Report on
RISK REDUCTION &
RESILIENCE IN ASIA

UNPACKING THE
POST 2015
AGENDA

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Food and Agriculture Organization
of the United Nations

International Federation
of Red Cross and Red Crescent Societies

Humanitarian Aid
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This report on "Risk Reduction and Resilience in Asia: Unpacking the post 2015 Agenda" reflects the views, commitments and interests shown by individual practitioners' who attended the 8th Practitioner Workshop in Bangkok during 23-25 November 2015 (See Annex-1 for details). This is the continuation of practice of knowledge exchange among disaster risk reduction practitioners in a range of issues that are relevant to community resilience, local and regional networking and global frameworks.

During the three days of interesting sessions, the practitioners discussed and unpacked the post 2015 Agenda (primarily the Sendai Framework for DRR 2015-2030, the 2030 Agenda for Sustainable Development and the COP21 led the Paris Agreement under the United Nations Framework Convention on Climate Change. This was an essential part of the Practitioners Workshop as participants are bringing attention, knowledge and funds to what we are doing on the ground. We connected with our field experience and what makes actually our heart beat, we learnt from best practices and challenges, we shared experiences and perspectives, we identified areas and modalities of implementation of the post 2015 agenda on 4 themes related to saving lives.

We are creating a sense of responsibility inside the community, among our partners, within our institutions and in our governments on disaster risk and resilience building with a few high risks to miss reaching our final destination in 2030. These are

›   If we do not consider agriculture and livelihoods in DRR, we will be in 2030 negotiating on empty stomach and without lunch break, and joke aside we will have missed the opportunity to save more lives
›   if we do not open our minds and our projects to new technology – devices or systems wise, we will lose in cost-efficiency and accuracy, by not taking advantage of what is happening in the world around us
›   If we do not integrate the different focuses and actors of resilience at framework level and if we do not explore and understand the community perception and experience , we will miss the train of resilience
›   if we don't learn the lesson and don't tackle what previous frameworks were not addressing
›   if we don't nurture and empower the local knowledge, leadership and perception.

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ACRONYMS

AADMER // ASEAN Agreement on Disaster Management and Emergency Response

ADPC // Asian Disaster Preparedness Center

AEC // ASEAN Economic Community

APEC // Asia-Pacific Economic Cooperation

ASEAN // Association of Southeast Asian Nations

ASSI // Asian Safe School Initiative

DIPECHO // Disaster Preparedness ECHO Programme

ECHO // European Commission's Directorate General for Humanitarian Aid and Civil Protection

FAO // Food and Agriculture Organization (UN)

HFA // Hyogo Framework for Action

IDNDR // International Decade for Natural Disaster Reduction

IFRC // International Federation of the Red Cross and Red Crescent Societies

INDCs // Intended Nationally Determined Contributions

SAARC // The South Asian Association for Regional Cooperation

SDGs // Sustainable Development Goals

SFDRR // Sendai Framework for Disaster Risk Reduction

SPC // The Pacific Community

UNDP // United Nations Development Programme

UNESCAP // United Nations Economic and Social Commission for Asia and the Pacific

UNFCCC // United Nations Framework Convention on Climate Change

WCDRR // World Conference on Disaster Risk Reduction

INTRODUCTION

Since 1999, disaster risk management practitioners in Asia have gathered every two years with the objectives of sharing learning in Disaster Risk Reduction (DRR), stocktaking and consolidating good practice and networking. The Disaster Risk Management Practitioner's Meeting are organised with the financial support of the European Commission's Directorate General for Humanitarian Aid and Civil Protection (known as ECHO), and other contributions such as UNESCAP, ADPC, IFRC and UNDP.

Each meeting is organised around a central theme, which is seen as important to bring the DRR agenda forward and contribution to the national, regional and international DRR frameworks. Past events have covered the following priorities. The past meetings gather between 100-300 practitioners' from both the development and humanitarian sector, and various institutions (Regional entities, UN, NGOs, Red Cross/Crescent Movement, CSOs, Academia, Think-Tanks, etc.). Technical experts from relevant government agencies have also attended. For practical and logistic reasons, meetings were primarily held either in Thailand (2004, 2006, 2009, 2013), Vietnam (1999, 2001), or Cambodia (2008).

In order to sustain the momentum from Sendai, the 8th Practitioners' Workshop on Risk Reduction and Resilience in Asia was organised during 23-25 November 2015, gathered over 150 delegates from more than 25 countries, and offered an opportunity to practitioners for interaction and learning through panel discussions and parallel sessions on four distinct but interrelated themes about reducing the risk of natural hazards. The three-day workshop stimulated discussion on a central theme of 'Risk Reduction and Resilience in Asia,' and engaged disaster experts to reflect on the outcomes of the 3rd World Conference on Disaster Risk Reduction held in March 2015, Sendai, Japan. The Disaster Risk Reduction (DRR) practitioners from Asia and beyond had a chance to brainstorm subject-specific operational strategies of the Sendai Framework of Disaster Risk Reduction (SFDRR) with colleagues from diverse backgrounds.

The workshop was jointly organized by Asian Disaster Preparedness Center, European Commission's Directorate General for Humanitarian Aid and Civil Protection (ECHO), International Federation of the Red Cross and Red Crescent Societies (IFRC), Food and Agriculture Organization of the United Nations (FAO), and the United Nations Development Programme (UNDP).

The discussions revolved around four themes, including community resilience, preparedness for response, innovation and risk-informed development, and mainstreaming disaster risk reduction into development planning. Reflecting on these themes, the participants emphasized that no organization can implement the global resilience agenda without forming sustained partnerships.

EXECUTIVE SUMMARY

The 8th Practitioners' Workshop on Risk Reduction and Resilience in Asia took place from 23 – 25 November 2015 at Swissotel Nai Lert Park in Bangkok, Thailand. The event gathered more than 150 DRR practitioners from the region as well as global experts to discuss the future of DRR and resilience building in Asia.

The three-day workshop provided an opportunity to network, share experiences and learn from each other with a special focus on the Post-2015 agenda. The workshop has been fully captured on video, and a workshop video will be published in the near future. In addition, a detailed report will be produced focusing on the key lessons learned in each of the four workshop themes as well as the proposed future actions to support the implementation of the Post-2015 agenda.

Day 1 stood under the motto of "Getting Started". Starting with the key messages of Mr. Shane Wright, Mr. Edward Turvill, Mr. Stephan Baas, Ms. Anne Leclerc and Mr. Nicholas Rosellini, participants were introduced to the importance of the workshop discussions in the light of the Post-2015 agenda. The key messages stressed the importance of partnerships in order to realize a safe and resilient Asia and the opportunities for reaching this goal under the new Post-2015 agenda.

"With the adoption of the Sendai Framework, we have taken a big step forward to build upon the foundation created under the Hyogo Framework for Action and to continue the strengthening of resilience of governments, of communities and of private sector. The 8th Practitioners workshop provides an opportunity for us to reflect on the Sendai framework and how to translate the commitments made during the 3rd World Conference on DRR into practice and to implementing the framework on the ground."

Mr. Shane Wright, Asian Disaster Preparedness Centre

"As practitioner's advocating for more risk reduction and resilience, we need to be particularly careful to use the right arguments and the right language. This particularly applies to the new Sendai Framework. I strongly believe it's about doing things differently, better, even in the most difficult contexts. If we fail to do this, we will be missing opportunities to drive forward the agenda and secure the much needed funds."

Mr. Edward Turvill, European Commission Humanitarian Aid & Civil Protection (ECHO)

"This practitioner's workshop is a crucial moment and a unique opportunity to exchange experiences and knowledge, inspire each other and link our work to the global goals on DRR, sustainable development and climate change adaptation. We are very pleased that this workshop also offers a specific platform to share lessons learnt from the agriculture sector and identify links and synergies with other key sectors in building resilience."

**Mr. Stephan Baas**, Food and Agriculture Organization of the United Nations

"My personal expectation from this workshop is for you to harness that collaborative spirit and agree on the key priorities for disaster risk reduction for Asia Pacific that will help to achieve sustainable development goals. I would also like you to think about how we can achieve these. This is not a new field of work but there are always new approaches, partnerships and tools available that can help accelerate and better target our efforts towards a truly resilient Asia-Pacific"

Mr. Nicholas Rosellini, United Nations Development Program

"Today, we are all here as practitioners, not so much representing a particular organization, but coming with a wealth of experience and expertise, reducing risks in Asia. Let us all go beyond technical presentations and make our best effort to think beyond our traditional ways of working. Let us have the difficult discussions around our common challenges and try to identify the innovative approaches and the concrete opportunities that will make the implementation of Sendai even more successful than Hyogo"

Ms. Anne Leclerc, International Federation of the Red Cross

" How do the three key global instruments provide a common formula for international and regional cooperation on disaster risk reduction? "

Day 1 continued with the Spot Light session, looking at how the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals, the forthcoming climate change discussions at COP21, and the 2016 World Humanitarian Summit will guide our work on risk reduction and resilience building. The three main questions discussed by the panellists in this session were:

1. How do the three key global instruments (the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals and the Climate Change Framework) provide a common formula for international and regional cooperation on disaster risk reduction?

2. How best can we avoid confusion and seek guidance from these three overlapping global instruments while implementing DRR and CCA activities at national level?

3. How connected are DRR, CCA and Sustainable development communities?

Mr. Mihir Bhatt, Mr. Nelson Castano, Mr. Rajib Shaw, Ms. Wendy Fenton and Mr. Marcus Oxely were invited as panellists for this session, and shared their views and experiences with the other participants.

In the Inside Story session, the participants were then introduced to the four main themes of the workshop by Ms. Indira Kulenovic, Mr. Roderick Salve, Mr. Aslam Perwaiz, Mr. Sanny Jegillos, Ms. Nina Koeksalan and Mr. Thearat Touch.

Day 2 provided room for the participants to engage in more detailed discussions around the four main themes. The day was divided in group discussions (Review and The Stream) and plenary panel discussions to bring some of the key issues of each of the group discussions together (Witness and Head to Head).

The following sections provide a brief overview of the key issues discussed within the four different themes.

THEME 1

ENHANCING COMMUNITY RESILIENCE

Group discussions in theme 1 evolved around good practices related to building community resilience as well as future trends of community resilience. Some of the presentations included in theme 1 are:

- Enhancing Community Resilience in Aizawl, India, Mr. Hari Kumar
- Enhancing Urban Community Resilience: Learning from Best Practices and Challenges in Indonesia, Mr. Herry Firmansyah & Mr. Dino Argianto
- Using Science and Indigenous Knowledge in Risk Assessment for Evidence-Based Community Resilience, Dr. Eng. Marqueza Reyes

The following key questions have been brought forward to the plenary based on the group discussions:

1. What is community resilience? – Consensus between partners on resilient characteristics across all global frameworks which can be baseline (SFDRR, CCA, SDG etc.)
2. How to feed the community risk perceptions into common characteristics?

THEME 2

EXPANDING PREPAREDNESS FOR RESPONSE

Discussions in theme 2 were looking at country specific experiences in disaster preparedness as well as good practices. Furthermore, innovative ideas on how to expand preparedness for response were shared.

- Country Experiences:
  › Nepal-Gorkha earthquake, 2015, Mr. Suman Kumar Karna
  › Pakistan-Heat Wave, June 2015, Mr. Ahmed Kamal
  › Myanmar-Floods and Mudslides, 2015, Ms. Airlie Taylor

- Good Practices:
  › ASEAN- School Safety Initiative, Ms. B. Meidityawati & Mr. S. Budikurniawan
  › Contingency Planning, Mr. Provash Mondal
  › Early Warning, Mr. Shesh Kanta Kafle

- Expanding Preparedness for Response
  › UNESCAP Asia Pacific Disaster Report, Mr. Sanjay Kumar Srivastava
  › Preparedness for Recovery, Mr. Gregory Pearn
  › Cross Sector Preparedness in Vietnam, Ms. Vu Minh Hai

The following key questions have been brought forward to the plenary based on the group discussions:

1. How can we increase cross-border preparedness, especially with regard to early warning systems?
2. How can we ensure linkage between local level preparedness efforts & national level policies?
3. How can we ensure sufficient funding to allow institutions to prepare for disaster?

THEME 3

INNOVATION AND RISK-INFORMED DEVELOPMENT

Theme 3 looked at innovative approaches especially related to big data and new technologies. Discussions evolved mostly around the following topics:

- Big data analytics, Mr. Jonggun Lee
- Internet of Things and Virtual Reality, Mr. Riley Riley
- Impact of flight technology, Mr. Michael Perry
- Application of UAVs in development work, Mr. Andrew Schroeder

The following key questions have been brought forward to the plenary based on the group discussions:

1. Lot of databases but analysis needs to be fast and accurate. How can technology help?
2. Cost of new technologies going down but need to advocate with governments and educate practitioners and communities on the credibility of technology for social good and that it does not mean invasion of privacy.

THEME 4

MAINSTREAMING DRR WITHIN AND ACROSS SECTORS-AGRICULTURE AND RESILIENT LIVELIHOODS

Theme 4 looked specifically at the role of agriculture with regard to resilience building. The following presentations have been given during the theme 4 discussions:

- Good agriculture practices and DRR awareness raising for resilient livelihoods – Lessons from Lao PDR, Mr. Olayvanh Singvilay
- Innovative approaches for drought monitoring. early warning and livelihood support following the Sendai Framework of DRR:2015-2030, Mr. Sanjay Kumar Srivastava
- Agro-climate information bulletins for seasonal crop choices and farm management in the Philippines, Mr. Lorenzo Alvina and Rebecca Atega
- Integrating DRR into agriculture planning at national and decentralized level in Cambodia, Ms. Kimhian Seng
- Institutionalization of disaster risk management in the agricultural sector, Mr. Jo In Ho
- Cash preparedness and resilient livelihoods, Mr. Jonathan Brass
- Resilience of the Agri- Fisheries Sector for a more inclusive growth and development- Linking DRR and CCA, Mr. Christopher Morales

ACTION POINTS

Throughout the day, a number of action points have been discussed and formulated that are considered key in bringing the Post-2015 agenda forward from a DRR perspective.

- Next year is the momentum to revitalize inclusive (all stakeholders: private sector, donors, government, academic, media, civil society, etc.) national platform given that there is a need to translate global frameworks in national plans, that enhance community resilience.
- Risk information is available but there is need to enhance communities' capacity to use this information. Community practitioners have a role to broader risk knowledge sharing.
- Increase linkages between community & government activities for disaster preparedness through legislation to allocate (local) government funds for DRR/DM.
- Increase effectiveness of EWS through mapping of existing EWS and the development of SOPs for EW information dissemination.
- Increasing community preparedness through development of local level leadership & ownership.
- We need to prove that resilience is worth investing.
- If we do not continue to put agriculture and food security high on DRR/CCA agenda, we might risk that the SFDRR2 negotiations in 2030 will be held with empty stomach and no lunch break (farmer support - daily business).
- Local risk awareness and perception are important to improve disaster risk prevention, mitigation and preparedness.
- Consider livelihoods from day 1 of emergency response because DRR is about saving lives and livelihoods.

After two full days of discussion and experience sharing, the third day of the Practitioners' Workshop was focusing on combining the information, and come up with specific actions that can guide our future work in DRR in the region.

Day 3 started off with the Business Talk session. Mr. Marc Fancy, Mr. Thavirap Tantiwongse, Mr. Stephan Huppertz and Dr. Wei-Sen Li discussed the role of private sector in building resilience in detail under the guidance of Mr. Oliver Fall. A key part of the panel discussion dealt with the expectations that the different stakeholders have in order to build partnerships for resilience building.

The workshop finished with a take away session were the participants were asked to work in small groups to identify specific next steps that should be taken to bring the Post-2015 agenda forward.

Throughout the three-day workshop, the "Connecting the Dots" exercise was carried out in parallel with the other workshop sessions. The goal of the exercise was to develop mind maps for the four main themes of the Practitioners' Workshop. During all three days, participants were encouraged to add their thoughts and ideas to the mind maps which were structured according to problems/issues/challenges, solutions and opportunities.

