

**AGREEMENT**  
**between**  
**United Nations the International Strategy for Disaster Reduction secretariat (UN/ISDR)**  
**and**  
**Public Works Research Institute (PWRI)**

**Whereas** the United Nations secretariat of the International Strategy for Disaster Reduction (hereinafter referred to as "UN/ISDR") and Public Works Research Institute (PWRI) (hereinafter referred to as "the Agency") are committed to the objectives of the International Strategy for Disaster Reduction and implementation of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters and share the vision to substantially reduce disaster losses, in lives and in the social, economic and environmental assets of communities and countries.

**Whereas** UN/ISDR has been entrusted by its donors with certain resources, available under the Trust Fund for Disaster Reduction, that can be allocated for disaster reduction and risk management activities; is accountable to its donors for the proper management of these funds; and can, in accordance with the UN Financial Regulations and Rules and the UN policies as stipulated by the General Assembly and the Secretary-General, make available such resources for disaster reduction and risk management activities;

**Whereas** the Agency is apolitical and not profit-making, has demonstrated the capacity required to implement the activities involved in this Agreement, and has agreed that they shall be undertaken without discrimination, direct or indirect, because of race, ethnicity, religion or creed, status of nationality or political belief, gender, handicapped status, or any other circumstances;

**Now, therefore,** on the basis of mutual trust and in a spirit of friendly cooperation, the Agency and UN/ISDR have entered into the present Agreement (hereinafter referred to as "the Agreement").

**Article I. Duration of Present Agreement**

1. The terms of the present Agreement shall commence upon signature by both parties and expire on 31 December, 2007 unless earlier terminated in accordance with article XIII hereto, or extended in accordance with article XVII hereto.

**Article II. General Responsibilities of the Parties**

1. The Agency shall, with due diligence and efficiency, implement the set of activities included in phase 1 of the action described in Annex I hereto (hereinafter referred to as "the Project") and ensure that the funds and any supplies, equipment and other materials provided by UN/ISDR are only used for this purpose.
2. The Parties agree to carry out their respective responsibilities in accordance with the provisions of the present Agreement.
3. The Parties shall keep each other informed of all activities pertaining to the Project and shall consult regularly on the status of its implementation. The Agency shall facilitate visits by UN/ISDR or any other person duly authorized in writing by UN/ISDR to the Project

site(s) to review the progress and achievement of the Project during its period of implementation and thereafter.

### **Article III. Copyrights, Patents and Other Proprietary Rights**

1. Unless otherwise agreed upon in writing, UN/ISDR shall be entitled to all intellectual property and other proprietary rights, including but not limited to patents, copyrights, and trademarks, with regard to maps, drawings, photographs, plans, reports, documents, products and all other materials which bear a direct relation to or are produced or prepared or collected in consequence of or in the course of the execution of the present Agreement.
2. All decisions regarding publication with regard to products or documents and other materials which bear a direct relation to or are produced or prepared or collected in consequence of or in the course of the execution of the present Agreement shall be made by UN/ISDR in accordance with its sectoral policy on information management for disaster reduction and risk management. In the event that UN/ISDR authorizes the Agency to publish articles or results of studies based on the activities financed by the Fund, the Agency shall furnish UN/ISDR with a copy of the proposed publication for the UN's approval, in each case, before publication. The Agency shall secure a copyright of such publication in the name of the UN.
3. The Agency may not communicate at any time to any other person, Government or authority external to the UN, any information known to it by reason of its association with UN/ISDR which has not been made public except with the authorization of UN/ISDR. In any event, such information shall not be used for individual advantage or profit.
4. The Agency may only use the name and emblem of UN/ISDR in direct connection with the Project and subject to prior written consent of the UN.

### **Article IV. Personnel Requirement**

1. The Agency shall be fully responsible for all services performed by its Personnel. The Agency shall ensure that all relevant labour laws are observed and shall provide and thereafter maintain all appropriate medical and life insurance for its Personnel in connection with the Agreement.
2. The Agency shall ensure that its Personnel meet the highest standards of qualification and technical and professional competence necessary for the achievement of the Project Objectives.
3. The Agency's Personnel shall not be considered in any respect as being the employees or agents of UN/ISDR. UN/ISDR does not accept any liability for claims arising out of the activities performed under the present Agreement, or any claims for death, bodily injury, disability, damage to property or other hazards that may be suffered by the Agency's Personnel as a result of their work pertaining to the Project.

### **Article V. Supplies, Equipment, Materials and Procurement**

1. All non-expendable equipment furnished or financed by UN/ISDR shall remain the property of UN/ISDR and shall be returned by the Agency to UN/ISDR within thirty (30)

days of the completion of the Project or the expiration or termination of the present Agreement, whichever is first to occur, unless otherwise agreed upon between the Parties. Non-expendable equipment is defined as an item, which has a purchase price of US\$1,500 or more, or the equivalent in local currency at the United Nations official rate of exchange on the date of purchase, and with an anticipated serviceable life of at least five years.

