the Committee, the Vice-Chairperson shall preside at the meeting.

(3) The expenditure incurred (including the travelling

allowance, dearness allowance and other incidental expenses) to attend the meeting by the Members, referred to in clauses

(a) to (h) and (j) of section 4, shall be borne by their concerned controlling authorities.

(4) The specialists or experts referred to in clause (i) of section 4 and specialists or experts invitees referred to in clause (b) of second proviso to sub-section (1) to attend the meetings shall be paid such fees and allowances as may be prescribed by the Central Government.

(5) All questions which come up before any meeting of the National Committee shall be decided by a majority of votes of the members present and voting, and, in the event of an equality of votes, the Chairperson, or in his absence, the Vice-Chairperson, shall have a second or casting vote.

Vacancies, etc., not to invalidate proceedings of the National Committee.

7. No act or proceeding of the National Committee shall be invalid merely by reason of—

(a) any vacancy in, or any defect in, the constitution of the National Committee; or

(b) any defect in the appointment of a person acting as a Member of the National Committee; or

(c) any irregularity in the procedure of the National Committee not affecting the merits of the case.

Functions of National Committee.

8. (1) The National Committee shall discharge such functions as may be necessary to ensure proper surveillance, inspection, operation and maintenance of all specified dams in the country and ensure their safe functioning.

(2) Without prejudice to the provisions contained in sub-section (1), the functions of the National Committee shall include,—

(a) to monitor broadly the functioning of State Dam Safety Organisations or State Dam Safety Cells, as the case may be, and Non-State Dam Safety Organisations or Non-State Dam Safety Cells, as the case may be;

(b) to monitor and evaluate dam safety practices in various States and suggest improvements to bring dam safety practices in conformity with latest international practices consistent with Indian conditions;

(c) to act as a forum for exchange of views on techniques to be adopted for remedial measures to relieve distress conditions in dams and appurtenances;

(d) to analyse the causes of failures in cases of major dam failures and suggest changes in the plan philosophy, specifications, construction, operation and maintenance practices in order to avoid re-occurrence of such failures;

(e) to evolve comprehensive dam safety management

approach as an integration of dam safety evaluation, risk assessment and risk management; and

(f) to render advise on any specific matter relating to safety of dams which may be referred to it by the Central Government or the State Government, as the case may be.

(3) The knowledge and information collected or generated by the National Committee on Dam Safety shall be disseminated by the Central Dam Safety Organisation to all State Dam Safety Organisations or State Dam Safety Cells, as the case may be, and Non-State Dam Safety Organisations or Non-State Dam Safety Cells, as the case may be, for the purposes of achieving uniform standards in dam safety practices.

(4) The Central Dam Safety Organisation shall act as Secretariat of the National Committee for the purpose of discharging its functions under this Act.

CHAPTER III

CENTRAL DAM SAFETY ORGANISATION

Establishment of Central Dam Safety Organisation.	9. The Central Government shall, for the purposes of this Act, by notification, establish a separate division under the Ministry of Water Resources, in the Central Water Commission, an Organisation to be known as the “Central Dam Safety Organisation” to be headed by an officer not below the rank of Chief Engineer.
Appointment of employees.	10. (1) The Central Government shall, for the purpose of enabling the Central Dam Safety Organisation to perform its functions under this Act, provide such number of officers, and other employees as it may consider necessary. (2) The functions, powers and terms and conditions of service of the employees appointed under sub-section (1) shall be such as may be prescribed by the Central Government.
Functions of Central Dam Safety Organisation.	11. (1) The Central Dam Safety Organisation shall,— (a) provide the state-of-the-art technical and managerial assistance to the State Dam Safety Organisations or the State Dam Safety Cells, as the case may be, and to the Non-State Dam Safety Organisations or the Non-State Dam Safety Cells, as the case may be; (b) maintain a national level data-base of all specified dams in the country, including distress conditions, if any, noticed therein; (c) maintain liaison with the State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, of each State

and the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, of each dam owning Organisation for standardisation of dam safety related data and practices, and related technical or managerial assistance;

(d) publish and update from time to time the standardised guidelines and checklists or format or proforma for routine inspection and detailed investigations of dams and appurtenances;

(e) maintain the records of major dam failures in the country;

(f) examine wheresoever a need is felt, either through its own engineers or through a panel of experts, the cause of any major dam failure, and submit its report to the National Committee;

(g) examine whenever required, either through its own engineers or through a panel of experts, the cause of any major public safety concern in respect of any specified dam, and issue appropriate instructions on further investigations, operational parameters or remedial measures; and

(h) look into the unresolved points of issue between the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, of two States, or between the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, of a State and the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, of a owner of dam, for a proper solution.

(2) All decisions of the Central Dam Safety Organisation in matters referred to in clause (h) of sub-section (1) shall be final and binding.

CHAPTER IV

STATE COMMITTEE ON DAM SAFETY

12. (1) With effect from such date as the State Government may, by notification appoint, there shall be constituted, for the purposes of this Act, a States Committee by the State Government to be known as the "State Committee on Dam Safety":

State
Committee
on Dam
Safety.

Provided that the States in which the numbers of specified dam are twenty or less than twenty, such State may not constitute State Committee under this Act.

(2) The State Committee on Dam Safety shall consist of a Chairperson and such number of Members as may be determined by the State Government.

(3) The terms and conditions subject to which the Chairperson and Members of the State Committee may be appointed and the time, place of the meetings of the State

Functions of State Committee.

Committee and procedure in regard to the transaction of business at these meetings shall be such as may be prescribed by the State Government.

13. (1) The State Committee shall discharge such functions as may be necessary to ensure proper surveillance, inspection, operation and maintenance of all specified dams in that State and ensure their safe functioning.

(2) Without prejudice to the provisions contained in sub-section (1), the functions of the State Committee shall include to,—

(a) review the work done by the State Dam Safety Organisation;

(b) recommend the appropriate measures to be taken in relation to the safety of specified dam which is under distress condition;

(c) review the progress on measures recommended in relation to dam safety;

(d) establish priorities for investigations undertaken under sub-section (2) of section 19;

(e) in cases where investigations with respect to safety of any specified dam in the State had already been undertaken, to order further investigations in relation to safety of such specified dam and assign responsibilities for execution including the use of non-departmental resources, and need for the association of independent experts with next phase of such investigations;

(f) establish priorities among projects requiring remedial safety works; and

(g) keep the State Government informed of its activities and recommendations.

14. In States where State Dam Safety Committee are not constituted and in all cases of Central undertakings and private entities or bodies, the periodical reviews of the works or progress or prioritisation by the concerned State Dam Safety Organisation or State Dam Safety Cell and the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell shall be undertaken by the National Committee on Dam Safety through the Central Dam Safety Organisation.

Functions of State Committee to be discharged by National Committee in certain cases.

CHAPTER V

STATE DAM SAFETY ORGANISATION, STATE DAM SAFETY CELL, NON-STATE DAM SAFETY ORGANISATION AND NON-STATE DAM SAFETY CELL

A. State Dam Safety Organisation

15. (1) Every State, having more than twenty numbers of specified dams owned by it, shall establish in its Water Resources Department or Irrigation Department or Public Works Department or a department dealing with the matter relating to water resources, a separate Organisation, to be known as the "State Dam Safety Organisation" headed by an officer not below the rank of Chief Engineer or equivalent. Establishment of State Dam Safety Organisation.
- (2) The constitution and functions of the State Dam Safety Organisation shall be such as may be prescribed by the State Government.
- (3) The State Dam Safety Organisation shall consist of the persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydro-mechanical engineering, hydrology, geo-technical investigation and instrumentation or such other field as the State Government may consider appropriate.
- (4) The State Government shall, having regard to the number of specified dams in that State, provide such number of officers and employees to the State Dam Safety Organisation constituted by it for the efficient and effective functioning of the said Organisation.
- (5) The administrative and other expenses of the State Dam Safety Organisation shall be borne by the concerned State Government.

B. State Dam Safety Cell

Establishment of the State Dam Safety Cell in certain cases.

16. (1) Every State, having twenty or less than twenty numbers of specified dams owned by it, shall establish in its Water Resources Department or Irrigation Department or Public Works Department or a department dealing with the matter relating to water resources, a separate Cell, to be known as the "State Dam Safety Cell" headed by an officer not below the rank of Superintendent Engineer or its equivalent.
- (2) The constitution and functions of the State Dam Safety Cell shall be such as may be prescribed by the State Government.
- (3) The State Dam Safety Cell shall consist of the persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydro-mechanical engineering, hydrology, geo-technical investigation and instrumentation or such other field as the State Government may consider appropriate.
- (4) The State Government shall, having regard to the number

of dams in that State, provide such number of officers and employees to the State Dam Safety Cell constituted by it for the efficient and effective functioning of the said Cell.

(5) The administrative and other expenses of the State Dam Safety Cell shall be borne by the concerned State Government.

C. Non-State Dam Safety Organisation

17. (1) Every dam owner (other than the Central or State Governments) having more than ten numbers of specified dams owned by it, shall establish a body called "Non-State Dam Safety Organisation" headed by an officer not below the rank of Chief Engineer or its equivalent. Establishment of Non-State Dam Safety Organisation.

(2) The Non-State Dam Safety Organisation shall consist of the persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydro-mechanical engineering, hydrology, geo-technical investigation and instrumentation or such other field as the dam owner may consider appropriate.

(3) In the case of owner of a specified dam, being the public sector undertakings or institution or company or a body owned or controlled by,—

(a) the Central Government; or

(b) the Central Government and the State Government; or

(c) any undertakings or institution or a body owned or controlled by the Central Government or the State Government; or

(d) entities or bodies not falling in clause (a) or clause (b) or clause (c) [excluding specified dams referred to in sub-section (4)], the constitution and functions of the Non-State Dam Safety Organisation shall be such as may be specified by regulations made by the Central Dam Safety Organisation.

(4) In the case of owner of a specified dam being the public sector undertakings or institution or a body owned or controlled by the State Government or the undertakings or institution or a body owned or controlled by it or both, the constitution and functions of the Non-State Dam Safety Organisation shall be such as may be specified by the State Government.

D. Non-State Dam Safety Cell

Establishment of Non-State

18. (1) Every owner of a specified dam (other than Central or State Governments), having ten or less than ten number of

Dam Safety Cell.

specified dams owned by it, shall establish a body called "Non-State Dam Safety Cell" headed by an officer not below the rank of Superintendent Engineer or equivalent.

(2) The Non-State Dam Safety Cell shall consist of the persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydro-mechanical engineering, hydrology, geo-technical investigation and instrumentation or such other field as the dam owner may consider it appropriate.

(3) In the case of owner of a specified dam, being the public sector undertakings or institution or a company or a body owned or controlled by,—

(a) the Central Government; or

(b) the Central Government and the State Government; or

(c) any undertakings or institution or a body owned or controlled by the Central Government or State Government; or

(d) entities or bodies not falling in clause (a) or clause (b) or clause (c) [excluding specified dams referred to in sub-section (4)], the constitution and functions of the Non-State Dam Safety Cell shall be such as may be specified by regulations made by the Central Dam Safety Organisation.

