

"Towards Sustainable Communities" Gender in Community Based Disaster Management

Proceedings of the International Disaster Management Symposium, Kobe Jan. 18 2008

Gender

Environment

**Community
Based Disaster
Management**

Sustainability

Risk Reduction

Experiences from:

**Kobe
Bangladesh
Nepal
Sri Lanka**



**International Disaster
Management
Symposium 2008**

Inside:

- Overall activity report, country reports from Nepal and Bangladesh
- Summaries of keynote speeches and presentations
- Transcription of the panel discussion on "Gender Balanced Participation for Disaster Resilient Communities"

United Nations Centre for Regional Development (UNCRD)
Disaster Management Planning Hyogo Office <http://www.hyogo.uncrd.or.jp>



United Nations

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“Towards Sustainable Communities”
Proceedings

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Yomiuri Shimbun Osaka

International Disaster Management Symposium Steering Committee:
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United Nations International Strategy for Disaster Reduction (ISDR) Hyogo Office;
United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) Kobe;
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“Towards Sustainable Communities”
International Symposium Proceedings
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Welcoming Address from the UNCRD

Kazunobu Onogawa
Director, UNCRD

“Welcome to all. I am Kazunobu Onogawa, Director of the United Nations Centre for Regional Development (UNCRD). Today, we have been able to jointly convene the International Disaster Management Symposium 2008 here in Kobe with Yomiuri Shimbun and the support of Governor Ido who is here today. It has been 13 years since the Great Hanshin Awaji Earthquake. As all of you may know, the G8 Ministerial Summit will be convened in Japan this year. Among the topics to be discussed during the G8 Summit, disaster management is one of the key issues. I would like to offer thanks to the organizers for being able to convene this symposium again in such a significant year.

UNCRD was established 37 years ago in 1971 in Nagoya. 9 years ago in 1999, the establishment of the Disaster Management Planning Hyogo Office in Kobe refocused previous work on disaster management.

Today, we are focusing on the “community” in disaster management, but aside from these themes, the Kobe office has also been conducting a school safety and disaster education project and also another that focuses on the dissemination and promotion of earthquake resistant homes.

Today’s Symposium is divided into two parts with the first focusing on the theme of Disaster Management and Environment and the latter focusing on Gender in Community Based Disaster Management. At first glance, it might seem like such issues like gender and environment are not necessarily related to disaster management, but these are actually very intrinsically connected, as you will hopefully see through the discussions and presentations that will take place here today.

For today’s Symposium, we have many presenters from abroad such as Professor Fordham from the UK and Dr. Velasquez representing the International Strategy for Disaster Reduction (ISDR), the UN body which plays a leading role in disaster management policymaking. We have here today also representatives from other major UN agencies such as the UN Environmental Programme (UNEP) and the UN Development Programme (UNDP).

Through their presentations, we will illustrate the connection between community and disaster management through examples from Japan and abroad. We hope that all of you will enjoy the proceedings of today’s Symposium. Thank you very much.”



Opening Remarks from the Hyogo Prefectural Government

Ido Toshizou
Governor, Hyogo Prefecture



“Greetings to all. We have now marked the 13th ‘17th of January’ since the Great Hanshin Awaji Earthquake. 13 times means 13 years, and the years could be said to hold testimony of our outstanding recovery from the disaster. But in terms of our consciousness of risk reduction strategies and skills, I worry whether, in fact, it has been decreasing with time.

As we were not prepared for an earthquake back then, only about 26% of communities in Hyogo had disaster management committees. Now, committees have been setup in almost 97 to 100% of the communities. But we have to verify whether these committees are truly operable and adequate. In this regard, we have set January 17th to be ‘Hyogo Safety Day’ and implement disaster management training in each school district. Between 70 to 80% of all school districts conduct such exercises across Hyogo. We must however, also be careful to keep check that the content of these training exercises are indeed relevant and adequate. In

other words, it is important for all the citizens to continue on working towards disaster management as part of a prefecture-wide exercise.

This symposium was also originally intended to be a one-time event, but with the support of Yomiuri, we have been able to continue the initiative and today’s symposium marks the 8th in this series. I believe that in this sense too, there is great importance in sustaining meaningful initiatives over the long term.

The question of sustaining and heightening community level disaster management capacity is a very big issue. During the earthquake, more than 38,000 people were buried in rubble. Of these, 30,000 were rescued by community members. It is said that professional rescue personnel such as police and firefighters rescued just about 8,000 individuals. Without such commitment and disaster management capability among the communities, I believe that there will be no real capacity building for the individual and the region as a whole.

3 years ago, when we marked the 10th anniversary of the Earthquake, the World Conference for Disaster Reduction (WCDR) was convened in Kobe by the United Nations. It must be noted that one of the central pillars of the Hyogo Framework of Action, a key document from the Conference which mapped out the plan of action over the next 10 years, was community based disaster management. It is in fact very important for various systems be present in responding to disasters, but first and foremost, the citizens of communities must be ready to take the lead in order to heighten disaster management capability and safety of communities.

The actual ground situation is different among communities and in different countries, but the people of the community must recognize that “we are responsible for our own safety” and that their safety cannot be guaranteed if it is simply left for others to take care of.

It is predicted that an earthquake of at least magnitude 6 will strike in the Tokaido&Nankai region. We do not know if this will be within 30 or 20 years, but since we live in a region where we are expect such risks, I hope that all the people of the Prefecture can go back 13 years and once again reaffirm the need to be prepared from our experiences and lessons learnt.

In today’s symposium, I have been told that there will be discussion on gender issues including gender roles in disasters. Fro the point of view of community involvement, these are very important issues and I believe that there will be very fruitful discussion in this regard.



In terms of gender, it has been noted that because of changes in the local workforce, the number of community firefighters are decreasing and in times of emergencies, it is expected that women will be key in protecting their communities and serious efforts have been made to increase women recruits for community firefighters. I believe that this is also part of an effort to improve women's opportunities for social participation.

Lastly, I express my hope to UNCRD Director Onogawa and President Nakaura of Yomiuri Shimbun that this symposium will be continued in the future with various topics. With these words reflecting the expectations on behalf of the "local" communities, I would like to end my address.

Thank you very much."



The ground floor level of the Symposium venue was utilized to display reference materials on community based disaster management, gender, and environment by various UN agencies and NGOs, which were made available for public viewing.

International Disaster Management Symposium 2008

Interactive exhibits and reference material were available for the over 200 participants who came to the symposium.

A miniature interactive model that explains the concept of anti-seismic design and a reinforced building model that was used for the shake-table demonstration at the World Conference on Disaster Reduction (WCDR) 2005 was also on display.



Remarks from Yomiuri Shimbun Osaka

Jin Nakamura
President, Yomiuri Shimbun Osaka



“I am Nakamura from Yomiuri Shinmbun Osaka and would like to offer greetings to the audience members as one of the conveners of this symposium. It is a great pleasure for us that so many audience members have gathered here today, as well as specialists and staff from all over Japan and abroad. In particular, Mr. Jerry Velasquez and Ms. Dr. Fordham Fordham have come a long way to Kobe as keynote speakers.

13 years have passed since the Great Hanshin Awaji Earthquake and every year, newspapers and other media plan special stories and broadcasts on the anniversary of the disaster. There are various stories on disasters, risk reduction, psychological treatment, dedication to victims, and many other themes, and many symposiums and events are convened to address these topics. Even among all these various initiatives, I feel that Yomiuri Shimbun Osaka has been especially recognized for its commitment to actively covering and helping address these issues. Specifically speaking, we take part in convening symposiums, such as the one today.

We also station journalists as a resident researcher at the Disaster Reduction and Human Renovation Institution. Their research results will be effectively applied to their future articles. We are in the third year of this programme and currently, the third journalist is stationed at the Institution.

During the immediate aftermath of the earthquake, Yomiuri also called in 100 journalists from its various regional headquarters and offices to bring to light the direct voices of victims. In those days, journalists interviewed over 900 survivors and heard from them many tragedies, pain, and issues.

Most newspapers would end there, but Yomiuri has been following up the stories of these survivors and still remain in contact with 350 of these survivors who can be contacted at any time to help shed light on the progress of recovery. The head of the Kobe bureau at that time, Iwamoto, took charge of such reporting initiatives and is now editor in chief at Yomiuri Shimbun Osaka headquarters in recognition of his work.

Of course we cannot simply talk about our newspaper. The Hyogo Prefecture, Kobe City, and local governing bodies have also been very committed to disaster management issues and currently there are 8 disaster management centres and 8 international organizations stationed in Kobe.

Finally, Yomiuri, along with Asahi and Nikkei have made a series of cooperation agreements, one of which outlines the plan of action during large-scale disasters. For example, if news cannot be printed because of damages, anybody with remaining capacity will print news on behalf of the other company. These agreements were made in anticipation of pending large-scale earthquakes in the Kanto and Tonankai region.

These agreements are not for the sole benefit of the newspaper companies, but reflect our recognition for the great responsibility that newspaper companies have towards citizens in times of disasters. As a responsible newspaper company, Yomiuri will continue to commit itself to research and report on disaster related issues. Thank you very much.”

Introduction of Themes

Ando Shoichi
Coordinator, UNCRD Disaster Management Planning Hyogo Office

“Hello everybody. Thank you for gathering to join our symposium entitled “Towards Sustainable Communities”, which we have jointly convened with Yomiuri Shimbun, the UNCRD, and the International Symposium Steering Committee. This symposium focuses on the themes of gender and environment in the context of disaster management and I would like to first begin by explaining the linkage among these issues.

The concept of sustainability has mainly three components. These are the social, economic, and physical or environmental components. Simply put, social factors refer to people, the economic factor money, and environment refers to resources. Today’s symposium investigates how we can combine people, money, and resources to establish sustainable communities and development.

Especially when we focus on the theme of community, we must consider disaster management, a common issue for both the social aspect of gender and also for the natural environment. It is thus very important not to treat each of these topics as separate issues, and thus we have organized this Symposium to provide an opportunity to investigate the issue in a holistic manner.

Secondly, there are many UN agencies that work on the theme of gender, but the UNCRD headquarters in Nagoya and its head office in New York, the UN Department of Economic and Social Affairs (UN/DESA) are also very much involved in gender and human rights issues.

As for environment and disasters, likewise many organizations are working on related issues but the UNCRD is involved in working on some of the policies and projects being implemented by the International Strategy for Disaster Reduction (ISDR) of UN, which oversees worldwide disaster management policy and where Dr. Velasquez, today’s keynote speaker, is also from. The UNCRD headquarters in Nagoya is also implementing environmental projects, including those concerning traffic management with an environmental focus and some that disseminates the Japanese concept of “3R” resource management – reduce, reuse, recycle – around the world. The Disaster Management Planning Hyogo Office has taken both of these themes for further investigation in the context of community based disaster management.

The UNCRD Disaster Management Planning Hyogo Office would like to continue on implementing projects from here in Kobe and disseminate lessons from our experiences. Thank you very much.”



Overall UNCRD Activities on Gender in CBDM

SaitoYoko
Researcher, UNCRD Disaster Management Planning Hyogo Office



Thank you very much for a big turn-out today.

In my presentation, I would like to introduce to you some activities undertaken by UNCRD in the field of community-based disaster management.

The UNCRD Disaster Management Planning Hyogo Office was founded in 1999. At present, there are three on-going projects, namely: Gender in Community Based Disaster Management (2007-08); Housing Earthquake Safety Initiative (2007-); and, School Earthquake Safety Initiative's "Reducing Vulnerability of School Children to Earthquake" (2005-).

Community-based disaster management has been a key focus of the Hyogo Office since the onset. In 1999, we began with a research project entitled "Disaster-Safe City Planning Rooted in Culture and Climate". Currently, we are in the third phase of a research project focused on community-based disaster management in relation to urbanization and gender. Discussions are currently ongoing to further expand the focus of research from 2008 to gendered community-based disaster management in the context of regional development.

