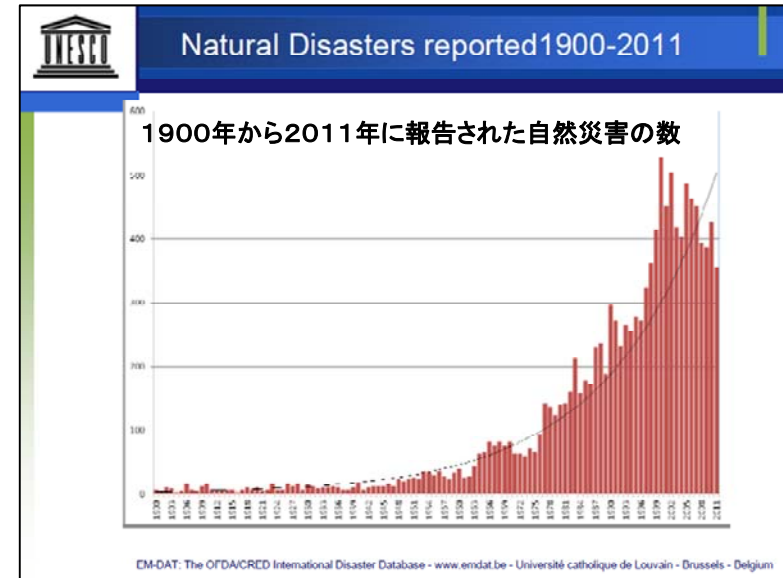


バダウィ・ルーバン
ユネスコ(パリ)自然災害部門 部長

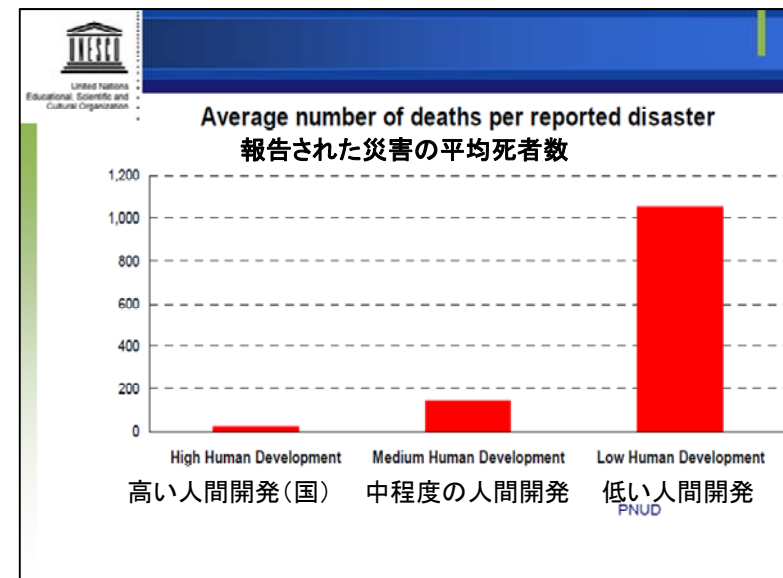
Badaoui ROUHBAN
Director
Unit for Natural Disasters
UNESCO, Paris