TOWARDS RISK REDUCTION AND RESILIENCE IN ASIA

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MR. SHANE WRIGHT
EXECUTIVE DIRECTOR, ASIAN DISASTER PREPAREDNESS CENTRE, THAILAND

With the adoption of the Sendai Framework for Disaster Risk Reduction (SFDRR), 2015-2030, we have taken a big step forward to build upon the foundation created under the Hyogo Framework for Action (HFA, 2005-2015) and to continue the strengthening of resilience of governments, of communities and of private sector. The 8th Practitioners workshop provided an opportunity for us to reflect on the Sendai framework and how to translate the commitments made during the 3rd World Conference on DRR into practice and to implementing the framework on the ground.

As we look back, a crucial part of our work is the close partnerships we have established with national governments, the productive working relationships with DRR stakeholders on the ground, the trust of the local communities that we have gained over the years, and working closely with national governments, UN agencies development partners and other relevant DRR stakeholders to conduct national DRM status review in order to plan the future strategy for the implementation of the Sendai Framework. We are looking forward to ensure alignment and synergy with the Sendai framework and the future implementation approach.

We have witnessed the increasing impact of disasters on our economies and infrastructure. Mainstreaming DRR into development and risk-informed investment decisions are two critical components that will help us to safeguard the hard earned development gains and the only way we can achieve this is through working together in synergy - it is events like today that will greatly facilitate that process.

ADPC takes great pride and pleasure in being able to contribute to the Sendai Framework and we are also honored to have contributed to the advancement of DRR in Asia and Pacific in the past 3 decades.

As we look back on the impact of ADPC in the region, the establishment of the Regional Consultative Committee on Disaster Management with the support of the Australian Government and the current support of the Global initiative on DRM from the German Government, the work of ADPC in supporting the Asian Ministerial Conference on DRR, the Global Platform on DRR and other various regional initiatives, the over 14000 alumni around the world who has taken ADPC training courses, the close partnership we have established with national governments, the productive working relationships with DRR stakeholders on the ground, the trust of the local communities that we have gained over the years, and the former ADPC staff who are now thriving in their own rights in the DRR circle. We could say that ADPC has made a big impact.

Looking forward, ADPC is working closely with national governments, UN agencies development partners and other relevant DRR stakeholders to conduct national DRM status review in order to plan the future strategy for the implementation of the Sendai Framework. We are also reviewing our own strategy ADPC Strategy 2020 to ensure alignment and synergy with the Sendai framework and the implementation approach.

DRR needs to be everyone's business and we have witnessed the increasing impact of disasters on our economies and infrastructure. Mainstreaming DRR into development and risk-informed investment decisions are two critical components that will help us to safe guard the hard earn development gains and the only one we can achieve this is through working together in synergy it is event like today that will greatly facilitate that process.

MR. EDWARD TURVILL
REGIONAL DRR/RESILIENCE TECHNICAL EXPERT, ASIA PACIFIC, EUROPEAN COMMISSION HUMANITARIAN AID & CIVIL PROTECTION (ECHO), THAILAND

Ten years on, the regional DM/DRR panorama has changed substantially for the better. We have a successor to the HFA and promises of more investment in this important field. The European Commission's Humanitarian Aid & Civil Protection, better known as ECHO, through its DIPECHO programme is now entering its 20th year in South East Asia. ECHO have provided over USD200M to a range of initiatives, including the efforts to champion community-based approaches and raising awareness on DRR. Some of these have been particularly successful and others less so. In any case, every single project has contributed to extending our community of practitioners.

As practitioners' advocating for more risk reduction and resilience, we need to be particularly careful to use the right arguments and the right language. This particularly applies to the new Sendai Framework. I strongly believe it's about doing things differently, better, even in the most difficult contexts. If we fail to do this, we will be missing opportunities to drive forward the agenda and secure much needed funds.

ECHO have contributed to a range of initiatives, including the efforts to champion community-based approaches and raising awareness on DRR. Some of these have been particularly successful and others less. In any case, every single project has contributed to extending our community of practitioners. The DIPECHO programme has allowed a number of us, including myself, to grow in this field.

A few weeks back, whilst in Fiji, I found myself in a meeting hall with village elders talking about El Nino, the drought and cyclone season. The interactions weren't among the most exciting.

At one point, the pastor of the local church in a very ceremonious tone shared his views about disasters and preparedness. To my surprise, he was actually urging people to ignore the warnings and leave their fate in the hands of God. He went on to say that preparedness was basically useless. As a DRR practitioner, you could imagine my first reaction of surprise. Had it been a face-to-face discussion, I would probably have chosen to ignore the statement. In that particular setting, I felt the need to share some evidence that would demonstrate the opposite, whilst at the same time recognizing the importance of indigenous knowledge and beliefs that support resilience and safety. The case of Bangladesh came to mind, and how in the course of a few decades, the country has significantly reduced the death-toll to cyclones through better preparedness. This argument didn't seem to convince him and a sneer remark was made in the local language. I followed with an example closer to home: Vanuatu & Tropical Cyclone Pam (March 2015). I shared my personal experience of visiting the same community before and after and how people told me that had it not been for the preparedness people would have died. The meeting went on for a while longer.

After, the partner representative told me that I should have skipped the Bangladesh example. I found out that the pastor had discarded my first example on the basis of the religion of those affected; my argument would have been stronger had I only focused on the Vanuatu example, which was closer to home and common Christian faith.

The point here is not religious bigotry, but that I failed as a practitioner to think that some arguments are won with logic and knowledge. As practitioner's advocating for more risk reduction and resilience, we need to be particularly careful to use the right arguments and the right language. This particularly applies to the new Sendai Framework. I strongly believe it's about doing things differently, better and in even in the most difficult contexts. If we fail to do this, we will be missing opportunities to drive forward the agenda and secure the much needed funds

MR. STEPHAN BAAS
STRATEGIC ADVISOR FOR RESILIENCE
UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION (FAO), ROME, ITALY

This practitioner's workshop is a crucial moment and a unique opportunity to exchange experiences and knowledge, inspire each other and link our work to the global goals on DRR, sustainable development and climate change adaptation. We are very pleased that this workshop also offers a specific platform to share lessons learnt from the agriculture sector and identify links and synergies with other key sectors in building resilience. The estimated economic damage of 1.5 trillion USD triggered by natural hazards worldwide in the decade from 2003 to 2013 is tremendous. However, we actually know little about how much of this impact is on the agriculture sector and its indirect effects on food security.

FAO has recently completed an in-depth study on Damage and Loss in Agriculture. The study focused on developing countries, but included also middle-income countries regularly exposed to natural hazards. It included the analysis of all PDNAs conducted between 2003 and 13 as well as in-depths statistical analysis (FAOSTAT) using national agricultural statistics to quantify the losses on crops and livestock covering the year and one year after all reported disasters, which affected more than 25, 0000 people. As an overarching result we found that at least 22 percent of all damage and losses caused by natural hazards was absorbed by the agriculture subsectors alone – a share that is substantially higher than previously thought. The study shows that different types of hazards make a big difference when it comes to impacts on sectors.

The Asian region reported about 60 percent of the total production losses (crops and livestock) recorded in all developing regions. The bulk (77%) of reported losses in Asia were experienced after floods. It is worth noting that indirect losses (on livelihoods after the shocks) in agriculture were as high as double (30% of all losses across sectors were in agriculture) as compared to the direct damage on agriculture. This reinforces the pivotal role of agriculture for DRR/M specifically when we apply a resilience and livelihood perspective. The agriculture sector is highly exposed to small-scale extreme events, which often remain unreported. The actual losses on the sector are even higher.

Climate variability and climate change will further increase the frequency and intensity of extreme weather events. Climate change is a global trend that threatens food security, increases environmental degradation and enhances the risk of outbreaks/spreading of plant and animal diseases. It also enhances the risk of social conflicts and migration in the long run. Together with a growing population, this is putting more and more pressure on agricultural production, farmers' livelihoods and natural resources. About 87% of the world's small farms (farms of less than 2 hectares) are in Asia and the Pacific region; their contribution to the total value of agricultural output is significant. At the same time, they are among the most vulnerable groups to disaster risks and climate change.

The endorsement of the Sendai Framework for DRR was the next big step to move ahead. Sendai emphasized the need that sectors like agriculture should be active partners for the delivery of DRR and resilience building. We believe this is very important and very correct. The framework also gives a stronger emphasis on a multi hazard approach, including trans boundary threats and it specifically recognizes slow-onset disasters - risks that are particularly relevant in agriculture. With the backing of SFDRR, specific issues can and need to be taken up.

Bringing the Sendai Framework into action requires from the sectors a stronger engagement in DRR platforms, but also enhanced human capacities and financial resources from and for the sectors, better horizontal and vertical coordination and links between humanitarian and development actors and of course more investments - by governments, the private sector and international assistance. In support to countries and the stronger engagement of agriculture stakeholders in DRR, and closely linked to the four Priority Areas for Action of the Sendai Framework, FAO has in 2014 set disaster risk reduction and resilient livelihoods among its five overarching strategic priorities.

MS. ANNE LECLERC
HEAD OF REGIONAL OFFICE FOR SOUTH EAST ASIA,
INTERNATIONAL FEDERATION OF THE RED CROSS, THAILAND

2015 is a year of global commitments from our governments. The Sendai Framework for DRR and the Sustainable Development Goals (SDG) are now launched, while world leaders are heading to Paris to discuss as part of COP21. What is critical for us is to ensure we can represent the voices and needs of the most vulnerable, so that commitments, policies and programmes resulting from the discussions are fully inclusive of their perspective.

What is critical for us at IFRC is to ensure we can represent the voices and needs of the most vulnerable, so that commitments, policies and programmes resulting from the discussions are fully inclusive of their perspective. We do this through our National Societies and their participation in national, regional and global platforms, since it is together as a community of practice that we can bring the best positive change for our communities. In the coming three days, we also have this hope that we can identify key lessons and look ahead at emerging opportunities which will allow us to be closer to their needs and more efficient in the work we do to reduce risks and enhance resilience at all levels

The World Disaster Report that IFRC has launched in September 2015, which puts an emphasis on local actors as the key to humanitarian effectiveness. The report presents the case for a shift towards the "localization" of aid and a more equal partnership between international and local actors. We all know that local partners have a comparative advantage and are the first in responding to disasters. But their effectiveness goes beyond their proximity. Local groups, including National Red Cross and Red Crescent Societies, are effective because of the perspective they bring, their understanding of language and cultural norms, and because they are permanently present in communities and able to accompany them to address risks before, during and after disasters strike.

The IFRC has announced the launch of the One Billion Coalition for Resilience, a new partnership to lift, by 2025, one billion people out of situations of risks and vulnerability and to become more resilient in the face of shocks and hazards. This can only be achieved through enhanced partnerships, between international and local actors, among the practitioners at country level, through the effective use of local, national, regional and global platforms. As the landscape is changing, let us review together the relevance of our approaches and identify innovative ways to align our support to governments as they lead the implementation of the Sendai Framework along with their civil society.

It is our hope at IFRC that the 2030 agenda will see the strengthening of such partnerships and I believe this particular workshop is clear evidence of the willingness of all parties to come together, share lessons and look ahead as one. As the landscape is changing, let us review together the relevance of our approaches and identify innovative ways to align our support to governments as they lead the implementation of Sendai Framework along with their civil society.

Today, we are all here as practitioners, not so much representing a particular organization, but coming with a wealth of experience and expertise, reducing risks in Asia. Let us all go beyond technical presentations and make our best effort to think beyond our traditional ways of working. Let us have the difficult discussions around our common challenges and try to identify the innovative approaches and the concrete opportunities that will make the implementation of Sendai even more successful than Hyogo. I wish us all a very successful workshop and look forward to enhanced partnerships in the coming years.

MR. NICHOLAS ROSELLINI
DEPUTY ASSISTANT ADMINISTRATOR AND DEPUTY REGIONAL DIRECTOR, REGIONAL BUREAU FOR ASIA AND THE PACIFIC, UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP) IN THAILAND

We live in extraordinary times with huge numbers of people affected by conflicts and disasters. Undoubtedly, the Asia-Pacific region is the most disaster prone in the world. This year alone- the devastating earthquakes in Nepal, the floods in Myanmar and the Tropical Cyclone in Vanuatu were major disasters. Moreover, along with the scale, the frequency of disasters has been increasing in recent years - the Pacific region had nine major emergencies between November 2013 and June 2014. The 2014-15 cyclone season was also one of the most active and the onset of El Nino indicates increased risk exposure to extreme weather events, especially droughts and cyclones.

Unprecedented disasters and conflicts are undermining past, present and future development gains, especially for the poorest, and even in places accustomed to managing major disaster risks. UNDP is committed to building resilience of individuals, communities, and institutions to anticipate and prevent, prepare and recover from, and transform in the aftermath of shocks, stresses, and change. These arise from natural disasters, climate change and environmental degradation, violence and conflicts, financial and economic failures, and health crises such as HIV/AIDS.

The UN World Conference on Disaster Risk Reduction in Japan in March has updated the Hyogo Framework of 2005. While the Hyogo Framework guided major improvements in early warning systems and disaster response, there is a long way to go in many countries on effective risk management.

The Third International Conference on Financing for Development hosted by Ethiopia in July produced a new and realistic framework on financing for development – the Addis Ababa Action Agenda. It reminds us that most resourcing for development is mobilized by countries themselves – through growing economies and the collection of tax revenue, and through the attraction of loans and investment. Enhancing the capacities for mobilizing those resources is also a UNDP function – our emphasis on inclusive growth which broadens the base of and participation in economies, and our work on capable, effective, and transparent institutions, the rule of law, and conducive policy environments are highly relevant to getting adequate financing for development.

UNDP has played a significant role in supporting countries to prepare their climate action commitments for the conference, the Intended Nationally Determined Contributions (INDCs), as we have in many other processes related to the UN Framework Convention on Climate Change, over many years, and through practical support for adaptation and mitigation. Supporting climate action can be expected to be a growing part of our work for the foreseeable future.

"The overarching development framework though is expressed in the Sustainable Development Goals – these add up to a bold, ambitious, and transformational agenda. The agenda is universal, and it is about ends and means. Its human development goals are complemented by goals promoting inclusive growth, resiliency to disasters and climate change, creating decent jobs, investing in essential infrastructure, including energy and information communication technologies (ICTs), and promoting that fundamental precondition for sustainable development - peaceful and inclusive societies.

A colossal effort has gone into formulating the new global agreements. Now we must identify what we must do to implement them. We must identify what we need to prioritize in moving towards an Asia Pacific that is more resilient to disaster risks. Building resilience for the future is about disaster risk reduction; strengthening communities and their engagement in decisions which impact on their lives; responsive governance; and matching funding with these priorities. Risk reduction is only sustainable if it is led well by governments, national and sub-national; delivered through effective institutions which have the capacity to lead complex, long-running processes; and designed and implemented with full community engagement.

UNPACKING THE POST-2015 AGENDA

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BACKGROUND

n March 2015, representatives from 187 countries adopted the 'Sendai Framework for Disaster Risk Reduction 2015-2030' (SFDRR), during the Third UN World Conference on Disaster Risk Reduction (WCDRR) held in Sendai, Japan in March 2015. This represented the first major agreement of the post-2015 development agenda.

With an overarching intended outcome of "The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries", the framework aims to "Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience".

On 25 September 2015, the 193 countries of the UN General Assembly adopted the Sustainable Development Goals (SDGs), officially known as Transforming our world: the 2030 Agenda for Sustainable Development as an intergovernmental set of aspiration Goals with 169 targets. The Goals are contained in paragraph 54 United Nations Resolution A/RES/70/1 of 25 September 2015. The Resolution is a broader intergovernmental agreement that, while acting as the Post 2015 Development Agenda (successor to the Millennium Development Goals), builds on the Principles agreed upon under Resolution A/RES/66/288, popularly known as 'The Future We Want'. Following the adoption, UN agencies, under the umbrella of the United Nations Development Group, decided to support a campaign by several independent entities, among them corporate institutions and International Organizations.

The 2015 United Nations Climate Change Conference, COP 21 or CMP 11 was held in Paris, France, from 30 November to 12 December 2015. It was the 21st yearly session of the Conference of the Parties (COP) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the 11th session of the Meeting of the Parties to the 1997 Kyoto Protocol. The conference negotiated the Paris Agreement, a global agreement on the reduction of climate change. The expected key result was an agreement to set a goal of limiting global warming to less than 2 degrees Celsius (°C) compared to pre-industrial levels. The agreement calls for zero net anthropogenic greenhouse gas emissions to be reached during the second half of the 21st century.