2. The Agency shall be responsible for the proper custody, maintenance and care of all non-expendable equipment during Project implementation and prior to its return to UN/ISDR. During implementation of the Project, the Agency shall, for the protection of such non-expendable equipment, obtain insurance pursuant to Article VI below in such amounts as may be agreed upon between the Parties and incorporated in the Project Budget.

3. UN/ISDR may place on the supplies, equipment and other materials it furnishes or finances such markings as will be necessary to identify them as being provided by UN/ISDR.

4. In cases of damage, theft or other losses of supplies, equipment and other materials furnished or financed by UN/ISDR, the Agency shall provide UN/ISDR with a comprehensive report, including police report, where appropriate, and any other evidence giving full details of the events leading to the loss of the supplies, equipment and other materials. After becoming aware of damage, theft or other losses of supplies, equipment and other materials, the Agency shall use its best efforts to seek recovery under the applicable insurance.

5. The Agency shall ensure that its procedures for awarding contracts and for the purchase or hire of goods, equipment, other commodities and services under the present Agreement safeguard the principles of highest quality, economy and efficiency, and that the placing of orders shall be based on an assessment of competitive quotations, bids, or proposals, unless otherwise agreed to by UN/ISDR.

6. UN/ISDR shall make every effort to assist the Agency clearing all supplies, equipment and other materials through customs at places of entry into the country(ies) where the Project is to take place.

7. The Agency shall maintain complete and accurate records of supplies, equipment and other materials purchased with the funds made available by UN/ISDR and shall take periodic physical inventories. The Agency shall provide UN/ISDR annually with the inventory of such supplies, equipment and other materials, and at such time and in such form as UN/ISDR may request.

#### **Article VI. Insurance and Liabilities to Third Parties**

1. The Agency shall provide and thereafter maintain insurance against all risks in respect of its property and any equipment used for the implementation of the Project under the Agreement.

2. The Agency shall provide and thereafter maintain all appropriate workmen's compensation insurance, or its equivalent, with respect to its Personnel to cover claims for personal injury or death in connection with the Agreement.

3. The Agency shall also provide and thereafter maintain liability insurance in an adequate amount to cover third party claims for death or bodily injury, or loss of or damage to property, arising from or in connection with the provision of services under the Agreement or the operation of any vehicles, boats, airplanes or other equipment owned or leased by the Agency or its Personnel performing work or services in connection with the Agreement. The Agency shall provide and thereafter maintain all other types of insurance and in such amounts as may be agreed upon between the Parties and incorporated in the Project Budget.

4. Except for the workmen's compensation insurance, the insurance policies under this Article shall:

- a. Name UN/ISDR as additional insured;
- b. Include a waiver of subrogation of the Agency's rights to the insurance carrier against UN/ISDR;
- c. Provide that UN/ISDR shall receive thirty (30) days written notice from the insurers prior to any cancellation or change of coverage.

5. The Agency shall, prior to the start of the Agreement, provide UN/ISDR with satisfactory evidence of the insurance required under this Article.

6. All insurance required under this Article shall be obtained through insurers reasonably satisfactory to UN/ISDR. All policies shall be primary without right of contribution from any other insurance which may be carried by UN/ISDR.

#### Article VII. Financial and Operational Arrangements

1. The Project Budget for the proposed activities submitted by the Agency requests resources (hereinafter referred to as "the Fund") up to the maximum amount of US\$100,000 for the duration of the Agreement.

2. Funding to support this project will be released to the Agency in instalments as follows: a first instalment of US\$75,000 will be released following the signing of the Agreement. Any subsequent instalments will be released when substantive and financial reports and other agreed upon documentation, as referenced in Articles IX and X, below, have been submitted to and accepted by UN/ISDR as showing satisfactory management and use of the Fund. Such additional funding is not guaranteed under the terms of this agreement.

3. All instalments to be released under the present Agreement shall be made to the following bank and account:

<b>Bank name</b>	<b>The Bank of Tokyo-Mitsubishi UFJ, Ltd.</b>
<b>Bank address</b>	<b>ASHIWA CHUOU BRANCH 1-2-5 KASHIWA, KASHIWA-CITY CHIBA-PREF 277-0005, JAPAN</b>
<b>Account number</b>	<b>275-1851795</b>
<b>Account title</b>	<b>INCORPORATED ADMINISTRATIVE AGENCY PUBLIC WORKS RESEARCH INSTITUTE</b>

4. Interest will be apportioned annually to the undisbursed balance of funds which have been received in accordance with paragraph 2 above. The Agency shall keep at the UN's disposal any interest accrued on the undisbursed balance of funds received according to paragraph 2 above. Its use will be subject to UN/ISDR approval.