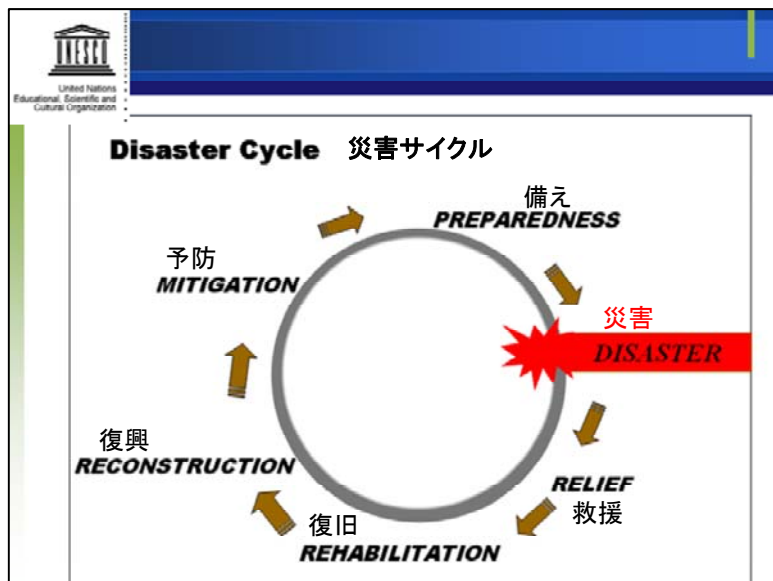
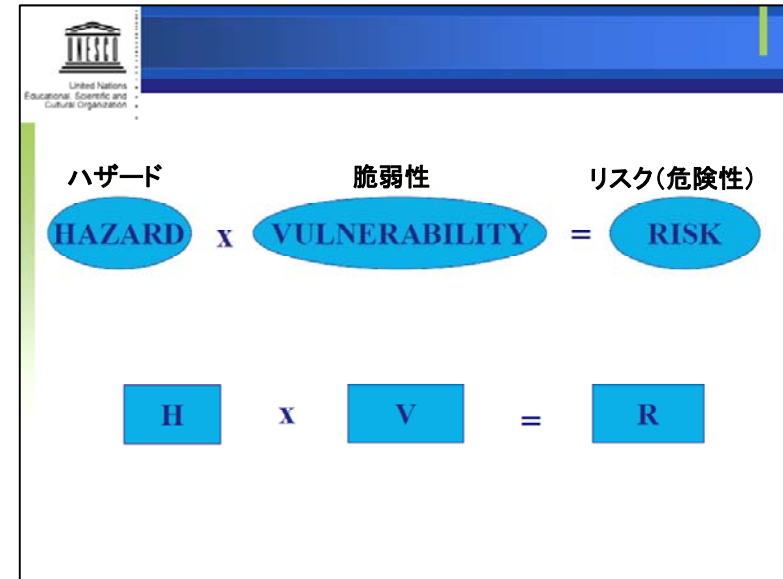
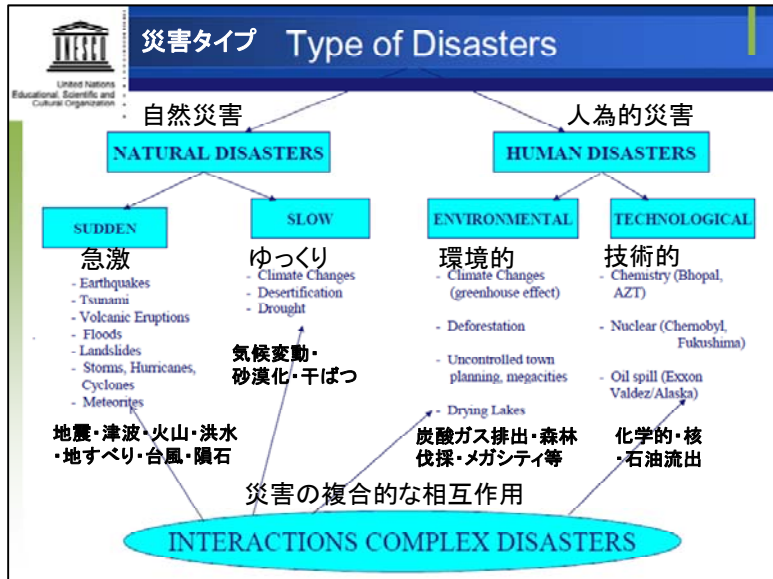



10 Major Disasters (fatalities) in the last 30 years

最近30年間の10大災害 (死者数)

Iran	Earthquake	1990	35,000
Bangladesh	Cycl/flood	1991	140,000
Venezuela	Flood	1999	30,000
Iran	Earthquake	2003	27,000
Indonesia, others	Eq/tsunami	2004	over 280,000
Pakistan	Earthquake	2005	over 80,000
Myanmar	Cycl/flood	2008	over 130,000
China	Earthquake	2008	90,000
Haiti	Earthquake	2010	over 200,000
Armenia	Earthquake	1988	25,000