(4) In the case of owner of a specified dam being the public sector undertakings or institution or a body owned or controlled by the State Government or the undertakings or institution or a body owned or controlled by it or both, the constitution and functions of the Non-State Dam Safety Cell shall be such as may be specified by the State Government.

CHAPTER VI

DUTIES AND FUNCTIONS IN RELATION TO SAFETY OF DAMS

19. (1) Every State Dam Safety Organisation, State Dam Safety Cell, Non-State Dam Safety Organisation and Non-State Dam Safety Cell shall, — Surveillance and inspection.

(a) keep perpetual surveillance;

(b) carry out routine inspections;

(c) monitor the operation and maintenance,

of all specified dams falling under their control to ensure continued safety of such specified dams and take such measures as may be necessary to address safety concerns that are noticed.

(2) The State Dam Safety Organisation or the State Dam Safety Cell or the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall,

for the purpose of enabling it to make decisions compatible with public safety make or cause to be made such investigations and shall gather or cause to be gathered such data as may be required for proper review and study of the various features of the design, construction, repair and enlargement of dams, reservoirs and appurtenances under their control.

Maintenance of Log Books.

20. Every concerned State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell, shall maintain a Log Book or Data-base for each specified dam under their control recording therein all activities related to the surveillance and inspection and all important events related to the dam safety and such other details as may be specified by the Central Dam Safety Organisation and as per the format or data-base program specified by the regulations made by the Central Dam Safety Organisation.

Instructions on safety of specified dams.

21. (1) Every State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell, shall from time to time render its advice to the concerned owner of a specified dam on the safety measures or the remedial measures required to be taken with respect to any dam.

(2) Every State and specified dam owner shall issue appropriate instructions for implementing the advice or guidelines issued by the State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be.

(3) It shall be the duty of every State Dam Safety Organisation or State Dam Safety Cell, Non-State Dam Safety Organisation or Non-State Dam Safety Cell to monitor and ensure the implementation of the instructions issued under sub-section (1).

Funds for maintenance and repairs.

22. All State Governments and other owners of specified dam shall earmark sufficient and specific funds for maintenance and repairs of the specified dams and to implement the recommendations of the State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, and the Non-State Dam Safety Organisation or, the Non-State Dam Safety Cell, as the case may be.

23. (1) Every State Government and every owner of specified dam shall compile all technical documentations concerning hydrology, dam foundation, structural

Technical documentation.

engineering of dam, watershed upstream of dam, and nature or use of land downstream of dam along with information on all resources or facilities of economic or logistic importance which are likely to be affected due to operation of the dam and keep for record in the concerned State Dam Safety Organisation or State Dam Safety Cell or the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be.

(2) The Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, shall furnish all such information to the Central Dam Safety Organisation and concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be, as and when required by them.

(3) Every State Government and every owner of specified dam shall ensure that the State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, have been adequately equipped at all times with the state-of-the-art of information technology tools to store, retrieve, and distribute the data related to the dam safety and dam performance.

24. (1) The State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, shall be responsible to, and functionally report to, the highest engineering or technical authority of the concerned State Government.

Reporting.

(2) The Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall be responsible to, and functionally report to, the highest engineering or technical officer of the owner of the specified dam.

Individual responsible for safety of specified dams to be qualified.

25. (1) Every individual responsible for safety of specified dams and all activities related thereto shall possess such qualifications and experience as may be specified by the regulations made by the Central Dam Safety Organisation.

(2) Every individual referred to in sub-section (1) shall undergo such training programmes and at such intervals as may be necessary to make him aware of up-to-date standardised dam safety practices.

Jurisdiction of State Dam Safety Organisation or State Dam Safety Cell

26. (1) Without prejudice to the provisions of this Act, all specified dams, shall fall under the jurisdiction of the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, of the State in which dam is situated in matters related to dam inspections, analysis of information, reports or recommendations

and Central Dam Safety Organisation.

regarding safety status, and remedial measures to be undertaken to improve dam safety; and in all such matters full co-operation shall be extended by the concerned Non-State Dam Safety Organisation or the Non-State Dam Safety Cell and the owner of the specified dam.

(2) The authorised representative of the Central Dam Safety Organisation, concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be, for the purposes of making any inspection or investigation necessary for the implementation of the provisions of this Act, may enter upon any part of the specified dam or its site as and when required and apply such investigation methods, as may be considered necessary.

(3) In case, after making inspection or investigation under sub-section (2), the representative referred in that sub-section is of the opinion that certain remedial measures are required to be taken, he shall report such remedial measures to the officer-in-charge of such specified dam and the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, and to the concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be.

(4) The Central Dam Safety Organisation and concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be, in cases of dams being found to be endangered on account of their age, degeneration, degradation, structural or other impediments, shall suggest such remedial measures on such operational parameters (including maximum reservoir level, maximum spillway discharge and maximum discharges through other outlets) as it may consider necessary.

(5) Nothing contained in sub-sections (1), (2), (3) and (4) shall absolve the dam owner or any other authority or person from any of his responsibilities or obligations entrusted upon him under the provisions of this Act and the provisions of sub-sections (1), (2), (3) and (4) shall be in addition to, and not in derogation of any provisions of this Act.

27. All costs to be incurred by Central Dam Safety Organisation or State Dam Safety Organisation or State Dam Safety Cell on any form of investigation agreed by the owner or felt necessary by Central Dam Safety Organisation or State Dam Safety Organisation or State Dam Safety Cell, including payments given to the consultants and panel of experts, shall be paid by the owner of concerned specified dam.

Cost of investigation to be borne by dam owner.

28. (1) All new specified dams shall be investigated, designed and constructed by the organisations recognised for the said purpose.

Construction or operation or alteration of dams.

(2) Every organisation referred to in sub-section (1) shall for the purpose of investigation, design and construction employ such qualified, experienced and competent engineers, as may be specified by the regulations made by the Central Dam Safety Organisation.

(3) Every organisation referred to in sub-section (1) shall demonstrate the safety of the design, operational parameters and policies to the Central Government or concerned State Governments or concerned authority to approve the design of the dam to be constructed by such organisation.

(4) The construction of any new specified dam or the alteration or enlargement of any existing specified dam shall be taken up only with the approval of the Competent Authority, as may be specified by the Central Government or the concerned State Government, as the case may be.

(5) Every owner of the specified dam shall be responsible for operation, maintenance and safety of the dams owned by it.

(6) Every owner of the specified dam shall ensure that a well documented Operation and Maintenance Manual is kept at all times at each of his specified dams and sufficient number of trained Operation and Maintenance engineers or technical persons are posted at such dams.

Initial filling of reservoirs.

29. (1) Before initial filling of any reservoir of a specified dam, the organization responsible for its design shall draw the filling criteria and prepare an initial filling plan, with adequate time for monitoring and evaluating the performance of the dam and its appurtenances.

(2) Before initial filling of the reservoir is taken up, the State Dam Safety Organisation or State Dam Safety Cell or the concerned Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, shall arrange for safety inspection of the dam either through its own engineers or by an independent panel of experts, who shall also examine the initial filling programme and prepare a detailed report in respect thereof.

(3) The Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall forward the report of inspection or examination referred to in sub-section

(2) to the concerned State Dam Safety Organisation or

State Dam Safety Cell, as the case may be.

30. Nothing contained in this Act shall be construed to absolve an owner of a dam of the duties, obligations or liabilities incidental to the construction, operation, maintenance and supervision of the dam or reservoir. Responsibility of dam owner.

CHAPTER VII

SAFETY, INSPECTION AND DATA COLLECTION

31. (1) Every owner of a specified dam shall establish operational and maintenance set up for each dam and through such set up, undertake pre-monsoon and post-monsoon inspections of each of its dams to be done, — Periodical inspection.

(i) in the case of specified dams, being of hundred meters height or above, by the concerned Chief Engineer;

(ii) in the case of specified dams, being of thirty meters height or above, but less than hundred meters height, by the concerned Superintendent Engineer or higher level officer;

(iii) in the case of specified dams, being of fifteen meters height or above, but less than thirty meters height, by the concerned Executive Engineer or higher level officer;

(iv) in the case of specified dams, being of ten meters height or above, but less than fifteen meters height, by the concerned Assistant Engineer or higher level officer.

(2) Without prejudice to sub-section (1), every owner of a specified dam shall undertake special inspections, of each of his dams to be undertaken by the engineers referred to in subsection (1), during and after floods, after earthquake, and if any sign of distress or unusual behaviour is noticed in the dam, appurtenance or reservoir fringes.

(3) Every owner of a specified dam shall,—

(a) carry out all inspections referred to in sub-section (1) and sub-section (2) as per checklist or format or proforma or guidelines specified by the regulations made by the Central Dam Safety Organisation;

(b) station, at each of his specified dams site throughout the monsoon period, such engineer, as may be decided, in consultation with the State Dam Safety Organisation or the State Dam Safety Cell or the Non-

State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, and Chief Engineer-in-charge of such dams:

Provided that such engineers shall be required to be stationed at their respective dam sites during entire period of emergency following an earthquake or any other natural or manmade hazard that may create distress conditions in the dam.

(c) forward the inspection report referred in sub-section (1) and sub-section (2) to the State Dam Safety Organisation or the State Dam Safety Cell or the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell concerned, which shall analyse such report and submit their comments on the deficiency and remedial measures, if any, to the highest engineering or technical authority of the owner of specified dam:

Provided that the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall forward the copy of such report and submit their comments on the deficiency and remedial measures, if any, to the concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be.

32. (1) Every owner of a specified dam shall have a minimum number of sets of instrumentations as may be specified by the regulations made by the Central Dam Safety Organisation at all times for monitoring the performance of dam, in respect of all his specified dams.

Instrumentations to be installed in every specified dam.

(2) In case the instrumentation installed is required to be replaced, such instrumentation shall be replaced in a manner so as to maintain the continuity of readings exhibited in such instrumentations.

(3) Every owner of the specified dam shall maintain a record of readings of the instrumentation referred to in sub-sections (1) and (2) and forward such readings, to the State Dam Safety Organisation or the State Dam Safety Cell or the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell concerned, in the form, manner and at such interval specified by them.

(4) The State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell concerned shall analyse the readings referred to in sub-section (3) and wheresoever required to submit observations or advice to the highest engineering or technical authority of the owner of dam.

(5) The Non-State Dam Safety Organisation or Non-State Dam Safety Cell shall also forward the copy of its

observations or advice to the concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be.

Establishment of hydrometeorological station.

33. (1) Every owner of specified dam shall establish a hydro-meteorological station in the vicinity of at each such dam.
(2) Every hydro-meteorological station referred to in sub-section (1) shall be capable of recording data relating to, among other parameters, rainfall, atmospheric pressure, maximum or minimum temperature, and humidity, wind speed, wind direction, height of waves and reservoir-water temperature.
(3) Every owner of the specified dam shall collect, compile, process and store data referred to in sub-section (2) at suitable central location of such dam.