5. The Agency shall be authorized to make variations not exceeding ten (10) per cent on any one line item of the Project Budget, provided that the total Project Budget allocated by UN/ISDR is not exceeded. Any variations exceeding ten (10) per cent on any one line item that may be necessary for the proper and successful implementation of the Project shall be subject to prior consultations with and approval in writing by UN/ISDR. UN/ISDR shall not be liable for any expenditure incurred in excess of its contribution as specified in this Agreement.

6. Any portion of the Fund that is unspent, as well as any unused interest accrued on the undisbursed balance of funds received according to paragraph 2 above, shall be returned to UN/ISDR within thirty (30) days of the expiration or termination of the present Agreement or the completion of the Project, whichever is first to occur.

7. In the event that the Agency receives additional funding for the same purpose in the country(ies) where the Project takes place from any source other than UN/ISDR, the Agency shall immediately advise UN/ISDR of the following: source of funding; amount of funding; activities covered by the additional funding or intended application of the additional funds; and period that the additional funding is intended to cover (i.e. start and end dates of the funding if applicable).

#### **Article VIII. Maintenance of Records**

1. The Agency shall collect and keep readily accessible information and documentation on the progress implementation of the Project and the use made of the Fund. To this end, the Agency shall maintain separate accounts recording all receipts and expenditure under this Project relating to the Fund and ensure that any obligations entered into and all disbursements made are satisfactorily documented. For each payment a voucher shall be established showing the Project symbol, the name of the payee, the amount, purpose and date of disbursement. Bills, invoices, receipts and such other documentation pertinent to the transaction will be attached to the voucher in support thereof. These vouchers and the supporting documentation will be systematically filed in dossiers specifically established to house project financial documentation.

2. Upon expiration or termination of the Agreement, the Agency shall maintain the records for a period of at least five (5) years, unless otherwise agreed upon between the Parties.

#### **Article IX. Substantive Report**

1. The Agency shall submit to UN/ISDR an interim substantive report on 30 September 2007, detailing achievements, constraints and impact with regard to the utilization of the Fund for the Project. When the Fund provided by UN/ISDR is mixed with funds from other sources, the interim substantive report shall describe how and to what extent the Fund was used in the context of the overall contributions to the Project. The format of the reporting shall follow the outline of the report template provided by UN/ISDR.

2. The Agency shall submit to UN/ISDR a final substantive report detailing achievements, constraints, and impact with regard to the utilization of the Fund for the Project within one month of the completion of the Project or the expiration or termination of the present Agreement, whichever is first to occur. As with the interim substantive reports, the

final substantive report shall describe how and to what extent the Fund was used in the context of the overall contributions to the Project. The format of the reporting shall follow the outline of the report template provided by UN/ISDR.

### **Article X. Financial Report**

1. The Agency shall submit an interim financial report on 30 September 2007. Financial information shall be provided in the following categories:  
(a) Amount received; (b) Personnel costs; (c) Travel; (d) Contractual services; (e) Operational expenses; (f) Acquisitions; (g) Fellowships, Grants and other; and (h) Total expenditure. It shall list the amounts received and expended utilizing the standard form "Financial Statement on Income and Expenditures from Funds Allocated from the Trust Fund for Disaster Reduction", attached hereto as Annex A.
2. The Agency shall submit an end-of-year financial statement reflecting expenditures between 1 January and 31 December of the reporting year until such time as the completion of the Project or the expiration or termination of the Agreement, whichever is to occur later. The end-of-year financial statement shall be submitted within 30 days after the end of each calendar year and shall be certified by a qualified auditor. It shall list the amounts received and expended utilizing the standard form "Financial Statement on Income and Expenditures from Funds Allocated from the Trust Fund for Disaster Reduction", attached hereto as Annex A.
3. Within six (6) months of the completion of the Project or the expiration or termination of the present Agreement, whichever is first to occur, the Agency shall submit to UN/ISDR a "Final Financial Utilization Report on Income and Expenditures from Funds Allocated from the Trust Fund for Disaster Reduction". This Final Financial Statement shall be certified by a qualified auditor.

### **Article XI. Audit Requirements**

1. The Project shall be audited at least once during its lifetime, but may be audited annually, in consultation between the Parties. The audit shall be carried out by the auditors of a qualified audit firm, which shall produce an audit report. The Agency shall be responsible for payment of any amount, as incorporated in the Project Budget, representing any fees, expenses or financial costs in connection with such audit.
2. Notwithstanding the above, UN/ISDR shall have the right, at its own expense, to audit or review such Project-related books and records as it may require, and have access to the books and record of the Agency, as necessary.