United Nations system engaged in DRR
防災に関わる国連のシステム

International Strategy for Disaster Reduction (ISDR)

UNESCO

UNICEF

FAO

UN-HABITAT
United Nations Human Settlements Programme

World Meteorological Organization

United Nations University
"Advancing knowledge for human security and development"

UNFCCC

WORLD BANK

World Health Organization

UNEP

PNUD

兵庫行動枠組 (HFA)
Hyogo Framework for Action

Five Priority Areas 5つの優先分野

- ❖ Governance. ガバナンス
- ❖ Risk identification, assessment, monitoring and early warning. リスク評価・早期警報
- ❖ Knowledge management and education. 研究・教育
- ❖ Reducing underlying risk factors. リスク低減
- ❖ Preparedness for effective response and recovery. 救援・復興の備え

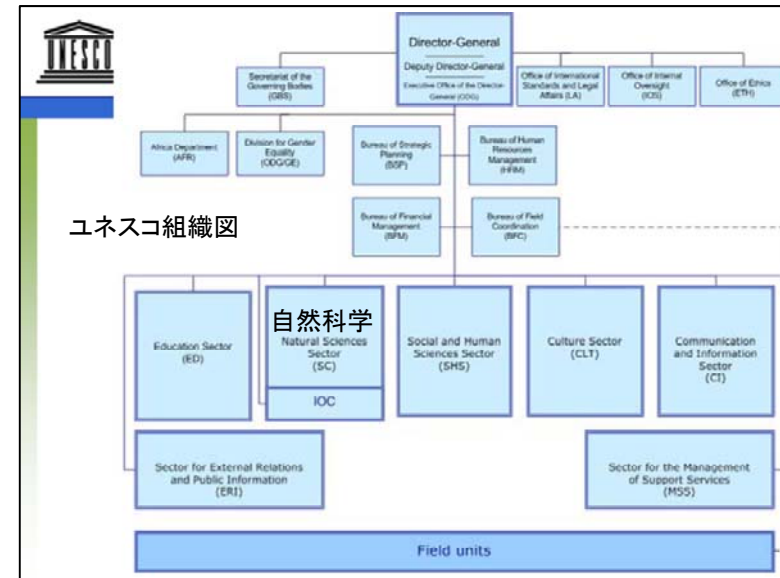
UNESCO ユネスコ


United Nations 国際連合

Educational Scientific Cultural Organization 教育科学文化機関

(natural, social, human sciences)

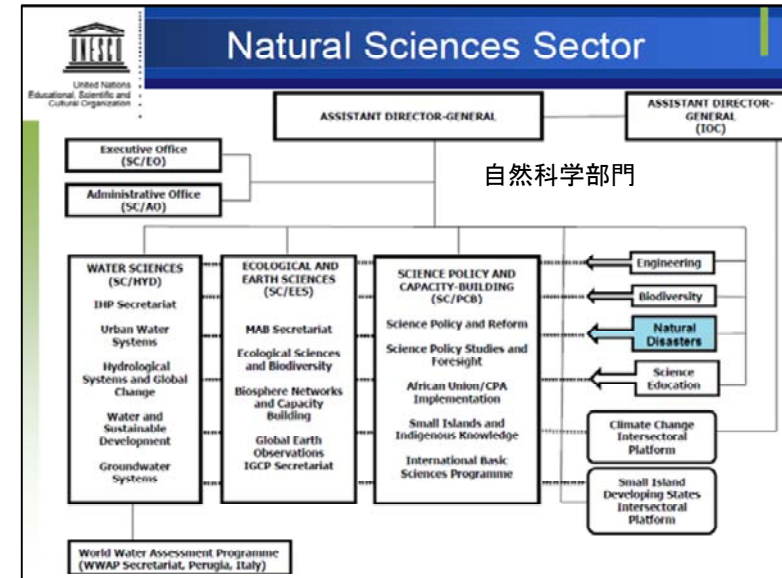
(culture, communication, information, WHC)