Installations of seismological station.

34. (1) Every owner of a specified dam, in the case of specified dam being of thirty meters height or above or specified dam being falling in the seismic zone III or above, shall establish a seismological station in the vicinity of each such dam.
(2) Every owner of specified dam shall collect, compile, process and store data referred to in sub-section (1) at a suitable location.

CHAPTER VIII

EMERGENCY ACTION PLAN AND DISASTER MANAGEMENT

Obligation for emergency action plan and disaster management.

35. (1) Every owner of the specified dam, in respect of each specified dam, shall,—
(a) establish well designed hydro-meteorological network and an inflow forecasting system;
(b) establish an emergency flood warning system for the probable flood affected areas down stream of the dam;
(c) test periodically for the aptness of systems referred to at (a) and (b) above;
(d) install such scientific and technical instruments which are invented or adopted after the commencement of this Act for the purpose of ensuring the safety of dam and the life and property of people downstream;
(e) make available the information relating to maximum anticipated inflows and outflows including flood warning and an adverse impact of the same, if any, on persons and property towards the upstream or downstream of the dam, to

the concerned authorities and also make available such information in public domain.

(2) Every owner of the specified dam, for each of its dam shall,—

(a) carry out risk assessment studies at an interval of twenty years or at such interval as may be specified by the regulations made by the Central Dam Safety Organisation;

(b) in respect of each specified dam existing on or before the commencement of this Act, prepare emergency action plan within five years from the date of commencement of this Act and thereafter update such plans at regular intervals;

(c) in respect of each specified dam which are constructed and filled initially after the commencement of this Act, prepare emergency action plan before the initial filling of the reservoir and thereafter update such plans at regular intervals .

(3) The emergency action plan referred to in sub-section (2) shall,—

(a) set out the procedures to be followed for the protection of persons and property upstream or downstream of the dam in the event of an actual or imminent dam failure or to mitigate the effects of the disaster;

(b) include therein,—

(i) in advance the type of emergencies which are likely to occur in the

operation of any reservoir;

(ii) identification of the likely catastrophic flood in the event of any failure of the dam, along with probable areas, population, structures and installations likely to be adversely affected due to flood water released from the reservoir;

(iii) warning procedures, inundation maps and advance preparations for

handling efficiently and in the best possible manner the likely adverse situations especially to avoid loss of human life;

(iv) such other matters which may having regard to the geographical

condition, size of the dam and other relevant factors as may be necessary

(4) The Emergency Action Plan referred to in sub-sections (2) and (3) shall be put into action as and when conditions arise which are or likely to be hazardous to a dam or potentially hazardous to public safety, infrastructure, other property or the environment.

(5) Every owner of the specified dam shall, while preparing and updating the emergency action plan, undertake a consultation process with all disaster management agencies and other concerned departments entrusted with disaster management and relief in the area likely to be affected and owners of other dams in the immediate vicinity likely to be

affected, so as to bring transparency and allay any unwarranted fear on dam safety issues.

Assistance to other disaster management authorities.
53 of 2005.

36. Without prejudice to the provisions contained in this Act or liability of the owner of the specified dam and other organisations and authorities under this Act, every such owner, organization and authority shall render necessary co-operation if so required by the authorities under the Disaster Management Act, 2005 to meet or mitigate any disaster or emergency arising out of the specified dams.

CHAPTER IX

COMPREHENSIVE DAM SAFETY EVALUATION

37. (1) The State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, or the concerned Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall, at least once in ten years, arrange for comprehensive safety evaluation of every specified dam falling under their control either through their own engineers or by an independent panel of experts for the purpose of determining the conditions of the specified dam and reservoir:

Obligation for comprehensive dam safety evaluation.

Provided that the first comprehensive safety evaluation for each existing specified dam shall be conducted within five years after the coming into force of this Act.

(2) The exact frequency of comprehensive evaluation shall be based on previous assessments, complexity of specified dam, operating history, recently held rehabilitation works, dam performance, age of dam and the hazard potential of dam.

(3) The comprehensive safety evaluation shall consist of, but not be limited to,—

(a) review and analysis of available data on the design, construction, operation, maintenance and performance of the structure;

(b) general assessment of hydrologic and hydraulic conditions with mandatory review of design floods as defined in the guidelines issued by the Central Government in case of dams which are more than fifteen meters in height or whose storage capacities are more than sixty million cubic meter;

(c) evaluation of the operation, maintenance and inspection procedures;

(d) evaluation of any other conditions which constitute or

could constitute a hazard to the integrity of the structure.

Compulsory evaluation in certain cases.

38. The comprehensive evaluation referred to in section 37 shall be compulsory in the case of,—
(a) major modification to the original structure or design criteria;
(b) discovery of an unusual condition at the dam or reservoir rim; and
(c) an extreme hydrological or seismic event.

Reports of comprehensive evaluation.

39. (1) The State Dam Safety Organisation or State Dam Safety Cell, as the case may be, shall report the results of the comprehensive safety evaluation undertaken under section 37 or 38, directly to the highest engineering or technical authority of concerned State Government.
(2) The Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall report the results of the comprehensive safety evaluation undertaken under section 37 or 38, to the highest engineering or technical authority of the Organisation and to the concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be.
(3) The reports referred to in sub-section (1) and sub-section (2) shall include, but not be limited to,—
(a) assessment of the condition of the structure based on the visual observations and available data on the design, hydrology, construction, operation, maintenance and performance of the structure;
(b) recommendations for any emergency measures or actions, if required, to assure the immediate safety of the structure;
(c) recommendations for remedial measures and actions related to design, construction, operation, maintenance and inspection of the structure, if required;
(d) recommendations for additional detailed studies, investigations and analyses, if required; and
(e) recommendations for improvements in routine maintenance and inspection of dam, if required.
(4) In case where the comprehensive safety evaluation undertaken under section 37 or 38, results in recommendations for a remedial action, the State Dam Safety Organisation or the State Dam Safety Cell and the concerned Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall pursue with the concerned authorities or owner of the specified Dam, as the case may be, to ensure that remedial measures are carried out in time, for which the State

Government or such owner shall provide adequate funds.
(5) In case where there are unresolved points of issues emerging between an independent panel of experts referred to in section 37 and the owner of the specified dams or concerned authorities, as the case may be, the matter shall be referred to the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, and in case, no agreement is arrived at, the matter shall be referred to the Central Dam Safety Organisation which shall give required guidance wherever necessary and send their recommendations to the State Government concerned for their implementation.

CHAPTER X

MISCELLANEOUS

Annual report of safety status of dams.

40. (1) Every Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, shall prepare and forward the annual report, within three months of the expiry of the preceding financial year, to each of the concerned State Dam Safety Organisation

or State Dam Safety Cell, as the case may be, and to the Central Dam Safety Organisation.

(2) Every State Dam Safety Organisation or State Dam Safety Cell, as the case may be, shall prepare annual report, within five months of the expiry of the preceding financial year, of its activities and safety status of dams in the State and such report shall be forwarded to the concerned State Government for placing it before the concerned State Legislature and to the Central Dam Safety Organisation.

(3) The State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, of each State and the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, as the case may be, of each owner of a specified dam shall provide to the Central Dam Safety Organisation, documentation of the projects, report of enquiries into failure and such other data as required in such format or manner as it may be specified by the regulations made by the Central Dam Safety Organisation.

(4) The Central Dam Safety Organisation, shall prepare a consolidated annual report of the dam safety activities in the country and submit the same to the Central Government within eight months of the expiry of the preceding financial year, and such reports shall be placed before each House of Parliament by the Central Government.

(5) The Central Dam Safety Organisation shall forward its annual report on the safety status of dams to the National Disaster Management Authority and also make available such

reports in public domain.

(6) The State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, of each State and Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, of each owner of a specified dam shall forward their annual reports to the concerned State Disaster Management Authority and also make available such reports in public domain.

41. Every owner of the dam other than specified dams shall undertake such measures as may be necessary to ensure safety of the dams and shall comply with the instructions and guidelines which may be issued by the concerned State Governments or the authorities.

Safety measures in respect of dams other than specified dams.

42. (1) Where a dam is located outside the territory of India and the Central Dam Safety Organisation *suo motu* or on receipt of information from any person or organisation or authority or source *prima facie* is of the opinion that measures are required to be taken to ensure safety of such dams and failure of which may endanger the life and property of people located in India, it shall in writing submit an intimation thereof to the Central Government indicating therein the likely damages which may arise due to failure of such dams and the safety measures required to be taken in respect of such dam.

Measures of safety of dams located outside territory of India.

(2) The Central Government on receipt of intimation under sub-section (1) or otherwise shall endeavor to take suitable measures to ensure safety of such dams by entering into treaty, agreement or convention with any other country or countries concerned with the safety of such dams and lay a report in respect of such measures before both the Houses of Parliament at the earliest.

43. The provisions of this Act shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force.

Effect of Act on other laws.

Power of Central Government to give directions.

44. The Central Government may give such directions, as it may consider necessary, to the State Government and owner of the specified dams for the effective implementation of the provisions of this Act.

Power of the Central Government

45. (1) The Central Government may, by notification, make rules to carry out the provisions of this Act.
(2) In particular, and without prejudice to the foregoing

to make rules. power, such rules may provide for all or any of the following matters, namely:—
(a) the time and place of the meetings of the National Committee and the procedure to be followed at such meetings under sub-section (1) of section 6;
(b) the fee and allowances paid to the specialists or expert Members and Specialists or expert invitees under sub-section (4) of section 6;
(c) the functions, powers and terms and conditions of service of the employees of the Central Dam Safety Organisation under sub-section (2) of section 10;
(d) any other matter which is to be or may be, prescribed or in respect of which provision is to be made by the Central Government by rules.

Power of State Government to make rules. **46.** (1) The State Government may, by notification, make rules to carry out the provisions of this Act.
(2) In particular, and without prejudice to the foregoing power, such rules may provide for all or any of the following matters, namely:—
(a) the terms and conditions of the Chairperson and Members of the State Committee and the procedure in regard to transaction of business at these meetings of the said Committee under sub-section (3) of section 12;
(b) the constitution and functions of State Dam Safety Organisation under subsection (2) of section 15;
(c) the constitution and functions of the State Dam Safety Cell under sub-section (2) of section 16;
(d) any other matter which is to be or may be, prescribed or in respect of which provision is to be made by the State Government by rules.

