Japanese Edition of AT RISK, 2nd Edition

Preface

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The 2nd English edition of AT RISK which is translated here by my friend Masayuki Watanabe and his talented and dedicated team has on its cover the image of Hokusai's famous wood cut, "Great Wave off the Coast of Kanagawa". We were fortunate to find a print in the British Museum and obtain permission to use it. We all of us on planet earth are even more fortunate that Katsushika Hokusai (1760-1849) lived and achieved this marvelous artistic creation.

Source: http://www.ee.umanitoba.ca/~kinsner/about/gwave.html .

As we pointed out in 2004 in the English original, Hokusai depicts the strength and resilience of Japanese culture of the time in the face of extreme natural events. Coastal storms, tsunami, earthquakes, volcanic eruptions, landslides and floods, as well as severe winters were all known at the time. Japanese history is full of such events and the human response to them. Architecture, fishing boats, bridges, farming methods, and a whole host of other aspects of Japanese material culture evolved to provide maximum resilience against these shocks. Non-material aspects of culture also emphasized living with nature, not opposing it. Shinto is, above all, a religion rooted in Japanese understanding of human beings as part of nature. Japanese Buddhism also taught that humans are but a

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small part of nature and that we need to be modest in the way we walk upon the earth. As haiku poet master Kobayashi Issa wrote:[2]

> These thin legs –
> winter storm winds
> a sickle moon

and:

> In the year's
> first snowstorm a treasure!
> the piss-pot

and again:

> While looking
> at poppies, poppies...
> a storm.

Now in the 21st Century, what can one say about Japanese culture in the face of natural hazards? What might be the lessons of the book, AT RISK, for the Japanese public?

First of all, Japan has grown into an industrial giant since Hokusai's day, and it is hugely more urbanized. Its major cities depend on lifelines that stretch across the globe for their energy and food, their "foot print" is immense. The urban industrial network of the islands of Japan are closely integrated and linked by sophisticated communications and transportation infrastructure. There is so much more to lose, so much more investment and some many more assets at risk today in Japan than there were in the late 18th and early 19th Centuries.

In the words of a recent Japanese government report:

> "Intensive use of urban space such as enhancement of underground space and increase of living areas below sea level, and high-rise buildings, brought us unprecedented vulnerabilities and risks. These aspects should be further understood by the public to take effective action."[3]

The optimist will say that modern Japan has created a 21st Century version of the architectural and other material adaptations to the hazards to which the islands have been exposed for centuries and which can only increase in severity as the climate changes. But is that the case? What was the lesson of the Great Hanshin Earthquake if not that an

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[2] http://haikuguy.com/issa/ .

[3] Government of Japan, Cabinet Office, 2009 *National progress report on the implementation of the Hyogo Framework for Action (2007-2009)*
http://www.preventionweb.net/english/hyogo/progress/reports/v.php?id=9809&pid:45 .

important and modern city could be shaken and burned with so much damage, including more than 6000 deaths? Are the Japanese willing to wager their future by trusting in technology alone?

One of the central themes of the AT RISK book is that vulnerability to disaster can and must be traced back to its roots in ideological, political, economic, and social processes that are fundamental in society. The Pressure and Release framework encourages the reader to travel along this pathway that leads from unsafe conditions back through dynamic pressures to the root causes. Since none of the AT RISK authors claims to be an expert in Japan, we must leave it to the reader to ask these questions her or himself. We make some tentative observations about Kobe and the Great Hanshin Earthquake in relation to some other major tremblers in chapter 8; but these are only a faint beginning. The challenge is to the reader to carry the analysis further.

Another of the central themes of the book is that change begins at the bottom and also so at the top. Central, regional, and municipal planning from the "top down" is essential. It is necessary but not sufficient. In addition, there needs to be strong community participation in hazard identification, mapping, and assessment of local capacities (strengths, skills, knowledge, and resources) and vulnerabilities. Most of the examples we use in AT RISK come from Africa, Latin America and other, less industrialized parts of Asia. Nevertheless, the importance of "people power" in the sense of community participation in Japan is clear. The Great Hanshin Earthquake provoked an unprecedented outpouring of volunteerism in Japan. Tens of thousands of young volunteers converged on Hyogo Prefecture. Some of these volunteer groups persisted and changed their goals over time and still exist as NGOs that work with citizens on preparedness and risk reduction is places like Nagoya.