防災のためのユネスコの活動
UNESCO's Actions for Disaster Reduction

Long-term Goals
長期目標

- ❖ Observation and early warning networks of natural hazards
- ❖ Hazard risk mapping ハザードマップ
- ❖ Disaster-resistant building codes 耐震建築基準
- ❖ Education for disaster reduction 防災教育
- ❖ Help make schools safer 安全な学校を支援
- ❖ Promotion of public awareness through communication
- ❖ Protection of cultural monuments and sites
- ❖ Social dimensions and ethics of disasters




UNESCO Scientific Programmes

ユネスコ科学プログラム

- ❖ **Natural Sciences 自然科学**
 - International Hydrological Programme (IHP)
 - Man and the Biosphere Programme (MAB)
 - International Engineering Initiative
 - International Geosciences Programme (IGCP)
 - Intergovernmental Oceanographic Commission (IOC)






- ❖ **Social and Human Sciences 社会・人間科学**
 - Management of Social Transformations (MOST) Programme





Establishment of international and regional centres
国際的・地域的センターの設立

- Japan,
- Peru,
- Iran,
- FYR Macedonia,
- Netherlands
- ...

世界的な津波警報システム
Global Tsunami Warning System

The map displays the four primary regions of the Global Tsunami Warning System, each enclosed in a colored oval: the Pacific Ocean (blue), the Caribbean (orange), the NE Atlantic & Med (green), and the Indian Ocean (yellow). Major continents and regions are labeled: N. America, S. America, Africa, Asia, and Australia.

津波警報システム

The diagram illustrates a deep-ocean pressure recording system. A satellite in orbit sends a signal to a buoy on the surface. The buoy is connected to a hydrophone at a depth of 5000 meters. An acoustic telemetry system transmits data from the hydrophone back to the buoy, which then relays it to the satellite. A tsunami detector is also shown on the seafloor.

数分でどこに最初の津波が来るか

United Nations Educational, Scientific and Cultural Organization

Where the First Wave Arrives in Minutes
Indonesian Lessons on Surviving Tsunamis near Their Sources

インドネシアの津波の教訓

The slide features a grid of 12 small photographs depicting the impact of a tsunami in Indonesia, showing people in various states of emergency and displacement. To the right is the cover of a report titled 'TSUNAMI PREPAREDNESS'.

Pakistan Flood Risk Management パキスタンの洪水管理



United Nations Educational, Scientific and Cultural Organization

International Flood Initiative

国際的な洪水対策

© UN Photo/Evan Schneider
A view of heavy flooding caused by monsoon rains in Punjab Province, near the city of Multan, Pakistan.

The slide includes an aerial photograph of extensive flooding in Punjab Province, Pakistan. At the bottom, it features the logos of the World Meteorological Organization (WMO), United Nations University, and the International Strategy for Disaster Reduction (ISDR).



Pakistan Flood Risk Management

 パキスタンの
洪水管理

United Nations
Educational, Scientific and
Cultural Organization

- ❖ Integrated flood and watershed management
- ❖ Groundwater resources for emergency situations
- ❖ Glaciers Melt, landslides and ground instability geohazards in flood affected areas
- ❖ Education and capacity building as a cross-cutting issue



International Flood Initiative

 国際的な
洪水対策

United Nations
Educational, Scientific and
Cultural Organization

International Centre for Water Hazard and Risk Management (ICHARM)
 Tsukuba, Japan

水災害・リスクマネージメント国際センター
 (ICHARM) つくば(土研)

Global Center of Excellence for
 Water Hazard and Risk Management
ICHARM
 International Centre for Water Hazard and Risk
 Management under the auspices of UNESCO






UNESCO-IHE



 ユネスコ水教育
研究所 (IHE)