### **Article XII. Responsibility for Claims**

1. The Agency shall indemnify, hold and save harmless, and defend, at its own expense, UN/ISDR, its officials, agents, servants and employees from and against all suits, claims, demands, and liability of any nature or kind, including their costs and expenses, arising out of acts or omissions of the Agency, or the Agency's Personnel, in the performance of the Agreement. This provision shall extend, *inter alia*, to claims and liability in the nature of workmen's compensation, products liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Agency or its

Personnel. The obligations under this paragraph do not lapse upon expiration or termination of the Agreement.

2. The Agency shall be responsible for and deal with all claims brought against it by its Personnel.

### **Article XIII. Suspension and Early Termination**

1. The Parties hereto recognize that the successful completion and accomplishment of the Project Objectives are of paramount importance, and that UN/ISDR may find it necessary to terminate the Project, or to modify the arrangements for execution of the Project, should circumstances arise which jeopardize successful completion or the accomplishment of the Project Objectives. The provisions of the present Article shall apply to any such situation.

2. UN/ISDR shall consult with the Agency if any circumstance arises that, in the judgment of UN/ISDR, interferes or threatens to interfere with the successful completion of the Project or the accomplishment of the Project Objectives. The Agency shall promptly inform UN/ISDR in writing of any such circumstance that might come to the Agency's attention. The Parties shall cooperate towards the rectification or elimination of the circumstance in question and shall exert all reasonable efforts to that end, including prompt corrective steps by the Agency, where such circumstances are attributable to it or within its responsibility or control. If applicable, the Parties shall also cooperate in assessing the consequences of possible termination of the Project on the target beneficiaries of the Project.

3. UN/ISDR may at any time after occurrence of the circumstance in question and appropriate consultations suspend execution of the Project by written notice to the Agency, without prejudice to the initiation or continuation of any of the measures envisaged in paragraph 2, above, of the present Article. UN/ISDR may indicate to the Agency the conditions under which it is prepared to authorize a resumption of execution of the Project.

4. If the cause of suspension is not rectified or eliminated within fourteen (14) days after UN/ISDR has given notice of suspension to the Agency, UN/ISDR may, by written notice at any time thereafter during the continuation of such cause: (a) terminate the Agreement; or (b) terminate the Project and entrust its execution to another organization. The effective date of termination under the provisions of the present paragraph shall be specified by written notice from UN/ISDR. In the event of transfer of the Agency's responsibilities for execution of a Project to another organization, the Agency shall cooperate with UN/ISDR and the other organization in the orderly transfer of such responsibilities.

5. Upon receipt of a notice of termination by UN/ISDR under the present Article, the Agency shall take immediate steps to terminate activities under the present Agreement, in a prompt and orderly manner, so as to minimize losses and further expenditures. The Agency shall undertake no forward commitments and shall return to UN/ISDR, within thirty (30) days, any portion of the Fund that is unspent, supplies, equipment and other materials provided by UN/ISDR, unless UN/ISDR has agreed otherwise in writing.

6. In the event of any termination under the present Article, UN/ISDR shall reimburse the Agency only for the costs incurred to execute the Project in conformity with the express terms of the present Agreement. Reimbursements to the Agency under this provision, when added to amounts previously remitted to it by UN/ISDR in respect of the Project, shall not exceed the total UN/ISDR allocation for the Project.

#### **Article XIV. Arbitration**

1. The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of the Agreement or the breach, termination or invalidity thereof. Where the Parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then obtaining, or according to such other procedure as may be agreed between the Parties.
2. Any dispute, controversy or claim between the Parties arising out of the Agreement or the breach, termination or invalidity thereof, unless settled amicably under paragraph 1 of this Article within sixty (60) days after receipt by one Party of the other Party's request for such amicable settlement, shall be referred by either Party to arbitration in accordance with the UNCITRAL Arbitration Rules then obtaining. The arbitral tribunal shall have no authority to award punitive damages. In addition, unless otherwise expressly provided in the Agreement, the arbitral tribunal shall have no authority to award interest in excess of [five (5%)] percent, and any such interest shall be simple interest only. The parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy, claim or dispute.
3. No claim or dispute arising out of the Agreement shall be made against UN/ISDR by the Agency unless and to the extent such claim or dispute shall have been asserted in writing, in accordance with Article XVIII below, not later than the earlier of two (2) years from the expiration or termination of the Agreement or the occurrence of loss, damage or injury giving rise to such claim or dispute.

#### **Article XV. Privileges and Immunities**

Nothing in or related to the present Agreement shall be deemed a waiver, express or implied, of any of the privileges and immunities of the UN, including its subsidiary organs.