Again the optimist will say that modern Japan still has the community spirit that one can see in the way the oarsmen cooperate in the fishing boat as they face the great wave in Hokosai's art work. Again we have to leave it to the reader to determine if this is true, or whether it is increasingly hard to recruit young people into the famous volunteer fire fighting associations in Tokyo's neighborhoods, and that these old ways are becoming mere rituals and not a solid basis for citizen action. The pressures of urban life, a modern economy under the stress of world wide recession are heavy, and people have little time for community efforts, especially when the live in one place and commute for an hour or more to their work place and then home again.

Hyogo Prefecture gave its name to the international framework for disaster risk reduction that is used world wide. The Hyogo Framework of Action (HFA)[4] has five main pillars or priorities for action. In 2009, the UN secretariat for the International Strategy for Disaster Reduction (UN-ISDR) did a study of how national governments saw their achievements in implementing these five pillars.[5] They were broken down into 100 sub-

[4] UN-ISDR, 2005 http://www.unisdr.org/eng/hfa/docs/HFA-brochure-English.pdf.
[5] UN-ISDR, 2009 *Global Risk Assessment* http://www.preventionweb.net/english/hyogo/gar/report/index.php?id=9413.

goals. National governments ranked their own performance on each on a scale of 1-5 (with 5 being highest achievement). At the same time, a group of 600 NGOs world wide undertook a parallel study of local people's views of HFA achievement.[6] A survey of 7000 community representatives, civil society leaders, and local government officials in 48 countries also ranked these 100 goals on a scale of 1-5. The striking result is that very little national scale action has yet penetrated down to the local level even though the HFA has been underway for near five years. The HFA goal of significant decrease in deaths and losses from natural hazards by 2015 will simply not be possible without more vigorous activity at the local level, and that, in turn, requires partnership between local government and communities.

Let us consider each of these five pillars in terms of the book AT RISK and the realities of modern Japan. In reflecting I draw on Japan Cabinet Office's report on HFA implementation 2007-2009.[7]

1. **Make Disaster Risk a Priority**

Japan gives itself high ranking (4-5) on various core indicators defining priority, citing legal commitments to public safety from 1961 onwards and the process of amending relevant laws, considerable financial resources dedicated to disaster risk reduction (DRR), and well established national institutions dedicated to DRR.

But concerning community participation the Cabinet Office report cites constraints:

> "Change in social structure, living environment and lifestyles on a nationwide scale in recent years have led to increase of numbers of elderly people who are living alone as well as sparsely-settled areas mainly consist of aging population, which make difficult mutual support among residents including setting up community organizations. Based on the "Guidelines for Evacuation Support of People Requiring Assistance During a Disaster" in 2005 (revised in 2006), measures to provide necessary assistance to those such as the elderly and physically impaired at the time of a disaster need to be reinforced."

AT RISK devotes a good deal of time directing the reader towards understanding in their particular circumstances the root causes of vulnerability for groups such as elderly living alone, people living with disabilities, and isolated rural dwellers. What lies behind the processes identified by the Cabinet office ("change in social structure", etc.)? The reader is challenged to dig deeper and find the root causes.

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[6] Global Network of Civil Society for Disaster Risk Reduction (GNDR), 2009 *Clouds but Little Rain* http://www.globalnetwork-dr.org/reports/VFLfullreport0609.pdf.

[7] Government of Japan, Cabinet Office, 2009 *National progress report on the implementation of the Hyogo Framework for Action (2007-2009)* http://www.preventionweb.net/english/hyogo/progress/reports/v.php?id=9809&pid:45 .

2. Know Risks and Take Action

Regarding the mapping of hazards, much technical work has been done, but the Cabinet Office sites progress yet to be made in both providing these maps to the public or in convincing the public of their usefulness.

> "Some of the maps are not open to the general public. Further, promotion of proper understanding of public on importance of hazard maps and risk information shown on the maps are required."

AT RISK provides many examples of highly successful hazard mapping by lay people, citizens themselves. The report of the GNDR sited earlier also found that hazard mapping and vulnerability assessment by communities themselves is a strategic platform for building partnerships with local government.