HOW TO INTEGRATE DISASTER RISK REDUCTION TO ACHIEVE SDGS IN ASIA PACIFIC CONTEXT ?

Sustainable Development Goals (SDGs) will not be achieved unless we address Disaster Risk Reduction (DRR). In Asia-Pacific, 15 out of 17 SDGs are closely linked with DRR. Some of the key factors for implementation would be

- Integration of DRR within SDGs
- Disaster affects all sectors so every sector needs to make its activities resilient
- DRM Strategies in SFDRR implementation are estimated to have a four fold return in terms of mitigating the impact of disasters.
- More countries have DRR policies and legislation but many have yet to incorporate these into development planning

KEY DISCUSSION POINTS

1. How do the three key global instruments namely the Sendai Framework for Disaster Risk Reduction, Sustainable Development Goals and the Climate Change Framework (UNFCC and Paris Agreement) provide a common formula for international and regional cooperation on disaster risk reduction?
2. How best can we avoid confusion and seek guidance from these three overlapping global instruments while implementing DRR and CCA activities at national level?
3. How connected DRR, CCA and Sustainable development communities are?

HOW DO THE 3 MAJOR FRAMEWORKS (SFDRR, SDG'S, COP) TIE TOGETHER?

The common ground identified was;

1. Poverty is key to all three frameworks
2. Energy production and use tie them together
3. Change is inevitable, need to be sustainable together

HOW IS RESILIENCE INCORPORATED IN SDG AND SFDRR?

The SDGs has 17 goals that we will collectively work towards to ensure the sustainability of people, the planet and peace. The vision is a world free of poverty, hunger, and disease, where all life can thrive without fear. The DRR community had been pushing for resilience to not only be a cross-cutting aim within the SDGs, but also framed as a specific development challenge. Resilience is relatively well reflected in this new framework. Of course all the targets relating to improved health, education, and inequality are relevant to resilience; communities cannot be resilient to disasters if they have been worn down by disease, insecurity and poverty. Furthermore, whilst many states were uncertain at first about the high number of goals in the framework, the broad range of issues they cover go a long way to encompassing the diverse drivers of vulnerability. The examples of resilience reflected specifically under certain goals are as follows;

The most explicit is probably Target 1.5 under Goal 1: End poverty it all its forms everywhere – "By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters". One challenge is that this target is not quantifiable and how one would measure this clearly remains uncertain.

Goal 11, which aimed at making cities and human settlements inclusive, safe, resilient and sustainable was also a significant inclusion for the resilience agenda. The most relevant target under this goal is to "By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situation" (Target 11.5).

The document also states that in order to achieve this there is a need to "By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels" (11b). The challenge will now be ensuring that the indicator for this target successfully captures the very diverse range of issues expressed here: inclusivity, efficiency, resilience, and integration.

Another critical target is Goal 13: Take urgent action to combat climate change and its impacts. Targets under this goals specifically refer to the importance of adapting and building the resilience of communities to climate related disasters.

WHAT ARE THE UNINTENDED OR UNFAVORABLE CONSEQUENCES OF SENDAI FRAMEWORK?

The key points observed are:

- The framework further institutionalized fragmentation and silos

- It targets symptoms rather than root causes

- There is a lack of the acknowledgement of political economy issues

- Inequality of risk increasing/ risk distribution change

IS SCIENCE IS MOVING FROM AN ADVISORY ROLE TO ONE OF ENGAGEMENT?

In Post-Sendai, the UNISDR has facilitated the development of Asia Science Technology Academia Advisory Group (ASTAAG) with the following focus:

1. Strengthening science technology academic community

2. Focus both on higher education, research, disciplinary issues in academics

3. Support governments in science based decision making

4. Regional standards linking to targets, assessment of current status of ST innovations

5. Enhance networking among academic community and other stakeholders (civil society, private sector, media etc.)

The main aim is to ensure science and technology community can support implementation of the Sendai Framework for Disaster Risk Reduction.

CAN THE SDGS FILL THE SHORTCOMINGS OF SFDRR?

The SDGs are ambitious, much more so than the SFDRR. "End poverty everywhere by 2030". It is rather an ambitious task that governments need to be working towards this specific target of total poverty eradication rather than

the fuzziness of "a substantial reduction in global disaster mortality by 2030, aiming to lower the average per 100,000 global mortality rate in the decade 2020–2030 compared to the period 2005–2015" (Paragraph 18a, SFDRR. Not having quantitative indicators is a problem and the approaches used by governments to work towards these ambitious targets in the SDGs will at the same time help them meet and exceed the weaker aims of the SFDRR. There are three specific areas in which the SDGs could fill the shortcomings of the SFDRR.

First is filling the SFDRR's gap in emphasizing ecosystem management for resilience. The SDGs state: "We recognize that social and economic development depends on the sustainable management of our planet's natural resources. We are therefore determined to conserve and sustainably use oceans and seas, freshwater resources, as well as forests, mountains and dry lands and to protect biodiversity, ecosystems and wildlife." Target 2.4 also reflects this emphasis on ecosystem management calling that "By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality". Many felt that the SFDRR failed to incorporate fully the importance of ecosystem management in hazard mitigation, holding back the frameworks ability to reduce the creation of new risk. This extra focus in the SDGs could be a step towards filling this gap in the SFDRR.

The second area is around the means of implementation. To achieve Goal 1 of the SDGs, the eradication of poverty, it states that "significant mobilization of resources from a variety of sources is required, including through enhanced development cooperation, in order to provide adequate and predictable

means for developing countries". This is a stronger statement than in the SFDRR which saw the removal in last minute negotiations of "predictable" funding for developing countries to do DRR. With predictable funding going towards poverty eradication, a task that the SDGs acknowledge requires the building of communities' resilience to disasters, we can feel slightly more assured that reliable funding will be on its way to developing countries to reduce disaster risk.

The third area is the SDGs' strong statement on the need for disaggregated data – "Quality, accessible, timely and reliable disaggregated data will be needed to help with the measurement of progress and to ensure that no one is left behind" (paragraph 48). If data is disaggregated by age, gender, disability, and ethnic group, to name just a few, it will ensure that no target is viewed as being met unless met for all groups.

Many discussions are now being had on how to monitor these different frameworks, and what is arising is a recognition that there is a need for a joint monitoring framework across these three international policies (SDGs, SFDRR, and UNFCCC Climate Change Agreement). This could see alignment in indicators, sharing of data collected, but also, due to the strong statement of support in the SDGs, the universal disaggregation of data across them all.

DO THE SFDRR AND SDGS PAVE THE WAY FOR AN AMBITIOUS CLIMATE CHANGE AGREEMENT AT COP21?

The new agenda sets the stage for the Climate Change Agreement negotiations in Paris by giving some clear indication of what Paris needs to deliver in order for post-2015 development to work: an ambitious and universal agreement with legal force that closes the significant gap between Parties' current pledges to reduce greenhouse gases by 2020 and the reduction needed to have a chance of holding the increase in global average temperature below 2 °C or 1.5 °C. This is pretty significant for a framework that is about development: its inclusion highlights that there is strong recognition that climate change and development are interlinked and that these contemporary frameworks should align.

WHAT CAN PRACTITIONERS DO?

The Governments have the primary responsibility to achieve the goals and targets of the SDGs. The SDGs are quite a world away from the SFDRR in terms of the positivity felt amongst groups surrounding its ambition. It is now time to make use of this positive momentum. A small selection of priorities that practitioners can do from now:

1. Work with national governments to recognize that building resilience will help countries to achieve outcomes across all the post-2015 frameworks.

2. Advocate for a joint monitoring framework across these international policies that disaggregates data: only if indicators are aligned, data is shared, and disaggregation is utilized by all post-2015 frameworks will any of them achieve their desired outcomes for all people.

RISK REDUCTION AND RESILIENCE: THEME INTRODUCTION

/3

DEFINITION OF RESILIENCE

"The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions". 2009 UNISDR Terminology on Disaster Risk Reduction.

COMMUNITY RESILIENCE IN THE REGION

On enhancing resilience at local level, sixth Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) called on all governments of Asia and the Pacific to promote:
- The institutionalization of integrated community resilience approaches into local development planning
- Comprehensive school safety.
- Disaster resilient villages to serve as a strong basis for creating community based disaster risk reduction at the local level.
- Inclusion and volunteer/community-based networks;
- The role of women as leaders in local level resilience building, etc.

COMMUNITY RESILIENCE IN THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION

The Sendai Framework for Action (SFDRR) places a key focus on the role of all relevant stakeholders as active participants in disaster risk reduction efforts. This emphasizes the need for community members to take responsibility in improving their knowledge, capacity and basic skills in order to cope with local hazard risks.

STAKEHOLDERS IN BUILDING COMMUNITY RESILIENCE

Key stakeholders to consider for Community Resilience include: local people themselves (including vulnerable groups such as elderly, young and disabled persons etc.), school staff, business owners, government representatives and officials from commune, district, provincial offices, as well as NGO staff etc.

URBAN RESILIENCE

Urban environments are highly concentrated centers of population and pose particular challenges in view of exposure and vulnerability of people, assets and infrastructure to hazards which can be exacerbated in cases where rapid and unplanned urbanization occurs. Interventions at the community level are thus also an important consideration for practitioners engaged in urban locations

COMPREHENSIVE SCHOOL SAFETY FRAMEWORK

Schools are an important feature of many communities around which resilience building efforts can be centered.

COMPREHENSIVE SCHOOL SAFETY FRAMEWORK
- SAFE LEARNING FACILITIES
- SCHOOL DISASTER MANAGMENT
- RISK REDUCTION AND RESILIENCE EDUCATION

DEFINITION OF COMMUNITY

A community is a group of people who may or may not live within the same area, village or neighborhood, share a similar culture, habits and resources.

Communities are groups of people also exposed to the same threats and risks such as disease, political and economic issues and natural disasters.

CHARACTERISTICS OF A DISASTER RESILIENT COMMUNITY

In identifying the key 'Characteristics of a Disaster-Resilient Community', seminal disaster risk reduction theorist John Twigg highlighted five key thematic areas:

1. Governance
2. Risk Assessment
3. Knowledge and Education
4. Risk Management and Vulnerability
5. Disaster Preparedness and Response

SFDRR PRIORITIES AND COMMUNITY RESILIENCE

PRIORITY 1 - Understanding Disaster Risk: Highlights the need to enhancing disaster risk information and knowledge as well as collaboration at the community level.

PRIORITY 2 - Strengthening disaster risk governance to manage disaster risk: Emphasizes the importance of assigning clear roles to community representatives within disaster risk management institutions and processes.

INVESTING IN COMMUNITY RESILIENCE

Community resilience demands public and private-sector investments that transcend short or medium-term mitigation programs and projects. It means the local government places value on investing in making communities resilient to disasters through integrating disaster risk into local level development planning and policy process.

RISK GOVERNANCE

Disaster risk governance is a crucial factor in reducing disaster risk at the point of implementation. Even where building codes, land use plans and safety standards do exist, their compliance and enforcement - especially at local level - may be weak. This stresses the idea that risk reduction is both a technical and governance challenge.

COMMUNITY ARRANGEMENTS FOR EARLY WARNING

Early Warning Systems (EWS) refer to provisions and arrangements made to disseminate timely and meaningful warning information which enable individuals, communities and organizations threatened by hazard risks to respond in sufficient time to reduce the possibility of harm or loss.

A RESILIENT COMMUNITY IS...

...knowledgeable, healthy and can meet its basic needs.

...is socially cohesive   ...has economic opportunities

...has well maintained and accessible infrastructure and services

...can manage its natural assets   ...is connected

PRIORITY 3 - Investing in disaster risk reduction for resilience: stresses the need to strengthen the protection of livelihoods and productive assets at the local level.

PRIORITY 4 - Enhancing disaster preparedness for effective response; and to "Build Back Better" in recovery, rehabilitation and reconstruction: highlights participation of all sectors and relevant community stakeholders for effective preparedness for response.

LOCAL KNOWLEDGE AND EXPERTISE

Community participation is an important means of encouraging the utilization of local and traditional knowledge which can be used to inform context specific and cost effective approaches for the reduction of disaster risk at the local level. This can be used to complement scientific and technical approaches.

PUBLIC EDUCATION AND RISK AWARENESS

Raising the awareness of communities on hazard risks they are likely to encounter in their surrounding areas is a key facet of disaster preparedness. Harmonizing disaster risk knowledge and information among partners and identifying effective ways of disseminating is therefore a key consideration for DRR practitioners.

COMMUNITY ASSETS FOR DISASTER PREPAREDNESS

A key part of building the capacities of communities in view of disaster resilience is the provision of necessary resources to adequately prepare community members for disaster events. This may entail structural assets, non-structural assets or a mixture of both.

SIX REASONS TO TALK ABOUT COMMUNITY RESILIENCE

1
COMMUNITIES HAVE A CRITICAL ROLE IN REDUCING THE RISKS WHICH THEY ARE EXPOSED TO.

Enhancing the access of communities to knowledge or information about their surrounding risks promote a culture of safety.

4
A RESILIENT COMMUNITY IS ABLE TO RESPOND TO ADAPT TO CHANGE OR STRESSES IN A POSITIVE MANNER AND IS ABLE TO MAINTAIN ITS CORE FUNCTION AS A COMMUNITY DESPITE STRESSES.

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2
COMMUNITIES ARE THE FIRST RESPONDERS IN THE EVENT OF A DISASTER, BUT THE MAJORITY OF THEM ARE UNTRAINED AND UNEQUIPPED TO COPE IN THE EVENT OF AN EMERGENCY.

More lives are saved and casualties rescued by local people than outsiders in disasters around the world (World Disaster Report, 2015). Therefore, it is important to strengthen the capacities of communities to ensure that in the case of a disaster loss of lives and assets can be limited.

5
DISCUSSION AND EXPERIENCE SHARING CAN HELP IDENTIFY EFFECTIVE WAYS TO COMBINE STRUCTURAL AND NON-STRUCTURAL MEASURES FOR DISASTER RISK REDUCTION AT THE LOCAL LEVEL SUITABLE FOR DIFFERENT COMMUNITY CONTEXTS.

The 8th Practitioners' Workshop on Risk Reduction and Resilience in Asia will provide a unique opportunity for practitioners and organizations to jointly reflect on the outcomes of the Third World Conference on Disaster Risk Reduction which took place in Sendai, Japan in March 2015. The workshop will be organized by and for practitioners with relevant technical expertise and knowledge of risk reduction in Asia. The participants will identify ways to translate the Sendai commitments into practice and implement the framework on the ground - putting policy debates aside.

The outcomes of the workshop will be harnessed to support regional and global disaster risk reduction efforts in support of the motto "DRR is everyone's business".

The workshop program will revolve around the following four themes:

- Enhancing Community Resilience
- Expanding Preparedness for Response
- Innovation and Risk-Informed Development
- Mainstreaming DRR Within and Across Sectors - Focusing on Agriculture and Resilient Livelihoods

COMMUNITY RESILIENCE

3
THE ONLY WAY FORWARD TO REDUCING DISASTER MORTALITY RATE AND ECONOMIC LOSSES IS TO ENHANCE COMMUNITY RESILIENCE BY COMBINING BOTTOM-UP AND TOP-DOWN MULTI-SECTORAL APPROACHES

TOP-DOWN APPROACHES

BOTTOM-UP APPROACHES

6
COMMUNITY RESILIENCE BUILDING IS INVARIABLY LINKED TO DECISION-MAKING AND ACTION FOR DISASTER RISK REDUCTION AT A VARIETY OF OTHER SCALES SUCH AS SUB-NATIONAL, NATIONAL, REGIONAL AND INTERNATIONAL LEVELS.

ENHANCING COMMUNITY RESILIENCE

The impacts of disasters are most immediately and intensely felt at the local level - this places communities at the frontline of attempts to prepare for, respond to, and mitigate the effects of disasters. Meanwhile, many top-down approaches have failed to recognize the important role of communities, addressing insufficiently the specific local needs of vulnerable people, ignoring the potential of local resources and capacities and may even increase people's vulnerability to hazards. Invariably, local people possess a better understanding of their surrounding areas, the culture, fragility of the local environment and its natural resource base and can contribute to the process of development in a more sustainable and long lasting manner. Therefore, it is imperative that communities are engaged in processes designed to enhance their own local development and reduce levels of disaster risk.

