

International Platform for Reducing Earthquake Disasters (IPRED) Action Plans (July 2008, Paris)

1. Background achievements

Natural disasters caused by earthquakes, tsunamis, floods, landslides, cyclones and other hazards are on the rise. The vulnerability of cities and coastal areas to natural hazards is increasing dramatically. The global climate change is expected to exacerbate natural disasters.

Buildings, especially housing, should protect human beings from natural disasters. When buildings are themselves damaged by earthquakes, the impact on the lives of the occupants is enormous. Damage to buildings caused by disasters can also seriously hinder relief and repairing efforts. For example, major hospitals and other facilities may become unable to function, roads may be blocked by wreckage, and there may be massive refugee flows.

In January 2005, the United Nations World Conference on Disaster Reduction (WCDR) was held in Kobe, and the WCDR adopted the Hyogo Framework for Action (HFA) 2005-2015: Building the resilience of nations and communities to disasters. At one of the Conference Sessions, it was discussed that it is important to improve the safety of buildings and housing as a basic and vital priority for the world's disaster reduction efforts. It was then proposed that the "Building Disaster Reduction Network" should be established.

Such a network is especially needed for earthquakes in order to activate and share data of invaluable experience of each country, as it is difficult for a single country to experience and verify the effects of measures.

In June 2007, the First Session of the Global Platform for Disaster Risk Reduction (GP/DRR) was held in Geneva for the purpose of assessment and implementation of the HFA. At one of the side events of GP/DRR, the importance of enforcement and dissemination of building codes was highlighted. It was proposed to establish a "Taskforce Group on Building Code" with regards to its enforcement and dissemination, and UNESCO offered to act as the Secretariat.

As Japan has experienced many large earthquakes since ancient times, earthquake disaster reduction has been researched and studied quite extensively. UNESCO has recognized and supported these Japanese efforts and expertise concerning earthquake risk reduction.

UNESCO participated in a joint venture with the Building Research Institute (BRI) of Japan when the Government of Japan established the International Institute of Seismology and Earthquake Engineering (IISEE). Since then, the IISEE has conducted international training courses on seismology and earthquake engineering (1963-1972) for researchers and engineers from foreign countries. UNESCO has also provided financial support to the training courses.

Since 2005, the curriculum of this training course is conducted as the Master Program on Earthquake Disaster Mitigation at the National Graduate Institute for Policy Studies (GRIPS) of Japan, and in 2006, UNESCO provided funds in support of it. Today, supported by the Japan International Cooperation Agency (JICA), more than 1,300 researchers and engineers from over 90 countries have graduated from these courses.

2. Establishment of the IPRED

Against the above-mentioned background, and in order to address policy-relevant issues related to earthquake risk reduction and better prepare for the future earthquakes in the world, UNESCO and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan, in cooperation with the BRI of Japan, agreed to promote and expand an international platform regarding earthquakes, including a research and training platform for earthquake disaster reduction based on seismology and earthquake engineering.

The kickoff meeting of this initiative was held in June 2007 in Japan jointly organized by UNESCO, MLIT and BRI, and supported by Japanese National Commission for UNESCO, the Ministry of Foreign Affairs of Japan and other related organizations. The meeting was attended by representatives of the UNESCO Headquarters, nine countries (Chile, Egypt, Indonesia, Japan, Kazakhstan, Mexico, Peru, Romania, and Turkey) with experiences of JICA projects regarding earthquake disaster reduction in the past and related organizations.

At the end of the kickoff meeting, the participated members adopted the resolutions, and the formal name of this initiative was later agreed as the “International Platform for Reducing Earthquake Disasters (IPRED).” The following was included in the adapted resolutions:

- a. For the purpose of seismic risk reduction of buildings, an international network/platform for collaborative research, training, and education regarding

seismology and earthquake engineering is necessary to be established.

- b. A system to dispatch experts to an earthquake stricken country in order to carry out post-earthquake studies and draw lessons for future risk reduction will be very effective. In doing so, it is useful to use the world network of IISEE graduates.
- c. The IISEE of Japan would act as the Centre of Excellence (COE) of this project, and assist the activities and maintenance of the network/platform.
- d. A linkage between this project and a "Taskforce Group on Building Code" of GP/DRR should be pursued in order to activate the network/platform effectively.