As Governor Ido also mentioned earlier, 60% of those who were buried under the rubble in the Great Hanshin Awaji Earthquake of 1995 responded that they were rescued by their family members, friends, or neighbours, helping us reaffirm the importance of community-based disaster management.

In emergency situations, the first rescuers are the local people, and they are also the people who will be involved in recovery efforts until the very end. Therefore, when talking about emergency response and recovery, the need for self-reliance, cooperation and community support seem to be the lessons learned from the Great Hanshin-Awaji Earthquake.

What has UNCRD been doing? We talked earlier about gender in community-based disaster management. Later on in today's programme, Dr. Fordham's presentation will discuss the importance of giving consideration to gender in disaster relief. Likewise, the current UNCRD project focuses on incorporating both male and female perspectives in disaster management during the disaster preparedness stage.

We have with us today UNCRD facilitators from Bangladesh and Nepal, and we will have a chance to listen to their reports after this. I would thus like to take this moment to share with you our project in Sri Lanka.

In Sri Lanka, UNCRD invited women from two villages to participate in a workshop to discuss the capacities and vulnerabilities of their villages' disaster management capacity. These women had experienced the tsunami in 2005. One of the vulnerabilities mentioned was the lack of cooperation due to problems such as the differences arising from social castes and jealousy, which originated from prejudice and inequality, which in turn found their roots in lack of education and unemployment. Upon further discussions, it became clear that these were problems not only specific to disasters. Rather, the chronic problems faced by the communities became exacerbated in times of disasters.

The workshop took place in a temple at the center of the community, with participation of men, women and children. Using the results of their discussions, they were also asked to perform a play with help from a street drama group from Colombo that has been working for many years to deliver information for disease and disaster prevention in the form of an impromptu play following community assessments and interviews at the various slums in Colombo. The play was created and performed at the end of the workshop with the participation of men, women and children. It was the first time for women to take part in such activities and also for the drama group to work with women.

This is but one example of UNCRD's activities in community-based disaster management. Currently, we are conducting a survey to assess the community needs. The survey targets 200 people – 100 men and 100 women – in select case communities in each of the four countries, with 26 categories of questions.

Here are some of the early findings of the survey:

The source most referred to by the men surveyed in Nepal for disaster information was first the mass media, second the neighbours and local people, and third the regional government.

As for the women who were surveyed in Nepal, their most referred to source of disaster information was first their neighbours and local people, second the mass media, and third their family and relatives. Such variations according to gender would serve as an important piece of information for us when identifying partners to disseminate disaster management information.

When asked what source of information they find to be the most reliable, both groups identified the local government. This is a reminder that UNCRD's activities should always partner with local governments.

In addition, while 87% of men knew emergency telephone numbers, but a lower percentage of women – only 69% – knew them. As for the knowledge of their blood type, while 89% of men knew their blood type, as many as one third of the women did not know their own blood type.

As can be seen, there are gender differences in disaster management-related knowledge, which are important to note.

The surveys have just been completed in Bangladesh and Nepal, and in the coming months we will further analyze the data in order to use our findings to discuss community needs with community members and government officials. Based on the needs identified in such manner, we are planning to conduct activities such as trainings and workshops. For those who are unable to participate in such opportunities, we would produce and disseminate information materials in local language, as well as sharing them with government and other stakeholders for awareness raising and advocacy purposes.

As we would have the opportunity to hear from our colleagues from Bangladesh and Nepal in further detail, I would like to conclude my presentation here.

Thank you very much.

Activity Report from Nepal

Mukunda Sharma
Local Facilitator, UNCRD Disaster Management Planning Hyogo Office



First of all, I would like to start with a brief introduction of Nepal. The independent sovereign Himalayan state of Nepal is home to the world's highest mountain, Mt. Everest. According to statistics in 2006, the population of the country is 25.8 million. Nepal is divided into five development regions that are East, Central, West, Midwest, and Far West. The first four development regions contain three zones and the Far West region contains two zones. The 14 zones contain a total of a further 75 districts. There are more than 100 groups of all castes and ethnic groups who live together.

Secondly, I would like to talk about the disasters and its management in Nepal. The country has experienced several natural disasters, and is at great risk due to population growth, inadequate education and the lack of awareness. The National Fire-Prevention Law, enacted in 1982, has helped put in place risk reduction measures for earthquakes, fire disasters, cyclones, flooding, landslides, heavy rains, drought, starvation, and prevailing epidemics. It also promotes measures for industrial accidents, explosions, traffic accidents and hazardous substances. These major hazardous disasters, especially flooding and landslides have been occurring frequently in Nepal. According to the Ministry of Home Affairs, the death toll from such disasters has reached 221 in the past 10 years. 91 people died in 2006 and 73 people died in 2007 due to flooding and other disasters. Moreover, many more people have been affected by major natural disasters and epidemic: 50 thousand people were affected by flooding and prevailing epidemic in 2006; 97 thousand people were affected by flooding, landslides and prevailing epidemic in 2007.

Next, I would like to tell you about the United National Center for Regional Development's activities in Nepal. The UNCRD organised a workshop in June 2007, which focused on urbanisation in gender and community based disaster management. Participants were chosen from five Community Learning Centres (CLCs) in Nepal. More than 100 participants in total, both men and women from each of the five CLCs, took part in the workshop. An introductory event took place on the first day of the workshop. Both the facilitator from Bangladesh and myself, presented reports on our respective projects and exchanged information. An expert from National Society for Earthquake Technology (NSET), a local NGO that specializes on disaster management, gave detailed information on the science of earthquakes and practical advice for risk mitigation in homes and communities. The researcher Ms. Yoko Saito and Assistance researcher Mr. Edward Sumoto from UNCRD also shared their experiences from the Kobe earthquake and introduced the issues of gender and community participation.

On the second day, a 'Town Watching Exercise' programme was conducted with the participants. Participants were separated into five groups, each undertaking the observation of one of the five communities to identify its vulnerabilities and capacities. In regards to the theme of gender, it should be noted that women had equal opportunities with men throughout the programme to lead discussion, offer input, and present findings.

Following the introductory session, the next day participants took part in making hazard maps by reviewing the data collected through the 'town watching exercise'. The various risks and the capacities within their assigned community were reviewed and presentations were given based on those preliminary maps and data. Posters with refined community hazard maps were also made with the support of local NGO (NSET) and the CLC leaders in order to raise awareness of disaster risks and these were then installed in public places including several CLCs, public facilities, bus stops, health maintenance facilities, and municipal offices. The posters were seen as an effective way to provide information on disaster management to the community. Furthermore, we strongly recognised the importance of people in communities as the main resource for a people-centred community disaster management strategy.

Finally, I strongly believe that we need to raise public awareness of disaster management among the people in communities. This will be achieved through cooperation with the media, as well as activities undertaken by the people and the government. Moreover, it is important to encourage the people in communities to take part in disaster management activities. Besides these, it should be noted that much more disaster management measures must be organized and implemented by the government, local Community and Non Government Organisations.

Thank you.

Activity Report from Bangladesh

Maliha Ferdous
Local Facilitator, UNCRD Disaster Management Planning Hyogo Office

I would like to start my presentation by referring to some pictures and a question. Look at this picture. You can see a hand that remains trapped under the rubble. This is a hand of a very unfortunate lady. The white bangle is a sign of a married woman. Probably she was crying for help. This picture was taken from a building, which collapsed 4 years ago. The collapse of this single small residential building took 19 lives. Here is another example. In Bangladesh, there are many factories that make clothes for export. This was one of the dress-making factories. It looks like a sandwich. A ten-story building collapsed on top of itself, and 90 people were killed.

What are 'hazards'? What disaster caused the collapse of all these buildings? Was it an earthquake, tornado or tsunami? None of these were responsible! It was pure negligence, human negligence, negligence of authority and law. Innocent people lost their lives because of poorly constructed buildings.



Dhaka is the capital city of Bangladesh and home to 15 million people. The city faces an imminent risk for earthquake hazards, which have been previously recorded in not-so-recent history. There are hundred thousands of very old buildings in the city which could collapse any time. Meanwhile, the new city is expanding very fast. However, many buildings have been built without solid foundations, complete plans, and with underdeveloped civil engineering technology. It is also a fact that quite often very sub-standard construction materials are used. In other words, the city is highly populated and unplanned urbanisation is in progress. All of these contribute to the various problems that Dhaka face. The city is growing, and its vulnerabilities are also growing.

So what are the ways to improve the situation? The first way is to publicize and disseminate the building code, which is currently non-effective. I would like to point out that existing building codes and regulations are not fully effective to avoid human cost in a disaster. There is a building code but it has yet to be effectively enforced. Secondly, we must also have an effective response mechanism for disasters, such as good communication facilities. Unfortunately, existing facilities are not adequate.

In light of the situation, the best solution to counter such high vulnerability is to make people aware through massive public awareness initiatives for disaster management and response. This is what the UNCRD aimed to achieve through the Bangladesh workshop. To raise people's awareness of safer construction techniques and to give them an overview on gender perspective in disaster management, a participatory workshop entitled "Gender in Urbanization and Community Based Disaster Management (CBDM) with Shake Table Demonstration" was held in Dhaka. Bangladesh Disaster Preparedness Centre and UNCRD jointly organized the workshop with the technical support from the National Society for Earthquake Technology (NSET), Nepal. Masons were given practical anti-seismic construction training and from the shake table demonstration, community members and the people of Bangladesh, through media coverage, got first-hand knowledge of the consequences of unsafe constructions and feasible anti-seismic measures and options. Most importantly, the gender perspective in CBDM was introduced and highlighted during the workshop. Participants included from community members, policy makers, decision makers, disaster management officers and the media, who were all keen on learning about seismic hazard risk reduction.

The "shake table" exercise combines both training of experts and awareness raising of the public. In this workshop, after deciding on the type of house to construct for the demonstration, a 6-member team of masons were given anti-seismic construction training, followed by the construction of 1/10 scale model buildings for the shake table experiment. One model was constructed using prevalent methods and the other with simple anti-seismic measures using readily available technology and skills. After the models were constructed, community members were given disaster management lectures, followed by a visual demonstration for the participants and

media at the workshop to present the issues to the public and show how disaster resistant buildings can be built with simple existing technology. Through shake table demonstrations, people can see what kind of vulnerabilities they face if their homes are not constructed with appropriately anti-seismic measures. But if homes are safe, the lives of family members are protected. It is in the interest of men, women and children to know about risks and be prepared. Earthquakes do not kill people, buildings do, and by using the demonstration to disseminate knowledge and tools that are readily available but are not yet implemented, we hope more lives can be saved.

The reason why we need to focus on the gender perspective in community based disaster management is because of the fact that women are often more vulnerable to disaster risk due to social factors and other practices in daily life. Since women are likely to stay at home during the day, they have a higher risk of becoming a victim of an earthquake if buildings are vulnerable. Moreover, there are several gender based ‘needs’ in an emergency situation. In any type of disaster situation, men and women take different roles. Furthermore, when we look at gender in community based disaster management, gender-based considerations cannot be applied once a disaster actually happens. In other words, gender perspectives must be considered before a disaster occurs by applying it to risk reduction measures. Gender perspectives have to be given a high priority in consideration of policies and planning as well as in decision-making processes. Given the impact of the visual demonstration during the workshop, it enabled people to realise that the places they are living now and the decisions they are making are not safe enough. Living in risk-free houses is a primary concern to all family members regardless of sex and age.