There have been considerable efforts undertaken in the area of local level disaster risk reduction in Asia, under the guidance of several international and regional agreements and frameworks. The importance of local level DRR has first been stressed during the International Decade for Natural Disaster Reduction (IDNDR) conference in Yokohama, Japan in May 1994, where the international community reached a broad consensus to put more emphasis on Community Based Disaster Risk Reduction (CBDRR) programs. Since then, all regional and international frameworks and agreements related to DRR have stressed the important role of local level stakeholders in building more resilient communities and nations.

With more than 10 years of experience in providing community disaster risk reduction in the region, it is now time to discuss the best practices as well as innovative solutions that can be replicated and scaled up in the future to support the development of resilient communities in the region under the guidance of the Sendai Framework for Disaster Risk Reduction (SFDRR).

KEY CONSIDERATIONS

› The term 'resilience' is complex despite its frequent use by practitioners and policy-makers alike. In a post-2015 development era, the practitioners will be referring to a number of frameworks and instruments; however, the term 'resilience' is traditionally associated with DRR. Therefore, there would be need to see how best the 'resilience' can be defined and operationalized in the context of DRR, CCA and sustainable development.

› Given the expansion in the scope of resilience over a period of time, it would be important for development planning agencies as well as key sectors of a country to embrace the idea of making communities resilient to disasters. At the same time, national disaster management offices of countries in Asia also have to enhance their capacities for leading a more resilience-oriented agenda at different levels.

› Since the introduction of the Hyogo Framework for Action, DRR is mostly confined to a few national and sub-national agencies or authorities in addition to non-governmental organizations. For societies to be able to enhance resilience of communities, it is imperative for governments to encourage and ensure the participation of several key stakeholders in the process. They include, among others, the private sector organizations, media, students, elected representatives, scientific organizations, etc. which are currently either not part of the process or doing little as compared to the potential that they have.

› Organizations such as Red Cross have been taking the agenda forward through a range of activities. In this regard, the role of volunteers, community involvement in the planning and execution of DRR activities, including emergency preparedness and response, strengthening the livelihood support mechanisms, and implementing long-term and needs-based disaster and climate mitigation programs would be key to advancing community resilience in Asia.

DISASTER PREPAREDNESS

"The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions",

United Nations Office for Disaster Risk Reduction (UNISDR)

ELEMENTS OF DISASTER PREPAREDNESS

It includes contingency planning, stockpiling of equipment and supplies, emergency services and stand-by arrangements, communications, information management and coordination arrangements, personnel training, community drills and exercises, and public education supported by formal institutional, legal and budgetary capacities (UNISDR 2009)

DISASTER PREPAREDNESS IN THE SFDRR

"The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions",

United Nations Office for Disaster Risk Reduction (UNISDR)

COMMUNITY DRIVEN DISASTER PREPAREDNESS

Local communities are the first, and in some cases/areas, sole responders to disasters. Efforts need to be directed at enhancing community level preparedness capacities for better response.

CASE STUDY

Viet Nam faces flood, storms and other hazards every year. The government launched a 12-year program to strengthen community based DRM with support from international agencies. Following training and mainstreaming DRR in the school curriculum, local people are able to develop preparedness strategies as well as enhance the resilience of rural infrastructure. (GAR-2015)

IMPORTANCE OF LEGAL PREPAREDNESS

Indonesia didn't have any overarching disaster management law in place before the 2004 tsunami. The absence of legal provisions created confusion in channelizing the post-Tsunami international aid.

"This lack of legal preparedness contributed substantially to the chaos of the response operation and revealed a significant number of regulatory issues which hampered the response", WDR-2015.

DISASTER RESPONSE

"The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected",

United Nations Office for Disaster Risk Reduction (UNISDR)

DISASTER RESPONSE IN THE SFDRR

SFDRR stresses the importance of strengthening coordinated regional approaches and operational mechanisms to prepare for and ensure rapid and effective disaster response in situations that exceed national coping capacities.

KEY CHALLENGES OF DISASTER PREPAREDNESS & RESPONSE

- Focus is on preparing for less frequent but mega disasters rather than recurrent, small and medium-sized disasters.
- Local authorities lack required technical and financial resources for preparedness and response.

"We need to adopt an inclusive approach for disaster risk reduction taking gender dimension as a cross cutting issue. Preparedness plans are often homogeneous and thus ignore responses of women, children, people with disability and other marginal groups during the response, recovery and rehabilitation phases of disasters."

Prof. Mahbuba Nasreen, Institute of Disaster Management and Vulnerability Studies, University of Dhaka, Bangladesh

FINANCIAL PREPAREDNESS FOR RAPID DISASTER RESPONSE IN ASIA

- IFRC Disaster Relief Emergency Fund (DREF)
- Central Emergency Response Fund (CERF)
- OCHA Emergency Cash Grant Emergency Response Fund (ERF)
- UNDP TRAC 1.1.3 Category II resources
- ASEAN Disaster Management and Emergency Relief Fund (ADMER Fund)
- Asia Pacific Disaster Response Fund (APDRF)

EARLY WARNING SYSTEM

A set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

ELEMENTS OF EARLY WARNING SYSTEM

EARLY WARNING SYSTEM	
RISK KNOWLEDGE	MONITORING & WARNING
DISSEMINATION & COMMUNICATION	RESPONSE CAPABILITY

EARLY WARNING SYSTEMS IN THE SFDRR

SFDRR broadly stresses the need for:
- Maintaining and strengthening people-centered multi-hazard, multi-sectoral forecasting and early warning systems.
- Investing in disaster risk and emergency communications mechanisms, social technologies and hazard-monitoring telecommunications systems.
- Promoting the application of simple and low-cost early warning equipment and facilities.

INTEGRATING PREPAREDNESS IN SOCIAL PROTECTION SYSTEMS

World Bank's Global Facility for Disaster Reduction assisted the governments of Tonga and Fiji in mainstreaming the elements of disaster preparedness and recovery into the community protection system of the country. Such initiatives can promote a culture of safety in vulnerable countries.

BINDING REGULATORY AGREEMENTS BETWEEN STATES IN ASIA FOR PREPAREDNESS

Two agreements regulate disaster preparedness and response action in this region:
- ASEAN Agreement on Disaster Management and Emergency Response (AADMER)
- SAARC Natural Disaster Rapid Response Mechanism (NDRRM)

CCA AND DISASTER PREPAREDNESS FOR FOOD SECURITY

Over 25 million people are undernourished in Bangladesh due to a reduction in crop yield. Natural disasters and the climate changes are among some of the key contributory factors to this phenomenon. Preparing for disasters and climate change adaptation means better yield, a hope for food security, sustainable agriculture livelihood.

SIX REASONS TO TALK ABOUT EXPANDING PREPAREDNESS FOR RESPONSE

1
PREPAREDNESS REDUCES DISASTER MORTALITY.

Cyclone mortality in Bangladesh

Bangladesh successfully reduced tropical cyclone mortality in 20 years through cyclone shelter programs coupled with other preparedness measures and an improvement in provision of basic services.

4
WELL-PREPARED CRITICAL FACILITIES CAN WITHSTAND SERIOUS DISRUPTION.

Facilities in risk-prone locations can enhance their readiness for disasters through both structural and non-structural measures or a combination of approaches designed to minimize the negative impacts of disasters.

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2
INVESTING IN PREPAREDNESS HELPS TO SAVE MONEY.

$ SAVES $$$ $$$ $

In Preparedness   In Response

According to studies done by the United Nations Development Programme (UNDP) and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), each dollar invested in disaster preparedness, saves seven dollars in recovery.

5
SMALL AND MEDIUM SCALE DISASTERS REQUIRE DIVERSE PREPAREDNESS MECHANISMS THAT ARE AVAILABLE AT ALL LEVELS.

Governments tend to prepare for infrequent mega disasters, ignoring recurrent small and medium scale calamities. Local-level and hazard specific preparedness is the key to save lives and properties.

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PREPAREDNESS FOR RESPONSE

3
PREPAREDNESS IS A PREREQUISITE FOR SPEEDY RESPONSE, AND EFFECTIVE RECONSTRUCTION AND RECOVERY.

Better preparedness ensures speedy and effective response, which helps the process of recovery and reconstruction turn into an opportunity of building back better as described in the SFDRR.

6
PREPAREDNESS IS AN ONGOING CONCERN.

TSUNAMI HAZARD ZONE

IN CASE OF EARTHQUAKE, GO TO HIGH GROUND OR INLAND

Disaster preparedness requires continuous investment and attention.

THEME 2
DIVERSIFYING/ EXPANDING PREPAREDNESS FOR RESPONSE

There is the common understanding that in the future the number of small and medium-scale disasters is likely to increase. At the same time, it has been stressed (e.g. in the GAR2015), that both mortality rates as well as economic losses associated with these smaller-scale disasters are continuously increasing.

These recurrent localized disasters are a central concern for low-income households and small businesses as their livelihoods can be directly impacted by these events. Despite the increasing impact of small and medium-scale events, the majority of existing tools and structures for disaster response and management are solely oriented toward large-scale disasters.

This leads to the need to diversify/expand preparedness for response at all levels. One of the key priorities of the SFDRR is to "enhance disaster preparedness for effective response and to 'build back better' in recovery, rehabilitation and reconstruction". The SFDRR furthermore stresses the importance of strengthening disaster preparedness for response, taking action in anticipation of events, integrating disaster risk reduction in response preparedness and ensuring that capacities are in place for effective response and recovery at all levels.

Disaster preparedness should therefore not only consider the immediate response activities, but efforts should be taken to also prepare for disaster recovery, given the important role of recovery activities in contributing to resilience building and sustainable development.

KEY CONSIDERATIONS

› Most of the countries in Asia, especially the least developed, pump in more resources for emergency response management rather than investing in preparedness for a better response and early recovery. The recent earthquake in Nepal is a fresh example, which inflicted losses worth USD 7.6 billion.
› A weak element of governments' preparedness efforts is a single-hazard focus in most of the cases. If a country is prone to a one particular hazard, efforts will usually be made to protect communities from the impact of that hazard. In view of the changing risk patterns, it is extremely important for governments and other stakeholders including the private sector to take a multi-hazard preparedness approach.

RISK-INFORMED DEVELOPMENT

Risk-informed development refers to the integration of disaster risk reduction into development policies, strategies, plans and programs. This protects development gains from future disasters so that progress can be truly sustainable and resilient. In the process, vulnerabilities are reduced.

Five interrelated components contribute to risk informed development:

1. Risk Assessment and Communication;
2. Early Warning and Preparedness;
3. Inclusive Risk Governance;
4. Resilient Recovery; and
5. Urban and Local Level Risk Management.

EARLY WARNING AND PREPAREDNESS

Building the capacity of countries and communities to generate and disseminate timely and meaningful warning information is essential. In addition, capacity needs to be developed in order to prepare adequately for any disaster – from national coordination structures to local government and community planning.

RESILIENT RECOVERY

At any point more than a third of countries are recovering from disasters, and for many communities, recovery is an ever-present concern. The post disaster phase has traditionally been a critical moment for pushing forward risk reduction reforms and investments, and for building comprehensive resilience to disaster.

GLOBAL CENTER FOR DISASTER STATISTICS (GCDS)

The United Nations Development Programme (UNDP) and Tohoku University in Japan jointly established the Global Center for Disaster Statistics at the World Conference on Disaster Risk Reduction in Sendai in March 2015. The Center will help deliver quality, accessible and understandable disaster data for the implementation of SFDRR goals.

The center will focus on two main areas: one to support the integration of DRR information into development and two, to generate high quality data for monitoring and evaluation.

BIG DATA

Big data, or big data analytics, are the range of tools and methodologies that use advanced computing techniques to leverage largely passively generated data, for example those resulting from the use of mobile phones or social networks, and the active collection of observed data by satellites to gain insights for decision-making purposes.

The analysis of big data can help information sharing, decision-making and early warning in the context of disaster preparedness and risk reduction. The application of data mining techniques to existing data sets can help identify risk reduction measures.

CRISIS MAPPING

Crisis mapping leverages mobile and web-based applications, participatory maps and crowd sourced event data, aerial and satellite imagery, geospatial platforms, advanced visualization, live simulation, and computational and statistical models to power effective early warning for rapid response to complex humanitarian emergencies.

RISK ASSESSMENT AND COMMUNICATION

The systematic assessment of risks - vulnerability, hazard and exposure - must provide the evidence base for risk-informed development. The involvement of decision makers and communities in the risk-assessment process and the communication of that process's results are crucial to ensuring the application of risk assessment.

INCLUSIVE RISK GOVERNANCE

Weak governance arrangements and the substantial growth of populations and assets in areas exposed to climate and geological hazards are the predominant causes of increasing levels of risk. Societies with strong disaster and climate risk governance arrangements have a greater ability to manage risks and to make progress in reducing their disaster losses and impacts. Risk governance is at the heart of building resilience by ingraining risk reduction into a country's institutional, political and financial systems.

URBAN AND LOCAL LEVEL RISK MANAGEMENT

Urban centers have emerged as the world's engines for economic growth. Yet rapid and unplanned urbanization have increased cities' exposure and vulnerability to natural hazards. Similarly, community livelihoods and local level development processes have been undermined by the recurrent impacts of disasters, leading to and heightening socio-economic vulnerabilities. Ensuring a risk informed urban development paradigm and managing local and community level risks has become critical for achieving the objective of resilient socio-economic development.

SMS TECHNOLOGY

SMS technology is emerging as the tool of choice for disaster alert systems and disaster recovery. SMS is useful for disseminating up-to-date information to people in disaster-prone areas in advance as well as disaster survivors after a disaster occurs. Furthermore, SMS technology can establish a two-way channel between the survivors and rescue team for better recovery effectiveness.

SENSORS

Sensors can be installed in disaster-prone areas for real-time monitoring of the likelihood of disaster occurrence. For example, soil sensors can transmit detailed soil conditions (density, resistivity and stability) in preparation of landslides. The data is remotely captured and transmitted via wireless networks. In addition, captured data can be used for further data analysis.

DIGITAL DATA COLLECTION

Digital data collection replaces traditional or manual means of conducting assessments by using widely available digital devices such as smartphones. This results in substantial gains in the speed and quality of data collected.

INNOVATION, EVALUATION AND DIFFUSION CYCLE (WDR-2013)

STAGE 1	INNOVATION	STAGE 1 EVALUATION	STAGE 2	ADOPTION & SCALE UP	STAGE 2 EVALUATION
Need, problem and contextual assessment		Relevance, appropriateness, coverage, effectiveness, efficiency	Need, problem and contextual assessment		Relevance and appropriateness, coverage, impact
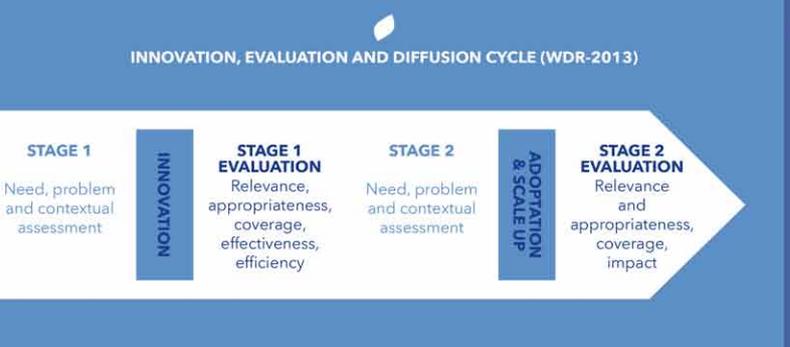
VIRTUAL REALITY

Virtual reality technology creates computer simulated 3D virtual environment with sound and touch. It can be used for a range of risk management related activities including assessments, real time diagnosis and information sharing.

USE OF UAV (DRONES)

The Unmanned Aerial Vehicle (UAV), popularly known as 'drone', is one the most promising technologies if used for public service. It can revolutionize the disaster risk management arena by providing services such as locating survivors under the rubble, performing structural analysis of damaged infrastructure, delivering needed supplies and equipment, and helping in extinguish fires – among many other potential applications.