3. IPRED Paris Action Plans 2008

On 8-10 July 2008, the IPRED meeting was held for the first time at the UNESCO Headquarters in Paris organized by UNESCO. The meeting was attended by representatives of nine earthquake-prone countries (Chile, Egypt, Indonesia, Japan, Kazakhstan, Mexico, Peru, Romania, and Turkey) as well as a guest expert from a Chinese university and the several observers from the Permanent Delegations to UNESCO. At the meeting, quick reports and lessons learned from recent devastating earthquake disasters were shared, and the following Action Plans were discussed and later adopted. The time schedule of the IPRED Paris Action Plans is shown in the Annex.

Action 1: Development of database to contribute to field investigations (database related to anti-seismic performance, etc.)

<Short-term>

- i. The IPRED will develop the international database to contribute to post-earthquake field investigation by the end of March, 2009.
- ii. The MLIT of Japan, with the cooperation of IISEE, will provide the data of the Japanese case by the end of September 2008, and UNESCO will edit and share it with other IPRED members.
- iii. The IPRED members other than Japan will submit their data in English to UNESCO by the end of December, 2008.
- iv. UNESCO, with the cooperation of IISEE, will edit and upload the database onto the website to be shared among the IPRED members by the end of March, 2009.

<Medium- or Long-term>

- v. The IPRED shall make joint actions to promote measures against existing buildings not complying with the current building codes.
- vi. UNESCO will promote the expansion of the membership in addition to the initial members, and request and add their data to the database.
- vii. Expansion of the items of the database will be discussed in the future IPRED meetings.
- viii. Once the database is developed, UNESCO and IISEE will try to maintain the up-to-date information whenever the opportunity arises, including at the time of IISEE training courses.

Action 2: Establishment of a system for post-earthquake field investigations**<Short-term>**

- i. UNESCO will initiate the dialogues to promote prior arrangements for both dispatch and acceptance of experts with related organizations to facilitate post-earthquake field investigations.
- ii. UNESCO, with the cooperation of IISEE, will designate a focal point of each country from the IPRED members, with a due recognition of the National Commissions for UNESCO.
- iii. UNESCO will share the information on such prior arrangements with other IPRED members.

<Medium- or Long-term>

- iv. UNESCO, through the IPRED, will arrange pre-earthquake field investigations as well as training of field investigators, and develop necessary tools before the occurrence of earthquakes.
- v. UNESCO will dispatch the field investigation teams in the wake of earthquakes.
- vi. UNESCO will continue discussing and promoting prior arrangements for both dispatch and acceptance of experts with related organizations to facilitate post-earthquake field investigations.

Action 3: Development of educational materials database (for the e-learning system, etc.)**<Short-term>**

- i. The IPRED will develop the educational materials database on the items to be developed for the database by the end of March, 2009.

- ii. The IPRED members will submit their data in English or in their native languages to UNESCO by the end of December, 2008.
- iii. UNESCO, with the cooperation of IISEE, will edit and upload the database onto the website to be shared among the IPRED members by the end of March, 2009.

<Medium- or Long-term>

- iv. UNESCO will promote the expansion of the membership in addition to the initial members, and request and add their data to the database.
- v. Expansion of the items of the database will be discussed in the future IPRED meetings.
- vi. Members are encouraged to submit additional materials to UNESCO whenever they develop or obtain useful materials.
- vii. UNESCO and IISEE will develop new educational materials and new training programmes based on the e-learning system.

Action 4: Promotion of international joint research programmes

<Short-term>

- i. The selected members of the IPRED, with the cooperation of IISEE, will initiate the dialogues to promote international joint research.
- ii. The IPRED members shall distribute appropriate information regarding possibilities on international joint research programmes.

<Medium- or Long-term>

- iii. The selected members of the IPRED will implement new international joint research programmes.

Action 5: Promotion of international cooperation with universities

<Short-term>

- i. The selected members of the IPRED will initiate the dialogues to promote the dual degree programmes with universities as well as exchange programmes for students and/or faculty regionally/internationally.

<Medium- or Long-term>

- ii. The selected members of the IPRED will implement the dual degree programmes with universities as well as exchange programmes for students and/or faculty.

Action 6: Promotion of sharing engineering data on structural testing, soil properties, etc.

<Short-term>

- i. IISEE and the selected members of the IPRED will initiate the dialogues to promote sharing engineering data on structural testing, soil properties, etc.