#### **Article XVI. Tax Exemption**

1. Section 7 of the Convention on the Privileges and Immunities of the United Nations provides, *inter alia*, that the UN, including its subsidiary organs, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use. In the event any governmental authority refuses to recognize the UN exemption from such taxes, duties or charges, the Agency shall immediately consult with UN/ISDR to determine a mutually acceptable procedure.
2. Accordingly, the Agency shall be responsible for any amount representing such taxes, duties or charges, unless the Agency has consulted with UN/ISDR before the payment thereof and UN/ISDR has, in each instance, specifically authorized the Agency to pay such taxes, duties or charges under protest. In that event, the Agency shall provide UN/ISDR with written evidence that payment of such taxes, duties or charges has been made and appropriately authorized.



**Article XVII. Amendments**

The present Agreement or its Annex(es) may be modified or amended only by written agreement between the Parties.

**Article XVIII. Correspondence**

Unless otherwise specified in the Agreement, all notices and other communications required or contemplated under the present Agreement shall be given in writing and addressed and delivered to the Party for whom intended at the address shown below or such other address as the intended recipient may from time-to-time designate by written notice, given in accordance with the terms of this Article.

If to UN/ISDR:

Mr. Patrick Kratt

UN/ISDR Asia and the Pacific

c/o UNESCAP – UN Conference Centre Building, Press Suite, Ground floor,

Rajdamnern Nok Avenue, Bangkok 10200, Thailand

Fax: +66 22 88 1050

Cc: Ms. Stéphanie Boubault

UN/ISDR

International Environment House II, Chemin de Balexert 7-9, CH-1219 Geneva,

Switzerland

boubault@un.org

Fax: +41 22 917 8982

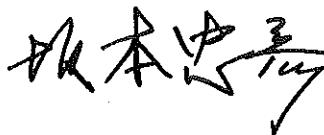
If to the Agency

1-6, Minamihara, Tsukuba-shi, Ibaraki-ken 305-8516, Japan

Fax +81-(0) 29-879-6709

**IN WITNESS WHEREOF** the undersigned, being duly authorized thereto, have on behalf of the Parties hereto signed the present Agreement at the place and on the day below written.

For the Agency



Signature:

Name: Tadahiko SAKAMOTO

Title: Chief Executive of PWRI

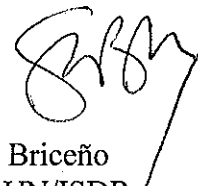
Place: 1-6, Minamihara, Tsukuba-shi,

Ibaraki-ken 305-8516, Japan

Date:

26th July 2007

For UN/ISDR



Signature:

Name: Salvano Briceño

Title: Director, UN/ISDR

Place: Geneva, Switzerland

Date

11 July 2007

Annex A – “Financial Statement on Income and Expenditures from Funds Allocated from the Trust Fund for Disaster Reduction”

Annex B – Project Document

**Annex A**

“Financial Statement on Income and Expenditures from Funds Received from the  
Trust Fund for Disaster Reduction - for the period \_\_\_ to \_\_\_

(United States Dollars)

**1. INCOME**

Balance available 1 January 200\_

Add: Remittances from United Nations

Interest income

Miscellaneous income (specify)

Total income

\_\_\_\_\_

\_\_\_\_\_

**2. EXPENDITURE**

Staff and other personnel costs

Travel on official business

Contractual services

Operating expenses

Acquisitions

Fellowships, grants, other

Total expenditure a/

\_\_\_\_\_

\_\_\_\_\_

Balance available 31 December 200\_

\_\_\_\_\_

\_\_\_\_\_  
a/ See attached supporting schedule giving breakdown of expenditure by project and by object of expenditure.

This is to certify that the above statement of income and expenditure is correct and that the expenditure was incurred in connexion with the approved projects for which allocations have been received.

\_\_\_\_\_

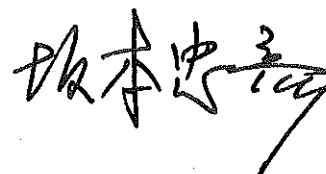
**WAIVER OF SUBROGATION OF PWRI RIGHTS TO THE INSURANCE CARRIER  
AGAINST UN/ISDR**

        PWRI         agrees to purchase insurance for any of the materials, equipment, human resources or services procured through the Grant provided by the UN/ISDR and shall indemnify and hold UN/ISDR harmless for any claims arising in connection with any materials, equipment, human resources or services procured under this Grant.