United Nations
Educational, Scientific and
Cultural Organization



- Flood resilience
- Floating buildings
- Redesigning urban areas

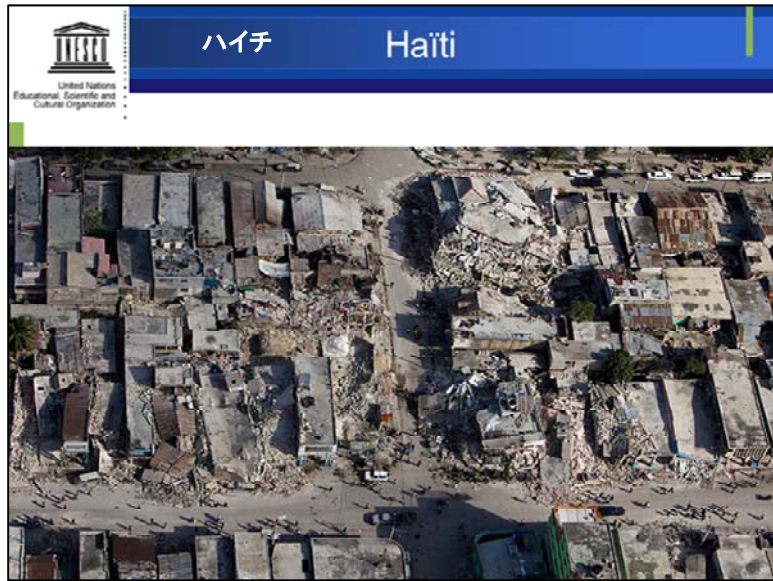
- Flood warning
- Developing flexible, appropriate software tools for real-time flood prediction
- Examining the effect of climate on flood prediction tools
- Using SMS messaging to deliver flood warning by location



DROUGHT HORN OF AFRICA

 アフリカ干ばつ
AFRICA

United Nations
Educational, Scientific and
Cultural Organization

- Operational Regional Drought early warning system
- A Regional Groundwater Resources Database
- A critical mass of scientists
- A set of drought response policies for managing groundwater in emergency situations



United Nations Educational, Scientific and Cultural Organization

ハイチ HAITI

- ❖ Training of 350 masons on earthquake-resistant housing
- ❖ Psychosocial support for secondary school children
- ❖ Reconstruction and equipments for secondary schools and vocational colleges
- ❖ Support for community radio stations
- ❖ Rapid reestablishment of Haitian coastal hazard warning services
- ❖ Humanitarian communication programmes in refugee camps

<http://unesdoc.unesco.org/images/0018/001805/180532f.pdf>

United Nations Educational, Scientific and Cultural Organization

UNESCO - IPRED ユネスコ IPRED

- ❖ International Platform for Reducing Earthquake Disasters

IPRED: 建築・住宅地震防災
国際プラットフォーム

IPRED 地震 IPRED - Earthquakes

United Nations Educational, Scientific and Cultural Organization

IPRED

Partners are invited to the IPRED website

Partners are invited to the IPRED website

Mexico: National Center for Disaster Prevention
 Egypt: National Research Institute of Astronomy and Geophysics (NRIAG)
 Turkey: Istanbul Technical University (ITU)
 Japan: Japan-Peru Center for Earthquake Engineering and Disaster Mitigation

Mexico: Universidad de Colima
 Turkey: Istanbul Technical University (ITU)
 Chile: Universidad Católica de Chile

Romania: National Center for Seismic Risk Reduction (CNRIRS)
 Peru: Japan-Peru Center for Earthquake Engineering and Disaster Mitigation (CISMID)
 Indonesia: Research Institute for Human Settlements (RIHS)
 Kazakhstan: Institute of Seismology

Ministry of Land Infrastructure, Transport and Tourism - MLIT
 ISEE - BR Building Research Institute Project Co. Ltd.
 JICA
 UNESCO

International Platform for Reducing Earthquake Disasters

**International Platform for Reducing Earthquake Disaster (IPRED)
 建築・住宅地震防災国際プラットフォーム (IPRED)**

United Nations Educational, Scientific and Cultural Organization

ユネスコ 建研 (IISEE)

UNESCO Center of Excellence: BRI/IISEE of Japan

Chile: Universidad Católica de Chile
 Egypt: National Research Institute of Astronomy and Geophysics (NRIAG)
 Indonesia: Research Institute for Human Settlements (RIHS)
 Kazakhstan: Institute of Seismology
 Mexico: National Center for Disaster Prevention (CENAPRED)
 Peru: Japan-Peru Center for Earthquake Engineering and Disaster Mitigation (CISMID)
 Romania: National Center for Seismic Risk Reduction (CNRIRS)
 Turkey: Istanbul Technical University (ITU)

