

109TH CONGRESS  
1ST SESSION

# S. 34

To provide for the development of a global tsunami detection and warning system, to improve existing communication of tsunami warnings to all potentially affected nations, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

JANUARY 24, 2005

Mr. LIEBERMAN introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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## A BILL

To provide for the development of a global tsunami detection and warning system, to improve existing communication of tsunami warnings to all potentially affected nations, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION. 1. SHORT TITLE.**

4       This Act may be cited as the “Global Tsunami Detec-  
5       tion and Warning System Act of 2005”.

1 **SEC. 2. DEVELOPMENT AND DEPLOYMENT OF TSUNAMI**  
2 **SENSORS.**

3 (a) RESPONSIBILITIES OF SECRETARY OF COM-  
4 MERCE.—The Secretary of Commerce shall—

5 (1) identify deficiencies in the existing system  
6 of worldwide seismic stations that can identify in  
7 real or near real time potentially tsunamigenic  
8 earthquakes in any location in the Pacific, Atlantic,  
9 or Indian Oceans and associated seas;

10 (2) work with the Secretary of State to enlist  
11 international cooperation in deploying seismic sen-  
12 sors to eliminate such deficiencies;

13 (3) work with the Secretary of the Interior,  
14 through the Director of the United States Geological  
15 Survey to identify and implement any additions or  
16 improvements to the United States maintained net-  
17 work of seismic stations that are necessary to im-  
18 prove real time or near real time signal acquisition  
19 and processing capability for detection of potentially  
20 tsunamigenic seismic events;

21 (4) identify tsunami sensors, such as those de-  
22 veloped by the National Oceanic and Atmospheric  
23 Administration and deployed under its Deep Ocean  
24 Assessment and Report of Tsunamis Project, or  
25 other appropriate ocean-based sensors, that can be  
26 deployed to detect potential tsunamis generated by

1 any type of disturbance, including earthquake, un-  
2 derwater landslide, above water landslide, eruption  
3 of an explosive volcano, and meteor impact;

4 (5) identify the number and location of such  
5 sensors that must be deployed throughout the Atlan-  
6 tic, Indian, and Pacific Oceans, and associated seas,  
7 and any other bodies of water of concern, to provide  
8 a system offering complete global coverage for detec-  
9 tion of a tsunami, taking into consideration and co-  
10 ordinating with any regional systems in place or  
11 under development through other nations in the af-  
12 fected regions;

13 (6) procure and deploy such sensors;

14 (7) establish the measurement system, forecast  
15 system, and communication system and infrastruc-  
16 ture needed to receive and process the signals gen-  
17 erated by such tsunami sensors, by building on exist-  
18 ing infrastructure at existing Centers of the Na-  
19 tional Oceanic and Atmospheric Administration,  
20 such as the Pacific Tsunami Warning Center and  
21 West Coast and Alaska Tsunami Center; and

22 (8) disseminate tsunami forecasts and warnings  
23 as necessary to all potentially affected nations.

24 (b) REPORT TO CONGRESS.—Not later than 180 days  
25 after the date of the enactment of this Act, the Secretary

1 of Commerce shall submit to Congress a report on the  
2 progress made in carrying out the requirements of sub-  
3 section (a).

4 **SEC. 3. INTERNATIONAL CONFERENCE ON GLOBAL TSU-**  
5 **NAMI DETECTION AND WARNING.**

6 (a) SENSE OF CONGRESS ON CONVENING CON-  
7 FERENCE.—It is the sense of Congress that the President,  
8 in consultation with the leaders of nations described in  
9 section 4(a)(1), should undertake to convene, within 180  
10 days after the date of the enactment of this Act, an inter-  
11 national conference on global tsunami detection and warn-  
12 ing for the purposes of—

13 (1) supporting the common objective of such  
14 nations of preventing or reducing the toll of human  
15 loss from future tsunami-related natural disasters in  
16 the Pacific, Indian, and Atlantic Oceans and associ-  
17 ated seas; and

18 (2) seeking international agreement on the most  
19 effective means for deploying and funding a global  
20 tsunami detection and warning system.

21 (b) SENSE OF CONGRESS ON ALTERNATIVE AC-  
22 TION.—It is further the sense of Congress that a con-  
23 ference described in subsection (a) would not be necessary  
24 if, as determined by the President after consultation with  
25 the Secretary of State and the Secretary of Commerce,

1 satisfactory international agreement as described in para-  
2 graph (2) of that subsection has been reached within 90  
3 days after the date of the enactment of this Act.

4 **SEC. 4. NETWORK OF NATIONS POTENTIALLY AFFECTED BY**  
5 **TSUNAMIS.**

6 (a) REQUIREMENT FOR STRATEGY.—The Secretary  
7 of State, in consultation with the Secretary of Commerce,  
8 shall prepare and implement a comprehensive strategy to  
9 achieve the following objectives:

10 (1) Identify all coastal nations that have the po-  
11 tential to be adversely affected by tsunamis, particu-  
12 larly the nations that border the Pacific, Indian, and  
13 Atlantic Oceans, and associated seas.

14 (2) Identify appropriate organizations, agencies,  
15 and contacts within the governments of those na-  
16 tions for disseminating tsunami warnings by work-  
17 ing with—

18 (A) the United Nations Educational, Sci-  
19 entific, and Cultural Organization; and

20 (B) other appropriate organizations.

21 (3) Develop, with cooperating nations and their  
22 agencies and organizations, a structure for a Global  
23 Tsunami Warning System that has an appropriate  
24 number of regional operational headquarters.

1           (4) Identify, with cooperating nations and their  
2 agencies and organizations, and establish an appro-  
3 priate chain of command structure to ensure that  
4 warnings of potential or approaching tsunamis are  
5 directed to the appropriate contacts in potentially af-  
6 fected countries in a timely manner through the  
7 Global Tsunami Warning System network.

8           (5) Implement, with cooperating nations and  
9 their agencies and organizations, a tsunami fore-  
10 casting system that includes tsunami early detection  
11 and monitoring instrumentation integrated with  
12 modeling technology essential to producing real-time  
13 tsunami forecasts.

14           (6) Utilize the forecasts developed under the  
15 tsunami forecasting system to form appropriate  
16 warnings, and rapidly disseminate such warnings to  
17 potentially affected nations.

18           (7) Develop an appropriate warning commu-  
19 nications system involving telephone, Internet, radio,  
20 fax, and other appropriate means to convey warn-  
21 ings as rapidly as possible to all potentially affected  
22 nations.

23           (8) Work in partnership with the nations identi-  
24 fied as described in paragraph (1), as needed, to de-  
25 velop, establish, and maintain appropriate edu-

1        cational and response planning partnerships to en-  
2        sure that tsunami warnings are properly interpreted  
3        by officials in other nations and that coastal commu-  
4        nities respond appropriately to tsunami warnings.

5            (9) Seek funding assistance from participating  
6        nations to fund the sensor systems identified under  
7        section 4 and the ongoing operation and mainte-  
8        nance of such systems.

9            (b) REPORT TO CONGRESS.—Not later than 180 days  
10       after the date of the enactment of this Act, the Secretary  
11       of State shall submit to Congress a report on the strategy  
12       required under subsection (a). The report shall include the  
13       following:

14            (1) The strategy.

15            (2) The progress made on implementing the  
16       strategy.

17       **SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

18       Funds are hereby authorized to be appropriated to  
19       carry out this Act as follows:

20            (1) For fiscal year 2005, \$30,000,000.

21            (2) For each of fiscal years 2006 through 2014,  
22       \$7,500,000.

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