Even though Dhaka is small in size for a city, it has many problems since it is a very dense city. The biggest problem is its high vulnerability to earthquakes. By organising the workshop, UNCDR has taken a small humble step towards the realisation of community based disaster management in Bangladesh. However, we have to integrate the concept with permanent institution like government, schools and community groups in order to make it a very effective demonstration and further promote the concept. Initiatives taken by the UNCDR were just at the beginning of this continuous effort, and I believe that we have much to offer for the bigger success in the future.

Thank you very much.

Workshop in Dhaka, Bangladesh



Enthusiastic community participants.



As part of the mason training for practical anti-seismic construction methods, two 1:10 house models were constructed with utmost precision, one using prevalent techniques and the other reinforced with practical methods. The models were then put to test on the shake table at the workshop.

Workshop in Kathmandu, Nepal



Participants collected data to produce a hazard map for their own community by employing the “Town-Watching” method and capacity and vulnerability analysis.



“Ecosystem Services and Disaster Risk Reduction”

Jerry Velasquez
Senior Regional Coordinator, UN/ISDR Secretariat Asia and the Pacific
(Former Chief of Environmental Conventions Inter-linkages and Synergies Branch, UNEP)

This presentation will address the following three subjects from a global perspective: A brief overview of disaster trends; the broader linkages between ecosystem services and disaster reduction; and strategies to link disaster prevention and ecosystem services through specific examples.

Overall Trend of Disasters

Firstly, as an overall trend, the number of disasters has been increasing, which is the case not only in developing countries but also in developed countries: Three European countries were affected by one of the ten most deadly disasters in 2006. The largest number of disasters took place in the Asian continent.



However, we can see from the data that the number of deaths and the effect of disasters are actually decreasing. This must mean that we are doing something good because we are effectively reducing disaster impact on people and our economies. But this is still not enough. If we look at the global distribution of disasters, we see that much of the disaster risk is highly concentrated in select areas of the world.

What we have to understand about disasters is that they are not all natural. Disasters are caused by two main components: the hazards that are exacerbated by extreme events and exposed vulnerabilities. The hazards can be caused by natural events, but it can also be caused by human activity. Climate change is one such hazard that is caused by human activity. However, even if the frequency and magnitude of hazards is low, if our vulnerability is very high, the risk we face becomes very high.

Can we implement sustainable development without considering risks and hazards? The short answer is, no, we cannot. Risks will always be there, but if we do not manage them there will be more and more disasters so we must address the root causes. It is not enough for us to only respond to disasters. We have to determine what causes the disasters. According to a study by the US Federal Emergency Management Agency (FEMA), any investment in disaster management will be rewarded by four times as much benefit. In other words, instead of responding to disasters, through disaster preparedness and investments prior to disasters, benefits of fourfold can be expected. The problem is of course that you cannot see the fourfold benefit in actual dollars, and if you are especially effective, the four dollars from a one-dollar investment will not be actualized because you would have prevented the disaster from happening at all. So it's difficult for everyone to visualize such benefits.

The Linkage between Ecosystems and Disaster Management

Secondly, in relation to the importance of ecosystems, the UN undertook The Millennium Ecosystem Assessment from 2001 to 2005 to determine the health of the world's environment. During the assessment process, a concept called “ecosystem services” was developed. The “services” are those that are provided by the environment for sustaining the life on earth. There are four categories of ecosystem services; “Provisioning” services such as food and water; “Regulating” services such as flood prevention and disease control; “Cultural” services such as spiritual, recreational and cultural benefits; and “Supporting” services such as nutrient cycling, which maintain the conditions for life on Earth.

These services are very important for our sustenance and because regulating services also impact disaster management, this also leads to the issue of human security. That one is able to have access to resources that ensure personal security is related to security in terms of disaster management. For example, trees in the forests prevent flooding and landslides. We are unable to lead a comfortable, healthy life without access to basic materials, such as wood, clean air and plants. Furthermore, the regulating services are also extremely important for human health and safety.

Unfortunately, the UN Millennium Ecosystem Assessment has left out disaster regulation as a clear component of regulating services. The Assessment has divided Regulation Services into different subcomponents such as

climate regulation, water regulation, human disease prevention, etc. But they did not look in totality how certain environmental goods like trees, mangroves, and coral reefs can also prevent disasters and what that value is. Because of this gap, we don't have a complete understanding of these ecosystem services.

In ISDR, there is a working group dealing entirely with environment and disaster issues, and what they have found is that natural hazards are physical processes that can be directly affected by social processes. There is a link between disasters and human activities. A healthy ecosystem often provides natural defences. We've heard all of these stories that mangrove belts can actually prevent or minimize the effect of tsunamis. We know that a healthy forest will prevent landslides and future flooding in that area. We also know that a degraded ecosystem reduces community resilience. If a forest is degraded, the people living around it will not have access, for example, to the fruits and the benefits from the forest, affecting their livelihood. They will not have the capability to be resilient when a disaster occurs.

Of the 24 key ecosystem services assessed by the Millennium Ecosystem Assessment, they found that 16 were in danger and that some of them, like fisheries, were actually beyond repair. People rely so much on fish that the service has been over-used by people to the point where we can no longer revert it to its original state. This is a very dangerous situation. A lot of the services that nature provides us are in a critical situation.

There are also numerous mountainous areas where there are increasing dangers of landslides, which is an example of an environmental degradation that has become a hazard in itself. Looking at such reports, one sees many risks. The role of the ecosystem includes the role of forests for the prevention of flooding. Each ecosystem has its own unique role that can prevent disasters – coastal areas, oceans, the North and South Poles, the mountainous areas and islands all have their own roles. By looking into each example, we should realize that the services provided by these ecosystems are very important indeed.

Possible Solutions

Let us now move to a specific example to show the interrelation between ecosystem services and disaster management through the timely example of climate change. Activities in response to climate change can be largely divided into "mitigation" and "adaptation". At the moment, 95% of our activities in relation to climate change are regarded to be mitigation activities. Mitigation basically promotes the reduction of the amount of greenhouse gases in the atmosphere. We try to reduce the emission, for example, by trying to minimize the use of cars. Another attempt is to increase forests that would absorb carbon dioxides. However, it is the case that CO₂ sequestration still only accounts for about 2% of all mitigation activities. According to the Intergovernmental Panel on Climate Change (IPCC), 3% of the global GDP is necessary to achieve effective mitigation. This figure amounts to about 30 billion dollars and we have a long way to go. But as Al Gore, Jeffrey Sachs and other people have said, the cost is high but the cost of not doing anything is higher.

Where does the disaster component fit in? The disaster component is adaptation. Adaptation basically accepts that the climate will change; hence disaster mitigation becomes an integral component. There are several activities ongoing for climate change adaptation, but such efforts are still very few, accounting for only five percent of activities related to climate change response. The World Bank estimated that roughly USD 10-40 billion is needed annually for reaching climate mitigation goals by 2012, though currently, we only have about USD 300-600 million per year to work on these goals. There are some individual contributions by countries such as the UK who contributed roughly USD 1.6 billion to the World Bank for climate change mitigation, but not all of this fund was allocated for the purpose of adaptation. The bottom line is that there's not enough money to reduce disasters.

As I mentioned earlier, according to IPCC, the necessary budget for mitigating climate change amounts to 3% of the global GDP. This figure does not include the cost of responding to disasters that may be triggered by climate change, for example, damages to the scale of Hurricane Sidr in Bangladesh, which means that 3% is simply not enough. For example, when calculating the disaster cost of climate change for APEC countries, the IPCC estimated that this will amount to about 5 to 15% of the GDP of all the APEC countries – again, 3% of the global GDP will not be enough. If we want to respond to the climate change in the real sense, much more resources would be needed.

The impact of development projects on climate change must also be reassessed. A 2006 report by the World Bank said that a review of their project portfolios revealed that 40% of their projects are in danger of exacerbating climate risk, citing that some of their projects may be increasing vulnerability. For example, a dam project may actually be displacing a lot more people than they estimate or may be increasing the pollution, or perhaps destroying more forest than previously estimated because they have not fully integrated the risk of those developmental projects.

So how can we increase resources and focus on adaptation? One solution is the coordination or combination of the ecosystem services and carbon revenues. At the UN Climate Change Conference (COP13) in Bali, the World Bank's proposed the Forest Carbon Partnership Fund was discussed as a concrete way of reducing emissions through land degradation and logging. At the moment, renewable energy and waste management are the main strategies for mitigation, but new mechanisms that aim to stop logging are also being developed. When trees are cut and processed, greenhouse gas is emitted. 20% of the global emissions of greenhouse gases are attributed to logging. Thus logging must be stopped, but the only possible way is for countries to receive financial incentives to stop logging. In other words, we must pay these countries to stop logging by compensating the market value, in CO₂equivalent, per ton of emissions avoided by preventing logging. This is what the World Bank is trying to initiate with the creation of the Carbon Fund.

The problem, however, is that the cost of carbon is currently USD 10-20 per metric ton in the market, meaning that it is currently more profitable for these countries to cut down trees. One of the solutions would be to link the payment to disaster response. This is the idea of offsetting. For example, when buying gasoline and thus emitting carbon, you can offset the emissions by paying for the carbon equivalent towards the trees required to be saved to offset the same amount of carbon emissions. Indeed, many companies are trying to adopt this practice.

Let's take an example of a mangrove project. After the flooding in Louisiana caused by Hurricane Katrina, the U.S. government promoted the planting of mangrove forests around Louisiana Bay, because they calculated that it is effective for regulate floods. If they had actually used concrete barriers instead of mangroves, the result would have been the same, but in order to produce one metric ton of concrete, 500 kg of carbon dioxide will be emitted. So you can see the same results, but planting mangrove trees not only reduces, but also prevents CO₂ emissions. We must pursue such combined efforts for responding to climate change and also helping disaster reduction. We could promote climate change mitigation while promoting climate change adaptation at the same time.

We need to be able to explain in detail how much funds are needed in dollars for these efforts and to quantify the value of regulation services. Currently, we do not know how much money we need to pay to protect forests to prevent landslides, or how much financial value there is in preventing floods. The quantification of such values could be the component that gives added value to the market price of the equivalent amount of CO₂ emissions avoided. Through such efforts, we can increase resources and focus on adaptation activities and pay for the regulating services that our ecosystems provide for disaster prevention. Through these considerations, we hope that many of our activities can continue on moving forward.

Thank you very much.

“Achieving Gendered Disaster Risk Reduction (GDRR)”

Dr. Maureen Fordham
Programme Leader, MSc in Disaster Management and Sustainable Development
University of Northumbria, UK



Today, I would like to speak about “Gendered Disaster Risk Reduction”. Firstly, I would like to address Disaster Risk Reduction (DRR) to lead into this subject. Then, I would like to raise the question why we should think about “Gender”. Finally, I will address policy initiatives through conceptualization of how gender can be merged with DRR.

So let us proceed to talk about DRR. Needless to say, it is important to link disaster with development when considering disaster risk reduction. It took quite a long time to get people to make this connection. Now, we realize that the linkage between disaster risk reduction and development is an essential component for sustainable development. For risk reduction, we need to identify root causes of disasters. According to a model from the book “At Risk”, we have previously been focused solely on the hazard. People never looked further than the instance of a flood disaster, the earthquake, and the cyclone. People examined scientific aspects such as hydrology and seismology. However, they did not make the connection with development: with society and people. Indeed, development itself is a major contributor to causing disasters.

There are many root causes that make people vulnerable. The one we are particularly interested in today concerns gender relations. For example, women generally have less power, less influence, have fewer resources, and therefore they have less control of their development and their environment. It puts them more at risk. What I would like to emphasize here is that there are extremely complicated and intricate underlying root causes of disaster vulnerability of which gender inequality is one. At a more practical level, if no adequate training is given or a person in charge has less capacity to reduce the risk of disasters, safety may be compromised, resulting in a disaster.

