

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
STARRED QUESTION NO. *188
TO BE ANSWERED ON MONDAY, MARCH 11, 2013

SEISMIC TREMORS IN IDUKKI AND KOTTAYAM DISTRICTS OF KERALA

***188. SHRI JOY ABRAHAM:**

Will the Minister of **EARTH SCIENCES** be pleased to state:

- (a) whether frequent and continuous seismic tremors have occurred in parts of Idukki and adjacent Kottayam districts of Kerala in recent years;
- (b) if so, the details thereof indicating the number and intensity of those tremors during the last two years along with their epicentres and their proximity to the dams in Idukki district;
- (c) the steps taken by Government to protect dams from adverse effects of tremors and to allay the fear in the minds of the people; and
- (d) the equipments and their locations to monitor seismic tremors in these districts of the State?

ANSWER
MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI S. JAIPAL REDDY)

(a) to (d): A Statement is laid on the Table of the House.

**STATEMENT LAID ON THE TABLE OF THE RAJYA SABHA IN REPLY (a) to (d) TO
STARRED QUESTION NO. *188 REGARDING “SEISMIC TREMORS IN IDUKKI
AND KOTTAYAM DISTRICTS OF KERALA” TO BE ANSWERED
ON MONDAY, MARCH 11, 2013**

- (a) Low magnitude earthquake related tremors have occurred in Idukki and Kottayam districts of Kerala during the past two years.
- (b) The details of earthquake related tremors recorded since January 2011 are given in the Annexure. Out of 39 tremors recorded, 36 are of less than 3.0 in magnitude (hence of low magnitude category) and 3 are of magnitude between 3.4-3.8 (hence of slight magnitude category). Most of these events are within 10km of Kulamavu dam and about 10-15km from Idukki and Cheruthoni dams.
- (c) Continuous monitoring of seismicity in Idukki region is being carried out by Kerala State Electricity Board (KSEB) through the Idukki network. Site inspection is also carried out by the state government/ dam authorities taking advisory assistance from the Dam Safety Organization (DSO) of the Central Water Commission as far as the technical matters related to the Dam Safety. Awareness camps are conducted in the felt region to allay the fears of people. Information is also disseminated through press and media for public awareness.
- (d) As part of the Idukki Seismic network 12 Seismic Stations have been established by KSEB to monitor seismicity in and around Idukki region. One of them is digital while the rest are analogue system. Details of the locations of seismic stations are given below:
- | | | | |
|-----|----------------|---|-------------------------|
| 1. | Idukki | - | Idukki District |
| 2. | Kulamavu | - | Idukki District |
| 3. | Alady | - | Idukki District |
| 4. | Meencut | - | Idukki District |
| 5. | Pallom | - | Kottayam District |
| 6. | Pamba | - | Pathanamthitta District |
| 7. | Idamalayar | - | Ernakulam District |
| 8. | Kuttampuzha | - | Ernakulam district |
| 9. | Chottupara | - | Idukki district |
| 10. | Sholayar | - | Trichur district |
| 11. | Peringal kuthu | - | Trichur district |
| 12. | Vallakkadavu | - | Idukki district |

The State Government has now taken steps to upgrade 6 of the Stations to broadband digital system.

List of Earthquakes in Kottayam and Idukki districts since 01.01.2011

Sl. No.	Epicentre	Magnitude in Richter Scale	Date
1.	Kottamala, Kannampadi, Idukki	3.8	26.07.2011
2.	Kottamala, Kannampadi, Idukki	2.2	26.07.2011
3.	Kottamala, Kannampadi, Idukki	2.9	26.07.2011
4.	Kottamala, Kannampadi, Idukki	1.0	26.07.2011
5.	Kottamala, Kannampadi, Idukki	1.1	26.07.2011
6.	Kottamala, Kannampadi, Idukki	2.6	26.07.2011
7.	Kottamala, Kannampadi, Idukki	1.0	26.07.2011
8.	Kottamala, Kannampadi, Idukki	1.3	28.07.2011
9.	Kottamala, Kannampadi, Idukki	0.6	04.08.2011
10.	Kottamala, Kannampadi, Idukki	1.5	20.08.2011
11.	Kottamala, Kannampadi, Idukki	2.1	23.08.2011
12.	Kottamala, Kannampadi, Idukki	1.0	16.09.2011
13.	Toprankudi, Idukki	2.2	16.09.2011
14.	Kannampadi, Idukki	2.2	17.09.2011
15.	Kannampadi, Idukki	1.9	18.09.2011
16.	Kannampadi, Idukki	2.0	03.10.2011
17.	Kannampadi, Idukki	0.7	03.10.2011
18.	Kannampadi, Idukki	2.0	07.10.2011
19.	Kannampadi, Idukki	2.4	03.11.2011
20.	Near Valakod, Idukki	2.8	18.11.2011
21.	Near Valakod, Idukki	3.4	18.11.2011
22.	Near Valakod, Idukki	3.4	26.11.2011
23.	Near Valakod, Idukki	1.0	26.11.2011
24.	Near Valakod, Idukki	1.7	26.11.2011
25.	Near Valakod, Idukki	1.4	26.11.2011
26.	Near Valakod, Idukki	2.0	10.12.2011
27.	Near Valakod, Idukki	1.8	04.01.2012
28.	Near Valakod, Idukki	2.0	09.01.2012
29.	Near Valakod, Idukki	2.1	05.03.2012
30.	Near Valakod, Idukki	2.3	10.03.2012
31.	Vandiperiyar, Idukki	2.9	21.07.2012
32.	Venjurmedu, Idukki	2.7	22.07.2012
33.	Idamalayar, Idukki	1.8	19.08.2012
34.	Ramapuram, Kottayam	1.8	02.09.2012
35.	Ramapuram, Kottayam	1.5	02.09.2012
36.	Upputhara, Idukki	2.2	06.11.2012
37.	Upputhara, Idukki	1.3	07.11.2012
38.	Upputhara, Idukki	1.7	08.11.2012
39.	Ramapuram, Kottayam	Felt	23.02.2013