<Medium- or Long-term>

- ii. IISEE and the selected members of the IPRED will establish the data sharing system.

Action 7: Promotion of ground motion observation network and the data sharing

<Short-term>

- i. IISEE and the selected members of the IPRED will initiate the dialogues to promote ground motion observation network and the data sharing.

<Medium- or Long-term>

- ii. IISEE and the selected members of the IPRED will establish the ground motion observation network and the data sharing system.

Action 8: Training of trainers through the IISEE follow-up trainings, follow-up workshops, etc.

<Short-term>

- i. The IPRED will support and cooperate with IISEE to organize the JICA follow-up training on the occasion of the 7th General Assembly of Asian Seismological Commission (7ASC) in November, 2008.

<Medium- or Long-term>

- ii. The IPRED will support and cooperate with IISEE to organize the following two training courses from the year 2009 in addition to the existing annual three courses regarding seismology, earthquake engineering and tsunami.
 - “Earthquake Disaster Mitigation” training course for three trainers which aims at conferring doctorates after the three-year training with the collaboration of the University of Tsukuba and the GRIPS
 - “Technology and Policy for Earthquake and Tsunami Disaster Management” training course for two weeks for twelve trainers from the Asian countries

Action 9: Development of the portal website**<Short-term>**

- i. UNESCO will launch the IPRED website (<http://www.unesco-ipred.org/>) and its linkage with the UNESCO official website by the end of July, 2008.
- ii. The members of the IPRED will link their official website with the IPRED website and IISEE Educational Network.
- iii. UNESCO, with the cooperation of IISEE, will develop the portal website for the IPRED members to support the international database and the educational materials database by the end of March, 2009.

<Medium- or Long-term>

- iv. UNESCO and IISEE will maintain and improve the developed portal website.

Action 10: Establishment of the “IISEE-UNESCO Lecture Notes Series”**<Short-term>**

- i. The IPRED will support and cooperate with IISEE to establish the “IISEE-UNESCO Lecture Notes Series” in English by the beginning of September, 2008.
- ii. The IPRED will support and cooperate with IISEE to publicize the above “IISEE-UNESCO Lecture Notes Series” the beginning of December, 2008.

<Medium- or Long-term>

- iii. The IPRED will support and cooperate with IISEE to continue improving the “IISEE-UNESCO Lecture Notes Series.”
- iv. The IPRED will support and cooperate with IISEE to translate the “IISEE-UNESCO Lecture Notes Series” into other languages in order to contribute to the self-training of practitioners.

Action 11: Development of the microtremor array exploration techniques**<Short-term>**

- i. The IPRED will support and cooperate with IISEE to organize the “Two Days Training for Microtremor Array Exploration Techniques” on the occasion of the 7th General Assembly of Asian Seismological Commission (7ASC) in November, 2008.

<Medium- or Long-term>

- ii. The IPRED will support and cooperate with IISEE to develop the microtremor array exploration techniques.

Action 12: Dissemination of activities through International/regional events related to seismology or earthquake engineering**<Short-term>**

- i. UNESCO and the IPRED members will disseminate the IPRED activities through international/regional events related to seismology or earthquake engineering including the following:
 - International Disaster and Risk Conference (IDRC), 25-29 August, 2008 (Davos, Switzerland)
 - The 14th World Conference on Earthquake Engineering (14WCEE), 12-17 October, 2008 (Beijing, China)
 - The 7th General Assembly of Asian Seismological Commission (7ASC), 24-27 November, 2008 and ASC 2008 Pre-symposium, 22-23 November, 2008 (Tsukuba, Japan)
- ii. UNESCO and the IPRED members will promote the expansion of the membership through international/regional events.

<Medium- or Long-term>

- iii. UNESCO and the IPRED members continue to disseminate the IPRED activities through international/regional events related to seismology or earthquake engineering including the following:
 - The 2nd Session of the Global Platform for Disaster Risk Reduction (GP/DRR), 15-19 June, 2009 (Geneva, Switzerland)

Action 13: Planning of international workshops to raise IPRED's awareness**<Short-term>**

- i. UNESCO and the IPRED members will initiate the dialogues to organize international workshops for the purpose of responding to local necessities and social problematic aspects as well as making policy-makers conscious.