47. (1) The Central Dam Safety Organisation may make regulation consistent with this Act and the rules made there under to carry out the purposes of this Act.
(2) In particular, and without prejudice to the generality of the foregoing power, such regulations may provide for all or any of the following matters, namely: —
(a) the constitution and functions of the Non-State Dam Safety Organisation under sub-section (3) of section 17;
(b) the constitution and functions of the Non-State Dam Safety Cell under subsection (3) of section 18;
(c) the details pertaining to the maintenance of Log Books by the State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell under section 20;
(d) the qualifications and experience of the individuals

Power to make regulations.

responsible for safety of specified dams under sub-section (1) of section 25;

(e) the qualifications and experience of the engineers responsible for investigation, design and construction of specified dams under sub-section (2) of section 28;

(f) the checklist or format or proforma or guidelines of inspections under clause (a) of sub-section (3) of section 31;

(g) the minimum number of set of instrumentations to be installed in the new specified dam under sub-section (1) of section 32;

(h) the frequency of risk assessment studies to be carried out under clause (a) of sub-section (2) of section 35;

(i) the format or manner with respect to such other data as received under subsection (3) of section 40; and

(j) any other matter which is to be specified or in respect of which provision is to be made by the Central Dam Safety Organisation by regulations.

Power to remove difficulties.

48. (1) If any difficulty arises in giving effect to the provisions of this Act, the Central Government may, by order, published in the Official Gazette, make such provisions not inconsistent with the provisions of this Act, as may appear to be necessary or expedient for removing the difficulty:

Provided that no order shall be made under this section after the expiry of two years from the date of commencement of this Act.

(2) Every order made under this section shall, as soon as may be after it is made, be laid before each House of Parliament.

Rules and regulations to be laid before Parliament and State Legislature.

49. (1) Every rule and every regulation made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both the Houses agree in making any modification in the rule or regulation or both Houses agree that the rule or regulation should not be made, the rule or regulation shall thereafter have effect only in such modified form or be of no effect, as the case may be, so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or regulation.

(2) Every rule made by a State Government under this Act shall be laid as soon as may be, after it is made, before the State Legislature, where it consists of two Houses, or where such legislature consists of one House, before that House.

STATEMENT OF OBJECTS AND REASONS

Dams are critical infrastructure constructed with large investments for multi-purpose uses such as irrigation, power generation, flood moderation and supply of water for drinking and industrial purposes. An unsafe dam constitutes a hazard to human life, ecology and public and private assets (including crops, houses, buildings, canals and roads). Therefore, the safety of dam is a matter of great concern to the general public and becomes a national responsibility to take necessary steps to ensure the safety of dams.

2. The Government of India, keeping the importance of safety of dams, constituted a Standing Committee in 1982, under the Chairmanship of Chairman, Central Water Commission, to review the existing practices and to evolve unified procedure for safety of dams in India. The Standing Committee in its report dated the 10th July, 1986 has recommended for unified dam safety procedures for all dams in India and the necessary legislation on dam safety. Initial efforts for dam safety legislation were directed towards enactment of appropriate legislation by respective State Governments, and accordingly the State of Bihar enacted the Dam Safety Act, 2006. However, some of the States favoured the idea of a uniform central legislation on dam safety. The States of Andhra Pradesh and West Bengal have adopted resolutions in their States for an Act of Parliament.

3. In view of the above, it is necessary to enact a law to provide for proper surveillance, inspection, operation and maintenance of dams of certain parameters in India to ensure their safe functioning and thereby to protect the persons and property against risks associated with dam failure. In the first instance, the provisions of the proposed legislation shall apply to the States of Andhra Pradesh, West Bengal and the Union territories, and also to their public sector undertakings and to the public sector undertakings of the Central Government. It shall also apply to such owners of specified dams other than those owned or controlled by the Central Government or the State Government. However, the provisions of the proposed legislation shall also apply to other States if resolution to that effect is passed by the Houses of Legislature of those States under clause (1) of article 252 of the Constitution.

4. The proposed Dam Safety Bill, 2010, *inter alia*, provides for—

(a) constitution of the National Committee on Dam Safety, consisting of a Chairperson, eight members, specialists or experts in the field of dam safety and a Member-Secretary, to ensure proper surveillance, inspection, operation and maintenance of all specified dams and ensure their safe functioning;

(b) establishment of the Central Dam Safety Organisation in the Central Water Commission to provide, *inter alia*, the technical and managerial assistance to the State Dam Safety Organisations or the State Dam Safety Cells, the Non-State Dam Safety Organisations or the Non-State Dam Safety Cells; to settle the unresolved points of issues between the State Dam Safety Organisation or State Dam Safety Cell of two States, or between the State Dam Safety Organisation or State Dam Safety Cell of a State and the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell, etc.;

(c) constitution of the State Committee on Dam Safety by the State Governments having more than twenty specified dams, to ensure proper surveillance, inspection, operation and maintenance of all specified dams in that State and to ensure their safe functioning;

(d) establishment of the State Dam Safety Organisations in States having more than twenty specified dams to discharge such functions as may be prescribed by the concerned State Government;

(e) establishment of the State Dam Safety Cells in States, having twenty or less than twenty number of specified dams, to discharge such functions as may be prescribed by the concerned State Government;

(f) establishment of Non-State Dam Safety Organisations by the dam owners, (other than the Central Government or State Governments) having more than ten specified dams, to discharge such functions as may be specified by the Central Dam Safety Organisation or the State Dam Safety Organisation;

(g) establishment of Non-State Dam Safety Cell by the dam owner (other than the Central Government or State Governments), having ten or less than ten numbers of specified dams, to discharge such functions as may be specified by the Central Dam Safety Organisation or the State Dam Safety Organisation;

(h) an obligation upon every owner of a specified dam to establish operational and maintenance set up for undertaking pre-monsoon and post-monsoon inspections and special inspections during and after floods, earthquakes, etc.;

(i) an obligation upon the concerned State Dam Safety Organisation, Non-State Dam Safety Organisations, State Dam Safety Cell and Non-State Dam Safety Cell to arrange for comprehensive safety evaluation of every specified dam at least once in every ten years;

(j) an obligation upon the Central Dam Safety Organisation to forward its annual report to the National Disaster Management Authority and the State Dam Safety Organisation or State Dam Safety Cell, Non-State Dam Safety Organisation or Non-State Dam Safety Cell to forward their annual reports on safety status of dams to the concerned State Disaster Management Authority;

(k) empowers the Central Government and the State Governments to make rules to carry out the provisions of the proposed legislation.

5. The Notes on Clauses explain in detail the various provisions contained in the Bill.

6. The Bill seeks to achieve the above objectives.

NEW DELHI;
KUMAR BANSAL
The 18th August, 2010.

PAWAN

NOTES ON CLAUSES

Clause 1.—This clause relates to the short title, extent and commencement of the proposed legislation. This clause enables the Central Government to appoint a date by notification with respect to the commencement of the proposed legislation in the States of Andhra Pradesh, West Bengal and in all the Union territories. With respect to any other State, the proposed legislation shall come into force on the date of adoption of the enacted legislation under clause (1) of article 252 of the Constitution.

Clause 2.—This clause relates to application of the proposed legislation.

This clause provides that the provisions of the proposed legislation applies — (a) in the first instance, to the whole of the States of Andhra Pradesh, West Bengal and to all the Union territories; and it shall also apply to such other State which adopts the enacted legislation by resolution passed in that behalf under clause (1) of article 252 of the Constitution; (b) to every owner of a specified dam, being public sector undertaking or institution or a body owned or controlled by the Central Government or the State Government; and (c) to every owner of a specified dam, being undertaking or company or institution or a body other than those owned or controlled by the State Government or the Central Government.

Clause 3.— This clause defines certain expressions used in the Bill.

Clause 4.— This clause relates to constitution of the National Committee on Dam Safety.

This clause provides for the constitution of a National Committee to be known as the "National Committee on Dam Safety" on such date as the Central Government may, by notification, appoint and the composition of said Committee is specified in the said clause.

Clause 5.— This clause relates to the tenure of specialists or experts as Members of the National Committee.

This clause provides that tenure of specialists or experts as Members of the National Committee shall be valid for a period of three years from the date of issuance of the notification.

Clause 6.— This clause relates to the meetings of the National Committee on Dam Safety.

This clause provides that the National Committee shall meet at such times and places and shall observe such rules of procedure in regard to the transaction of business at its meetings (including quorum at such meetings) as may be prescribed by the Central Government. This clause further provides that the National Committee may invite such specialists or experts in Dam Safety, as it may consider appropriate, for the discharge of its functions. This clause also contains the provisions relating to the expenditure incurred, the fee and allowances paid to the specialists or experts and the method of deciding of questions which come up before any meeting of the National Committee.

Clause 7.— This clause relates to the vacancies, etc., not to invalidate proceedings of the National Committee.

This clause provides that no act or proceeding of the National Committee shall be invalid merely by reason of — (a) any vacancy in, or any defect in the constitution of the National Committee; or (b) any defect in the appointment of a person acting as a member of the National Committee; or (c) any irregularity in the procedure of the National Committee not affecting the merits of the case.

Clause 8.— This clause relates to the functions of National Committee. This clause provides that the National Committee shall discharge such functions as may be necessary to ensure proper surveillance, inspection, operation and maintenance of all specified dams in the country and ensure their safe functioning. The functions of the National Committee shall include,— (a) to monitor broadly the functioning of State Dam Safety Organisation or State Dam Safety Cell, as the case may be, and Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be; (b) to monitor and evaluate dam safety practices in various States and suggest improvements to bring dam safety practices in conformity with latest international practices consistent with Indian conditions; (c) to act as a forum for exchange of views on techniques to be adopted for remedial measures to relieve distress conditions in dams and appurtenances; (d) to analyse the causes of failures in cases of major dam failures and suggest changes in the plan philosophy, specifications, construction, operation and maintenance practices in order to avoid reoccurrence of such failures; (e) to evolve comprehensive dam safety management approach as an integration of dam safety evaluation, risk assessment, and risk management; and (f) to render advise on any specific matter relating to safety of dams which may be referred to it by the Central Government or the State Government. This clause further provides that the knowledge and information gathered or generated by the National Committee on Dam Safety shall be disseminated by the Central Dam Safety Organisation to all State Dam Safety Organisations or State Dam Safety Cells, as the case may be, and Non-State Dam Safety Organisations or Non-State Dam Safety Cells, as the case may be, for achieving uniform standard in dam safety practices. This clause also provides that the Central Dam Safety Organisation shall act as Secretariat of the National Committee for the purpose of discharging its functions under the proposed legislation.

Clause 9.— This clause relates to the establishment of Central Dam Safety Organisation.

This clause provides that the Central Government shall, for the purposes of the proposed legislation, by notification, establish a separate division in the Ministry of Water Resources, in the Central Water Commission, an Organisation to be known as the "Central Dam Safety Organisation" to be headed by an officer not below the rank of Chief Engineer.

Clause 10.— This clause relates to the appointment of employees of the Central Dam Safety Organisation.

This clause provides that the Central Government shall, for the purpose of enabling the Central Dam Safety Organisation to perform its functions under the proposed legislation, provide such number of officers, and other employees as they may consider necessary. This clause further provides that the functions, powers and terms and conditions of service of the employees shall be such as may be prescribed by the Central Government.