チリ
 エジプト
 エルサルバドル
 インドネシア
 カザフスタン
 メキシコ
 ペルー
 ルーマニア
 トルコ

Research **Training** **Database**

研究 研修 データベース

USGS RELEMR - Earthquakes

United Nations Educational, Scientific and Cultural Organization

地震 - 地中海世界


Reducing Earthquake Losses in the Extended Mediterranean Region

RELSAR - Earthquakes


United Nations Educational, Scientific and Cultural Organization

地震 - 南アジア地域


Reducing Earthquake Losses in the South Asia Region


 United Nations Educational, Scientific and Cultural Organization
 Japan Center for Network Seismology & Source Science
 المعهد الوطني للبحوث الجيولوجية
LNSN - Earthquakes

地震 - リビア地震ネットワーク




Libyan National Seismological Network – National project with regional vocation



建築基準 グローバル タスクフォース
 ❖ **Global Taskforce on Building Codes**



 United Nations Educational, Scientific and Cultural Organization
カトマンズ(ネパール)とニューデリー(インド)事務所
Kathmandu Office, Nepal and New Delhi Office, India






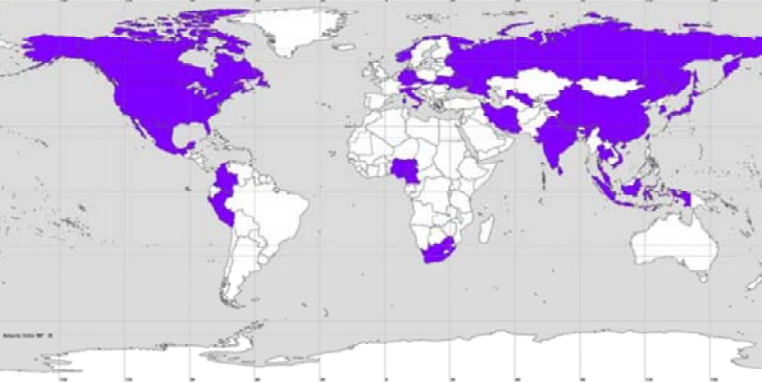
カトマンズとニューデリー事務所の業務

- ❖ Establishment of Earthquake Monitoring Stations in Nepal
- ❖ Preparedness for Flood Risk Reduction through Mapping and Assessing Risk and Management Options and Building Capacity in Lal Bakaiya Watershed, Nepal
- ❖ Improving Human Security through Better Understanding of Flood Mechanism in the Himalayas: A Pilot Project for Flash Flood Management in the lesser Himalayas of South Asia




ICL 地すべり ICL - Landslides

United Nations
 Educational, Scientific and
 Cultural Organization



国際斜面災害研究機構
 International Consortium on Landslides



**International Consortium on
Landslides (ICL) ICL 国際斜面
災害研究機構**

United Nations
 Educational, Scientific and
 Cultural Organization







The First World Landslide Forum


IMEWS - Volcanoes

United Nations
 Educational, Scientific and
 Cultural Organization

IMEWS 国際火山噴火早期警戒制度 (火山)



Volcanoes - International Monitoring Early Warning System



DIPECHOプロジェクト: 中米総合防災警報システム

United Nations
 Educational, Scientific and
 Cultural Organization


**DIPECHO Project: Strengthening Early
Warning Systems in
Central America from a multi-threat perspective**



DIPECHO: 欧州連合人道局 災害準備体制

 **DIPECHOプロジェクト(中米)の内容**

United Nations Educational, Scientific and Cultural Organization



- ❖ Inventory and diagnostic of EWS in Central America.
- ❖ Study of EWS legal frameworks and procedures.
- ❖ Validation of the "Manual on EWS Regional Flood" (produced by the OAS).
- ❖ Guidelines for the design and sustainability of EWS to Landslides / Mudslides
- ❖ Development of educational materials on EWS for the Ministries of Education.
- ❖ Incorporation of EWS in the formal school curriculum of each country.
- ❖ Awareness workshops and training aimed at authorities and officials from the ministries of education in the subject EWS.
- ❖ Support national efforts to commemorate the International Day for Disaster Reduction