People have been talking about gender in disasters for quite a few years now. I think this is an indication of how, when you get these very difficult and abstract subjects, it takes very many years to get some kind of change on the ground. Look at this quote from the 1995 Human Development Report: “Human Development, if not engendered, is endangered.” But what change has there been? We need to look at root causes of gendered disaster vulnerability. How disasters affect men and women, boys and girls differently, and put them differently at risk.

When the “Gender” component is added to explain the inter-relationships, gendered factors related to the economy at the international or national level must also be added. In today’s increasingly globalized world, the most impoverished group is still comprised mostly by women. Their access to power, resources, and influence in economic and social systems is relatively limited. The same trend can be observed in the field of disaster management, where men comprise most of those involved in managerial roles. However, we often do not have data to show this gendered picture around the world.

If we look at unsafe conditions, one factor that leads to increased risk of disasters is dangerous location in relation to disaster risk. These areas include homes, and therefore, women are inevitably associated. Let’s think a bit further. When constructing earthquake resistant buildings, people tend to imagine building large high-rises such as business centers and pay less attention to homes. However, the fact is that when a disaster occurs, many lives, especially those of women, are lost in their homes. Let’s think about women’s working environment, which in many cases also tend to be the home. We all wish to work in a safer environment. However, the fact is that women are less likely to work in such an environment. What we need here is to address these issues more comprehensively.

Data that are related to disasters are widely available; however, it does not provide adequate information on who is at risk and for whom the risks need to be reduced. We have to use our imagination in regards to those who died or those who had to leave their home and whether they were men or women, their ethnicity, caste, and physical ability. Despite the availability of some data, the reality is that it is extremely difficult to find adequate information at the time of a disaster, especially gender disaggregated data. Thus these considerations need to be made in before disasters occur.

Furthermore, when we think of “Gender”, we tend to think of the female gender. However, we need to think of gender as an association between both males and females and the power relationships between them. For instance, there is the case of the 1995 Chicago heat wave. Interestingly, data suggested that the death rate of elderly male victims were twice

the number of females. This was despite the expectation that elderly females were more vulnerable to disasters. Female victims may lack power and may lack a number of resources, but they have better social networks, which, in this case, worked to their advantage. Through such social networks, women were able to ask for help. On the other hand, elderly male victims tended to be less socially active, leading to greater fatalities so therefore, they should be targeted as a vulnerable population at the time of a heat wave. Many of the male victims died in solitude. This example indicates that the “Gender” issue does not necessarily mean female but also includes male, as well.

In another example, after the Tsunami, many victims who lost their lives were female. Is it because women were physically weaker? We believe that there was also a social reason that contributed to greater risk and their death.

During the recovery process after a disaster, people automatically assume that women are at their homes, which would also mean that they are less productive in the economy. In most cases, their work may be considered less important than their male counterpart. Women are under tremendous strain during a disaster as well as during the recovery process. One small thing that could make a difference would be the establishment of women and children friendly spaces in camps after a disaster, where women and girls and young children can have freedom to move around and feel safe. That’s a very small effort that could make very big difference to the way people recover from disasters. After the Tsunami, generally speaking, women were less happy with the response to the disasters. If women comprise half of the population, should they still be treated as a minority?

For the years between the years 2005 to 2015, governments around the world have pledged their commitment to implement the Hyogo Framework for Action. In particular, “gender” definitely needs to be incorporated into practice. “Gender” is not easily acknowledgeable; therefore we need to visualize it. For that process, focusing on the current needs of people becomes necessary, for instance, we should include women in DRR committees, which consisted largely of men in the past. We do have to be careful though that if we just add women, we are in danger of overloading them because they often work longer hours than men.

There are some reported cases of increasing domestic violence against women during disasters. This may be due to the tremendous amount of stress caused by a disaster for the family, particularly for the men. Sometimes, men release their stress through violence against women and children. Additionally, more opportunities for women to generate incomes must be provided. In the long run, we need to focus on women’s right to acquire equal opportunity to a whole range of rights, such as education, political representation, and human rights. We need to build an environment for women to work equally and independently as men, even after a disaster, by eliminating discrimination in their working and home environments.

Here, I would like to use an example from El Salvador and an interesting community risk reduction project, which was initiated by Plan International. When Hurricane Stan hit Latin America and elsewhere in 2005, a local woman named Theresa, who was trained as a nutritional advisor, was part of an organized nutritional committee. At the time of Hurricane Stan, she and other committee members identified and helped the most vulnerable within the community. Young people and children were not an exception. They organized shelters after the hurricane and also helped evacuate people and rescue people where there were many landslides. These examples show that young children and women are not merely physically weaker victims, but they are capable of organizing the community and can engage themselves as active organizers.

Women and girls are not just victims – they are also active managers and organizers



■ *“Sometimes we women don’t know about our strength. In emergencies we have the opportunity to test ourself and become not ‘just women’... It was us women who dared to go in the canyons, going after the victims. It was us women who took the elderly out of the house.”*

Marisol Carmen of La Laguna Municipal Civil Protection Committee, El Salvador

International Disaster Management Symposium 2008, “Towards Sustainable Communities”.
16th January, 2008, Yomotsu Kobe Hall, Kobe, Japan

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Here is another statement given by a woman from a different community. According to her, oftentimes they as women do not know how much strength they possess. It is only during an emergency such as a disaster that they come to realize their own strength and it gives the women an opportunity to realize that they are not merely women. Just as in these cases in El Salvador, there are so many reported cases of women rescuing victims in different disaster cases. Unfortunately, we still do not realize women’s potential.

Now, I would like to mention what it really means to build an ideal disaster-resilient community. Here is a guideline indicating various topics and characteristics according to each theme. Many people are trying to apply them in real situations and discuss how to evaluate disaster-resilience and the possibility of creating indicators by the community members. There are five prioritized areas in the “Hyogo Framework for Action”, and we use them as component factors.

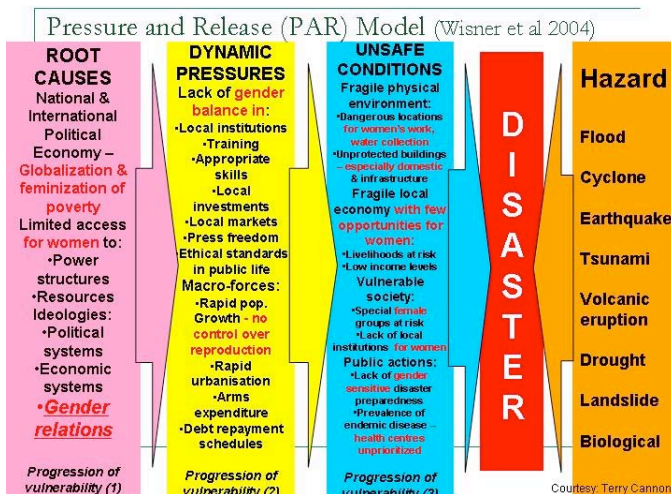
It includes local government, municipalities, national governments, as well as the global environment. However, there is no guarantee that “Gender” will be included in these components. Therefore, I am including children as well as “Gender” as a (independent) component of disaster management. It is not only DRR, but also “CC” (Child Centered) and “G” (Gender). It is necessary to build disaster-resilient communities by acknowledging children and young people’s rights and enabling women to speak out, and engage in action. It is also necessary that each community acknowledge the importance of women’s roles and encourage their participation.

Now let’s go back to Hyogo Framework for Action. GDN, the Gender and Disaster Network, was launched in 1997. We, in GDN, demand that the “Gender” component be included in the HFA. It is my wish for “Gender” to receive full recognition and to be acknowledged that it is related to many issues. It should be recognized visibly and should be included in all the five priorities. In terms of the priority in Hyogo Framework, if DRR is a national or a local priority, unless you are aware of gender issues, there is no reason to put gender in. We have said the HFA must explicitly recognize gender as a cross cutting concern requiring attention throughout response, recovery, rehabilitation, preparedness, and mitigation phases of disaster reduction and planning.

This symposium is an indication that inclusion of “Gender” is in process and people are currently engaged and there are resources available as well. If any of you have never thought about the “Gender” issue, I strongly encourage you to look at these resources and to participate in the GDN.

GDN Homepage: <http://www.gdnonline.org/>

Thank you



“Understanding the Cyclical Inter-linkages between Environmental Management and Disaster Risk Reduction”

Hari Srinivas
Chief of Urban Environmental Management Unit, UNEP/IETC

In today’s presentation, I would like to discuss the importance of linking environmental management and disaster risk mitigation.

First, one of the key lessons emerging from assessments of recent disasters is that the local environment and ecology, either directly or indirectly, has an impact on disaster events. In fact, the starting point for environmental degradation is our life styles and consumption patterns that trigger changes in the environment and eco-systems. Therefore, one policy approach to disaster mitigation and prevention lies in identifying and mitigating environmental factors and their inter-linkages with risks and hazards.



The main point I want to make is that the environment management and disaster prevention are interrelated. When we can’t manage the environment, the risk of disasters increases and vice versa – disasters have a negative impact on the environment. Moreover, disasters and environmental degradation are related to each other. We need to therefore study and understand what sort of impacts environmental degradation has on disasters, and also how the environment deteriorates due to disaster events.

When we analyze current disaster management practices, we see that environmental concerns are not intrinsically incorporated in disaster policies and programmes. I call this the “CNN Syndrome”, where only those aspects that are focused on in the mass media are considered important. Decision-making and actions relating to environment and disaster management are not integrated or considered together, and therefore response is also disorganized.

Longer-term environmental degradation affects, and in some cases creates, disaster events. Problems such as deforestation cause land degradation and damage to the soil, which in turn reduces the soil’s ability to hold water. This further leads to flooding in the downstream areas through accumulation of silt, debris and water.

These long-term environmental degradation processes can increase the risk of disasters and make communities living near such risks and hazards more vulnerable. We also have to remember that these processes have a human-induced starting point: Our lifestyle choices that lead to a demand for wood and its consequent deforestation.

Human-induced risks and hazards, such as industrial wastes, chemicals etc. are also on the rise. Many commercial and industrial activities are the cause of disasters and environmental degradation. Although the management of chemicals, waste products etc. are essential, they are not yet adequately considered. They not only form a hazard in themselves, but also increase nearby communities’ vulnerabilities during a disaster such as earthquakes or typhoons.

In case of the 2004 Tsunami disaster in Indonesia, seven to ten billion cubic meters of waste was generated in Band Aceh alone. This is an incredibly high volume of waste that had to be processed and disposed. About 8,000 kilo liters of oil, from two oil sites and a cement plant, were released into the environment. 60,000 water wells were also damaged in Indonesia. Coral reefs, sea grass, beds, mangroves, agricultural lands etc. were actually very severely affected as the result of the tsunami in Indonesia alone. In the Maldives, about 300,000 m³ of waste was generated. Dangerous toxic wastes found in building materials, such as asbestos and oil related materials, and were mixed with ordinary debris. Drinking water and sewage treatment tanks were also damaged. As a result of dumping debris in the sea, coral reefs and mangroves were also damaged.

Clearly integrating environmental risks and disaster management is important and goes beyond immediate humanitarian issues. Where do we start? There are three levels of issues to understand the problems of environmental planning and disaster management. First, we see a lack of awareness of preparing for disasters at all levels. Disaster mitigation, especially in developing countries is simply not a priority to preparing for disaster. Second, the idea of disaster prevention is left out in the process of environmental protection, and vice versa.

Damage to the environment is not considered in the process of planning disaster prevention. Thirdly, there is a lack of financial and budgetary allocations, human resources etc. This is a cyclical dilemma.

As to whether we need to consider the protection or degradation of the environment, maybe both are needed. When considering both the environment and disaster management, there are many issues such as how to treat cause and effects, and the effects before and after disasters. Issues could be local, national or global.

