

Global Geohazards Education
; Through the Triangular Cooperation of the
International Year of Planet Earth Initiative,
the United Nations
and the National Governments

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I remember the horror and devastating life losses of the result of the tsunami attacks that struck the coasts of Indonesia, Thailand, Sri Lanka, India as well as other neighboring countries. The event took the lives of thousands of residents and tourists, and the Japanese word 'tsunami' was instantly coined in all parts of the world ever since the year 2004. In addition to the vivid images of tormented towns, unidentified bodies and the shore covered with the debris of homes and buildings, I remember hearing a story about why the impact of the tsunami attacks took so many lives. Besides there being no prior notice, the tourists and residents were not familiar with the impact and aftermaths of the massive tidal wave. What happened was that the people at the seashore remained closely to the sea, amazed by the unusual phenomena, or even collected fish from the exposed seabed. However, this kind of curiosity and uninformed behavior has cost them their lives.

Since geohazards do not happen at a routine basis, or even quite often in most of the regions, most people do not recognize that they in fact lack the necessary knowledge towards surviving such abrupt crises. There is the widespread insensitivity and mannerist disinterest towards the need to learn about the evacuation plan on the individual level, not to mention on the societal level. Due to such circumstances, I would like to point out that the public education would serve as the best tool in informing the public about the geohazards, as well as how to react when one is caught in surprise by a major geohazard event.

Shortcomings of the Current Public Education

In response to the absence of any central figure or entity directly responsible in educating the public about the geohazards and the appropriate reactions, one should ask this serious question: if education cannot provide basic tools of survival against the giant surf of geohazards, what can? However, on the course of answering this question, one may find an interesting fact; that we are in fact educated about earthquakes and hurricanes, volcanoes and massive disasters in classes. We are exposed to the scientific reasons behind such geohazards; from the influence of seismic wavelengths and lava eruption to El Nino and global warming. Furthermore, there are professional institutions available that forecast such events prior to its actual happening (although it may not earn sufficient time for safe evacuation of the affected city.) Then why is it that the citizens of the 21st century are numbed when it comes to effectively saving themselves and the people around them? It is because the current curriculums heavily focus on understanding the scientific background and the rationale behind the geohazards, but not on how to determine, prepare and react to the events that may as well seriously threaten

the health, wealth and even the life of the affected persons.

There is another reason why the current public education should put more emphasis on reacting towards the geohazards; that institutional precautionary measures are not 100% effective when it comes to predicting or preventing the geohazards. Although precautionary measures such as forecasts and city planning will help minimize the actual threat of the event, when geohazards take place, it is solely upon an individual's knowledge that will spare one's life. Although there are nation-wide campaigns, 24-hour news channels and emergency broadcasts, they are often not available during or right after the actual occurrence of the geohazards. This goes the same for those who are at locations or in situations that make it difficult for them to get detailed information on evacuating the disaster. That is why a systematic education to equip individuals of necessary information is critical. If we think about it, not even a quarter of the students in regular public schools become geologists, meteorologists or even take a profession related to earth science, but when geohazards occur, everyone is affected hugely. That is why the education towards safeguarding oneself against geohazards is critically important.

Towards Global Education on 'Minimizing Risks, Maximizing Awareness'

Just as the 2008 global launch program of IYPE selected geohazards as one of the three major challenging topics, it is nevertheless important to reassess the current systematic absence towards fighting against global hazards. This is where I suggest the triangular cooperation of the IYPE initiative, the UN and the local governments. By providing worldly accumulated information available as a textbook, encouraging local governments to implement educational systems related to geohazards, and by actually conducting local education, these three parties will eventually bring about the maximization of awareness, therefore enabling the minimization of risk.