 **Safe School Strategy** 安全な学校戦略
School collapse or damages

United Nations Educational, Scientific and Cultural Organization



被災した学校の数

- Tangshan, China 1976 (>2,000)
- Spitak, Armenia 1988 (>1,000)
- Ardakul, Iran 1997 (110)
- Bingol, Turkey 2003 (84)
- Ahmedabad, India 2003 (>25)
- Kashmir, Pakistan 2005
- Sichuan, China 2008 (>6,500 Classrooms)
- Haiti 2010 (>5,000 schools)

 **School Safety** 学校の安全性

United Nations Educational, Scientific and Cultural Organization



1. Baseline study on school safety activities worldwide
2. Methodology for assessing school safety
3. School safety index
4. Guidelines for strengthening school safety
5. Implementation of school safety measures, e.g.:
(soft → emergency plans)
(hard → retrofitting)

- ❖ Multi-sectoral (ED, SC, SHS, CLT, CI)
- ❖ UN Interagency (UNISDR, Unicef, WB, etc)
- ❖ DRR Community (Plan, Save the Children, INEE)

TPKE

 **UNESCO - Indigenous** ユネスコ 在来の知恵

United Nations Educational, Scientific and Cultural Organization



Indigenous Knowledge
在来(伝統)の知恵



ESD-DRR
防災教育 - 減災


DIPECHOプロジェクト： 津波学習と備え(南米)

United Nations
 Educational, Scientific and
 Cultural Organization

DIPECHO Project: Learning and Preparedness for Tsunamis





**ユネスコ プロジェクト： 津波学習
チリ・コロンビア・エクアドル・ペルー**

United Nations
 Educational, Scientific and
 Cultural Organization

❖ Learning and Preparedness




Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura

- Fortalecimiento del Sistema Regional de Alerta ante Tsunami en Chile, Colombia, Ecuador y Perú


Education Package “Earthquake Preparedness Programme for School”

United Nations
 Educational, Scientific and
 Cultural Organization

UNESCO Office, Jakarta

教育パッケージ 学校の地震対策プログラム (ジャカルタ)

Reinforce the school community group in disaster preparedness



1. Development Kit for Teachers
2. Learning Materials for Teachers
3. Worksheet for Students


Asia-Pacific Cultural Centre for UNESCO (ACCU)

United Nations
 Educational, Scientific and
 Cultural Organization

ユネスコ アジア(太平洋)文化センター (ACCU) 日本

Programmes and materials in Disaster Reduction and Preparedness



減災と備えのためのプログラムと教材



United Nations Educational, Scientific and Cultural Organization

減災 活動 サブサハラアフリカ

DRR Activities Sub-Saharan Africa



United Nations Educational, Scientific and Cultural Organization

Support for the study of geo hazards within the framework of the geosciences Initiatives African Region

- ❖ to improve the awareness and the understanding of, and the preparedness for geohazards
- ❖ to be included and specifically addressed in the study of Earth science in the Africa universities.

地球科学研究の枠組みでのハザード研究支援(アフリカ地域)



United Nations Educational, Scientific and Cultural Organization

Hyogo framework for action 兵庫行動枠組 2005-2015

優先行動3: 防災文化を構築するため、知識、技術、教育を活用する

Priority No 3:


**Knowledge, innovation and education -
Building a culture of resilient communities**


“the integration of disaster risk reduction as an intrinsic element of the UN Decade of Education for Sustainable Development”,

United Nations Educational, Scientific and Cultural Organization

DRR integration into curricula 教育カリキュラムへの防災の取込み

1. A comprehensive mapping that captures key national experiences and good practices with regards to integration of DRR in school curriculum
2. A guidance for governments, ministries and partner agencies and organizations to effectively integrate DRR in curricula. It will draw from previous experiences and further DRR agenda through curriculum enhancement.



unicef 

TPKE

UNESCO Logo

教育の最低基準： 備え、救援、復興

United Nations Educational, Scientific and Cultural Organization

Minimum Standards for Education: Preparedness, Response, Recovery.