Date:

26th July 2007

Signature



**Annex B****Comprehensive Tsunami Disaster Prevention Training Course****A. Overview**

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## 1. Basic data

- 1.1 Submitting organisation: International Centre for Water Hazard and Risk Management (ICHARM), Public Works Research Institute (PWRI), Japan
- 1.2 Contact person in organisation: Shigenobu Tanaka, Team Leader, International Technical Exchange Team
- 1.3 Project title: Comprehensive Tsunami Disaster Prevention Training Course
- 1.4 Geographical focus: India, Indonesia, Maldives, Sri Lanka

## 2. Proposed timeframe

- 2.1 Start date: 1<sup>st</sup> May 2007
- 2.2 End date: 31<sup>st</sup> December 2008

## 3. Financial data (US\$)

- 3.1 Total resources required for this project \$ 250,000
- 3.2 UN/ISDR contribution requested \$ 200,000

**4. Short summary of the Project:**

This project aims at developing qualified human resources to work for comprehensive tsunami disaster mitigation in developing countries. To achieve such goal, the project offers the "Comprehensive Tsunami Disaster Prevention (CTDP)" training course for trainees to learn the fundamentals as well as the most advanced knowledge and technology on CTDP in Japan. The CTDP covers the overall aspects of tsunami disaster management such as structural measures, tsunami early warning systems, local tsunami disaster management plans and disaster management systems. The proposed hands-on training course comprises lectures and exercises and provides on-sight inspections opportunities to learn tsunami prevention measures in Japan so that they will be able to better promote and utilize CTDP based on natural and socio-economic needs in their own countries.

In order to cover the full range of CTDP's subject matters, two different six-week-long training packages will be carried out within the mentioned timeframe. One will focus on structural measures and local disaster management plans whereas the other on disaster management systems, tsunami early warning systems as well as dissemination systems, and disaster education. The trainees are expected to share the know-how acquired through the course among those involved after returning to their homelands.

As a precondition, each target country will be required to form a national level committee unless otherwise existed that can look after tsunami disaster management within their countries. The committee is responsible to coordinate concerned ministries and authorities for implementation. In recommendation from the national committee, selected ministries and/or departments will select and recommend trainees to this CTDP course.

## **B. Context and Justification**

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### **1. National / or Regional Context**

The Indian Ocean Tsunami in December 2004 caused about 230,000 casualties and enormous property damage. This giant loss is basically due to the lack of proper preparation for tsunami disasters from national government level to local level. The numbers of deaths in India, Indonesia, Maldives and Sri Lanka were 18045, 167736, 108 and 35322 whereas the total numbers of houses destroyed were 235377, 141000, 8074 and 65275 respectively. The total estimated damage reached \$2.56 billion on the south-eastern coast of India, \$4.5 billion in Indonesia, \$250 million in Maldives and \$1.5 billion in Sri Lanka (data source: <http://www.tsunamispecialenvoy.org/country/humantoll.asp>). After the tragedy, UNESCO plays a leading role to make up a plan to implement the Indian Ocean Tsunami warning system.

In India, the Ministry of Home Affairs is the nodal ministry for disaster management. Disaster management is not conventionally a subject for five-year plans at the national level, though disasters occur regularly. In Indonesia, the disaster management organization is BAKORANAS chaired by Vice President. The House of Representatives has initiative to formulate the Disaster Management Act after the Indian Ocean Tsunami. In Maldives, the government has started the preparation for a risk management system to reduce the human and economic impact of potential disasters. In Sri Lanka, the National Disaster Management Bill was passed in 2005 and the National Disaster Management Authority was established under the Chairmanship of the Prime Minister.

### **2. Problem Analysis**

The enormous damage of the Indian Ocean Tsunami was mainly caused by the lack of proper knowledge and preparation for tsunami disasters. Though past tsunami records and local legends of tsunamis clearly indicate the severity of damages due to tsunamis, governmental officials and local people do not have adequate knowledge and concerns. Each country has a disaster management plan and established a related organization to look after the problems; however, such a plan generally does not include tsunami disasters. People living along the coast near the epicentre of the earthquake have little knowledge of moving to higher elevations when they feel a shock of an earthquake. Tsunami warning was not issued in countries those far away from the epicentre, such as Sri Lanka and India. Structural measures are rarely in place except on some parts of the Maldives coast.

From a long experience of tsunami disasters, Japan has significantly established tsunami disaster prevention measures. In Japan, local people who live in tsunami-affected areas understand that tsunami comes after earthquakes and related legends have been taught in schools. People affected by the Meiji Sanriku Tsunami in 1896 were relocated to higher places. Structural measures such as coastal dikes, tsunami breakwaters as well as the pine tree belts on the coasts have been implemented and maintained. Tsunami warning systems were also established after the damage caused by the Chile Earthquake-induced Tsunami in 1960. Under the national plan, local tsunami prevention plans and tsunami hazard maps are recently introduced and effectively implemented in prefectures along the coast.