The understanding of interaction between the environment and disasters has not yet been fully developed. Also when it comes to disasters, we tend to focus on sudden onset disasters such as cyclones, tsunamis and earthquakes, and tend to forget slow onset disasters such as droughts, desertification and deforestation. The environment is also damaged over the long-term through disasters.

This is why monitoring environmental change forms an important starting point that should be linked to disaster management planning. Most of the time, destruction of the environment during disasters happens in rapidly changing areas called environmental “hotspots”. We need to observe how eco-systems, the natural environment, human development, and disaster management interact together, because the prevention and mitigation of disaster and environmental risks also shape capacity building, training, awareness raising exercises.

Matching the activities of environmental management and of disaster management is important. One approach, for example, is to look at the precautionary principle and disaster management. The precautionary principle is a well known approach to prevent and reduce negative impacts on the environment. The essential feature of the principle is that we try to analyze a particular action, foresee its impact on the environment, and prevent it from happening in the first place, as precaution. When we start to expand this approach, what we realise is that at every stage of disaster management cycle, there are environmental impacts, aspects, tools, and strategies that can be considered, and the precautionary approach calls for a reduction of the negative impacts on the environment.

A number of policy and programme analysis tools are now available when planning development projects. Before a disaster happens, we need to think of how we can reduce risks and environmental change that are caused by human activities. By regulating these activities, how can we lower the risks and prevent disasters?

Among the tools available for understanding both environmental and disaster issues include: Environmental Risk Assessment; Environmental Management Systems; Strategic Environmental Assessment; Environmental Vulnerability/Hazard Mapping etc. These are tools that already exist and focus on environmental issues, but can easily be adopted for disaster aspects as well. There are also tools available for post disaster assessments, including Rapid Environmental Assessment, Environmental Impact Assessment, and so on.

Environment is an intangible issue receiving less attention than humanitarian aspects of disaster management – but no less important. Prioritizing the environment begins by considering the impact of our everyday decisions, choices and lifestyles on the environment and the resources it provides.

Finally, there is a need for broader understanding and awareness of the inter-linkages – causes and effects – between environmental and disaster issues. By promoting closer dialogue between environment and disaster professionals, we can collate case studies, good practices, information and knowledge, so that we can create better synergies. Guidelines and strategies also need to be developed to see how knowledge in the environmental sphere can be used for disaster mitigation.

When we take an integrated approach to environment management and disaster management, what we realize is that ultimately, a disaster event is a reminder that something is not right with our environment. But right now, we treat disaster and environmental management as separate issues and separate entities. The main message that I wanted to share with you today is that we need a better understanding of the cyclical interlinkages between disaster mitigation and response one hand, and environmental management on the other.

Thank you very much.

“Facilitation of Community Based Disaster Risk Reduction Through Environmental Education”

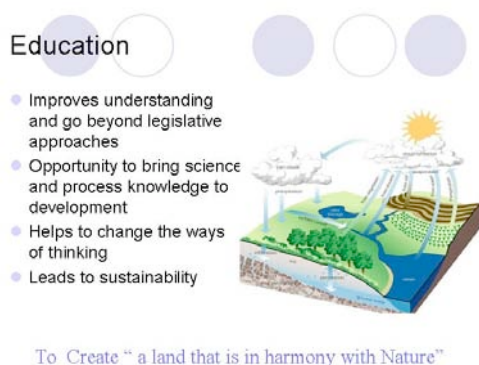
Ananda Mallawantantri
Assistant Resident Representative, Team Leader of Environment,
Energy, and Disaster Management, UNDP Sri Lanka

First, I would like to thank our hosts for allowing me to learn about Kobe’s initiatives over the 13 years since the earthquake. Today, I would like to talk you about some of the experiences of Sri Lanka. I will mostly focus on how environment education, or the knowledge of the environment processes may help in disaster risk reduction, and share with you a number of examples from Sri Lanka. Jerry has highlighted how disasters, though we may call it natural, is greatly influenced by human intervention, exacerbating the risk and damages of some of the disasters. It’s important for the educational aspect of disaster risk reduction to take a holistic approach, taking into consideration the relationships between the human interventions, natural environmental process and also the climate change related influences. We must also take gender and issues considering the elderly and disabled into account for our educational processes. It is also important to involve stakeholders and the communities in this process of education.



Often times, we try to enforce regulations and tell people not to do certain things, but we fail to explain why they shouldn’t do certain things with adequate explanations in understandable terms. It would be much easier if proper explanations were given as to why they should comply, what their role is, and how they are connected to the enforcement and outcome, and how everyone’s actions would help themselves, their community, and also the whole world. So it is also helpful to be able to understand the dynamics of the environment: the water movement, soil movement, erosion, and key environmental processes my colleague Hari explained in his presentation.

In Sri Lanka too, we face a number of issues, mostly due to the impacts on the ecosystem due to development activities. For example, road construction is one of the big problems in Sri Lanka, causing wide-spread soil erosion. Run-off is deposited in reservoirs, lakes and waterways, reducing their capacity. To counter this problem, in a recent example, we have tried to stabilize slopes using grass and coil structures and educating people not to build roads during rainy season when there is a high level of erosion. Simple information such as these can make a difference.



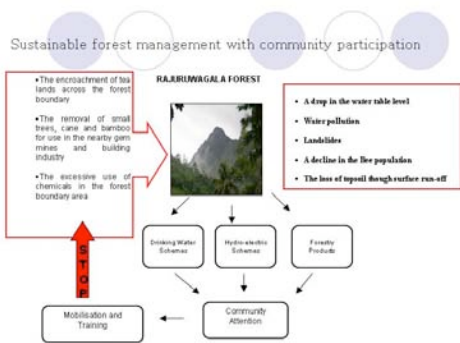
We also engage in education by showing pictures that show environmental relationships such as how agricultural land-use contributes to the deposit of sediments into the rivers that are providing drinking water for downstream populations. These simple examples have helped people better understand the impacts of their actions to the environment. We also show them data, for example, how erosion has reduced soil fertility and agricultural production. Also, there are many instances of water accumulation that have occurred due to the obstruction of drainage pathways by human activities, but people don’t realize the potential negative impact. However, when you highlight, for example, how the water accumulation help mosquito flourish and leads to the spread dengue fever, or present other medical statistics, the message is well received.

Sometimes we have observed several bad experiences due to lack of enough education. Here’s a good example from the Tsunami. When the waves struck Sri Lanka, many wells used for drinking water got flooded with salt water and debris. People thought that pumping out the contaminated water using pumps would be an adequate solution and that they would immediately have clean water. In actuality, the pumping process, mostly in the coastal sandy soils, caused sewage from nearby toilets pits to be sucked into the wells and also to suck seawater in from the ocean nearby. Because the water was contaminated, people had to depend on other water supplies. Hence practical educational components are really helpful in early recovery and disaster risk reduction in communities.

We also promote rainwater harvesting, but people hesitate to drink rainwater believing that rainwater contains harmful pollutants. So a significant amount of education is needed to promote this kind of system and techniques. Solid waste is another big problem in Sri Lanka, but it was very difficult to convince people to take responsibility unless you show them the benefits. The dengue potential due to poor waste management is one example and another example that

yielded much success was to show people how they could make money out of waste by generating compost and making energy such as biogas for cooking etc.

In another example, people who believed that it would help make a better waterway to irrigate their farmland cleared a riverbank of its vegetation. However, this caused the entire riverbank to collapse as it succumbed to erosion. Community-level education was conducted to discourage such mistakes in the future. Pesticides are also a big problem in Sri Lanka as it contaminates water bodies. Scientists were invited to explain the impact of pesticide residues on wild life and humans. Cultivation in very permeable soils, especially sandy soils, exacerbate the problem because people put a lot of fertilizers and pesticides which eventually finds its way into drinking water wells. There are now several programmes that are ongoing to try to educate people on pesticide and land use. There are also frequent instances of landslides, which occur as high intensity rain causes soil loss, the entire hill eventually collapsing. Lots of education and mapping exercises are also being done, as well as the cultivation of grass on slopes.



When people are educated and we allow them to share the benefits of informed decisions, very interesting results can be observed. In a particular example, we educated a community giving them a holistic view of the ecosystem and their relation and impact to the system. In a particular community, their drinking water was supplied by a stream coming from a nearby forest situated on the slopes of a hill. Because of lots of water pollution and logging, landslides and loss of topsoil was becoming a big problem. In the project, people were supplied hydroelectricity through a micro-turbine that was installed in the stream. In addition, drinking water was provided to the community from a water supply project. They were then educated about the ecosystem and how by saving the forest, they will have a steady supply of clean water for

drinking and for hydropower. After the programme, we have begun to observe that locals began to protect the forest and anyone caught logging would be turned over to the police. So this was a very successful community awareness-raising project that allowed them to benefit from the natural resources and its conservation.

One last example is the role of mangroves in coastal protection. Sri Lanka has conducted computer simulation exercises to better understand the use of vegetative barriers to protect against sea waves and to estimate the optimal shapes and heights of the vegetation. Based on the assessments, different crop combinations can be used for conservation.

So in conclusion, it is important to bring in all stakeholders and community members in this education process, use simple easy to understand messages or conduct pilot studies to improve the understanding of the stakeholders on ecology and the linkage between development, risk reduction, and the environment. And sometimes, computer simulations and use of some higher technology also helps the designing and educational processes.

Thank you very much.

“Shiawase Hakobo – From Kobe to the World: Disaster Management Education”

Taisuke Matsuzaki
Senior Manager, Research Division, Kobe City Board of Education

I would like to talk to you about the disaster mitigation education material that Kobe City and Yomiuri Shimbun (Yomiuri Newspaper) has been developing.

13 years ago in the Great Hanshin Awaji Earthquake, a huge number of children and teachers lost their lives. Approximately 85% of education facilities were damaged. Schools became shelters as no less than 130,000 people were forced to evacuate. As a result, the damages to education in Kobe were tremendous. Ever since those days of the earthquake, Kobe has been working to overcome the disruption and effects on education.

A basic ideal in post-Earthquake education and disaster mitigation education is to utilise the experience and lessons learnt from the Earthquake. Firstly, students obtain knowledge such as the mechanisms through which earthquakes and natural disasters occur. Secondly, skills for self-defence are acquired. The third is to learn the importance of lives and community networks. We have learnt the value of human lives and the importance of helping each other from the earthquake. These three perspectives are reflected in our disaster mitigation education.

However, we are facing a range of challenges in disaster mitigation education. First is the change in the awareness level for disasters. Since time has passed, the experience has also fade out. The second challenge is the generation gap. In the future, there will be teachers who have not experienced earthquakes teaching disaster mitigation to children who also have no experience. Furthermore, it is an increasing reality that we face threats from not only natural disasters, but also ‘new disasters’ such as terrorism and environmental degradation, which needs to be included in disaster management education.

To take these issues in consideration, we developed a set of education materials called “Bringing Happiness” in cooperation with Yomiuri Shimbun, Yomouri Television, and the Kobe City Board of Education 2 years ago. To date, we have also developed versions adapted for primary and secondary school students. The education materials include a DVD that contains movies about natural disasters and a CD that has newspaper articles and pictures of disasters. I would like you to take a look at some of the movies. This movie shows footage from the day that the Great Hanhsin Awaji Earthquake occurred.

(Movie) Highway and houses were totally collapsed, and many people died because of destruction of houses. They could not get out of their houses.

Now, I will show you footage from a movie called “What happened to schools back then?” This clip shows a school that became an evacuation shelter.

(Movie) After the earthquake, schools became evacuation centers for 70% of the evacuees since schools were one of the most secure places. Faculties of schools facilitated evacuation of people in gymnasiums and classrooms.

The next clip explains the mechanism of the Tsunami.