<Medium- or Long-term>

- ii. UNESCO and the IPRED members will implement international workshops for the purpose of responding to local necessities and social problematic aspects as well as making policy-makers conscious.

Action 14: Information dissemination by distribution of printed materials

<Short-term>

- i. UNESCO and the IPRED members will initiate the dialogues to create printed materials for the purpose of dissemination of useful information such as retrofitting methods, etc.

<Medium- or Long-term>

- ii. UNESCO and the IPRED members will create printed materials for the purpose of dissemination of useful information such as retrofitting methods, etc.

Action 15: Translation of building codes into other languages

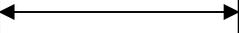
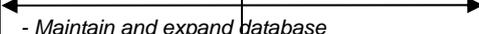
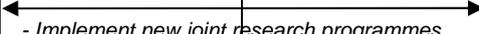
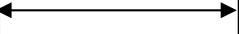
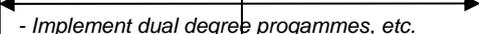
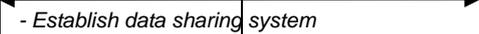
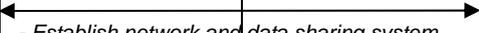
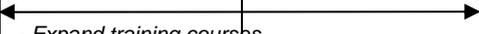
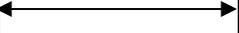
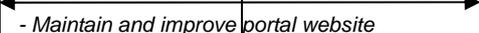
<Short-term>

- i. UNESCO and the IPRED members will initiate the dialogues to select building codes to be translated into other languages.

<Medium- or Long-term>

- ii. UNESCO and the IPRED members will translate the selected building codes into other languages.

Annex: Time schedule of the IPRED Paris Action Plans 2008

	Short-term	Medium-term	Long-term
Action 1: Development of database to contribute to field investigations (database related to anti-seismic performance, etc.)	 - Develop database	 - Maintain and expand database	
Action 2: Establishment of a system for post-earthquake field investigations	 - Initiate dialogues for prior arrangements - Designate a focal point of each country	 - Arrange pre-earthquake field investigations - Continue promoting prior arrangements	
Action 3: Development of educational materials database (for the e-learning system, etc.)	 - Develop database	 - Maintain and expand database	
Action 4: Promotion of international joint research programmes	 - Initiate dialogues for joint research	 - Implement new joint research programmes	
Action 5: Promotion of international cooperation with universities	 - Initiate dialogues for dual degree programmes, etc.	 - Implement dual degree programmes, etc.	
Action 6: Promotion of sharing engineering data on structural testing, soil properties, etc.	 - Initiate dialogues for data sharing	 - Establish data sharing system	
Action 7: Promotion of ground motion observation network and the data sharing	 - Initiate dialogues for network and data sharing	 - Establish network and data sharing system.	
Action 8: Training of trainers through the IISEE follow-up trainings, follow-up workshops, etc.	 - Organize the follow-up training in November	 - Expand training courses	
Action 9: Development of the portal website	 - Develop portal website	 - Maintain and improve portal website	

<p>Action 10: Establishment of the “IISEE-UNESCO Lecture Notes Series”</p>	<p>← →</p> <p>- Establish and publicize lecture notes</p> <p>← →</p>	<p>← →</p> <p>- Expand lecture notes into other languages</p>	<p>← →</p>
<p>Action 11: Development of the microtremor array exploration techniques</p>	<p>← →</p> <p>- Organize trainings</p>	<p>← →</p> <p>- Continue development</p>	<p>← →</p>
<p>Action 12: Dissemination of activities through International/regional events related to seismology or earthquake engineering</p>	<p>← →</p> <p>- Disseminate activities through several events</p>	<p>← →</p> <p>- Continue dissemination</p>	<p>← →</p>
<p>Action 13: Planning of international workshops to raise IPRED’s awareness</p>	<p>← →</p> <p>- Initiate dialogues for workshops</p>	<p>← →</p> <p>- Implement workshops</p>	<p>← →</p>
<p>Action 14: Information dissemination by distribution of printed materials</p>	<p>← →</p> <p>- Initiate dialogues for printed materials</p>	<p>← →</p> <p>- Create printed materials</p>	<p>← →</p>
<p>Action 15: Translation of building codes into other languages</p>	<p>← →</p> <p>- Initiate dialogues for translation of building codes</p>	<p>← →</p> <p>- Translate building codes</p>	<p>← →</p>