The IYPE initiative should take the role of the 'brain', in terms of accumulating available resources of IUGS and making it available under specific terms such as providing a subsidiary textbook of how to prepare and react on geohazards. This is especially important because of two reasons. The first is that the sophisticated information and study of evacuation strategy is not equally available in all countries. This has a lot to do with the frequency and seriousness of the geohazards occurring in specific countries. As Japan has excellent expertise in technologies and information regarding earthquakes, countries with active volcanoes (like the U.S.A) may have sufficient information on the volcanic activities. However, for all countries to initiate the development of their own education program is rather costly and unattractive because of

the gap of the availability of information. That is why it is important for global academic institutions such as the IUGS and its global initiative of IYPE to actively establish the education program with regards to geohazards. The second reason is that each governments have different acknowledgement of the urgency to prevent effects of geohazards through public education. These reasons include a) there being less frequent threats of geohazards, b) less systematic accumulation of knowledge towards geohazards available, or even c) other political agendas and feasibility issues. That is why it is not easy for them to actively initiate education based on a seemingly farfetched threat. That is why, instead of pushing the responsibility towards national governments to deal with establishment of education material, IUGS and IYPE should take the lead. This will help effectively persuade each prospective governments to implement such textbooks and curriculums in their public education.

The UN should take the role of a 'backbone'; in assuring interaction of IYPE initiative with the governments. As IYPE has been fully supported by its 191 members, it is important that the UN plays a central role in ensuring that the IYPE project does not end in merely providing a utopian 'should-be'. The UN should further its role in making sure that specific plans of carrying out the IYPE projects as a 'must-be-achieved' goal until 2009. Specific actions regarding the UN's role would include securing necessary capital for the employment of necessary personnel and bureaus to write textbooks and build feasible curriculum guidance. Since the IUGS is an academic association, any political, economic or diplomatic concerns with regards to the global establishment of education on geohazards and their effects should be dealt with the UN.

The national governments will be the 'hands' that implement and grow the education programs in their public education. There are two possibilities of associating this global education project of geohazards with already existing curriculums of public schools. One is rather obvious; add the geohazards text book as a supplementary material for the earth science classes that are widely available in public schools all over the world. In this way students can easily relate the theoretical background and the rationale behind the occurrence of geohazards with the actual action plans to avoid risks. The coherence of earth science and geohazards avoidance education would be the 'earth science' factor. Another way of associating pre-existing curriculum with the geohazards education program would be to apply the education in health and first-aid classes. In addition to the skills and techniques in dealing with dangers associated with more day-to-day phenomena, adding the information with regards to the precautionary measures and safety information in terms of massive geohazards will also allow the expansion of knowledge towards individual safety. By associating the two areas under 'safety

education', the students will be able to naturally accept the additional information and guidelines of geohazards. Along with the translation and local production of the textbooks and naturally assimilating the geohazards education material with the pre-existing public education curriculums, it will also be effective when the national governments add more relevant or familiar national/regional cases to the text book to familiarize the contents. Addition of information on local or national institutions that will assist the prevention, prediction and minimization of the harms such as hotlines and websites will also bring substantial and practical help when the actual crises occur.

Although geohazards do not occur frequently during the lifespan of an individual, they have been constantly present and hugely disastrous in terms of the lifespan of this planet. That is why it is especially important for the whole world to act organically towards maximizing the awareness of geohazards, thus minimizing their risks. We as global citizens are always exposed to such possibilities of giant threats of this planet. In this sense, what can avert the current system of absence of awareness of the public towards self-security against the geohazards? What should be done to ensure effective information accumulation as well as feasible improvement? To these questions I have proposed that the IYPE initiative, the UN and the local governments work towards building and implementing education on geohazards and the reaction plans.

Motivation – Young Hui Na

I have always felt that education should not only provide theoretical knowledge but also wisdom in practicing such knowledge at real life situations. In addition, whether my proposal would actually attract the concerned countries (in terms of time constraint and budget) to realize such goals was a focal point when writing this essay. Those thoughts led me to the conclusion of utilizing the preexisting institutions and education channels.