Notes d'orientation pour La construction d'écoles plus sûres


Dispositif mondial de réduction des catastrophes et de relèvement (GFDRR)

Logos: UN, ISEDR, INEE, THE WORLD BANK

UNESCO Logo

ユネスコ バンコク アジア太平洋地域教育局
UNESCO Bangkok

Asia and Pacific Regional Bureau for Education



UNESCO Logo

Education for Natural Disaster Preparedness in the Context of ESD
UNESCO Bangkok 防災教育ESD

- ❖ Take stock of ongoing ENDP activities at the country level
- ❖ Conduct situational analyses in the following proposed countries to identify and address gaps and needs:

China	Japan	中国 日本
India	Indonesia	インド インドネシア
Philippines	Sri Lanka	フィリピン スリランカ
Thailand	Vanuatu	タイ バヌアツ

1. Development of an ENDP materials website
2. Regional Workshop on Education for Disaster Risk Reduction for Sustainable Development
3. Curriculum recommendations

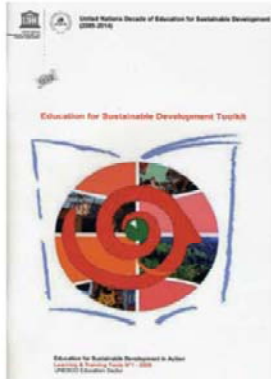

UNESCO Logo

防災教育教材（教師用マニュアル）




United Nations Educational, Scientific and Cultural Organization

防災教育用教材

Education for Sustainable Development Toolkit

Media as partners in education for sustainable development: A Training and Resource Kit

United Nations Educational, Scientific and Cultural Organization

Web-Tools ウェブ・ツール



Teaching and learning for a sustainable future
a multimedia teacher education programme

Themes and Modules

UN Decade of Education for Sustainable Development	Getting Started in TLSF	Curriculum Rationale	Sustainable Development Across the Curriculum	Interdisciplinary Curriculum Themes	Teaching & Learning Strategies	Dissemination & Training Toolkit
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United Nations Educational, Scientific and Cultural Organization
Morris L.O. © 2008

United Nations Educational, Scientific and Cultural Organization

Culture Sector 文化部門



Culture Sector (CLT)

❖ World Heritage 世界遺産



Protecting, safeguarding and managing the tangible and intangible heritage

United Nations Educational, Scientific and Cultural Organization

The World Heritage Convention 世界遺産条約




The World Heritage Convention:

- **unique international legal instrument for the protection of both cultural and natural Heritage**
- **international cooperation in favour of the promotion of peace and recognition of cultural diversity**



Strategy for reducing risks at World Heritage Properties 世界遺産 防災戦略

- ❖ Purposes: 目的: 世界遺産の保護を強化する
- ❖ Strengthen the protection of World Heritage
- ❖ Contribute to sustainable development
 - o integrate concern for heritage into national disaster reduction policies
 - o incorporate concern for disaster risk reduction within management plans and systems for World Heritage properties in their territories.



World Heritage 世界遺産 緊急事態で作られた概念



A concept created by an emergency:

1910 : The first dam is built in Aswan

The Nubian monuments are threatened by the water of the lake created by the dam.

1960 : The construction of the high dam of Aswan is accomplished

"The Nubian monuments will disappear under the water unless..."

8 March 1960

1960年3月8日 ユネスコが活動を開始



UNESCO launches an international campaign...

UNESCO requests international technical and financial assistance in order to save the Nubian monuments.

A group of experts, coming from different countries, is asked to prepare an action plan in order to safeguard all the Nubian heritage.

- the contribution of 50 countries
- an amount of around US\$ 80 millions
- the acceleration of the excavations



The temples of Abu Simbel and Philae are "saved".



UNESCO's response to

Natural disaster

自然災害へのユネスコの責任

To protect cultural heritage

文化遺産の保護



ペルー・マチュピチュの斜面崩壊 Landslides, Machu Pichu, Peru
International Programme on Landslides supported by UNESCO