Clause 11.— This clause relates to the functions of Central Dam Safety Organisation. This clause provides that the Central Dam Safety Organisation shall, — (a) provide the state-of-the-

art technical and managerial assistance to the State Dam Safety Organisations or State Dam Safety Cells, as the case may be, and Non-State Dam Safety Organisations or Non-State Dam Safety Cells, as the case may be; (b) maintain a national level data-base of all specified dams in the country; (c) maintain liaison with the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, of each State and the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, of each dam owning Organisation for standardisation of dam safety related data and practices, and related technical or managerial assistance; (d) issue and update from time to time the standardised guidelines and check-lists or format or proforma for routine inspections as well as detailed investigations of dams and appurtenances; (e) maintain the records of major dam failures in the country; (f) examine wheresoever a need is felt, either through its own engineers or through a panel of experts, the cause of any major dam failure, and submit its report to the National Committee on Dam Safety; and (g) look into unresolved points of issue between the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, of two States, or between State Dam Safety Organisation or State Dam Safety Cell, as the case may be, of a State and the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, of a owner of a specified dam, for a proper solution. This clause further provides that all decisions of Central Dam Safety Organisation shall be final and binding.

Clause 12.— This clause relates to the constitution of State Committee on Dam Safety.

This clause provides for the constitution of a State Committee to be known as the State Committee on Dam Safety on such date as the State Government may, by notification, appoints. This clause further provides that the States in which the numbers of specified dam are less than twenty, such State may not constitute State Committee under this Act. This clause also provides that the State Committee on Dam Safety shall consist of a Chairperson and such number of members as may be determined by the State Government. This clause also provides that the provisions relating to the terms and conditions subject to which the Chairperson and members of the State Committee may be appointed and the time, place of the meetings of the State Committee shall be such as may be prescribed by the State Government.

Clause 13.— This clause relates to the functions of State Committee on Dam Safety.

This clause provides that the State Committee shall discharge such functions as may be necessary to ensure proper surveillance, inspection, operation and maintenance of all specified dams in that State and ensure their safe functioning. This clause further provides that the functions of the State Committee shall include to,—(a) review the work done by the State Dam Safety Organisation; (b) recommend the appropriate measures to be taken in relation to the safety of specified Dam; (c) review the progress on measures recommended in relation to dam safety; (d) establish priorities for investigations undertaken under subsection (2) of section 19; (e) in cases where investigations with respect to safety of any specified dam in the State had already been undertaken, to order further investigations in relation to safety of such specified dam and assign responsibilities for execution including the use of non-departmental resources, and need for the association of independent experts with next phase of such investigations; (f) establish priorities among projects needing remedial safety works; and (g) keep the State Government informed of its activities and recommendations.

Clause 14.— This clause relates to the functions of State Committee to be discharged by National Committee in certain cases. This clause provides that in States where State Dam Safety Committee are not constituted and in all cases of Central undertakings and private entities or bodies, the periodical reviews of the works or progress or prioritisation by the concerned State Dam Safety Organisation or State Dam Safety Cell and Non-State Dam Safety Organisation or Non-State Dam Safety Cell shall be undertaken by the National Committee on Dam Safety through Central Dam Safety Organisation.

Clause 15.— This clause relates to the establishment of State Dam Safety Organisation. This clause provides that every State having more than twenty numbers of specified dams owned by it shall constitute a body called "State Dam Safety Organisation" headed by an officer not below the rank of Chief Engineer or equivalent. This clause further provides that the constitution and functions of the State Dam Safety Organisation shall be such as may be prescribed by the State Government. This clause also provides that the State Dam Safety Organisation shall consist of the persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydro-mechanical, hydrology, geo-technical investigation and instrumentation or such other field as the State Government may consider appropriate. This clause also provides that the administrative and other expenses of the State Dam Safety Organisation shall be borne by the concerned State Government.

Clause 16.— This clause relates to the establishment of the State Dam Safety Cell in certain cases.

This clause provides that every State having twenty or less than twenty numbers of specified dams owned by it shall establish a body called "State Dam Safety Cell" headed by an officer not below the rank of Superintendent Engineer or its equivalent. This clause further provides that the establishment and functions of the State Dam Safety Cell shall be prescribed by the State Government. This clause also provides that the State Dam Safety Cell shall consist of the persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydro-mechanical, hydrology, geo-technical investigation and instrumentation or such other field as the State Government may consider appropriate. This clause also provides that the administrative and other expenses of the State Dam Safety Cell shall be borne by the concerned State Government.

Clause 17.— This clause relates to the establishment of Non-State Dam Safety Organisations.

This clause provides that every dam owner (other than Central or State Governments) having more than ten numbers of specified dams owned by it, shall establish a body called "Non-State Dam Safety Organisation" headed by an officer not below the rank of Chief Engineer or equivalent. This clause further provides that the Non-State Dam Safety Organisation shall consist of the persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydromechanical, hydrology, geo-technical investigation and instrumentation or such other field as the dam owner may consider appropriate. This clause also provides that in the case of owner of a specified dam, being the undertakings or institution or a company or a body owned or controlled by the Central Government or by the Central Government and State Government, or any undertakings or

institution or a body owned or controlled by the Central Government or the State Government and other private entities or bodies, the constitution and functions of the Non-State Dam Safety Organisation shall be specified by regulations made by the Central Dam Safety Organisation. This clause also provide that in the case of owner of a specified dam being the undertaking or an institution or a body owned or controlled by the State Government or the undertaking or an institution or a body owned or controlled by it or both, the constitution and functions of the Non-State Dam Safety Organisation shall be such as may be specified by the State Government.

Clause 18.— This clause relates to the establishment of Non-State Dam Safety Cell.

This clause provides that every owner of a specified dam (other than Central or State Governments), having ten or less than ten number of specified dams owned by it, shall establish a body called "Non-State Dam Safety Cell" headed by an officer not below the rank of Superintendent Engineer or its equivalent. This clause further provides that the Non-State Dam Safety Cell shall consist of the persons having professional qualifications and sufficient experience in the field of safety of dams preferably from the areas of dam-designs, hydromechanical, hydrology, geo-technical investigation and instrumentation or such other field as the dam owner may consider appropriate. This clause also provides that in the case of owner of a specified dam, being the public sector undertakings or institution or a body owned or controlled by the Central Government; or by the Central Government and the State Government or any undertakings or institution or a body owned or controlled by the Central Government or State Government and other private entities or bodies, the constitution and functions of the Non-State Dam Safety Cell shall be such as may be specified by regulations made by the Central Dam Safety Organisation. This clause also provides that in the case of owner of a specified dam being the undertaking or institution or a body owned or controlled by the State Government or the undertaking or institution or a body owned or controlled by it or both, the constitution and functions of the Non-State Dam Safety Cell shall be such as may be specified by the State Government.

Clause 19.—This clause relates to the surveillance and inspection.

This clause provides that every State Dam Safety Organisation, State Dam Safety Cell, Non-State Dam Safety Organisation and Non-State Dam Safety Cell shall, — (a) keep perpetual surveillance; (b) carry out routine and special inspections; (c) monitor the operation and maintenance, of all specified dams falling under their jurisdiction to ensure continued safety of such specified dams and take such steps as may be necessary in this regard. This clause further provides that the State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell shall, for the purpose of enabling it to make decisions compatible with public safety make or cause to be made such investigations and shall gather or cause to be gathered such data as may be required for proper review and study of the various features of the design, construction, repair and enlargement of dams, reservoirs and appurtenances under their control.

Clause 20.— This clause relates to maintenance of log books.

This clause provides that every concerned State Dam Safety Organisation or State Dam Safety Cell, or Non-State Dam Safety Organisation or Non-State Dam Safety Cell, shall maintain a log book or Data-base for each specified dam recording therein all activities related to the

surveillance and inspection and all important events related to the dam safety and such other details as may be specified by regulations by the Central Dam Safety Organisation.

Clause 21.— This clause relates to the instructions on safety of specified dams.

This clause provides that every State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell shall from time to time render advice to the concerned owner of a specified dam on the safety measures required to be taken with respect to any dam. This clause further provides that it shall be the duty of every State Dam Safety Organisation or State Dam Safety Cell, Non-State Dam Safety Organisation or Non-State Dam Safety Cell to ensure necessary action in monitoring and implementing the instructions.

Clause 22.— This clause relates to the funds for maintenance and repairs.

This clause provides that all State Governments and other owners of specified dam shall earmark sufficient and specific funds for maintenance and repairs of the specified dams and to implement the recommendations of the State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, and the Non-State Dam Safety Organisation or, the Non-State Dam Safety Cell, as the case may be.

Clause 23.— This clause relates to the technical documentation.

This clause provides that every State Government and every owner of specified dam shall compile all technical documentations concerning hydrology, dam foundation, structural engineering of specified dam, watershed upstream of dam, and nature or use of land downstream of dam along with information on all resources or facilities of economic or logistic importance which are likely to be affected due to operation of the dam, and kept for record in the concerned State Dam Safety Organisation or State Dam Safety Cell or the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be. This clause further provides that the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, shall furnish all such information to the Central Dam Safety Organisation and concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be, as and when required by them. This clause also provides that every State Government and every owner of specified dam shall ensure that the State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell, have been adequately equipped with the state-of-the-art of information technology tools to store, retrieve and distribute the data related to the dam safety and dam performance.

Clause 24.— This clause relates to the reporting of the State Dam Safety Organisation or the State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell. This clause provides that the State Dam Safety Organisation or the State Dam Safety Cell shall be responsible to and functionally report to the highest engineering or technical authority of the concerned State Government. This clause further provides that the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell shall be responsible to and functionally report to the highest engineering or technical officer of the owner of the specified dam.

Clause 25.— This clause relates to the individual responsible for safety of specified dams to be qualified.

This clause provides that every individual responsible for safety of specified dams and all activities related thereto shall possess such qualifications and experience as may be specified by the Central Dam Safety Organisation. This clause further provides that every individual shall undergo such training programmes and at such intervals as may be specified by the Central Dam Safety Organisation.

Clause 26.— This clause relates to the jurisdiction of the State Dam Safety Organisation or State Dam Safety Cell and Central Dam Safety Organisation. This clause provides that all specified dams, shall fall under the jurisdiction of the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, of the State in which dam is situated in matters related to dam inspections, analysis of information, reports or recommendations regarding safety status, and remedial measures to be undertaken to improve dam safety; and in all such matters full co-operation shall be extended by the concerned Non-State Dam Safety Organisation or Non-State Dam Safety Cell and the dam owner. This clause further provides that the authorised representative of the Central Dam Safety Organisation or State Dam Safety Organisation may enter upon any part of the specified dam or its site as and when required. This clause also provides that the Central Dam Safety Organisation and concerned State Dam Safety Organisation or State Dam Safety Cell in cases of dams being found to be endangered on account of their age, degeneration, degradation, structural or other impediments, shall suggest such remedial measures on such operational parameters as it may consider necessary.