The comparison of the mitigation measures for the Indian Ocean Tsunami with the Japanese measures reveals the lack of responsible organizations, mitigation plans, warning systems, awareness level, structural measures and additional non-structural measures such as land use plans. In addition to these, basic information required to analyse tsunami disasters and mitigation measures is insufficient.

### **3. Added value of the Project**

The course is to improve the efficiency of tsunami disaster management by national and regional officials, aiming to reduce the loss of life and property in tsunami-prone coastal areas.

End user focused workshops that organized by trainees in four countries would be useful to transfer the knowledge of tsunami prevention measures and to stimulate and strengthen the capacity of related agencies for disaster preparedness. Proposed national and local action plans to be made during the training will contribute to formulate realistic disaster reduction plans, which promote resilience for tsunami disasters.

Reports of the training will be uploaded on the web page of ICHARM and will provide information on tsunami disaster prevention, which would be beneficial especially to other south-east Asian countries such as Thailand, Pakistan and the Philippines for establishing tsunami prevention measures.

### **C. Description of the project**

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*[Note that objectives, results and activities need to be coherent with the UN/ISDR logical framework for the overall initiative provided as an attachment to this document.]*

#### **1. Overall Objective**

The overall objective is to develop human resources who work for comprehensive tsunami disaster mitigation including structural measures, tsunami early warning systems, local disaster management plans in developing countries. The trainees will learn the fundamentals as well as the most advanced knowledge and technology on comprehensive tsunami disaster prevention practices in Japan. After returning their home countries, they are also expected to share the information and know-how acquired through the course among those who are in charge of taking actions.

#### **2. Expected Results**

The trainees will be capable of promoting and utilizing comprehensive tsunami prevention measures based on natural and socio-economic needs in their own countries. To increase the manpower and to improve the performance of the trainees' organizations on tsunami disaster prevention, the trainees will organize knowledge conveyance workshops in their organizations and will share the information with other counterparts after they return to their countries. In the meantime, respective governments are required to individually set up a committee as coordinating organization for promoting comprehensive tsunami disaster prevention and the establishment and implementation of comprehensive tsunami disaster prevention plans. The framework of establishing the plan would be prepared in two years.

#### **3. Activities**

This training course provides lectures, trainings, and on-sight inspections to learn tsunami prevention measures in Japan. The trainees will be required to;

- (1) Identify their problems by comparing the current situations in their own countries to that in Japan, after having knowledge on the history of tsunami disaster prevention and current systems in Japan
- (2) Learn and understand planning/designing techniques of structural measures that widely used in Japan
- (3) Learn and understand how to make and use tsunami hazard maps
- (4) Learn and understand tsunami early warning systems and ways of disseminating the systems
- (5) Learn and understand disaster management systems in Japan
- (6) Learn and understand local disaster management plans for tsunami in Japan
- (7) Make action plans to solve issues and problems for tsunami disaster management in their own countries by using the knowledge they learnt in the training course

ICHAM intends to provide this training course to those who hold a position of the section chief level or equivalent in organizations that are mainly responsible for promoting comprehensive tsunami disaster prevention in the next 3 to 5 years. This training course is not for those who are in charge of issuing tsunami early warning systems. The trainees have to be working in organizations that are responsible for preventing disasters and minimizing tsunami damage by using tsunami early warning systems.

The CTDP course will offer two different six-week-long training packages within the two year time period. The curriculum will cover following topics:

- Orientation
- Country report
- Generation and transformation of tsunamis

- Disaster caused by tsunamis
- Disaster management system
- Comprehensive tsunami management plan
- Tsunami warning system
- Tsunami hazard map
  
- Structural measures
- Land use regulation
- Education and training
- Lesson learned from Indian Ocean Tsunami
- Japanese experiences including field trip to the sites
- Concluding report (Action Plan)

After the CTDP course, the participants should hold workshops with related officials of their organization and/or the committee in their countries. Further, they should make a report and send it to ICHARM. ICHARM will finalize a concluding report and submit it to ISDR.

#### **4. Stakeholders and Beneficiaries** *(two to three paragraphs)*

The organizations which dispatch the trainees can improve their abilities to respond tsunami disasters and devise tsunami prevention plans at the national and local levels. By holding workshops, other related officials of the organizations can also have chance to improve their abilities to work better towards tsunami disaster mitigation.

On the other hand, people who live in the coastal areas that prone to tsunamis will be benefited by the implementation of tsunami prevention plans.

#### **5. Sustainability and Disaster Risk Reduction**

Tsunami disasters cause serious damage to regional economic activities. Such disaster gives great stress especially to the poor. National and local action plans contribute to decreasing the loss of properties and to promoting sustainable development.