(Movie) When an earthquake occurs and its epicentre lies in the sea, the shape of the seafloor is dramatically changed. As a result, seawater moves in relation to the change, leading to the initial pull of water away from the coastline. Huge waves are created as the water rushes back to the coast. This is a tsunami. Such visualization makes it easy for children to understand the mechanism and the dangers of a Tsunami and its warning signs.

Now I will show you footage of community-based disaster reduction training that is jointly conducted with schools and communities. This was filmed at an athletic meet at a primary school.

(Movie) Students enjoy a ‘stretcher obstacle race’ and rescue training integrated into games.

Here is a clip in which children are taking on the role as indispensable volunteers.

(Movie) When drinking water was not available after the Earthquake, children took part in collecting water from mobile water tanks. Children played a crucial role in overcoming the difficulties that the family faced during life at the evacuation shelter. Children from neighbouring communities also rushed to the disaster area to help.



As we have seen, children are able to learn the importance of “heartfelt networking” from this learning material. It also is possible for children to learn about the situation immediately after the earthquake from the attached CD-ROM. These learning materials are provided not only to schools in Kobe, but also distributed for utilization in local disaster reduction training for regional communities. In addition, the material is used for teachers’ training, universities, research institutes, local governments and risk management study in the private sector. Overseas, in earthquake-prone countries such as the Republic of Armenia, Sri Lanka, and Algeria, the education material has been used to introduce Kobe’s experiences and disaster mitigation education methods. In the process of wider dissemination, the mission of Kobe city is to provide made-to-order disaster mitigation education materials and curriculum around the world. For disaster management, we believe that international cooperation and knowledge sharing is essential. There is no border in disaster mitigation education. For example, we took ‘Bringing Happiness’ to Armenia and we organised a class. Students learnt the importance of lives, cooperation and self-help. Teachers understood how conducting a class by using visual education materials is effective. Thus, we think that such material can be used not only in Japan, but also overseas.

(♪ Song in memory of the Earthquake ♪)

This song has been sung at the coming-of-age-celebration by those who were still children when the Earthquake occurred. Now, it is sung by people who have not experienced the Earthquake.

Finally, I would like to emphasise that gaining knowledge for disaster reduction and helping each other will lead to the development of effective disaster management planning, awareness raising, saving lives, and towards saving the Earth. We in Kobe wish to keep providing information about environment and disaster mitigation from Kobe to the world. Thank you.

Panel Discussion:

“Gender Balanced Participation for Disaster Resilient Communities”

Coordinator:

Kentaro Serita, Professor, Aichi Gakuin University

Panelists:

Kumiko Oshima, Director, Nigata Women’s Foundation;

Yuko Suemura, Visiting Professor, Osaka University of Economics and Former
Counsellor of Amagasaki City;

Yoko Saito, UNCRD Researcher; and

Dr. Fordham Fordham, Senior Lecturer, Northumbria University, UK

Serita: We would now like to begin the session. Aichi Gakuin University is in Aichi Prefecture, but I have originally been working at Kobe University and I am also the Chief Representative of the non-profit organization Citizens towards Overseas Disaster Emergencies (CODE), which is also part of this symposium’s steering committee.

My specialty is international law and I have written recently on such topics as pending territorial issues between Korea and Japan, much to the chagrin of some analysts, but this is also part of my work. Because my specialty is international law, I have studied a bit about the United Nations as well.



Back in 1995, I was on a skiing trip with some of my students on the day of the earthquake. When we heard the news, we rushed back to Kobe by taking a series of overnight trains and buses. Back then, I was dean and head of research for the Graduate School of International Cooperation Studies at Kobe University and fortunately, none of my students lost their lives, but Kobe University as a whole lost 39 students including those from abroad. As was mentioned in Professor Dr. Fordham’s presentation, it is impossible to garner individual experiences and stories and even engendered data from mere numbers of casualties.

In terms of my personal experiences from the 1995 earthquake, I recall how the People’s Republic of Algeria sent us 5 large tents. In 2003 when Algeria was struck by an earthquake, an emergency response team was sent from Japan and I, as an academic commissioned by JICA, accompanied the response team as an external evaluator.

In the emergency response team, there was a female doctor, which greatly helped when attending to women and children in the predominantly Muslim nation. It was then that I discovered that having a female member in the disaster response team was extremely rare, perhaps even the first time and that most teams consisted wholly of men.

During the Governor’s speech, we heard how there’s a great decrease in overall numbers of community firefighters and in Dr. Fordham’s presentation how in most places in the world, firefighters are predominantly men. So when we talk about gender roles and balance in disaster management, these issues come to head, but as we sit here today, I often cannot help but feel a little uncomfortable as the topic itself often concentrates on women – and I happen to be the only male on this panel today!

Today, instead of using formal terminology such as “gender”, the organizers have opted to use (in the Japanese version of the press release) the phrase “men and women helping each other” and I find this to be a good phrase, making one feel that even in heated discussion, men will not be in an uncomfortable position, and hints a very cooperative atmosphere.

So today, we have four panelists, but we have already heard from Dr. Fordham and Ms. Saito, so let us first hear from Ms. Oshima and Ms. Kimura for about 10 minutes each, including a bit of self-introduction, followed by some comments from the other two. Ms. Oshima, please go ahead.

Oshima: Being first in a series of panelists always makes me nervous but I hope you will forgive me if I offend anybody because of that! I am living in Niigata city and heading an organization that deals precisely on the subject of gender equality with the goal of engendering society at the Prefectural level.

The reason why I had been invited today to this wonderful symposium is because, as everyone knows, Niigata was struck by the Great Chuetsu Earthquake – although the Meteorological Agency simply calls it the Niigata Chuetsu Earthquake. At that time, we interviewed female victims and in 2005, we held a forum at the Women’s Education Center, an institution setup by the Ministry of Education, Culture, Sports, Science and Technology.



In this national level forum, we featured three female victims from Niigata to take part as panelists, and I was able to coordinate the discussions to talk about gender issues and roles of women in society and emergency.

Much of the discussion apparently came as a surprise and discovery for most participants, which included local government staff representing various cities, towns, and villages from around Japan, and private participants. Subsequently, I was invited to talk about such issues in town halls, corporate staff meetings and training, disaster management committees and staff workshops, and in other various opportunities, resulting in several Japan-wide tours. I believe this is how I came to gain an opportunity to participate in today’s panel.

It is also the fact that the 2004 earthquake in Niigata reflects Japan’s most common geographic characteristics, having occurred in a valley – 70% of Japan’s habitable land lies on valleys and/or between mountains. Three years later in July 2007, another series of earthquakes struck Kashiwazaki, another city in Niigata and some victims suffered from both earthquakes.

In the Kashiwazaki Chuetsu Earthquake, arcades and shopping centers were heavily damaged. In both disasters, we interviewed many female victims and members of the government who took the lead in the recovery effort.

When looking at both disasters and after interviewing the women, I discovered that under a centralized relief and recovery effort, women are still experiencing gender based discrimination or harassment and stereotypically imposed gender roles, which leads me to strongly believe in the need to disseminate these voices and experiences.

One of the areas in which these voices were heard was in regards to life in evacuation centers. The Great Chuetsu Earthquake was a series of temblors measuring 7, 6, and around 5 on the Richter scale. During their stay in evacuation centers, men and women who had daytime jobs would leave for work and “housewives” would be left together with many old people and children. During the daytime, these women had to cope not only with fear and uncertainty for aftershocks but also had to take care of these new neighbors and were worn out. However, at the end of the day, women were expected to cook and attend to their spouses and family, and sometimes for the entire evacuation center. When I reported such voices and issues and initiated a discussion in the forum, the women were relieved to know that it was ok for them to voice such opinions, which hereto they could not voice until they were given an opportunity to participate as panelists, and I think this is certainly an example in which the topic of gender plays an important role.

There is also a need to talk about gender in the work environment. There was one family in which both the husband and wife worked in the same company and held managerial positions. After the earthquake, as soon as the company restarted operations, the husband went back to work, leaving his wife to take care of his family and home. For his commitment and troubles, he was soon promoted.

As for his wife, she first had an obligation and expectation to perform her role as a wife to her husband and also to his family and also as a mother. Because of these responsibilities, she could not get back to work for another two weeks and her company was very critical of her for forsaking her managerial role.

The company’s vice president is a woman and she expressed regret for “not standing up for her as a woman” but claimed that she couldn’t do so in a company environment that was not engendered. In the end, the woman did not get promoted and was simply given less responsible roles.

In another example that I heard from a midwife, a young mother experienced her first birth a few days before the earthquake. Three or four days later, she experienced the temblor and suffered from a breakdown. The midwife, who was very conscious about gender issues, she tried to find out what was best for the mother, who then said that she wanted to get away from taking care of the baby even if only for two to three hours a day. So it was decided that she will take up a part time job for a few hours and she happened to have a very supportive family, with her husband and his parents supporting this decision, saying that it was best that she become healthy. While the mother worked, her family took care of the baby and as for herself, by taking a few hours away from her house, her love for the baby grew stronger. This is yet another example about gender roles from the time of the earthquake.

There are many more examples, but if such an example were to occur in such a closed, mountainous area several generations ago, the mother would have been heavily criticized, but I feel that the midwife had a brilliant foresight that helped lead the family to a good solution and I think it turned out best for the child, who could be raised with less stress and a peaceful mind.

Professor Serita mentioned that “gender cooperation” is a very technical and hard term, but I believe that a consideration of such issues leads to the strengthening of community capacity. Emergencies also highlight gender issues that are not usually apparent in daily life. And in such instances, it becomes more apparent that gender issues must be addressed in pre-emergency times, with each individual working together to improve their mindsets and contribute to building a stronger community.

I believe that when a community is trying to recover from an emergency, it depends on the welfare of each individual and if it is a community in which everyone cannot voice their concerns, that in itself will also be an obstruction to a smooth path to recovery.

If one cannot voice their concern, I think there is a prevailing view that men take the lead in the recovery process and women, who can only voice their concern in private, are being viewed with less seriousness. These views should be considered in pre-disaster conditions so that a more gender balanced approach can be made in emergency situations. Thank you.

Serita: Thank you very much. As you may all know, 5 years after the Earthquake, we had our international review on the process of recovery and a holistic review 5 years later at the 10th anniversary. In both instances, we addressed gender issues, and for the international review, we invited two female specialists, one professor from the UK and another from the U.S. who was also differently abled. I believe that that was one of the first instances in which we were exposed to the theme of gender in the context of disaster management. In fact, at that time the international review committee was headed by Vice Governor Saito who insisted that the word “gender” should specifically be included in the report, which he claimed that it would be less meaningful otherwise. I think this was the first time such debate took place in terms of disaster management (in Japan).

During the 10-year review, we heard of examples about post disaster gender roles, as in the case described by Ms. Oshima about working husbands and wives who had to take leave and attend to home and family. This issue was quite heavily debated during the proceedings and with Ms. Oshima’s presentation, I could not but agree about the need for an open society in which one can voice hardships and experiences. I believe we can get more comments from Ms. Dr. Fordham and Ms. Saito about these topics, but first, let us hear from Ms. Suemura.

Suemura: Hello, I am Suemura. I believe that all audience members have a single A4 sheet of paper with some information as I have limited time to present. Back when the disaster occurred, I was a member of a civilian international cooperation organization and though the headquarters were located in Tokyo, I spent my time here in Kobe to work on emergency relief and recovery efforts.

Currently, I am carrying on similar work as both researcher and implementing staff by focusing on the two points of institutional/governmental reform and the establishment of civilian sectors in Japan (to deal with disaster management) and I hope that somehow my past experiences can be put to use when considering the question of how the public sector can be reformed and rebuilt.

During these 13 years, I have spent each year considering these issues, often coming to a point where I am put face-to-face with certain issues that I must reflect on.