INTERNET OF THINGS

The Internet of Things (IoT) is the network of physical objects or 'things' embedded with electronics, software, sensors, and network connectivity, which enables these objects to collect and exchange data.

SIX REASONS TO TALK ABOUT INNOVATION AND RISK-INFORMED DEVELOPMENT

1 THERE IS A CLOSE LINKAGE BETWEEN DISASTER AND DEVELOPMENT.

DEVELOPMET REALM

NEGATIVE REALM — POSITIVE REALM

DEVELOPMENT CAN INCREASE RISK | DEVELOPMENT CAN REDUCE RISK

DISASTER CAN SET BACK DEVELOPMENT | DISASTER CAN PROVIDE DEVELOPMENT OPPORTUNITY

DISASTER REALM

4 'IF IT ISN'T RISK-INFORMED, IT ISN'T SUSTAINABLE'.

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2 IT'S NOT POSSIBLE TO COMPLETELY ELIMINATE DISASTER RISK, BUT IT IS POSSIBLE TO MANAGE RISK.

Since the 2005 Hyogo Framework for Action, investments in preparedness and early warning have reduced mortality across a wide range of countries; institutional and policy frameworks have advanced and many countries have prioritized the reduction of disaster risk.

Despite these successes, disaster losses continue to accumulate and the exposure of people and assets continues to grow. Poorly planned development drives both disaster and climate risks, with the majority of public and private investments not yet underpinned by an adequate understanding of risks. What must be understood is that the costs for investing in risk reduction are far less than the economic costs of disasters. Risk-informed development must become the only way to do development if future risks are to be mitigated.

Current global goals acknowledge the importance of risk-informed development and/ or financing as prerequisites for sustainable development.

5 THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION RECOGNIZES THE IMPORTANCE OF TECHNOLOGY AND INNOVATIONS IN RESPONSE AND RISK REDUCTION.

The SFDRR recognizes the importance of using information and communication technology innovations to collect, analyze and disseminate disaster risk data. Such data and information holds the key to mainstreaming DRR into development policies, strategies and planes at national, sub-national, sectoral and local levels.

The 8th Practitioners' Workshop on Risk Reduction and Resilience in Asia will provide a unique opportunity for practitioners and organizations to jointly reflect on the outcomes of the Third World Conference on Disaster Risk Reduction which took place in Sendai, Japan in March 2015. The workshop will be organized by and for practitioners with relevant technical expertise and knowledge of risk reduction in Asia. The participants will identify ways to translate the Sendai commitments into practice and implement the framework on the ground - putting policy debates aside.

The outcomes of the workshop will be harnessed to support regional and global disaster risk reduction efforts in support of the motto "DRR is everyone's business".

The workshop program will revolve around the following four themes:

- Enhancing Community Resilience
- Expanding Preparedness for Response
- Innovation and Risk-Informed Development
- Mainstreaming DRR Within and Across Sectors - Focusing on Agriculture and Resilient Livelihoods

INNOVATION AND RISK INFORMED DEVELOPMENT

3 INNOVATION AND INFORMATION COMBINED CAN ENHANCE RISK INFORMED DEVELOPMENT.

Development challenges are increasingly complex, inter-connected and the pace of change is unprecedented. As these changes affect all countries across the globe, it is becoming more critical to be able to respond to complex challenges with agile and flexible solutions, and shift away from business as usual. Innovations help to look at a problem through a different lens, thereby finding new solutions and approaches.

Digital technology and innovations can offer new ways of gathering data and evidence to improve risk information, which is the basis for risk-informed development.

6 EASY TO USE TECHNOLOGIES ARE BRINGING ABOUT A REVOLUTION IN DISASTER RISK MANAGEMENT.

The use of technology for humanitarian and development work is a growing field. Several countries have developed tools or are using real time information technology in disaster response and reduction. There are a host of tools that are being used for data collection, hazard mapping, information sharing, early warning etc.

THEME 3
INNOVATION AND RISK-INFORMED DEVELOPMENT

Disaster risk reduction is fundamentally about 'doing development right'. When development is not risk-informed - and thus does not include disaster risk reduction aspects - development will never be sustainable. Disaster risk reduction should therefore not be regarded as an initiative in itself, but as an integral part of good governance and sustainable development.

During the review of the HFA it was acknowledged that "in particular, economic growth and an improvement in development conditions have contributed to a downward trend in mortality risk". Given the strong linkages between sustainable development and disaster risk reduction, it is therefore pivotal to discuss possible ways to ensure risk-informed development through mainstreaming of DRR, good risk governance and suitable financing approaches.

Risk-informed development requires an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. As stated in the Sendai Framework for Disaster Risk Reduction, risk information should be applied to develop and implementation of disaster risk reduction policies.

KEY CONSIDERATIONS

› Countries have done considerable work on assessing risks at different levels. Risk assessment is one of the key foundational activities for risk reduction and resilient development. In the absence of accurate data and information about the current trends and the future projections of the nature and impact of disasters, development cannot be made resilient to disaster and climate risks.

› At the same time climate change science is progressing well. Over the last few years, governments have started talking about and considering the changing climate as one of the key factors that can derail the development efforts of any country.

› Countries' capacity to take a multi-hazard approach to reducing disaster and climate risks needs to be enhanced. Unattended risks will have a serious impact on people and economies in the future.

› The encouraging point is that the risk reduction investments are beginning to emerge as multi-sectoral and widespread, which would have a positive impact in terms of reduction in risks and vulnerabilities.

› For development to be risk-informed, government and non-governmental stakeholders including the private sector have to come together and take this agenda forward as a shared responsibility. In this regard, good data on damages and losses as well as data on countries exposure to climate change will be important. Not only will this, cost-benefit analysis of efforts offer a good policy advocacy for risk-informed development.

› It may be a good idea to establish an international center on useable disaster risk statistics, data and other information. Similarly, use of new and innovative technologies can help a lot in stepping up efforts for resilient development. Global Pulse – Big Data for DRR and Sustainable Development, and internet of things, virtual reality and Drones are all new technologies that can be leveraged to support DRR and risk-informed development.

DISASTER IMPACTS ON AGRICULTURE SUB-SECTORS

| Crops		Fisheries		Irrigation	
42	34	5	2	4	12
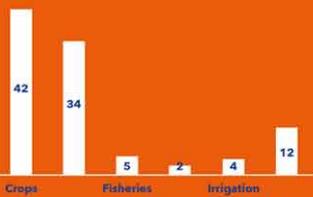
Figure: Damage and losses to agriculture subsectors
(percentage share of total within the sector)
Source: FAO based on data from post-disaster needs assessments, 2003-2013

LINKAGES TO GLOBAL FRAMEWORKS

Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030:

The SFDRR stresses the importance of sectoral engagement to reduce damages and losses, and to build resilient livelihoods through systematically including DRR into planning, implementation and policy making.

Involvement of sectoral agencies will enhance efficiency in DRR delivery through their existing technical delivery capacities at all levels and in particular at local level.

Sustainable Development Goals (SDGs)

In the 2030 Agenda for Sustainable Development, out of the 17 SDGs, a total of 10 goals make clear references to DRR and under the target 2.4 in the context of sustainable food production systems and resilient agricultural practices.

UNFCCC

Although the agricultural sectors do not yet feature prominently in the formal UNFCCC negotiations, it is increasingly clear that they have a critical role to play in the global response to climate change. Many countries explicitly mention action in agriculture, forestry and/or land use in their INDCs, which will form the basis of the new climate agreement to be finalized in Paris at COP21

LEGISLATION AND POLICIES

International standards for sustainable agriculture do exist; however, they are limited when it comes to disaster risk reduction.

Legislation and policies need to explicitly include DRR aspects to inform sector planning and investment.

As an example, Cambodia has a sector specific national Plan of Action for DRR in agriculture. Currently, DRR measures are mainstreamed in the Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries Sector (2014-2018).

CRITICAL DATA AND INFORMATION GAPS

National and international disaster loss databases typically report populations affected and damage to housing and other infrastructure, but seldom report damage or losses in the agriculture sector. As a result, there is no clear understanding of the extent to which natural hazards and disasters impact the agriculture sector and subsectors in developing countries.

The availability of such data would improve agricultural planning and the development of innovative risk transfer mechanisms.

DISASTER PREPAREDNESS

Disaster preparedness activities in the agricultural sector are mostly focusing on early warning and preparedness measures, reflecting the importance and relevance of these measures to the agricultural sector.

For example, the Global Information and Early Warning System on Food and Agriculture (GIEWS) provides information on the world food supply/demand situation and early warnings of impending food crises to inform early actions.

At country level, agro-climatic bulletins, based on weather forecasts, are used as an effective measure to inform farmers' seasonal decisions on practices that can reduce risks.

RESILIENT LIVELIHOODS

The capacity of people's livelihoods to absorb and recover from hazards and/or effects of climate change and other shocks and stresses without compromising (and potentially enhancing) long term prospects.

Resilient livelihood systems withstand threats or adapt to new pathways in times of crises.

RESILIENCE IN THE AGRICULTURAL SECTOR

Resilience of the agriculture sector refers to the ability to prevent disasters and crises as well as to anticipate, absorb, accommodate or recover and adapt from them in a timely, efficient and sustainable manner.

It includes protecting, restoring and improving livelihoods as well as food and agricultural systems. This implies to better link humanitarian assistance and development.

QUOTES

> **"DISASTER RISK REDUCTION IS A KEY COMPONENT IN THE FIGHT AGAINST HUNGER."**

> **"AGRICULTURE'S ROLE IS CRITICAL TO REDUCING DISASTER RISK AND ENHANCING RESILIENCE. RISK SENSITIVE FARMING, ANIMAL HUSBANDRY, FISHING AND FOREST MANAGEMENT PRACTICES OFFER SMART SOLUTIONS."**

POST DISASTER RECOVERY ASSESSMENT AND PLANNING

DRR measures are essential aspects of sustainable recovery and rehabilitation. This requires culturally sensitive strategic coordination between humanitarian and development interventions, and direct investments into and across risk sensitive sectors.

Building back better in agriculture, however, has not been systematically applied yet.

BUDGET ALLOCATION

In most countries disaster risk related budget allocations are focusing on emergency funds and response. Specific budget allocations for DRR hardly ever reach into the agricultural sector.

An exception are the Philippines: 5% of agencies' budgets at national level are allocated for DRRM and CCA and 5% of the local disaster risk reduction and management fund for DRRM responsive Comprehensive Development and Land Use Plans (CDP and CLUP) (Source: National Disaster Risk Reduction and Management Plan 2011-2028.)

ADISASTER – DEVELOPMENT LINKAGES

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Resilient livelihood systems withstand threats or adapt to new pathways in times of crises.

MAINSTREAMING DRR INTO DEVELOPMENT

The key purpose of mainstreaming DRR is to make certain that all national and sectoral development programs and projects are:

1. designed with evident consideration for potential disaster risk and to resist hazard impacts
2. not inadvertently increasing vulnerability to disasters in all sectors
3. designed to contribute to developmental aims and to reduce future disaster risk

Based on Trobe & Davis (2005)

EXAMPLES OF CENTER OF EXCELLENCE

- DRR platforms and programmes
- National governments, committees and initiatives
- NGO consortiums and humanitarian organizations
- Universities and research centres
- Knowledge networks and think tanks
- Sectoral and Global Alliances
- International financial and technical Institutions
- Private sector

INSTITUTIONAL MECHANISMS AND SET-UPS

Disaster risk reduction involves a huge number of stakeholders. Coordination and cooperation within and across related sectors including their clear defined responsibilities and roles are needed to reach sustainable disaster risk reduction.

DRR platforms - despite their value added for DRR awareness raising and capacity development - did not create incentives for sectors to take up DRR proactively. This underlines the need for the integration of DRR into government multi-sectoral development planning and budgeting, as well as the direct involvement of sectors.

EMERGING TRENDS

1. Increased recognition of the complementarities and synergies between DRR and CCA.

2. Development of agriculture-specific plans for DRR/M that integrate strategic measures in the sector along the HFA/SFDRR priorities for action.

3. Growing recognition of the importance of national drought management policies for preparedness and early response.

4. Growing evidence that investing in disaster risk reduction is more cost-effective in reducing the impact of disasters on agriculture than other kinds of investments and post-disaster interventions

CHALLENGES

1. Creating capacities through sectoral line agencies, along with clear institutional and financial commitments
2. Moving from concept to action and outreach to the most vulnerable
3. Timely access to sector specific information and early warnings.
4. Up-scaling of known and new risk reduction technologies and practices
5. Solid operational and action-oriented partnerships across sectors to address the challenge of multiple risks at all levels, and to optimize available resources.

SIX REASONS TO TALK ABOUT DRR IN THE AGRICULTURE SECTOR

1

THE PRODUCTION OF SUSTAINABLE, STABLE AND SUFFICIENT NUTRITIOUS FOOD IS A MAJOR CHALLENGE FOR THE COMING YEARS.

How will the estimated increase of 60-70 percent of food production be achieved to meet the global demand of a growing population by 2050?

4

AT LEAST USD 80 BILLION IN CROP AND LIVESTOCK PRODUCTION HAS BEEN LOST IN DEVELOPING COUNTRIES OVER THE PAST DECADE AFTER 140 MEDIUM AND LARGE-SCALE DISASTERS THAT AFFECTED MORE THAN 250000 PEOPLE EACH. ASIAN COUNTRIES SUFFERED 60 PERCENT OF THESE LOSSES, MOSTLY AS RESULT OF FLOODS. EXTENSIVE DISASTERS HAVE AN ESPECIALLY HIGH IMPACT ON AGRICULTURE UNDERMINING THE LIVELIHOODS OF THE AFFECTED POPULATION AND THEREBY SETTING BACK DEVELOPMENT GOALS. THE AGRICULTURE SECTOR ABSORBS AROUND 22 PERCENT OF THE TOTAL ECONOMIC IMPACT CAUSED BY NATURAL HAZARDS AND DISASTERS IN DEVELOPING COUNTRIES. THE INDIRECT LOSSES THEREBY EXCEED THE DIRECT DAMAGE.

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AGRICULTURE AND RESILIENT LIVELIHOODS

2

AGRICULTURE CONSTITUTES A CRUCIAL SECTOR IN THE ECONOMIES OF MANY COUNTRIES. WORLDWIDE, THE LIVELIHOODS OF 2.5 BILLION FAMILY FARMERS DEPEND ON AGRICULTURE. - SOURCE: FAO INFOGRAPHICS, 2014

FAMILY FARMS PRODUCE ABOUT **80%** OF THE WORLD'S FOOD

Source: FAO Infographics, 2014

5

INVESTING IN RESILIENCE REQUIRES SECTOR SPECIFIC ACTION, PARTICULAR AT LOCAL LEVEL. AGRICULTURE, INCLUDING FISHERIES, AQUACULTURE, LIVESTOCK AND FORESTRY, FOR INSTANCE, IS KEY IN PROVIDING SERVICES TO THE LOCAL LEVEL THAT ENHANCE DISASTER RESILIENCE, AND LINK FOOD AND NUTRITION SECURITY WITH SUSTAINABLE DEVELOPMENT, SUSTAINABLE LAND WATER AND FOREST MANAGEMENT TECHNIQUES, AND TO HEALTH SYSTEMS.

Integrated pest management training at a farmers' field school in Nakhong Village, LAO PDR (FAO, 2015)

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3

CLIMATE CHANGE WILL INCREASE THE FREQUENCY AND INTENSITY OF DISASTERS TRIGGERED BY HYDRO-METEOROLOGICAL HAZARDS AND IS EXPECTED TO HAVE A PROFOUND IMPACT ON AGRICULTURE. WORLDWIDE, THE AVERAGE ANNUAL NUMBER OF CLIMATE-RELATED DISASTERS DOUBLED IN THE DECADE 2003-2013 WITH RESPECT TO THE 1980S.

According to the International Food Policy Research Institute, climate change will cause an increase of between 8.5 and 10.3 percent in the number of malnourished children in all developing countries, relative to scenarios without climate change.

6

MAINSTREAMING DRR INTO SECTORAL AND OTHER MEDIUM AND LONG-TERM DEVELOPMENT PLANS HAS BEEN EMPHASIZED IN SFDRR AS ONE OF THE NEW PATHWAYS FOR REDUCING RISKS.