Since tsunami occurs infrequently, for example once in 100 years, it is difficult but necessary to come up with ways to keep public awareness towards tsunami disaster mitigation. Action plans should cover public awareness as one of the sustainable measures. In the Sanriku District of Japan, continuous efforts have been made to keep local people's awareness on tsunami disasters to avoid repetition of painful experiences. The know-how to be learned in the course will contribute to devising systems for reducing tsunami disasters.

#### **6. Partnerships**

Close collaboration with related organizations will be made for effective implementation of the training course, which includes the following;

The National Institute for Land and Infrastructure Management of the Ministry of Land, Infrastructure and Transport was divided from PWRI six years ago specifically to focus on infrastructure management related research, which includes tsunami disaster management. The existing research results from the institute's efforts can contribute to the training course as well as its staff researchers.

The International Institute of Seismology and Earthquake Engineering of the Building Research Institute in Japan also has an international training course for seismology and earthquake engineering professionals and technical experts from earthquake-prone developing countries. Their contribution is also expected.

### **D. Implementation**

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#### **1. Implementation Arrangements**

The project implementation will be carried out in two periods; implementation phase 1 and phase 2. During implementation phase 1 ICHARM plans to implement a set of the activities presented above,

which will form a sound basis for the continuation and finalisation of the project during phase 2. The following activities will be implemented as part of phase 1:

- ✓ Making a textbook for trainees
  - Making the framework of the textbook
  - Review of existing textbooks on Tsunami
  
- Making English textbook for explanation of earthquake and Tsunami countermeasures in prefectural government and municipal government
- ✓ Meeting with related organizations
  - Meeting with the lecturers
  - Meeting with organizations in charge of field trips
- ✓ Preparing teaching materials for follow-up activities
  - Making teaching materials for the workshops
  - Making teaching materials for public awareness
- ✓ Review on the latest knowledge of Tsunami disaster mitigation especially after Indian Ocean Tsunami
  - Review on non-structural countermeasures such as forestation of mangrove tree, which will be reflected in the textbook

Detailed work plan and budget breakdowns for the implementation of the activities included in phase 1 are enclosed in annex 1 and 2.

ICHARM recognizes the four key components to effectively carry out this kind of training course,

1. Experience in organizing and executing training courses, workshops, etc.
2. Information on research and survey in relevant fields
3. Network consisting of researchers and practitioners in Japan and overseas
4. Consultation capability to propose ideas, solutions, etc. to government offices

PWRI, hosting organization of ICHARM, is in position to fulfil all those components. Especially, it has developed a huge human network inside and outside Japan so that it can easily get access to excellent expertise, such as Dr. Nobuo Shuto, a world eminent tsunami expert and a former PWRI researcher. The institute has rich experience not only in tsunami protection but also in coastal area protection from erosion and storm surges.

One of the ICHARM's goals is to offer training courses for developing countries. To achieve the goal, ICHARM is privileged to utilize all of those PWRI's strengths. In addition, International Technical Exchange Team of ICHARM, with its internationally recruited staff, has a plenty of experience in executing and supervising this kind of projects. Considering all required components, ICHARM is confident in its implementation capacity. The monitoring and evaluation of the training course will be carried out by ICHARM.

## 2. Inputs

The main lecturers will be invited from governmental organizations, such as the Central Disaster Management Council for the subjects related to the disaster management plan, the Japan Meteorological Agency for tsunami warning systems, the Ministry of Land, Infrastructure and Transport for structural measures, and from universities such as Tohoku University for tsunami research. In addition, experts from ICHARM will be mobilized for tsunami hazard mapping.

The main reference documents for the training course will be the manual of regional tsunami disaster prevention plans, the rescue plan of Iwate Prefecture for tsunami, the manual for the estimation of tsunami hazard, and the damage report of the Tokachi-oki Earthquake.

On-site inspections of tsunami affected areas such as the Sanriku District will be conducted for better understanding on how CTDP has been developed from experiences of the past failures and successes.



**3. Budget**

<b>Item</b>	<b>Budget (USD)</b>
Personnel (staff or consultants)	89,000
Travel	7,000
Workshops, meetings etc.	21,200
Procurement	5,000
Contractual services	49,800
Operating expenses	28,000
<b>Total</b>	<b>200,000</b>

**4. Annexes**

Annex 1: Work plan – Phase 1

Annex 2: Budget – Phase 1



**Annex 2: Budget – Phase 1**

The following budget breakdown details the expected expenditures for activities undertaken during implementation phase 1 within the project “Comprehensive Tsunami Disaster Prevention Training Course”.

<b>Item</b>	<b>Budget (USD)</b>
Personnel costs (staff or consultants)	26,000
Travel	9,500
Contractual services	45,500
Documentations	0
Operational expenses	14,000
Acquisitions	5,000
Fellowships, Grants and other	0
<b>Total</b>	<b>100,000</b>