Although I am working on the issue of disaster management, most of my work deals with pre-disaster preparation of various frameworks and building up on experiences and therefore there has been less opportunities to directly work on disasters, so participation in this Symposium is actually a great pleasure for me.

So now, I would like to look back at the past 13 years as a way of also introducing myself. For 5 to 6 month after the earthquake, roughly until the Golden Week holidays, I spent my time working as a member of the international cooperation NGO in the disaster struck areas of Kobe.

The NGO back then was one of the many grassroots organizations established to respond to a large number of refugees in Asia from a non-governmental point of view and position. By taking our experiences from dealing with refugee issues, we tried to implement lessons learnt from previous activities in domestic emergency settings. Originally, there was an understanding that the group will only conduct activities abroad so there was initially a great deal of discussion as to whether we should operate in Japan. However, after looking at the footage from Kobe, we could not ignore the reality and many organizations reversed their policies to assist in relief and recovery efforts.

So back then, there was an upsurge of volunteers who themselves were not victims or from the area, and also a country-wide upsurge and change of mentality towards active volunteerism, so I believe one of the main activities we conducted back then was to figure out what the needs were in the disaster areas and appropriately connect volunteers and resources to those needs.

A project was also initiated to protect and care for children in each evacuation center. There were also initiatives to build communities in temporary housing by organizing mobile libraries and community centers.



After my nearly half-year stint, I myself went back to the office in Tokyo, but these initiatives were continued for the next three years. After I got back to Tokyo, I set about to work on the second phase of post disaster recovery, which I think was between half a year after the disaster and until about two years after the disaster. During this period, we started creating an organized network for immediate disaster response in the case of an emergency in Tokyo. This initiative was not for the purpose of unifying each group as one collective voice but more for the sake of putting each of our experiences to practice and each group started to talk to each other around this time.

Specifically, we first called upon various organizations and we first began with a network of 5 or six organizations including the Red Cross, a volunteer center run by the National Council of Social Welfare, labour unions, coops, and other international NGOs. At the moment, we continue to run newsletters and support training around January 17th and this network has now grown to include about 104 organizations.

We also took part in the Second UN Conference on Human Settlements (Habitat II), at which we disseminated our experiences from the earthquake and we continued to try to incorporate our experiences in the overall strategy.

In the 90s, there was increasing focus on the role of the NGO in UN meetings, and this role was getting more clearly defined. I believe the conference we participated in was during the latter half of this process. Main discussion topics included the need to formalize and implement the right to habitat and the question of what a sustainable human settlement is in light of rapid urbanization and how we can develop such settlements. These two I feel were the main themes of Habitat II and we participated from the position of a NGO and organized a NGO forum. During this forum, we were also successful in formalizing the participation of two NGO members in the official Japanese government delegation, which originally consisted of public servants from Kasumigaseki (Tokyo).

When looking back at the discussion from this forum, I personally thought that the best thing I learnt was to think in terms of citizens/habitants, the concept of habitat, and the importance for members of various sectors to jointly discuss with each other, so that the content and quality of discussion can be greatly improved.

Refocusing on my country, Japan, I felt that, 60 years after the end of World War II and 100 years after the adoption of the nation's first Constitution, there has been established a distinct hierarchy between public and civilian and that the civilian sector has yet to come to a vibrant existence.

For the last ten years, we have concentrated on studying strategies to strengthening the base of action by citizens and to do this, we went back to the academia to start with detailed research on laws and policy, financial issues, government activity and framework, and legal frameworks that govern public institutions.

I also think that the civilian sector is another group that can come to undertake public works. To allow the civilian sector to flourish and contribute to public works, it is crucial that laws and governing frameworks are adjusted, so we are trying to help reform governing institutions at the moment.

As was introduced in the presentations today, these issues of community participation is very important, but in consideration of Japan's current budgetary pressure, we must find a good balance between such important issues and sound financial planning.

When considering these two points, I found hope in another example of a post-emergency situation, although this was not a natural disaster. In the aftermath of the JR Fukuchiyama Line disaster in April 2005, because much of the victims (commuters) lived in a very widely spread out area, it was very hard to figure out how the victims were coping and recovering after the disaster. Those who immediately volunteered to take up this challenge were people from the civilian sector who had been working hard on their own since the Hanshin Awaji Earthquake.

One of these groups was Community Support Center Kobe, which had been working since the earthquake and the other was a group supporting elders in a time of pension and care reform to deal with the acute aging and lower birthrates that this country suffers from. Several other groups joined these two to form a network to act as a support group for the train wreck survivors and those who took the lead were women.

To give further examples of the civilian groups involved, the groups had a solid focus on community and some converted part of their homes into a day care center, in a way sharing their personal wealth with the whole community. I feel that organizations such as these will come to play a key role in the disaster management cycle and place my greatest hope in them. I would like to end my presentation here noting that these are the possibilities Thank you.

Serita: Thank you very much. In the previous presentation by Dr. Fordham, she suggested that it is very important for there to be a friendly environment for women and children and that both women and children themselves can become organizers and take the lead.

In the two review sessions that I mentioned, I do not believe that such viewpoints really came up. Most discussion was about logistical issues such as the lack of division of living space in evacuation centers, difficulty to use bathrooms, and other gender based differences, but these two social points did not come up.

I said it's a good phrase to say "women and men working together", but perhaps it would be good to include "women and children". May I first have some comments from Dr. Fordham?

Fordham: Thank you. These two very interesting presentations were conducted from different viewpoints. Ms. Oshima's example was very specific about workplace segregation and experiences of a working couple and I was very surprised by the story. I think it was a very good specific example yet we do not often think about such issues.

In any case, whatever women do seem to be less appreciated than what men do. Therefore, there seems to be an obligation for men to report to work while women must take care of other responsibilities, thereby defining certain social responsibilities, but things do change over time. The current situation will not always hold true and this is even more so in emergency settings such as war and disasters.

The roles of women change, but often, things go back to status quo once the war or disaster is over, but whatever happened during the emergency phase is also a testimony to the fact that there are chances for change. At the moment there is much work without compensation that women are imposed upon, regardless of whether it may be heavily taxing physically and economically. On the other hand, there also may be mistaken stereotypes that men are not capable of adequately taking on these same roles.

But in this room, I think there are also many fathers who as a parent are taking care of their children. Men also have the capacity and role to take care of and raise others. Perhaps there have been little opportunity for most men to take on such roles, however, and a misconception arose that men were not capable of such duties although men are perfectly capable of take the role.

In regards to the presentation by Ms. Kimura, there was mention of legal and financial issues. Around the world, this is still a very big problem and not many women are given equal rights to wealth and property or land and legal rights. In such cases, especially when men lose their lives in disasters or become victims, as was the case in the Pakistan, Kashmir Earthquake in 2005, women suffer a lot, especially those who became widows. They have no resources, no money, no land rights and even if there are legal frameworks to support these women, there's very low expectation and actual implementation.

Therefore, it is very important to have community groups and NGOs because community groups are always on the ground and many of these consist of women members. Often times, disasters destroy everything and it is very hard to check facts and know what is going on. It is often though in these cases that, therefore, outside intervention is needed, but the fact is, sometimes a grassroots network already exists on the ground. Women are sometimes very active in such networks, although during emergencies, these facts are often forgotten and people rush to bring in help from outside that may not work so well.

Similar things happened in the United States. In the case of Hurricane Andrew, outside agencies came to try to deliver services, but in actuality, a local women's group knew the neighborhood very well and people at the grassroots level so they were already delivering certain services without outside help.

So, even in non-emergency settings, we must be aware of community groups even if they are not necessarily directly related to disaster management because in emergency phases, these groups may play a very important role and we should not look over this.



Saito: Thank you very much. First, what I was thinking while listening to Ms. Oshima was that, while I do not know too much about Japanese examples, I was reminded of women in Iran who I came in contact with when working there during the Bam Earthquake through my previous job at CODE, a NGO that Professor Serita briefly mentioned.

What I felt was that the exact same situation was happening in Iran and Japan. That is, the importance of mothers to be given a little time away from their children, who are often forced to live in a single small tent and attend to the children around the clock, putting great pressure on them. But of course, mothers could not just leave their children behind.

So what CODE supported was a children's day care center where children could play as much as they want while the mothers could meet in a separate room, allowing both mothers and children to each have some time for themselves. This helped mothers and children to get along and therefore I could see that it was the exact same situation in Iran and Japan.

Also, as I heard Ms. Suemura's presentation, I am reminded that when we often go abroad and announce that we are NGO or the UN, we are questioned "What are you going to do for us, what can you do?" In this case, I reply, "What do you want to do? I am not here because I want to do something, but first because I want to hear what your opinion is."

I continue saying, "Please tell me what you can do and I can tell you what we can support. In other words, I always say that you, the community, are the main actors and not us.

But if NGO and UN agencies continue to say that "we can do this so let's do it", people will come to think that "oh, they are going to do something for us." So, it is very important to support the civilian sector and volunteers so that the local community can take the lead to initiate activities.

Serita: Thank you both. After listening to everybody's stories, the first step might be to redefine what the concept of community and gender roles are. But if we start this discussion, we cannot hope to finish in time to connect the issues to disaster management so I will introduce one example from Japan. As you may know, there is a UN Convention on the Elimination of all Forms of Discrimination against Women to which almost all countries in the world are party. The Convention specifically states that men and women must support each other.

However, it is important to still do away with stereotypical gender roles and commercials depicting women cooking and men working have in some cases been cancelled. In Japan, there is still no perfect equality of pay or work, but the Equal Employment Opportunity Law has been adopted, paving the way for more equal workers rights and opportunities. Through such legal framework, gender equality has become a clearer issue.

There are now public institutions for gender balanced planning and other new realities that reflect changing attitudes, and as mentioned by Ms. Oshima and Dr. Fordham, it seems possible that society may change.

Of course, this problem is not just that of women or men and it is a problem of both sides, a concept that "gender" embodies.

I would now like to lead the discussion back to disaster management, would Ms. Suemura or Ms. Oshima like to say something in response to Dr. Fordham's presentation?

Suemura: Thank you very much. I have already told you about my daily activities, but in particular, the reason why I introduced the women's group that sprung from the civilian sector is because this has become a place where gender roles in daily lives, such as those that Professor Serita mentioned, can be discussed without inhibition and where capacity can be built through project activities.

Another point is regarding women's unpaid, uncompensated labour that Dr. Fordham mentioned, and that is that while we should promote further opportunities for compensated labour for women, uncompensated labour is very much an important and strongly evident factor in our society. Though ironically this has also some relationship with the low birth rate of this nation, as a citizen group, we hope to promote women's opportunities for work and independence.

I feel that it is always important to holistically observe at least two components at a time, such as citizen sector and disaster management or gender and citizen sectors.

Serita: Thank you. As Dr. Fordham mentioned, women are socially connected with each other and through such a network they were able to contact each other, but men are independent from such networks, and I thought I couldn't agree more.

One thing that I really wanted to ask Oshima-san is about women's groups, which are often things that have always existed in communities, such as those that concern childcare, and I was thinking that sometimes these might come in confrontation with public organizations.

For example, community based groups may be concerned with childcare and the disabled or the elderly. The groups with Oshima-san mentioned are, so to speak, perhaps a group established by local government and perhaps in some cases, women's community groups might dislike such groups of public origin and they may feel distant from it. So I was wondering how things transpired in the Nakayama area and how the anti-gender based discrimination legislation, which has provisions regarding women in mountain area villages, has come into play.

The reason why I ask is because the gender issue cannot be separated from the process of democratization and the progress of democratization is very important in terms of disaster management, so if you could provide us with any examples or issues regarding this matter it would be greatly appreciated.