Example from Lao PDR - Plan of Action for Disaster Risk Reduction and Management in Agriculture

MAINSTREAMING DRR WITHIN AND ACROSS SECTORS – FOCUSING ON AGRICULTURE AND RESILIENT LIVELIHOODS

As stated in the SFDRR, one way of investing in disaster risk reduction for resilience is to mainstream DRR within and across relevant sectors. Mainstreaming of DRR has become more prominent in recent years, leading to various initiatives focusing especially on the mainstreaming of DRR into cross-sectoral development planning and poverty alleviation strategies. However, there is only limited practical experience available on how to mainstream proactive planning for risk reduction and replication of disaster risk reduction measures in agriculture and some other sectors, which is fundamental to support the development of resilient livelihoods.

In many countries, agriculture is among the most important economic sectors. As an example, in Cambodia, Lao PDR, and Nepal, agriculture accounts for over 30% of GDP. Disasters have a disproportionate effect on the agriculture sector. Disasters often destroy crops and livestock, physical capital and livelihood assets, market infrastructure and productive inputs. To cope, rural families will often use their savings or increase borrowing to meet basic needs, depleting their resource base even further, increasing levels of indebtedness and eroding livelihoods over time. In some cases, disasters destroy critical infrastructure and disrupt market access and trade. However, the agricultural sector is not merely a victim of disasters; farmers, fishermen and forest dependent communities are also active stakeholders, as are agricultural, forestry and fisheries planners. Through their ways of working/living they can promote resilience, but these actions may also enhance risks and vulnerabilities: e.g. unsustainable agricultural, forestry or fishing practices may destabilize agro-ecosystems and enhance the risk of flooding, landslides, storms, sea surges etc. This dual perspective underlines the importance of building enhanced DRR systems within agriculture, forestry and fisheries to promote resilient livelihoods, maintain sustainable agro-ecosystems and reduce new risk.

KEY CONSIDERATIONS

› There is a strong correlation in the number of countries that face high risk to natural hazards and undernourishment- this reflects the crucial nexus between agriculture and DRR for food and nutrition security. A study by the United Nations Food and Agriculture Organization found that in developing countries, the sector absorbs about 22 percent of the total damage and losses caused by natural hazards. This is much higher than previously estimated.

› The share of indirect losses of 30% are double as much as the direct damages Subsectors are differently affected by disasters: Crops mainly (60%) affected by floods, in livestock 86% of the damage and loss have been caused by droughts, in the forestry sector storms have caused almost 90% of all damage and losses, in Fisheries, tsunamis had the biggest impact with 70%.

› Various practices and technologies exist worldwide which increase yields and resilience to shocks while protecting the environment. Green Super rice (multi-stress tolerant inbred rice lines) is one of such examples from the Philippines, which notes the following (preliminary FAO study results):
  • Increase of 20% in net benefits under normal conditions - "no regret option".
  • Increasing the resilience to extreme events is the performance under dry conditions with a rise of 80% in yields compared to the normal variety.
  • Reduced need for chemical fertilizers.

› Mainstreaming DRR in sectoral planning and institutional capacities are crucial to move beyond pilot-testing and projects and from theory and concept to practice and action (scaling up and outreach). An FAO-GAR input paper (a study of 30 countries) suggests that:
  • Almost 50% countries' Agriculture sector policy and plans make reference to DRR
  • There are big variations in contents and visibility
  • HFA priorities linked to governance and awareness strategies have not been well captured in HFA progress reports
  • Challenges remain especially when it comes to the implementation - in terms of outreach and upscaling.

› The study also identified that some of the key drivers for DRR mainstreaming in agriculture identified were:
  • National policies make mainstreaming DRR into development sectors a clear priority
  • The global agenda on climate change adaptation- raising more attention to the climate related risk in sectors
  • The government's understanding of the nexus between disaster risk and sustainable agricultural development- reflected in overarching national plans.

› The SFDRR's four priorities applied in sectors like agriculture are providing a model for more integrated approach (example DIPECHO-FAO project in South-East Asia).

SPECIAL FOCUS: SAFE SCHOOL AND DRR IN EDUCATION

Asia has experienced the greatest number of natural disasters of any region in the world over the past decade, with 80% of resulting global deaths occurring in the region, particularly as a result of the 2004 Indian Ocean tsunami, Cyclone Nargis in 2009 and Typhoon Bopha in 2012. The Southeast Asia region is particularly prone to a wide range of hazards. Among ASEAN countries, almost 150 million people have been affected by natural disasters during this period. Children are particularly affected by the impact of these disasters on their education. For example, in the last 4 years, disasters caused full or partial damage to more than 11,000 school buildings in the ASEAN region. These risks are a direct threat to the fulfilment of every child's right to education.

At the same time, significant efforts have been made within individual ASEAN countries and regionally to better prepare for these natural disasters. One of the most important initiatives is the ASEAN Agreement on Disaster Management and Emergency Response (AADMER), which was ratified by all 10 Member States in 2009 and provides both a regional framework for cooperation, coordination, technical assistance and resource mobilization in all aspects of disaster management, and affirms ASEAN's commitment to the Hyogo Framework of Action. AADMER emphasises the active participation of all stakeholders. The AADMER Work Programme (AWP) 2010 - 2015 operationalises AADMER. The ASSI Phase 2 Project outlined in this document describes a regional initiative designed to support a key education component of this Work Programme under Strategic Component 2, Prevention and Mitigation. The ASEAN Safe School Initiative has the following objectives.

INTEGRATING DISASTER RISK REDUCTION (DRR) IN THE SCHOOL CURRICULUM

- Facilitate the institutionalization of DRR in the education sector of ASEAN Member States;

- Promote sharing of experiences, sound practices, and innovative approaches on DRR integration in the

- curriculum among and between the education sector, national disaster management agencies, and the

- broader education sector working group/ stakeholders; and

- Deepen the collaboration among key stakeholders in each Member State to initiate or upscale DRR integration in the curriculum and teacher training system of school teachers.

DISASTER SAFETY OF EDUCATIONAL FACILITIES

- Promote the integration of safe school construction in the education sector agenda of Member States;

- Share disaster-resilient school construction practices and safe school models that use locally sourced

- materials and scientific knowledge;

- Enable Member States to undertake vulnerability assessments of existing schools;

- Provide guidance to Member States on ensuring safe school construction;

- Assist Member States in developing a national action plan for schools.

RISK REDUCTION AND RESILIENCE: PRACTICES AND OPPORTUNITIES

/4

PRACTICES AND OPPORTUNITIES

Following the discussion on the post-2015 development instruments (Sendai Framework for Disaster Risk Reduction; Sustainable Development Goals; Climate Change Agreement; World Humanitarian Summit), the practitioners kick-started the discussion around how the workshop themes would facilitate a much deeper understanding about risk and resilience. Practitioners also brought to the table a wealth of experience in terms of most successful resilience practices, challenges and learning as well as options that may be considered for future implementation by government and non-governmental stakeholders in Asia.

A total of eight technical breakout sessions took place during the workshop to discuss best practices from across the region, and to find pathways to operationalizing Post-2015 agenda at national and regional level. Four sessions on pre-identified themes of the workshop ran in parallel in the morning, and four further sessions were held in the afternoon. Each of the four themes had a particular focus, which was highlighted through presentations, working group sessions, panel discussions and plenary sessions. Speakers and discussants referred to the following points during the proceedings

that took place after the context setting of the workshop.

- Focus on interesting and practical initiatives and approaches being undertaken at the regional, national and sub-national levels.

- Describe how these initiatives and approaches are contributing to, or have contributed to, risk reduction and resilience building. Also, discuss more on the positive changes or impacts that a particular approach or intervention has been able to create.

- Describe how best a specific successful approach or practice can contribute to operationalizing the SFDRR in Asia.

- Discuss and share challenges and ways to overcome them.

An average, 25 to 30 disaster practitioners attended each of the sessions and came up with a number of actions points at the end of the afternoon session, which were presented to the house in a panel discussion. Summary of the all 8 thematic sessions is given below under each theme:

THEME 1
ENHANCING COMMUNITY RESILIENCE

The Theme **Enhancing Community Resilience** specifically discussed pathways to resilience building at community level. Practitioners form the field shared their experiences, as well as best practices related to enhancing community resilience through education, awareness, and organization at school and household level. The group work revolved around along the 4 pillars of SFDRR. Each group came up with key action points at the end of the afternoon session, which were presented to a panel of experts for further deliberation.

Guiding questions throughout the discussion included:

• What is community resilience? – Consensus between partners on resilient characteristics across all global frameworks, which can be baseline (SFDRR, CCA, SDG etc.)

• How to feed the community risk perceptions into common characteristics of resilience?

• How best can resilience be applied and operationalized under the post-2015 development framework?

The Community Resilience theme was divided into two parts:

• Part one introduced the session, provided some "snapshots" and examples of best practices and challenges identified in past years and allowed the audience to comment.

• Part two allowed all participants to identify best practices and challenges around 4 sub-themes (3 first aligning with SFDRR priorities of action and number 4 as cross-cutting):

› Understanding risk: supporting communities in identifying their surrounding risks, connecting communities with early warning systems, public awareness and education, training communities to take appropriate actions and adopt safe behaviors.

› Risk governance: linking community-based interventions and local development processes to ensure sustainability and scalability (including

discussions around community-based committees or teams that are involved in action planning and local advocacy).

› Investing in risk reduction: example of school Safety, looking at interventions in schools and in surrounding communities

› Inclusive approach: ensuring whole communities are part of the resilience approach

A panel discussion offered four snapshots from best practices and challenges, which included: Livelihood and Resilience; Urban Resilience; Community Resilience in Rural Context; and School Safety.

While highlighting the best practices under the first snapshot from Lao PDR, the speaker informed participants that the local action plan is connected to the governments Social Economic Development Plan, which is the guiding strategic and policy document. Similarly, the government has developed a close collaboration with NGOs on early warning and awareness raising. The speaker stressed for the need of a thorough analysis of livelihood in the context of resilience. The traditional knowledge of farmers need to be complimented with modern technology and methods as they face many challenges including a significant rise in water salinity. Also, adaptation practices need to be promoted in a fast-changing climate.

The speaker pointed out that the scarcity of agricultural land is hampering the process of undertaking appropriate livelihood adaptation options for the vulnerable groups. Hazard-prone communities lack knowledge of scientific analysis and links between climate science and livelihood opportunities. On the other hand, replication of livelihood projects by NGOs involves challenges, as the government does not have budget for this purpose.

Practitioners suggested that in view of limited budget, it would be useful to look into the possibility of establishing linkages between farmers and national banks. For replication of good practices, the suggestion was that the focus should be placed on enhancing the capacity of government institutions by working directly with them. This can be done at the planning and implementation stages of a project aimed at enhancing livelihood and adapting climate-sensitive agriculture practices. For this purpose, 3-5 years is a good time frame. It was also suggested to engage with the private sector as Oxfam has done in Bangladesh.

On Urban Resilience, the speaker from Indonesia shared best practices. Assessment of vulnerabilities and capacities through a participatory process is essential in addition to targeting tangible urban issues. This may be achieved through small-scale initiatives such as community solid waste management, urban farming, green open spaces, and green and clean campaigns.

It is equally helpful to build coalition and consortium and make good use of mainstream and alternative media, mobile apps, advocacy based research in partnership with universities. To be able to connect dots more effectively, identifying 'champions' among different stakeholders can also help raise issues related to urban resilience.

Urban resilience, however, is a complex issue, which requires dedicated and sustained efforts by all stakeholders. Communities are generally less interested in becoming part of any drive aimed at urban resilience. This is largely because of their long working hours related to livelihoods for family members. Practitioners emphasized that despite the massive challenges for urban resilience, good practices must be replicated for wider advocacy and impact.

Practitioners also discussed community resilience in the rural context, while making a reference to Nepal. One of the key suggestions was to work closely with all stakeholders even before the start of any project activity. Engaging with them at the planning and budgeting stage of a project not only promotes transparency but also acts as a confidence-building measure.

One of the challenges is that there are many partners and NGO working on the subject with less synergy. There are different concepts and definitions that practitioners refer to, which make it confusing as to how to choose a right concept. Similarly, there exist a variety of models, tools and frameworks for the same purpose. Another challenge is a clear gap (communication and interaction) between government and communities, which makes it difficult for the rural resilience to take root.

A snapshot from Cambodia highlighted challenges that the school safety agenda is currently facing. The speaker talked about the issue of scarce resources at the local level. It was also brought to the fore that DRR is not yet formally integrated into the education curriculum, which is a pre-requisite for safety of schools.

It was suggested to connect the school safety plans with community DRR plans so that both could complement each other. It may also help enhance awareness among parents as well as students.

The community resilience theme also discussed a few examples from around the region. For example, a national CBDRM program in Vietnam was launched in 2009, targeting 6,000 communes. Communities were part of the budget management. Government's share of budget was 50% whereas 45% came from international organizations and communities contributed the remaining 5%. This case study offers a good example of how a bottom-up planning and implementation mechanism can work well for communities.

THEME 2
EXPANDING PREPAREDNESS FOR RESPONSE

Theme 2 discussed country specific experiences in disaster preparedness as well as good practices. Furthermore, practitioners form the field shared their experience and innovative ideas on how to expand preparedness for response. The group work revolved around along the 4 pillars of SFDRR. The group came up with key action points at the end of the afternoon session, which were presented to a panel of experts for further deliberations.

Guiding questions throughout the discussion included:

- How can we increase cross-border preparedness, especially with regard to early warning systems?

- How can we ensure linkages between local level preparedness efforts and national level policies?

- How can we ensure sufficient funding to allow institutions to prepare for disasters?

Theme 2 discussed in detail the aspects of preparedness, the challenges, and the steps that need to be undertaken in the region for strengthening preparedness for better response.

In this regard, country presentations were made on the Nepal earthquake, Pakistan heat-wave, Myanmar floods, in addition to good practices related to ASEAN School Safety Initiative, Contingency Planning, and Early warning.

The highlights of the response following the Nepal earthquake were shared with practitioners. These included leadership of the Ministry of Home Affairs, ongoing multiple initiatives, effectiveness of the UN Cluster System, a high level of regional and global support, good efforts for resource mobilization, utilization of tools such GIS, Crowd Sourcing, Mobile apps, and the establishment of District Disaster Response Committees.

However, at the same, there were some concerns that the speaker from Nepal noted in the presentation. For example, the DRM Act of Nepal is pending approval for more than five years now. Response activities are not properly coordinated or

synergized but are happening randomly with a lack of central command or coordination. Also, the response is too focused on urban centers despite the fact the 90 percent of damages were recorded in rural areas. Rural damages can be attributed to poor rural housing conditions in terms of codes and standards rarely being applied in these locations. Local NGOs face capacity constraints which also contributed to ineffective response especially in remote parts of the country. Remoteness of affected villages itself was a challenge as there were either no communications means available or roads were too dilapidated.

Participants noted that during an earlier disaster the distribution of goods was tracked by utilizing cards that the government gave to affected communities. Practitioners suggested that the government and humanitarian partners should put efforts in establishing storage sites to act as dedicated response supplies.

Based on experiences from Pakistan, the speaker highlighted the shift in overall climate and the unprecedented heat-wave that struck Pakistan's coastal city of Karachi claiming many lives. The speaker shared that Pakistan sits at number 3 at the list of climate risk index. Changes in weather patterns are already quite visible. The heat wave was completely unexpected but the national and provincial governments were able to provide rapid response with health care facilities. The government used mobile phone networks for disseminating pubic service message, which helped people a great deal in taking precautionary measures against the heat wave. The speaker suggested that during such disasters, office hours might be changed to ensure that workers are not directly exposed to sunlight.

Experiences from Myanmar underlined that better early warning communication and greater awareness among communities about preparedness and response is critical. The speaker explained how the floods in 2015

affected a number of communities in Myanmar. It resulted in large displacement and destruction and inflicted damage worth USD 2.25 billion. Although communities are much better prepared since the Cyclone Nargis hit Myanmar, a lot of work still needs to be done. Community volunteers have enhanced their response capacity and there is an institutional framework for DRR in place, yet there are no national level programs that can strengthen preparedness efforts.