Clause 27.—This clause relates to the cost of investigation to be borne by the dam owner.

This clause provides that all costs to be incurred by Central Dam Safety Organisation or State Dam Safety Organisation or State Dam Safety Cell on any form of investigation agreed by the owner or felt necessary by Central Dam Safety Organisation or State Dam Safety Organisation or State Dam Safety Cell, including payments given to the consultants and panel of experts, shall be paid by the owner of concerned specified dam.

Clause 28.— This clause relates to the construction or operation or alteration of dams.

This clause provides that all new specified dams shall be investigated, designed and constructed by Organisations recognised by the Government and consisting of such qualified, experienced and competent engineers, as may be specified by the Central Dam Safety Organisation. This clause further provides that the construction of any new specified dam or the alteration or enlargement of any existing specified dam shall be taken up only with the approval of the Competent Authority, as may be specified by the Central Government or the concerned State Government, as the case may be. This clause also provides that every owner of the dam shall be responsible for operation, maintenance and safety of the dams owned by it and shall ensure that a documented Operation and Maintenance Manual is kept at all times at each of his dam and sufficient number of trained Operation and Maintenance engineers or technical persons are posted at such dams.

Clause 29.— This clause relates to the initial filling of reservoirs.

This clause provides that before initial filling of any reservoir of a specified dam, the organisation responsible for its design shall draw the filling criteria and prepare a initial filling plan, with adequate time for monitoring and evaluating the performance of the dam and its appurtenances as the reservoir is being filled for the first time. This clause further provides that before the filling of the reservoir is taken up, the State Dam Safety Organisation or State Dam Safety Cell or the concerned Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, shall arrange for safety inspection of the dam either through its own engineers or by an independent panel of experts, who shall also examine the initial filling programme and prepare a detailed report in respect thereof. This clause also provides that the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, shall forward the report of inspection or examination to the concerned State Dam Safety Organisation or State Dam Safety Cell.

Clause 30.— This clause relates to the responsibility of dam owner.

This clause provides that nothing contained in this Act shall be construed to absolve an owner of a dam of the duties, obligations or liabilities incidental to the construction, operation, maintenance and supervision of the dam or reservoir.

Clause 31.— This clause relates to periodical inspection. This clause provides that every owner of a specified dam shall establish operational and maintenance set up for each dam and through such set up, undertake pre-monsoon and post-monsoon inspections of each of its dams to be done,— (i) in the case of specified dams, being of hundred meters height or above, by the concerned Chief Engineer; (ii) in the case of specified dams, being of thirty meters height or above, but less than hundred meters height, by the concerned Superintendent Engineer or higher level officer; (iii) in the case of specified dams, being of fifteen meters height or above, but less than thirty meters height, by the concerned Executive Engineer or higher level officer; (iv) in the case of specified dams, being of ten meters height or above, but less than fifteen meters height, by the concerned Assistant Engineer or higher level officer. This clause further provides that every owner of a specified dam shall undertake special inspections, of each of its dam to be undertaken by the Engineers during and after floods, after earthquake, and if any sign of distress or unusual behaviour is noticed in the dam, appurtenance or reservoir fringes. This clause also provides the responsibilities to be fulfilled by every owner of a specified dam for the purpose of inspection.

Clause 32.— This clause relates to the instrumentations to be installed in every specified dam.

This clause provides that every owner of a specified dam shall have a minimum number of sets of instrumentations at all times for monitoring the performance of dam in respect of all its specified dams. This clause further provides that in case the instrumentation installed is required to be replaced, such instrumentation shall be replaced in such manner so as to maintain the continuity of readings exhibited in such instrumentations. This clause also provides that every owner of specified dam shall maintain a record of readings of the instrumentation and forward such readings, to the State Dam Safety Organisation or the State Dam Safety Cell or the Non-State Dam Safety Organisation or the Non-State Dam Safety Cell concerned, in the form, manner and at such interval specified by them and the State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell

concerned shall analyse the readings and wheresoever's required to submit observations or advice to the highest engineering or technical authority of the owner of dam. This clause also provides that the Non-State Dam Safety Organisation or Non-State Dam Safety Cell shall also forward the copy of its observations or advice to the concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be.

Clause 33.— This clause relates to the installations of hydro-meteorological station.

This clause provides that every owner of specified dam shall establish a hydro-meteorological station in the vicinity of at each such dam and every hydrometeorological station shall be capable of recording data relating to, among other parameters, rainfall, atmospheric pressure, maximum or minimum temperature, and humidity, wind speed, wind direction, height of waves and reservoir-water temperature.

Clause 34. This clause relates to installations of seismological station.

This clause provides that every owner of a specified dam, in the case of specified dam being of thirty meters height or above or specified dam being falling in the seismic zone III or above, shall establish a seismological station in the vicinity of each such dam. This clause further provides that every owner of specified dam shall collect, compile process and store data at a suitable location.

Clause 35.— This clause relates to the Emergency Action Plan and Disaster Management.

This clause provides that the every owner of the specified dam shall, in respect of in each specified dam, establish, —(a) well designed hydro-meteorological network and an inflow forecasting system; (b) an emergency flood warning system for the probable flood affected areas downstream of the dam; (c) test periodically for its aptness; (d) instal or adopt such scientific and technical instrument which are invented or adopted after the commencement of this Act for the purpose of ensuring the safety of dam; and (e) to provide the information relating to maximum anticipated inflows and outflows including flood warning and an adverse impact of the same, if any, on persons and property towards the upstream or downstream of the dam, to the concerned authorities and also make available such information in public domain. This clause further provides that every owner of a specified dam, for each of its dam shall,— (a) carry out risk assessment studies at an interval of twenty years or at such interval as may be specified by the Central Dam Safety Organisation; (b) in respect of each specified dam existing on or before the commencement of this Act prepare emergency action plan within five years from the date of commencement of this Act and thereafter update such plans at regular intervals; (c) in respect of each specified dam which are constructed and filled initially after the commencement of this Act, prepare emergency action plan before the initial filling of the reservoir and thereafter update such plans at regular intervals. This clause also provides that the Emergency Action Plan shall, — (a) set out the procedures to be followed for the protection of persons and property upstream or downstream of the dam in the event of an actual or imminent dam failure or to mitigate the effects of the disaster; (b) include therein, — (i) in advance the type of emergencies which are likely to occur in the operation of any reservoir; (ii) identification of the likely catastrophic flood in the event of any failure of the dam, along with probable areas, population, structures and installations likely to be adversely affected due to flood water released from the reservoir; (iii) warning procedures, inundation maps and advance

preparations for handling efficiently and in the best possible manner the likely adverse situations especially to avoid loss of human life; (iv) such other matters which may have regard to the geographical condition, size of the dam and other relevant factors may be necessary. This clause also provides that the Emergency Action Plan shall be put into action as and when conditions arise which are or likely to be hazardous to a dam or potentially hazardous to public safety, infrastructure, other property or the environment and every owner of the specified dam shall, while preparing and updating the emergency action plan, undertake a consultation process with all disaster management agencies and other concerned departments entrusted with disaster management and relief in the area likely to be affected and owners of other dams in the immediate vicinity likely to be affected so as to bring transparency and allay any unwarranted fear on dam safety issues.

Clause 36.— This clause relates to the assistance to other disaster management authorities.

This clause provides that every owner of specified dam, organisations and authorities under this Act shall render assistance if so required by the authorities under the Disaster Management Act, 2005 to meet any disaster or emergency arising out of the specified dams.

Clause 37.— This clause relates to the obligation for Comprehensive Dam Safety Evaluation.

This clause provides that the State Dam Safety Organisation or State Dam Safety Cell or the concerned Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, shall, at least once in ten years, arrange for comprehensive safety evaluation of every specified dam falling under them either through their own engineers or by an independent panel of experts for the purpose of determining the conditions of the specified dam and reservoir. This clause further provides that the exact frequency of comprehensive evaluation shall be based on previous assessments, complexity of specified dam, operating history, recently held rehabilitation works, dam performance, age of dam and the hazard potential of dam.

Clause 38.— This clause relates to the compulsory comprehensive evaluation in certain cases.

This clause provides that the comprehensive evaluation shall be compulsory in the case of,—(a) major modification to the original or design criteria; (b) discovery of unusual condition at the dam or reservoir rim; and (c) after an extreme hydrological or seismic event.

Clause 39.— This clause relates to the reports of comprehensive evaluation.

This clause provides that the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, shall report the results of the comprehensive safety evaluation directly to the highest engineering or technical authority of concerned State Government similarly the Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, shall report the results of the comprehensive safety evaluation, to the highest engineering or technical authority of the Organisation and to the concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be. This clause further provides that the comprehensive evaluation reports shall include, but not be limited to—(a) assessment of the condition of the structure based on the visual observations and available data on the design, hydrology, construction, operation, maintenance, performance of the structure; (b) recommendations for any emergency

measures or actions, if required, to assure the immediate safety of the structure; (c) recommendations for remedial measures and actions related to design, construction, operation, maintenance and inspection of the structure, if required; (d) recommendations for additional detailed studies, investigations and analyses, if required; and (e) recommendations for improvements in routine maintenance and inspection of dam, if required. This clause also provides that in case where the comprehensive safety evaluation resulted in recommendations for a remedial action, the State Dam Safety Organisation or State Dam Safety Cell and the concerned Non-State Dam Safety Organisation or Non-State Dam Safety Cell shall pursue with the concerned authorities or owner of the specified dam, as the case may be, to ensure that remedial measures are carried out in time, for which the State Government or such owner shall provide adequate funds and in case where there are unresolved points of issues emerging between an independent panel of experts and the owner of the specified dams or concerned authorities, as the case may be, the matter shall be referred to the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, and in case, no agreement is arrived at, the matter shall be referred to the Central Dam Safety Organisation which shall give required guidance wherever necessary and send their recommendations to the State Government concerned for their implementation.

Clause 40.— This clause relates to the annual report of safety status of dams.

This clause provides that every Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, shall prepare and forward the annual report within three months of the expiry of the preceding financial year, to each of the concerned State Dam Safety Organisation or State Dam Safety Cell, as the case may be, and to the Central Dam Safety Organisation. Similarly every State Dam Safety Organisation or State Dam Safety Cell shall prepare annual report within six months of the expiry of the preceding financial year of its activities and safety status of dams in the State and such report shall be forwarded to the concerned State Government for placing it before the concerned State Legislature and to the Central Dam Safety Organisation. This clause further provides that the State Dam Safety Organisation or State Dam Safety Cell, as the case may be, of each State and the Non-State Dam Safety Organisation or Non-State Dam Safety Cell of each owner of a specified dam shall provide to Central Dam Safety Organisation, documentation of the projects, report of enquiries into failure and such other data as required in such format or manner as it may be specified by the regulations made by the Central Dam Safety Organisation. This clause also provides that the Central Dam Safety Organisation shall prepare a consolidated annual report of the dam safety activities in the country and submit the same to the Central Government. This clause also provides that the Central Dam Safety Organisation shall forward its annual report to the National Disaster Management Authority and also make available such reports in public domain, similarly the State Dam Safety Organisation or the State Dam Safety Cell, as the case may be, of each State and Non-State Dam Safety Organisation or Non-State Dam Safety Cell, as the case may be, of each owner of a specified dam shall forward their annual report to the concerned State Disaster Management Authority and also make available such reports in public domain.