Oshima: The group that I talked about is set up in the form of a foundation, but it is truly a private, civilian organization. The Niigata Prefecture Women's Foundation is for the improvement of women's position and rights in society and to promote gender balanced participation, Just as the central government is promoting. Of course, being human, the foundation is not perfectly equal itself.

The foundation started with an offer from the prefecture – "We will provide an equal amount of money that you collect". We were hoping that we would be able to start many project activities with these resources, but

unfortunately, this was just when the bubble economy went bust and we could not fully use the potential of community members and since we have been working in rather harsh finances as a citizen run, publicly established organization.

What Professor Serita mentioned, in simpler terms, is a housewives association and in Niigata and many women have joined the ranks including mothers. But in terms of healthy city planning within our Prefecture, we believe that in light of low birthrate and population decline, it is impossible to revitalize the cities with a strict mindset regarding gender roles. For example, we hold workshops pointing out that child care is not just women's issues and we are working towards building a society that is not restrained by gender roles, especially by working together with specialists and organizations of various types, for example by lending our office space for a nominal fee or letting them use our printing facilities in the hopes that each individual and each of these groups can strengthen their capacity.

So, as a publicly established, citizen-run organization, we are working both with some budget from the prefecture and also by our own funds from member fees. Such an arrangement allowed for a unique situation – one of my staff is the vice governor. So while I am a civilian, we actively work towards partnership and collaboration with government.

Another point about Niigata and its women is that there were many different examples from that with the disaster in urban metropolitan Kobe. So, back then when Hyogo Prefecture sent in public servants to help with the reconstruction of Niigata and offer suggestions, while it was highly appreciated, there were points that did not necessarily apply to the [Niigata] region. So I feel that perhaps, as the Niigata experience is something that happened in mountainous regions, we can offer different viewpoints from that of Kobe.



In terms of agriculture, because we lost a lot of arable land, I think that some important gender role issues came into play. For example, if women feel that “I also want to work together” when they see men involved in reconstruction, there may be social viewpoints that say, “You are a woman and you are in no place to do this.” But for each individual and the community as a whole to recover and revitalize, I feel that it is important for each other to accept such motivation to work together towards recovery and reconstruction.

So while we may offer different viewpoints and our experiences of damaged farmlands, when it comes down to the issue of revitalizing individuals and cooperation for regional and community recovery, what we strive for is the same whether in the city or in the mountains.

Serita: Thank you. As we have had many discussions today and also presenters from Asia who pointed out that disasters must be managed from pre-disaster times. Do you have any further comments regarding this point?

Also, another question is, during emergency times, how should one attend to detailed needs in consideration of the balance between speed and service. Please continue Oshima-san.

Oshima: In terms of attending to needs, there was the following example: [In the aftermath of the Niigata earthquake] many volunteers rushed to assist us from the Hanshin Awaji region. According to the relief manager from that time, when sending staff to evacuation centers, they sent in a mixed man and woman team that served evacuees on a rotation basis by gender groups. These staff would then see what was necessary.

In certain times while male staff members are making their rounds, female evacuees may not be able to discuss health issues, but when women staff made their rounds, the women were able to consult such needs and this offered them greater peace in mind. So such considerations using gender balanced staff was implemented in Niigata and has been reported from the relief manager at the time.

Serita: Thank you. Finally, we will open up the floor to any questions and comments from the floor if there are any. Any technical questions about the speed and technique of relief operations can be better explained by the UN

OCHA website, which has a Japanese website as well so I hope today you will forgive us with this information in regards to those types of questions.

There seems to be a question from the floor – please go ahead.

Question: Today's theme was gender and disaster management and I'm happy that I was able to hear some very good information and examples. I operate a women's group called "Women's Net[work] Kobe" and in the aftermath of the earthquake in Kobe, I had initiated a Women's Support Network and launched support operations. In 2005, I convened a symposium regarding women and disaster management and women's human rights in disaster areas. Following the symposium, I set up a webpage for disaster and women related information networks. It's a very simple homepage, but it outlines examples of what might transpire to women in times of disasters and offers specific recommendations on this homepage and hope that all of you with interest in this topic can view it.

Serita: Thank you very much for the very good information, I believe everybody can share and benefit from this. That seems to conclude audience comments and questions in relation to the panel, so we will end here.

Thank you very much!

Question and Answer Session:

Moderator: Thank you to all the audience members gathered here today. The first set of questions is about the environment and disaster management. There are two questions. First, if environmental considerations are made through legislation in parallel with development aid, developing countries may highly profit, but in reality, there is not enough financial resources or support framework. What must be done to attend to this problem? Mr. Velasquez, if you could please answer this question.

Velasquez: Thank you for the question. Fortunately, there is already such a mechanism in place. There is a voluntary offset market that is already in action. Many businesses and civilian sectors, as well as individuals belonging to public institutions such as myself can contribute individually to the offset. This is described in the webpage, but for example, if I were to travel by plane from Bangkok to Europe, I must pay 200 USD to offset for the CO2 emissions from this plane.

In my case, my office is in Bangkok and for each item such as travel by air, electricity, water and paper, we calculate this kind of offset. If desired, we can make payments to companies that specialize in such carbon-offset mechanisms and this already exists.

I don't know if Yomiuri Newspaper is utilizing such offset mechanisms, but many people are involved in many environmental mechanisms, not only carbon offsets so that we can reduce poverty and solve gender equality.

So it would be best if these are not simply about carbon offsets but can also be accompanied by community based projects to supplement such initiatives.

The World Bank project that I talked about is one of these that take place in Louisiana and others in Sri Lanka, Bangladesh, and Indonesia. Specific examples including the prevention of landslides by fighting soil erosion using natural barriers which acts as a carbon offset from cement production, which in some cases, as calculated by an offset company, can amount to 4 billion carbon equivalent in offsets.

Overseas Direct Assistance (ODA) is another example through which funding is given for such projects that work towards emissions reduction, including through JICA. At this point, environmental risks are more linked with damage reduction and response, but as [economist] Jeffrey Sachs has pointed out, the most effective way to attend to these issues is by utilizing a strategy that is most efficient with low start-up costs and greater cost-effectiveness, which can and must go hand-in-hand with CO2 reduction.

To benefit those people who are truly in need, there must be ways that we can automatically respond to climate risks without doing anything out of the ordinary and such mitigation projects could be put into action for disaster management issues as well.

There are many mechanisms already in place, for example 400 exist for ecosystem services and although the UN only has the Clean Development Mechanism (CDM), the rest, 399, are all in the private sector. The private sector is doing this completely independently from us and I think their participation holds the key to finding effective funding sources for attending to environmental issues and climate concerns.

Moderator: Thank you. That question was put forth by Ui Norarene of the Kyoto University Graduate School. Let us proceed to the next question, which is from Yuki Sadaike of Hokkaido University Graduate School. This question will be asked directly by her, please go ahead.

Sadaike: Thank you for allowing me to take part in such an important event. I have come from Hokkaido where the G8 Summit will take place this summer. I am in the process of conducting a research on disaster management education in the area surrounding Mount Usu, and because the pending G8 Summit is placing much emphasis on environmental issues, people in the Usu area are keen to promote their initiatives.

The "environment" we talk about here is not what was just discussed, such as the global environment and on a macro scale, but on a more local scale. Mount Usu is a volcano that has erupted in the past and the land has been shaped by it, and so the issue at hand here is how to live together and promote development or create disaster management infrastructure to live with the nature and risk of such an environment.

So the scale and concept of environment that was being discussed is a little different from what I want to talk about right now. And so I became curious whether there are any examples of education for environment and disaster management, relating to nature in communities, geography and planting, and other related topics in Kobe or from any of the participants.

Moderator: Thank you. Mr. Matsusaki, please answer the question.

Matsusaki: In Kobe elementary and junior high schools, we are taught in geography and social studies classes about the how the landscape has been made with the Rokko Mountains very close the sea and forming an alluvial landscape. This means that the mountain is steep and that the rivers are narrow and rapid flowing, and that sediments were carried by flash floods to form the alluvial landscape and we can learn from this how Kobe has been developing.

For example, in junior high school during a geography lesson in social studies class, we learnt how such flows of water have created a “tenjo-gawa” which are rivers that are located higher than normal residential areas, creating a high risk for floods and thereby necessitating more environmental protection.

Also, in high school, we have also learnt about geology, including studies about sediments and geological structures under the Rokko Mountains. Studies conducted through sediment boring has revealed that there has been much geological movement and how faults have been moving and that there have been major earthquakes every 400 years.

So, by learning such things in elementary school, junior high and high schools, just as one learns about the history of Mount Usu and its volcanic activities, one can learn about our own region’s weaknesses and discuss how to attend to these and it’s important for individuals to further study the issues a local universities and communities, as well as specialized institutions.

Moderator: Thank you. The next question will be the last for today and this is regarding the theme of Gender. The question is about how one can discern the detailed needs pertaining to gender segregated issues in the recovery phase immediately following disasters while balancing the quality of service and speed of response. This question is from Mr. Ishiwata of JICA. Ms. Fordham, please answer the question.

Fordham: In response, there must be a balance between the quality of response to the needs and the speed of response, but there are two ways to look at this. What we are involved in right now is response in case of disasters and also what preparation we can do before disasters.

Fundamentally, when speaking of disaster risk reduction, we might take the example from the Philippines, we have been assisting local communities to identify and assess their needs before disasters. Instead of just waiting for others to help when disasters strike, the people went ahead to identify and assess their own needs ahead of time.

These were people from a poor community and were not necessarily well educated, but by engaging them at a very local level and conducting trainings, they were able to very proactively participate in the effort, including the identification of possible scenarios for the number of injured and dead and damages and what needs would arise in what area.

In case pre-disaster training is not possible or that the needs are not yet clearly identifies, it is important for responders and aid workers to understand as soon as possible the characteristics of the community that they will be working in. They must identify from a wide variety of viewpoints about the structure of the community and its characteristics to figure out its needs.

To properly assess the needs, the teams involved must also have a good gender balance. Communities are made up of very diverse individuals and so one cannot necessarily assume that men and women will ask certain types of questions so all teams must analyze and assess the community and its needs and to plan and implement an effective plan of action, which should be drafted by an equally diverse team.

Closing Comments

Tomokatsu Ishigaki
Kobe Bureau Chief, Yomiuri Shimbun Osaka

“I am Ishigaki, Kobe Bureau Chief of the Yomiuri Shimbun. Today, we were able to hear a very wide and rich variety of presentations by specialists from around the world. Thank you very much. I would also like to offer my gratitude to all those who have come to participate in the Symposium today. We were able to learn through the presentations, keynote speeches and panel discussion about gender viewpoints in disaster management and its policies.



13 years ago, I experienced the earthquake while I was at my home in Nishinomiya city. I jumped out while it was still dark to report the disaster and I still cannot forget the sight of the highway on its side and the people who stood outside in the cold, numbed by the experience.

Yesterday morning, 13 years after the disaster, I went to the Higashi Yuenchi park in Kobe. At exactly 5:46 AM when the earthquake occurred, we gave our silent respect and prayers to the victims. The participants had gathered with a strong sense of memory and respect towards the lives of the many beloved that lost their lives. Similar events were held all over Kobe throughout the day. Keeping in mind such great sadness and anguish, I felt that it was very important for us to learn the lessons from the memories and records from the Hanshin Awaji Earthquake so that we do not repeat such terrible damages, and further, to reduce the effects of future disasters as much as possible.

In today's symposium, we have learnt from specialists from around the world that taking into account and respecting both women and men's roles and working together as a community, as well as implementing disaster management policies that include considerations for the natural environment are two integral aspects of disaster management. I think it was a good opportunity for us to think about how we can create a city that is safe against disasters by our activities in daily life.

I hope that today's symposium contributed in some way towards creating a society in which disaster management becomes ingrained as a culture.

Thank you very much.”

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