The speaker pointed out that communities usually wake up only after a disaster has occurred. A real disaster can serve as a tool for awareness but the cost is too high. On the other hand, early warning information varies greatly and sometimes it becomes too challenging for communities to understand and interpret. When it comes to providing people with response supplies, geographical focus leaves certain areas neglected due to various reasons. In order to be able to move forward, the speaker suggested that the use of new technology is important for enhanced preparedness and response in addition to conducting regular community drills and exercises. Governments need to strengthen capacity of existing structures so that preparedness can take root.

Practitioners asked questions on how the new government might deal with the issue of preparedness and response at the national and local levels. They also suggested that early warning messages need to be simplified so that communities can understand the scientific information and better use these to their advantage.

As far as efforts for making schools a safer place for students as well as the teaching and support staff, practitioners benefited

from a presentation from Indonesia. The speaker said that many schools in the country are located in highly hazard prone areas. To address this vulnerability, efforts have been ongoing in collaboration with ministries, UN agencies, INGOs and CBOs to not only make schools safe from disaster in Indonesia but also in the entire ASEAN region under the Asian Safe School Initiative (ASSI).

The safe school initiative is based on a 3-pillar framework. Pillar 1 focuses on creating and complying to minimum standards for safe learning facilities. Pillar 2 is all about strengthening preparedness and response whereas Pillar 3 aims at enhancing DRR skills and capacities of children.

There was also brief discussion on contingency planning aspects of preparedness for better response. Practitioners were of the view that minimum standards should be created so that the contingency plans could be linked with communities properly. One of the challenges was that contingency plans are not always executed in time due to various reasons including lack of capacity and resources. Making use of the UN Cluster System is helpful in this regard.

Practitioners also flagged a few key issues with regard to early warning systems. Practitioners noted that most of the early warning systems are standalone rather than being holistic o integrated. In many CBDRM initiatives, early warning systems are usually missing. Lack of innovations, lack of required technical capacities, political commitment, absence of legal frameworks, and lack of local level implementation were some other issues identified by practitioners. Experts said commented that there exist major gaps in institutional preparedness whereas the communication between geographical zones is often poor, which leads to the creation of further risks.

THEME 3
INNOVATION AND RISK-INFORMED DEVELOPMENT

Theme 3 discussed innovative approaches especially related to big data and new technologies. Discussions evolved mostly around the topics included the important roles of practitioners in: (i) accountabilities under the Sendai Framework; (ii) enhancing quality of data on damages and losses; (iii) application of big data for trend analysis. The group came up with key action points at the end of the afternoon session, which were presented to a panel of experts for further deliberations.

> Guiding questions throughout the discussion included:
>
> - Lot of databases but analysis needs to be fast and accurate. How can technology help in this regard?
>
> - Cost of new technologies is going down but there is a need to advocate to governments of the potential benefits, and educate practitioners and communities on the credibility of technology for social good. How can this be achieved?

During the breakout session of Theme 3, the practitioners talked about the usefulness of innovation in the fields of DRR and risk-informed development. Under the topic 'Internet of Things and Virtual Reality', it was suggested to explore use of Echo in emergency situations to keep communication going between emergency operations center and field operations. Another forum called Gloria may be utilized in damage and needs assessments. It can be pre-positioned in highly vulnerable areas.

At the same time, communities may be trained on how to use it so that they could use it immediately after a disaster. Using Gloria with community participation can help to ensure accountability and transparency of actions before and after disasters. Practitioners were told that they could use this online resource to develop high quality maps at short notice for timely response, risk analysis response planning. It encourages multi-hazard risk analysis and guides safer settlements in addition to supporting policy development through use of more accurate and updated information.

Experts informed that the knowledge hub in the Pacific is a network of farmers at the provincial and community level in Fiji, Tonga, Solomon Islands and Vanuatu. The idea is that the government connects with this existing institutional arrangement to inform them of ground realities. Installing solar powered echo and emergency Gloria to capture images of affected agricultural areas would be instrumental.

Under the 'Innovation' part of the theme, practitioners also discussed Big Data, which could facilitate the process of making risk-informed development decisions. For this, discussions with the private sector are essential so that the process can be taken forward. There are different modalities (e.g., how to make partnerships, who should conduct Big Data analyses, etc.) and dialogue options (e.g., with public and private sector) in commencing Big Data projects. The Public sector possesses most of the data but, sometimes, is not sure or unable to utilize it. Similarly, the private sector has lots of data but, sometimes, is not aware of how this data can help the public sector.

Practitioners and experts highlighted that governments need to know for what purpose the data is going to be used. When designing a big data project, a client-oriented design (e.g., who/where to use data, what they need, etc.) has to be considered. There were also questions on big data options and privacy of individuals. Experts also explained that open and public data are different from one another.

As far as potential areas of collaboration for big data, experts suggested that a repository to collect good big data case studies for both public and private sector may be developed. Similarly, practitioners should use effective communication materials to show good case studies, potentially with country specific potential (e.g., volcano in Indonesia) to bring

attention from potential collaborators from public and private sector.

The next discussion under the same topic was on the use of drones in risk assessments and housing assessments. Experts informed that drones can help with monitoring of development programs through regular image data collection to detect changes over time. They also have the potential to reach inaccessible areas e.g. volcanoes, high mountains, jungles etc. Drones can help with physical sample collection e.g., water, soil etc. for observations in addition to helping with 3D mapping, which is highly useful. Drone experts made a demonstration of how a drone can work in different situations.

They also shared examples from different locations.

With regard to potential areas of collaboration, practitioners need rapid creation and access to relevant data products including images, sensors and explore opportunities for data integration with GIS mapping. There is need to know what our data requirements are. For example, what type of resolution of images and where drone technology can/cannot go or can/ cannot work. Experts emphasized on the need to educate practitioners, advocate with governments and train communities.

THEME 4
MAINSTREAMING DRR WITHIN AND ACROSS SECTORS – FOCUSING ON AGRICULTURE AND RESILIENT LIVELIHOODS

Theme 4 looked specifically at the role of agriculture sectors including, forestry and fisheries, with regard to resilience building. Practitioners form the field shared their experiences, as well as best practices related to agriculture and resilient livelihoods.

Discussions and knowledge sharing was followed by group works along the 4 pillars of SFDRR. Each group came up with key action points in to mainstreaming DRR within and across sectors with a special focus on agriculture. .

Guiding questions throughout the discussion included:

- Assessing, understanding and monitoring risk for increased community awareness and informed sectoral decision making

- Governance, institutional capacities and arrangements for DRR in agriculture

- Practices and technologies in cropping, fisheries, livestock and forestry for building resilient livelihoods

- Preparedness and building back better for enhanced food security and risk-proofed agricultural development

The first session focused on sharing lessons learned from implementing the HFA. Presentations, group work and open discussion addressed the main achievements, drivers for success and challenges of mainstreaming DRR in agriculture.

The second session shifted the focus towards the implementation of the SFDRR, to identify emerging trends and opportunities for DRR in agriculture/sectors and to consolidate recommendations for the way forward.

Best practices on agriculture and resilient livelihoods from across the region, including Lao PDR, Philippines. Cambodia, were shared during thematic discussions through the following presentations:

- Good agriculture practices and DRR awareness raising for resilient livelihoods – Lessons from Lao PDR, Mr. Olayvanh Singvilay

- Innovative approaches for drought monitoring. early warning and livelihood support following the Sendai Framework of DRR:2015-2030, Mr. Sanjay Kumar Srivastava

- Agro-climate information bulletins for seasonal crop choices and farm management in the Philippines, Mr. Lorenzo Alvina and Rebecca Atega

- Integrating DRR into agricultural planning at national and decentralized level in Cambodia, Ms. Kimhian Seng

- Institutionalization of disaster risk management in the agricultural sector, Mr. Jo In Ho

- Cash preparedness and resilient livelihoods, Mr. Jonathan Brass

- Resilience of the Agri- Fisheries Sector for a more inclusive growth and development-Linking DRR and CCA, Mr. Christopher Morales

Key discussion points and recommendations for mainstreaming DRR in agriculture along the four priority of the SFDRR

SFDRR (2015-2030)	Key Recommendations	Key Message
1. Understanding Disaster Risk	› Use pictures to communicate climate risk information to farmers › Give more attention to local risk perceptions when communicating and addressing risk › Strengthen regional bodies to support countries on sharing data, building capacity and increasing awareness about risk › Build the capacity of local climate forecast institutions and stakeholders to adapt/downscale global early warning tools to country and sectoral specific profiles › Foster cross-sectoral collaboration for multi-hazard risk assessments (e.g. drought and land degradation)	› Local level awareness about disaster risks can improve disaster preparedness and minimize sectoral losses › Capacity enhancement of sectoral actors in assessing and communicating risk
2. Risk Governance	› Build more strategic and cross-sectoral partnerships for DRR › Integrate business continuity planning into agriculture and food value chains › Integrate DRR and CCA into sub-sectoral (livestock, forestry, fisheries, irrigation etc.) plans and activities › Strengthen governance and institutionalization of DRR in sectoral agencies to lead the implementation of the DRR issues in sectoral plans › Support national planning agencies in guiding the mainstreaming process (coherence) › Formulate a resource mobilization strategy for more effective DRR	› Continue to put agriculture and food security high on the DRR agenda or we risk having to address these issues more urgently in the future with empty stomachs › But communities and farmers at the center of local action –daily support
3. Investing in Resilience	› Conduct more specific cost- benefit analysis of agricultural practices to prove the value added of resilience › Invest in new technologies for agriculture at community level › Promote the engagement and political commitment of national and regional governments for local action an enabling environment for investments Public campaigns / awareness › Assess needs, gaps and opportunities to upscale CBDRR d for better scientific information for identifying and upscaling good practices › Provide vocational training for rural employment › Scale up good models: "pilot to action"	› Prove resilience is worth investing in › Engage all stakeholders in developing an enabling environment › Establish dialogue or facilitate between investors and communities
4. Preparedness Response and 'Bounce Back Better'	› Define national DRR goals that promote the integration of DRR into ministerial work plans › Broaden and improve access to the social protection system for vulnerable people › Ensure the national budget and system reflect the SFDRR commitments in Government actions to enhance planning and response › Move from gathering data on EWS to informing sectoral stakeholders and preparedness planning overnment to create enabling environment for insuring poor and financial products › Delivery of early warning information through community structures › Distill and document good practices/lessons learned from preparedness and response to inform capacity building › Build local capacity to adapt new and be aware of preparedness skills and techniques available in agriculture sectors › Enhance the capacity of first responders and development actors for building back better	› Consider livelihoods from day one of emergency response › DRR is about saving "lives" and livelihoods

THEMATIC ACTION POINTS

At the end of afternoon thematic sessions, all four groups came up with key action points to push the Post-2015 agenda forward from a DRR perspective. These action points were, then, further discussed in a panel discussion:

1. Next year is key in maintaining momentum in revitalizing inclusive (all stakeholders: private sector, donors, government, academic, media, civil society, etc.) national platform given that there is a need to translate global frameworks in national plans, that enhance community resilience.

2. Risk information is available but there is need to enhance communities' capacity to use this information. Community practitioners have a role to broader risk knowledge sharing.

3. Increase linkages between community & government activities for disaster preparedness through legislation to allocate (local) government funds for DRR/DM.

4. Increase effectiveness of EWS through mapping of existing EWS and the development of SOPs for EW information dissemination.

5. Increasing community preparedness through development of local level leadership & ownership.

6. We need to prove that resilience is worth investing.

7. If we do not continue to put agriculture and food security high on DRR/CCA agenda, we might risk that the SFDRR2 negotiations in 2030 will be held with empty stomach and no lunch break (farmer support - daily business).

8. Local risk awareness and perception are important to improve disaster risk prevention, mitigation and preparedness.

9. Consider livelihoods from day 1 of emergency response because DRR is about saving lives and livelihoods.

KEY DISCUSSION POINTS

The discussion revolved around the following key questions:

- Looking backward, looking forward– 15 years in each direction
- What significantly changed and made some difference in Asia?
- What did not work well enough?
- What changes in approach and mindset are needed: some conundrums?

KEY DISCUSSION OUTCOME

Following key points were highlighted during the panel discussion:

- The panelists agreed that there has been a tremendous progress in Asia with regard to building DRR institutions, enacting new legislations, and formulating national policies and plans. Over 15 countries in Asia have revised national legislations and institutional arrangements over the past 15 years following the campaigns guided by international DRR frameworks.
- Several countries have improved national and local DRR plans as well as functional early warning systems. The greatest achievement of all has been the paradigm shift from a response and relief-oriented approach to mainstreaming disaster risk reduction into development planning process to reduce the risk.
- Some countries have started integrating Community Based Disaster Risk Management (CBDRM) into their national programs in high risk areas. Such initiatives have greatly contributed to the enhancement of community resilience as the role of communities as drivers of change in DRR is being increasingly recognized by the governments
- Concept of build back better, comprehensive recovery framework is taking root in Asia. Governments are very forthcoming in building the capacities of their work force to carry out Post-disaster needs assessment for robust recovery planning.
- A sense of cooperation, coordination and collaboration to combat disaster risk is prevailing at regional level even among those states that have political difference.
- Regional organizations (SAARC, ASEAN, SPC) are increasingly active in Disaster Response and DRR through agreements, programs and roadmaps and sister country response.
- Despite having many national policies and plans, most of the countries have not been able to implement them partially due to the lack of technical capacity and partially due to financial issues.
- Too much time was spent on the mid-term review of HFA and framing HFA2; not enough attention on implementing HFA, and now when it is coming to an end assessing what is still not done.

BUSINESS SPEAK: PRIVATE SECTOR IN BUILDING RESILIENCE

/5

BACKGROUND

The private sector is increasingly affected by extreme weather events as well as major catastrophes such as floods, storms earthquake, volcanic eruption, tsunami, etc. The disaster impact will continue to rise if we fail to improve in climate change mitigation and adaptation. The 2011 Great East Japan Earthquake and Tsunami followed by the unprecedented flooding in Thailand was a wakeup call for private sector resilience at the global and regional levels. At the 3rd United Nations World Conference on Disaster Risk Reduction in March 2015, the private sector's role in reducing disaster risk was further reiterated. The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030, highlighted the need for the business sector to integrate disaster risk management, including business continuity, into business models and practices through disaster-risk-informed investments, especially in micro, small and medium-sized enterprises.

So far, the private sector has rarely been addressed or prioritized as a target group. They play a key role in economic terms and are pivotal for post-disaster economic recovery in guaranteeing income and employment. In many developing countries in the region, few measures have been taken by the private sector to reduce disaster risk, due to a lack of policy framework and institutional mechanism, inadequate disaster risk information, lack of awareness, limited financial resources, and scarce availability of advisory and support services. Small and medium-sized enterprises (SMEs) are particularly vulnerable to disasters due to a lack of investments in disaster risk management. However, SMEs account for more than 97% of all enterprises in the region (APEC, 2015), and thus play a key role in

economic prosperity and are pivotal for post-disaster economic recovery in guaranteeing income and employment for the majority of people. Therefore, the business community needs to participate in disaster risk reduction efforts, in particular they should put in place measures to secure business continuity during emergencies to safeguard the livelihoods of people and to reduce negative socio-economic impacts.

The Bangkok Declaration resulting from the 6th Asian Ministerial Conferences on Disaster Risk Reduction encourages "risk-informed investment as part of business process" to achieve business sustainability and resilience. Since 2011, the Asia-Pacific Economic Cooperation (APEC) summit has repeatedly called for private sector resilience and enhanced capacities of businesses, particularly SMEs in preparing for disasters. The 21st APEC SME Ministerial Meeting in China in 2014 also emphasized the importance of disaster resilience of SMEs and their recommendations include capacity building and establishment of business continuity plans (BCPs) for all industries.

Business community needs to prepare and participate in risk reduction efforts, but securing business continuity during emergencies is the priority. In order to capitalize on the momentum gained through various discussion forums, events and interest shown by private sector, a regional business forum is important to identify opportunities and challenges within private sector in enhancing disaster and climate resilience. This would contribute to the regional economic integration under the ASEAN Economic Community (AEC) initiative.

KEY DISCUSSION POINTS

The SFDRR specifically refers to private sector engagement in the statement calling for the: "substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries." With this in mind, the session demonstrated how collaborative frameworks are essential in business-led disaster resilience, reduction and response programmes. The key discussion points were:

- Highlight the importance of business resilience for inclusive and sustainable regional economic development and resilient communities;
- Reaffirm the commitment in strengthening disaster resilience of businesses, particularly SMEs;
- Exchange knowledge, experiences and best practices on the private sector engagement in disaster risk reduction; and
- Increase collaboration for enhancing the capacities of the private sector in building business resilience.