Clause 41.— This clause relates to the safety measures in respect of dams other than specified dams.

This clause provides that every owner of the dam other than specified dams shall undertake such measures as may be necessary to ensure safety of the dams and shall comply with the instructions and guidelines which may be issued by the concerned State Governments or the authorities.

Clause 42.— This clause relates to the measures of safety of dams located outside territory of India.

This clause provides that where a dam is located at outside territory of India and the Central Dam Safety Organisation *suo motu* or on receipt of information from any person or organisation or authority or source *prima facie* is of the opinion that measures are required to be taken to ensure safety of such dams and failure of which would may endanger the life and property located in India, it shall in writing submit an intimation thereof to the Central Government indicating therein the likely damages which may arise due to failure of such dam and the safety measures required to be taken in respect of such dam. This clause further provides that the Central Government on receipt of intimation or otherwise shall endeavour to take suitable measures to ensure safety of dams by entering into treaty, agreement or convention with any other country or countries concerned with the safety of such dam and lay a report in respect of such measures before both Houses of Parliament.

Clause 43.— This clause relates to the effect of Act on other laws.

This clause provides that the provisions of this proposed legislation shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force.

Clause 44.— This clause relates to the power of Central Government to give directions.

This clause provides that the Central Government may give such directions as it may consider necessary to the State Government and owner of the specified dam for the effective implementation of the provisions of this proposed legislation.

Clause 45.— This clause relates to the power of the Central Government to make rules.

This clause confers power upon the Central Government to make rules in respect of matters specified in the said clause.

Clause 46.— This clause relates to the power of the State Government to make rules.

This clause confers the power upon the State Government to make rules in respect of matters specified in the said clause.

Clause 47.— This clause relates to the power of the Central Dam Safety Organisation to make regulations.

This clause confers power upon the Central Dam Safety Organisation to make regulations consistent with this Act and the rules made thereunder to carry out the purposes of this Act.

Clause 48.— This clause relates to the power to remove difficulties.

This clause empowers the Central Government to remove any difficulty which may arise in giving effect to the provisions of the proposed legislation.

Clause 49.— This clause relates to the rules and regulations to be laid before Parliament and State Legislatures.

This clause provides that the rules made by the Central Government shall be laid before each House of Parliament. Similarly, every rule made by the State Government shall be laid before the State Legislature.

FINANCIAL MEMORANDUM

Clause 4 of the Bill provides for constitution of a National Committee on Dam Safety consisting of a Chairperson and eight *ex officio* Members, and other specialists or experts in the field of dam safety as Members and invitees and a Member Secretary. Clause 9 of the Bill provides for establishment of Central Dam Safety Organisation in Central Water Commission. Clause 10 of the Bill provides for the appointment of officers and other employees of the Central Dam Safety Organisation. Clause 40 of the Bill provides to prepare an annual report on the activities related to Dam Safety. The recurring expenditure of rupees fifty lakhs per annum is anticipated for meeting expenses of the National Committee on Dam Safety, Central Dam Safety Organisation, expenses relating to fee and allowances for experts and specialists and for the preparation of annual reports, etc., which would be met under the existing schemes of the Ministry of Water Resources. In respect of clauses 9 and 10 of the Bill, no additional post of officers or staff is envisaged presently.

The provisions of the Bill will not involve any other expenditure of recurring or nonrecurring nature.

MEMORANDUM REGARDING DELEGATED LEGISLATION

Sub-clause (1) of clause 45 empowers the Central Government to make rules for the purpose of carrying out the provisions of the proposed legislation. Sub-clause (2) specifies the matters in respect of which such rules may be made. These matters, *inter alia*, include— (a) the times and places of the meetings of the National Committee on Dam Safety and the procedure to be followed at such meetings under sub-section (1) of section 6; (b) the fee and allowances paid to the specialists or expert members and specialists or expert invitees under sub-section (4) of section 6; (c) the functions, powers and terms and conditions of service of the employees of the Central Dam Safety Organisation under sub-section (2) of section 10; (d) any other matter which is to be or may be, prescribed or in respect of which provision is to be made by the Central Government by rules.

2. Sub-clause (1) of clause 46 empowers the State Government to make rules for the purpose of carrying out the provisions of the proposed legislation. Sub-clause (2) specifies the matters in respect of which such rules may be made. These matters, *inter alia*, include —(a) the terms and conditions of the Chairperson and members of the State Committee on Dam Safety and the

procedure in regard to transaction of business at these meetings of the said Committee under sub-section (3) of section 12; (b) the constitution and functions of the State Dam Safety Organisation under sub-section (2) of section 15; (c) the constitution and functions of the State Dam Safety Cell under sub-section (2) of section 16; (d) any other matter which is to be or may be, prescribed or in respect of which provision is to be made by the State Government by rules.

3. Sub-clause (1) of clause 47 empowers the Central Dam Safety Organisation to make regulations consistent with the proposed legislation and the rules made thereunder to carry out the purposes of the proposed legislation. Sub-clause (2) specifies the matter in respect of which such regulations may be made. These matters, *inter alia*, include — (a) the constitution and functions of the Non-State Dam Safety Organisation under sub-section (3) of section 17; (b) the constitution and functions of the Non-State Dam Safety Cell under sub-section (3) of section 18; (c) the details pertaining to the maintenance of log books by the State Dam Safety Organisation or State Dam Safety Cell or Non-State Dam Safety Organisation or Non-State Dam Safety Cell under section 20; (d) the qualifications and experience of the individuals responsible for safety of specified dams under sub-section (1) of section 25; (e) the qualifications and experience of the engineers responsible for investigation, design and construction of specified dams under sub-section (2) of section 28; (f) the checklist or format or proforma or guidelines of inspections under clause (a) of sub-section (3) of section 31; (g) the minimum number of set of instrumentations to be installed in the specified dam under sub-section (1) of section 32; (h) the frequency of risk assessment studies to be carried out under clause (a) of sub-section (2) of section 35; (i) the format or manner with respect to such other data as required under sub-section (3) of section 40; (j) and any other matter which is to be specified or in respect of which provision is to be made by the Central Dam Safety Organisation by regulations.

4. Clause 49 provides that every rule made by the Central Government and every regulation made by the Central Dam Safety Organisation are required to be laid before each House of Parliament and every rule made by the State Government are required to be laid before each House of the State Legislature where it consists of two Houses, or where such Legislature consists of one House, before that House.

5. The matters in respect of which rules may be made by the Central Government and the State Government are matters of procedure and administrative details and it is not practicable to provide for them in the Bill itself. The delegation of legislative power is, therefore, of a normal character.

LOK SABHA

A

BILL

to provide for proper surveillance, inspection, operation and maintenance of all dams of certain parameters in India to ensure their safe functioning and for matters connected therewith or incidental thereto.

(Shri Pawan Kumar Bansal, Minister of Parliamentary Affairs & Water Resources)

LOK SABHA
CORRIGENDA

to

THE DAM SAFETY BILL, 2010

(To be / As introduced in Lok Sabha)

1.	Page 1, in the last line, - for "by the Parliament" read "by Parliament"
2.	Page 4, line 37, - for "Ministry of Water Resource" read "Ministry of Water Resources"
3.	Page 9, line 6, - for "undertakings" read "undertaking"
4.	Page 9, line 30, - for "undertakings" read "undertaking"
5.	Page 9, line 40, - for "undertakings" read "undertaking"
6.	Page 13, line 6, - for "floods, after earthquake," read "floods, earthquake,"
7.	Page 14, line 3,- for "of at each" read "of each"
8.	Page 15, line 36, - for "guidlines" read "guidelines"
9.	Page 18, line 7, - for "regulation" read "regulations"

NEW DELHI;

26 August, 2010
4 Bhadrapada, 1932 (Saka)

**MINUTES OF THE SECOND SITTING OF THE STANDING COMMITTEE ON WATER
RESOURCES (2010-11) HELD ON MONDAY, 04 OCTOBER 2010**

The Committee sat from 1500 hours to 1630 hours in Committee Room 'B', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Beni Prasad Verma – Chairman

MEMBERS

LOK SABHA

2. Shri Ghanshyam Anuragi
3. Shri Mahendrasinh P. Chauhan
4. Shri Sher Singh Ghubaya
5. Shri Badri Ram Jakhar
6. Shri Haribhau Jawale
7. Shri Virender Kashyap
8. Shri Ramashankar Rajbhar
9. Shri K.J.S.P. Reddy
10. Shri K.R.G. Reddy
11. Shri S.P.Y. Reddy
12. Smt. J. Shantha
13. Shri K. Shivkumar alias J.K. Riteesh
14. Dr. P. Venugopal (Tiruvallur)

RAJYA SABHA

15. Shri Balwinder Singh Bhunder
16. Shri Kumar Deepak Das
17. Shri Anil Madhav Dave
18. Shri Rama Chandra Khuntia
19. Shri Mangala Kisan
20. Dr. Gyan Prakash Pilonia

SECRETARIAT

Shri N.K. Sapra - Additional Secretary

REPRESENTATIVES OF THE MINISTRY OF WATER RESOURCES

1. Shri U.N. Panjar, Secretary
2. Shri A.K. Bajaj, Chairman, Central Water Commission
3. Shri A.B. Pandya, Commissioner (PR)

At the outset, the Chairman welcomed the newly appointed Members to the sitting of the Committee. Thereafter, the Chairman welcomed the representatives of the Ministry of Water Resources to the sitting of the Committee convened to have briefing on "The Dam Safety Bill, 2010" by the officials of the Ministry of Water Resources.

2. After the introduction, the Secretary, Ministry of Water Resources gave a briefing on the subject and a power point presentation was made on 'The Dam Safety Bill, 2010'. Thereafter, Members sought clarifications and gave some suggestions on various issues relating to the Bill which were replied to by the representatives of the Ministry.

(The witnesses then withdrew)

3. The Committee decided to hold another meeting for clause by clause discussion on the Bill. It was also decided to invite suggestions/views of public through publicity in the print and electronic media and also obtain comments of the State Governments. In the meantime views of some experts (as informed by the MoWR) may be obtained by calling them before the Committee. The Committee then decided to hold next sitting on 26 October 2010 for having views of the non-official experts on the Bill.

4. The verbatim proceedings of the sitting were kept for record.

The Committee then adjourned.