3. Build Understanding and Awareness

Japan gives itself highest marks for the amount of information available about hazards and DRR at all levels from national and prefectural to municipal. Nevertheless, regarding disaster related education in schools, the Cabinet Office notes:

> "Currently effective disaster reduction education at schools is mainly provided limited numbers of teachers with enthusiasm. It is required to develop more systematized programs as appropriate according to ages and areas as well as applicable to current official curriculum guidelines."

In Japan some limited but outstanding pilot experiments exist in "town watching" – hazard assessment by adults and by school children in their own communities.[8] But it is not yet common for school children and youth to address hazards in a non-academic way: that is, to use knowledge practically to map and assess hazards that might affect their own schools and communities. Some of the NGOs mentioned in AT RISK are doing just that in countries such as Nepal, Malawi, Ghana, and Bangladesh.

In higher education, the report sites only limited progress in integrating social and environmental dimensions into research on natural hazards, although…

> "…efforts for development of research methods and tools for multi-risk assessments which reflect social and environmental change and cost benefit analysis are currently on going by several actors including governments and academia."

[8] Ogawa, Yujiro, 2005, "Town Watching for Disaster Reduction"for effective and successful risk communication," United Nations World Conference on Disaster Reduction (Kobe, JAPAN) Thematic Session (Cluster 2): Effective and Successful Risk Communication -as an Integral Part of Disaster Risk Management, Kobe, Japan.

The central focus and whole purpose of writing AT RISK was to emphasize the importance of these social and environmental dimensions. The fact that so many elderly people, especially elderly widows living alone, perished in the Great Hanshin Earthquake came as a shock and surprise to Japanese officials and experts. Sociological research on the vulnerability of such groups of people had not been developed with any thing like the speed of Japan's engineering and earth science expertise. Social science research has since then begun to grow in Japan. But is there enough? What other "surprises" await the nation?

4. Reduce Risks

The core indicators in this case refer to whether disaster considerations are integrated into routine urban planning, economic planning, and the planning of large infrastructure projects. Also assessed are programs to reach out to vulnerable groups of people and the way in which DRR is included in disaster recovery programming. In all these areas Japan gives itself a "4" on the 1-5 score. Is this too optimistic? The reader is left to judge.

AT RISK can help direct readers to underlying questions about the rate of economic growth and the manner in which projects are carried out. In a world dominated by a single capitalist market, is it really possible to slow up or stop a large investment because removing a mountain top to make an artificial island to support an airport might hold unknown risks for people on the mountain slopes, down below, or, indeed, where landfill depends on technologies that are "failure proof" in an earthquake?[9]

5. Be Prepared and Ready to Act

In 2007 and 2008 Japan carried out a number of major simulations and drills to help plan and prepare for very large events such as the Nankai and Tonankai earthquakes, Tokyo Inland Earthquake, and volcanic eruptions. Nevertheless, some small municipalities lack the human and financial resources to develop their own local disaster plans. According to the Cabinet Office report:

> "Some local governments have difficulty to make timely revision of the Local Disaster Prevention Plan due to lack of human or financial resources."

AT RISK demonstrates that small and medium disasters can cumulatively reduce the welfare of people as much or more than single very large events, yet they tend to get less attention.

Ending this brief Preface on a positive note, one thing one can say about modern Japan is that local government is aware and active and is engaged with its citizens. This is a strong basis upon which to build. As hinted above, faith in technology alone and top down plans, warning, and assistance is not enough. One hopes that an active civil society

[9] On the impossibility of failure proof complex, tightly coupled systems (e.g. Chernobyl, Bhopal, etc.) see Perrrow, Charles, 1998, *Normal Accidents*, Princeton, NJ: Princeton University Press.

– the sons and daughters of the volunteers who came to Kobe in 1995 – together with good local government will combine with science and technology to provide risk reduction in Japan. Yet to make this happen, local governments will need more financial and human resources and communities will have to become more engaged, doing their own mapping, their own "town watching" and developing partnerships with local government. Also, these community efforts will have to be more inclusive. At the moment, according to the Cabinet Office report, women are not well represented in DRR activities. The vital importance of women's knowledge of local social conditions and their potential as workers at the community level for DRR is one of the themes addressed in AT RISK.

Hokusai and Watanabe have done a valuable thing in first representing the potential strengths of Japanese material and non-material culture in the face of disaster and then providing a translation of AT RISK, a book which does not have the answers for Japan, but hopefully has some of the useful questions.