**MINUTES OF THE THIRD SITTING OF THE STANDING COMMITTEE ON WATER
RESOURCES (2010-11) HELD ON TUESDAY, 26 OCTOBER 2010**

The Committee sat from 1500 hours to 1615 hours in Committee Room 'C', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Beni Prasad Verma – Chairman

MEMBERS

LOK SABHA

2. Shri Ghanshyam Anuragi
3. Shri Mahendrasinh P. Chauhan
4. Shri Sher Singh Ghubaya
5. Shri Badri Ram Jakhar
6. Shri Haribhau Jawale
7. Shri Virender Kashyap
8. Shri Ramashankar Rajbhar
9. Shri K.R.G. Reddy
10. Shri S.P.Y. Reddy
11. Shri Arjun Roy
12. Smt. J. Shantha
13. Smt. Annu Tandon
14. Dr. P. Venugopal (Tiruvallur)

RAJYA SABHA

15. Shri Balwinder Singh Bhunder
16. Shri Kumar Deepak Das
17. Shri Anil Madhav Dave
18. Shri Rama Chandra Khuntia
19. Shri Mangala Kisan
20. Dr. Gyan Prakash Pilonia
21. Smt. Bimla Kashyap Sood

SECRETARIAT

- | | | | |
|----|---------------------|---|----------------------|
| 1. | Shri N.K. Sapra | - | Additional Secretary |
| 2. | Shri Devender Singh | - | Joint Secretary |
| 3. | Shri B.S. Dahiya | - | Director |

**MINUTES OF THE FOURTH SITTING OF THE STANDING COMMITTEE ON WATER
RESOURCES (2010-11) HELD ON WEDNESDAY, 03 NOVEMBER 2010**

The Committee sat from 1200 hours to 1300 hours in Committee Room 'D', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Beni Prasad Verma – Chairman

MEMBERS

LOK SABHA

2. Shri Ghanshyam Anuragi
3. Shri Mahendrasinh P. Chauhan
4. Shri Sher Singh Ghubaya
5. Shri Badri Ram Jakhar
6. Shri Haribhau Jawale
7. Shri Virender Kashyap
8. Shri Ramashankar Rajbhar
9. Shri K.R.G. Reddy
10. Shri S.P.Y. Reddy
11. Shri Arjun Roy
12. Smt. J. Shantha
13. Smt. Annu Tandon
14. Dr. P. Venugopal (Tiruvallur)

RAJYA SABHA

15. Shri Balwinder Singh Bhunder
16. Shri Kumar Deepak Das
17. Shri Anil Madhav Dave
18. Shri B.S. Gnanadesikan
19. Shri Rama Chandra Khuntia
20. Dr. Gyan Prakash Pilia

SECRETARIAT

- | | | | |
|----|---------------------|---|----------------------|
| 1. | Shri N.K. Sapra | - | Additional Secretary |
| 2. | Shri Devender Singh | - | Joint Secretary |
| 3. | Shri B.S. Dahiya | - | Director |

List of Non-Official witnesses

1. Dr. M.A. Chitale, Former Secretary, MoWR and former Chairman, CWC
2. Shri V.M. Ranade, Former Secretary (Irrigation), Government of Maharashtra
3. Shri S.C. Sinha, Retd. Chief Engineer, Government of Bihar

At the outset, the Chairman welcomed the Members to the sitting of the Standing Committee on Water Resources convened to take oral evidence of non-official witnesses on the Dam Safety Bill, 2010.

2. Thereafter, the Chairman welcomed each of the Non-Official witnesses one-by-one and requested them to offer their views/comments/suggestions on 'The Dam Safety Bill, 2010' before the Committee. He drew their attention to the provisions of Direction 55(1) of the Directions by the Speaker, Lok Sabha. The Committee then took oral evidence of the Non-Official witnesses. Thereafter, the Chairman and the members sought certain clarifications on various provisions of the Bill. The witnesses responded to the queries and highlighted the inadequacies of the Bill as perceived by them and offered constructive suggestions.

3. The following main points emerged during the discussion :

- i) Operation and maintenance of the gates of the dams,
- ii) Responsibility in case of inter-State dams,
- iii) Effect of up stream dams on low stream dams,
- iv) Composition of National Committee on Dam Safety,
- v) Definition of Specified Dams,
- vi) The desirability of setting up gauge stations, climatological stations and seismological stations at the dams locations, and
- vii) Comprehensive dam safety evaluation and the periodicity of reviews/inspection of dams.

The verbatim proceedings of the sitting of the Committee have been kept for record.

The Committee then adjourned.

**MINUTES OF THE FIFTH SITTING OF THE STANDING COMMITTEE ON WATER
RESOURCES (2010-11) HELD ON MONDAY, 27 DECEMBER 2010**

The Committee sat from 1500 hours to 1645 hours in Room No. 62, First Floor,
Parliament House, New Delhi.

PRESENT

Shri Beni Prasad Verma – Chairman

MEMBERS

LOK SABHA

2. Shri Ghanshyam Anuragi
3. Shri Mahendrasinh P. Chauhan
4. Shri Haribhau Jawale
5. Shri Virender Kashyap
6. Shri Ramashankar Rajbhar
7. Shri S.P.Y. Reddy
8. Shri Arjun Roy
9. Smt. Annu Tandon
10. Dr. P. Venugopal (Tiruvallur)
11. Shri Sajjan Verma

RAJYA SABHA

12. Shri Balwinder Singh Bhunder
13. Shri Kumar Deepak Das
14. Shri Anil Madhav Dave
15. Dr. Ashok S. Ganguley
16. Shri Rama Chandra Khuntia
17. Dr. Gyan Prakash Pilania
18. Smt. Bimla Kashyap Sood

SECRETARIAT

Shri B.S. Dahiya

- Director

REPRESENTATIVES OF THE MINISTRY OF WATER RESOURCES

1. Shri Dhruv Vijai Singh, Secretary
2. Shri A.K. Bajaj, Chairman, Central Water Commission
3. Dr. B.R. Pillai, Director, (DSR)

**MINUTES OF THE EIGHTH SITTING OF THE STANDING COMMITTEE ON WATER
RESOURCES (2010-11) HELD ON THURSDAY, 24 MARCH 2011**

The Committee sat from 1500 hours to 1600 hours in Committee Room 'B', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Dip Gogoi – Chairman

MEMBERS

LOK SABHA

2. Shri Mahendrasinh P. Chauhan
3. Shri Sher Singh Ghubaya
4. Shri Badri Ram Jakhar
5. Shri Haribhau Jawale
6. Shri S.P.Y. Reddy
7. Shri Arjun Roy
8. Smt. J. Shantha
9. Smt. Annu Tandon

RAJYA SABHA

10. Shri Balwinder Singh Bhunder
11. Shri Anil Madhav Dave
12. Dr. Ashok S. Ganguley
13. Shri B.S. Gnanadesikan
14. Shri Rama Chandra Khuntia
15. Shri Ranjitsinh Vijaysinh Mohite-Patil
16. Dr. Gyan Prakash Pilania
17. Smt. Bimla Kashyap Sood

SECRETARIAT

- | | | | |
|----|---------------------|---|----------------------|
| 1. | Shri N.K. Sapra | - | Additional Secretary |
| 2. | Shri B.S. Dahiya | - | Director |
| 3. | Smt. Rita Jailkhani | - | Additional Director |

REPRESENTATIVES OF THE MINISTRY OF WATER RESOURCES

1. Shri Dhruv Vijai Singh, Secretary
2. Shri G. Mohan Kumar, Additional Secretary

3. Shri A.B. Pandya, Commissioner (PR)
4. Shri A.K. Bajaj, Chairman, Central Water Commission
5. Shri S.P. Kakran, Member (D&R), CWC
6. Shri C.S. Mathur, Chief Engineer (DSO), CWC
7. Dr. B.R. Pillai, Director (DSR), CWC

**REPRESENTATIVES OF THE MINISTRY OF LAW & JUSTICE
(LEGISLATIVE DEPARTMENT)**

1. Dr. G. Narayana Raju, Joint Secretary & Legislative Counsel
2. Smt. Sudha Rani Relangi, Deputy Legislative Counsel
3. Dr. R. Sreenivas, Deputy Legislative Counsel

At the outset, the Chairman welcomed the Members to the sitting of the Committee and thereafter the representatives of the Ministry of Water Resources, Central Water Commission and Ministry of Law & Justice (Legislative Department) to the sitting of the Committee convened to have further oral evidence on "The Dam Safety Bill, 2010".

2. After introduction, the Members sought clarifications on various issues related to the subject which were replied to by the representatives of the Ministries. The points raised and discussed during the sitting of the Committee included the following :

- (i) Safety of dams from earthquakes;
- (ii) Provision for penalty clause in case of dam failure and not obeying provisions contained in the Bill;
- (iii) Composition of State Dam Safety Organisation;
- (iv) Safety from criminal and terrorist activities;
- (v) Provision for disaster compensation by the State;
- (vi) Periodic examination of existing dams;
- (vii) Creation of Dam Safety and Inspection Authority; and
- (viii) Emergency action plan.

3. The verbatim proceedings of the sitting were kept for record.

The Committee then adjourned

**MINUTES OF THE TENTH SITTING OF THE STANDING COMMITTEE ON WATER
RESOURCES (2010-11) HELD ON THURSDAY, 12 MAY 2011**

The Committee sat from 1130 hours to 1200 hours in Committee Room 'D', Ground Floor, Parliament House Annexe, New Delhi.

PRESENT

Shri Dip Gogoi – Chairman

MEMBERS

LOK SABHA

2. Shri Ghanshyam Anuragi
3. Shri Mahendrasinh P. Chauhan
4. Shri Sher Singh Ghubaya
5. Shri Haribhau Jawale
6. Shri Ramashankar Rajbhar
7. Shri K.J.S.P. Reddy
8. Shri K.R.G. Reddy
9. Shri S.P.Y. Reddy
10. Smt. J. Shantha
11. Smt. Annu Tandon
12. Dr. P. Venugopal (Tiruvallur)
13. Shri Sajjan Verma

RAJYA SABHA

14. Shri Balwinder Singh Bhunder
15. Shri Kumar Deepak Das
16. Shri Rama Chandra Khuntia
17. Dr. Gyan Prakash Pilonia

SECRETARIAT

- | | | | |
|----|---------------------|---|-----------------|
| 1. | Shri N.K. Sapra | - | Secretary |
| 2. | Shri Devender Singh | - | Joint Secretary |
| 3. | Shri B.S. Dahiya | - | Director |

At the outset, the Chairman welcomed the Members to the sitting of the Committee convened for consideration and adoption of draft Report on 'The Dam Safety Bill, 2010'.

2. Thereafter, the Committee took up the draft Report on 'The Dam Safety Bill, 2010' for consideration. After some discussion, the Committee adopted the Report subject to suggestions/modification, if any, received from the Members within a week.
3. The Committee then authorized the Chairman to finalize the Report in view of the consequential changes, if any, and present the same to the Hon'ble Speaker under Direction No. 71 A(1) of Directions by the Speaker, Lok Sabha.
4. The Committee proposed to undertake a Study Visit in the month of June, 2011.

The Committee then adjourned