KEY DISCUSSION OUTCOME

In order to capitalize on the momentum gained through the previous session, the role of private sector in disaster risk reduction and climate adaptation is crucial in enhancing disaster resilience. The key ways ahead identified included:

- The Adoption of strategies and strengthened implementation of regulations in building resilience for corporate sustainability
- Promoting business continuity planning and incentivizing business continuity management
- Increasing collaboration for building capacities of private and public entities in dealing with emergency situations
- Educating and creating awareness on the necessity and benefits of disaster risk reduction and building resilience

CONCLUSION AND WAY FORWARD
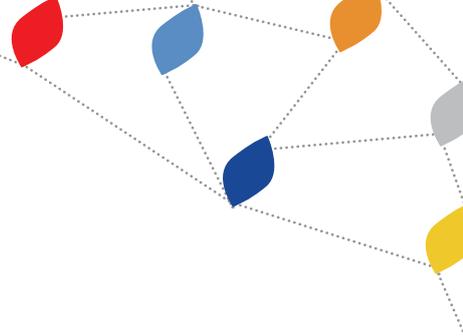
The outcomes of the 8th Practitioners' Workshop on Risk Reduction and Resilience in Asia will support the development and implementation of national level risk reduction and resilience building activities across the region for the next few years, building on the Sendai Framework and other Post-2015 frameworks. The combined presence of government, non-governmental organizations, donor agencies, and civil society organizations during the Practitioners' Workshop generated a consensus on key action points necessary for the future of risk reduction and resilience building and approaches for working together on building a safe and resilient Asia.

One of the central points that came out of the discussions is that collaboration across agencies and the utilization of new technologies will be central in ensuring risk-informed decision-making and sustainable development in the Asia-Pacific region. The next years will be crucial in revitalizing the commitment of all relevant stakeholders to ensure that there is a common understanding of how to translate the global frameworks and commitments into local level resilience.

New technologies have the potential to bring about substantial change the landscape of disaster preparedness and response. The participants in the Practitioners' Workshop agreed that there is the need to further explore this field and initiate new partnerships with relevant stakeholders to be able to benefit from new developments and technologies that can support risk reduction and resilience building on all levels.

The outcomes of the Practitioners' Workshop further stressed the importance to increase the linkages between local level actions and government activities. This linkage is crucial not only to ensure sufficient knowledge sharing and funding opportunities, but also to increase local level ownership and therefore increase resilience of communities and nations in the long-term. All practitioners agreed that there is the need to prove that resilience is worth investing for a prosperous future.

Last but not least, the importance of cross-sectoral activities was stressed. All practitioners agreed that mainstreaming DRR in agriculture is of utmost importance in order to build resilience of communities and nations in the long-term. Innovative ways of preparing the agricultural sector for disasters are needed to support resilience building.

The Practitioners' Workshop provided a unique opportunity to engage with other risk reduction practitioners from the region, as well as technical experts from various professions to identify some of the most pressing issues in the context of the Post-2015 agenda. It is very important that these issues will not be forgotten and are targeted in the Post-2015 era. Cooperation and coordination will be key for the Post-2015 agenda following the motto that "DRR is Everyone's Business".

Throughout the three-day workshop, the "Connecting the Dots" exercise was carried out in parallel with the other workshop sessions. The goal of the exercise was to develop mind maps for the four main themes of the Practitioners' Workshop. During all three days, participants were encouraged to add their thoughts and ideas to the mind maps which were structured according to problems/issues/challenges, solutions and opportunities. The result of the mind maps for each of the 4 themes is enclosed as Annex-2, Annex-3, Annex-4, and Annex-5.

The next years will be crucial in revitalizing the commitment of all relevant stakeholders to ensure that there is a common understanding of how to translate the global frameworks and commitments into local level resilience

ANNEX

1 LIST OF PARTICIPANTS

Ahmed Kamal
Member, Disaster Risk Reduction
National Disaster Management Authority
Pakistan

Airlie Taylor
Consortium Manager
Myanmar Consortium for Community Resilience
Myanmar

Am Phirum
Deputy Director
Department of Agricultural Land Resources Management
Cambodia

Aminath Shooza
Programme Associate
United Nations Development Programme
Maldives

Amelie Yan Gouiffes
Independent Consultant

An Un Gyong
Admin/Finance Assistant
Food and Agriculture Organization
Democratic People's Republic of Korea

Angeline Tandiono
Knowledge and Information Management Officer
IFRC South-East Asia Regional Delegation
Thailand

Andrew Schroeder
Director of Research and Analysis
Direct Relief

Anne Elizabeth Leclerc
Head of Regional Office for South East Asia
International Federation of the Red Cross and Red Crescent Societies (IFRC)

Anthony De La Cruz
Regional Specialist for Environment and Disaster Risk Reduction
UN Volunteers
Regional Headquarters for Asia and the Pacific

Armen Grigoryan
Disaster Risk Reduction Team Leader and Regional Advisor
UNDP Istanbul Regional Hub

Arlynn Aquino
In charge of the general programme management of Manila Field Office

Aslam Perwaiz
Head of Department
Asian Disaster Preparedness Center
Thailand

Aung Thaung Shwe
Deputy Director
Myanmar Red Cross Society
Myanmar

Aung Kyaw Soe
Project Coordinator
ActionAid
Myanmar

Bevita Dwi Meidityawati
Disaster Risk Reduction Specialist
World Vision
Indonesia

Bhichit Rattakul
Special Advisor
Asian Disaster Preparedness Center
Thailand

Bill Ho
Department Head Communication
Asian Disaster Preparedness Center
Thailand

Bounyuong Phommachak
Deputy Head
Disaster Preparedness Department
Laos Red Cross

Bouthong Philavong

Brian Heidel
Regional Advisor
USAID's Office of U.S. Foreign Disaster Assitance (USAID/OFDA)
East Asia & Pacific region

Caitlin Wiesen
Chief
Regional Policy and Programme Support
UNDP
Thailand

Caroline Zastiral
Regional Climate Change Coordinator
Plan International
Thailand

Cho Cho Win

Christopher Morales
OIC Director of the Field Operations Service
Department of Agriculture (DA)
Philippines

Colin Fernandes
Disaster Risk Reduction Programme Management
Delegate
Netherlands Red Cross

Dino Argianto
Disaster Management Program Coordinator
American Red Cross
Indonesia

Donna Mitzi Ladameo
Technical Adviser
Red Cross and Red Crescent Climate Centre

Derval Usher
Head of Office
Pulse Lab
Indonesia

Ed Carla Mae Tomoling
GIS Specialist
Philippine Climate Change Commission

Edward Turvill
Regional DRR/Resilience Technical Expert
European Commission Humanitarian Aid & Civil
Protection (ECHO)
Thailand

Eko Teguh Paripurno
Director/ Coordinator
Center for Disaster Research and Management
(DREAM)
University of
Pembangunan Nasional
Indonesia

Faisal Djalal
Senior Trainer
Indonesia

Gordon Johnson
Regional Team Leader for Resilience and
Sustainability
UNDP Bangkok Regional Hub

Govinda Padmanabhan
Emergency Analyst
Energy and Environment Unit
UNDP
India

Gregory Pearn
DRR Practitioner
UK

Guillaume Chantry
Development Workshop France
Viet Nam

Ha Thai Binh
Red Crescent Society
Viet Nam

Hanna Maier
Junior Adviser
Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ)
Thailand

Hari Kumar
Regional Coordinator
Geo-hazard international
India

He Chanthy
Curriculum Officer
Department of Curriculum Development
Ministry of Education, Youth and Sport
Cambodia

Herry Firmansyah
Program Manager
Indonesia Red Cross Society

Herve Gazeau
DRR Manager
International Federation of Red Cross and Red
Crescent Societies
Regional Office
Thailand

Hui-Hsuan Yang
Assistant Researcher
National Science and Technology Center for
Disaster Reduction
Taiwan

Ian Wilderspin
DRR Practitioner

Indira Kulenovic
Resilience Coordinator
Disaster Management Unit
Asia Pacific, IFRC

Indrajit Pal
Assistant Professor
Asian Institute of Technology,
Thailand

Irfan Maqbool
Head of Department
Asian Disaster Preparedness Center
Thailand

Ir. Sri Renani Pantjastuti

Jan Moritz Krueger
Regional DRR Advisor
Swiss Agency for Development and Cooperation
(SDC)
Thailand

Jerome Faucet
Program Coordinator
German Red Cross
Viet Nam

Jo In Ho
Director of Disaster Management
Ministry of Agriculture
Democratic Peoples of Republic of Korea

Jonathan Brass
Cash Preparedness and Livelihood Coordinator,
IFRC Asia-Pacific

Jonggun Lee
Data Scientist and Research Lead
Pulse Lab
Indonesia

Juan Daniel Reyes
Program Delegate
Finnish Red Cross
Philippines

Julie Caillet Fall
Head of Delegation
French Red Cross
Viet Nam

Kannaro Kep
DRR Practitioner
Cambodia

Khual Tawna
Resilience Program Manager
Plan International
Myanmar

Kim Sang Il
Chief of Academy of Agriculture Sciences
Democratic People's Republic of Korea

Kimhian Seng
Lead Technical Advisor
Food and Agriculture Organization
Cambodia

Klainkong Vaidhyakarn
Deputy Director
Change Fusion
Thailand

Krishna Vatsa
Global Advisor on Climate Risk
Management
UNDP

Liviu Vedrasco
Technical Officer
World Health Organization
Thailand

Lorenzo Alvina
Department of Agriculture Region V
Philippines

Loy Rego
DRR Practitioner
Myanmar

Marc Fancy
Executive Director
Prudence Foundation

Marcus Oxley
Executive Director
GNDR

Mareike Bentfeld
Asian Disaster Preparedness Centre
Thailand

Marqueza Cathalina L. Reyes
Head of Department
Asian Disaster Preparedness Centre
Thailand

Michael Perry
Director of Communication
DJI

Michael Pizzari
Operations Officer
Food and Agriculture Organization of the United
Nations
Regional Office for Asia and the Pacific
Bangkok, *Thailand*

Mio Yokota
Climate Change and Disaster Risk Reduction Liaison
Officer
UNDP Bureau for Policy and Programme Support
Japan

Mohammad Abdur Rouf
Regional Development Coordinator Asia-Pacific
Global Network of Civil Society Organizations for
Disaster Reduction

Monzu Morshed
Deputy Chief of Party
SHOUHARDO3
CARE, *Bangladesh*

Nacanieli Speight
Programme Associate
UNDP Pacific Center's Pacific Risk Resilience
Programme
Vanuatu

Nelson Castano
Head of Disaster Management Unit,
IFRC Asia-Pacific

Thai Anh Nguyen
Senior DRR Program Officer
IFRC office in *Viet Nam*

Nguyen Thi Kieu

Nguyen Thu

Nicholas Lamade

Nicholas Rosellini
Deputy Assistant Administrator and Deputy
Regional Director
Regional Bureau for Asia and the Pacific
United Nations Development Programme
Thailand

Nina Koeksalan
Advisor for disaster risk reduction and natural
resources management
Food and Agriculture Organization of the United
Nations Headquarters, Rome , *Italy*

Nway Nway Soe

Oivind Hetland
Senior Advisor Disaster Risk Management
Norwegian Red Cross

Okhee Kim
Senior Officer at Disaster Management Unit
Asia Pacific
IFRC

Olaf Handloegten

Olayvanh Singvilay
Farming Specialist,
Food and Agriculture Organization of the United
Nations, *Lao PDR*

Olga Shaskina
UNV Disaster Risk Reduction Coordinator
UNDP *Thailand*

Oliver J. Fall
Journalists/Author

Phoukhamp Viengvilay

Pich Serywath

Piseth Pel
Disaster Risk Management Specialist
Plan International
Cambodia

Provash Mondal
Humanitarian Coordinator
OXFAM
Lao PDR

Rajesh Sharma
Programme Specialist (Global), Disaster Risk
Information and Application
UNDP Bangkok Regional Hub

Rajib Shaw
Professor in the Graduate School of Global
Environmental Studies
Kyoto University, *Japan*

Ramya Gopalan
Innovation Specialist
UNDP
Bangkok Regional Hub

Rebecca Atega
Department of Agriculture Region XII,
Philippines

Ridwan Yunus
Information Management Officer
UNDP
Indonesia

Riley Riley

Roberto Sandoval

Roderick Salve
Senior Manger
Red Cross
Philippines

Sandra Romero Ruiz
Disaster Management Development Delegate
International Federation of Red Cross and Red
Crescent Societies
Philippines

Sanjay Srivastava
UNESCAP

Sanjeev Kafley
Regional Community Safety and Resilience
Coordinator for SEA
IFRC

Sanna Salmela Eckstein
Regional Disaster Preparedness/Disaster Risk
Reduction Delegate
Finnish Red Cross
Cambodia

Sanny Jegillos
Senior Advisor
Resilient and Sustainable Development Team
UNDP Bangkok Regional Hub

Saroj Bahadur Shrestha
Program Manager
Nepal Red Cross Society
Kathmandu

Satendra Singh
Chief Technical Adviser
Food and Agriculture Organization of the United
Nations Lao PDR

Shairi Mathur
Programme Specialist, Disaster Risk Reduction and
Recovery
UNDP Bangkok Regional Hub

Shamika N. Sirimanne
Director of ICT and Disaster Risk Reduction Division
UNESCAP
Thailand

Shane Wright
Executive Director
Asian Disaster Preparedness Center
Thailand

Sheila Roquitte
Resilience Advisor for South and Southeast Asia
USAID
Thailand

Shesh Kanta Kafle
Disaster Management Coordinator
International Federation of Red Cross and Red
Crescent Societies
Pakistan

Soesatyo Budikurniawan
DRR Program Coordinator
Save The Children
Indonesia

Somvath Keokhamphoui
Lao PDR

Sonya Syafitri
Consortium Manager
National Alliance for Risk Reduction and Response
Initiatives
Bangladesh

Stephan Baas
Strategic Resilience Advisor
Food and Agriculture Organization of the United
Nations Headquarters, Rome, *Italy*

Stephan Huppertz
Su Thandar Win
Programme Manager
Oxfam
Myanmar

Suman Kumar Karna
Recovery Specialist
NORCAP

Sunisthida Phetduang
Head of CBDRR Unit
Thai Red Cross Society
Bangkok

Takuya Ito
Researcher
International Research Institute of Disaster Statistics

Tarique Sohail

Thanongdeth Insiengmay
Senior Program Manager
ADPC, Vientiane, *Lao PDR*

Thavirap Tantiwongse
Public Affairs Director
GlaxoSmithKline
Thailand

Thearat Touch
Cambodia

Thet Naing Win
Project Manager
HelpAge International
Myanmar

Thipphamonh Chanthalangsy
Director of Education Construction Design and
Management
Ministry of Education and Sports
Lao PDR

Trang Nguyen
Program Officer
Disaster management
Viet Nam Red Cross

Tzu-Yin Chang
Division Head
Information Division of National Science and
Technology
Center for Disaster Reduction
Taiwan

Usman Qazi
DRR Practitioner
Pakistan

Uy Sam Onn
Deputy Director for Disaster Management
Cambodian Red Cross

Vidya Rehman Rana
Risk Communication Consultant
Thailand

Vinod Kumar Sharma
Senior Professor, Disaster Management
Indian Institute Of Public Administration
India

Vu Min Hai
Programme Manager
Oxfam
Viet Nam

Waqaniburotu Lesumainaivalu
Regional DRR Manager
IFRC, Pacific Office

Wei Sen Li
Secretary General
National Science and Technology
Center for Disaster Reduction
Taiwan

Wendy Fenton
DRR Practitioner
UK

Yon Chun Ae
Senior Officer
External Cooperation Department
Ministry of Agriculture
Democratic People's Republic of Korea

Yuichi Ono
Assistant Director
International Research Institute of Disaster Statistics
Tohoku University, *Japan*

Zhaoxi Li
Disaster risk information technology consultant
UNDP Bangkok Regional Hub

Mihir Bhatt
All India Disaster Management Institute
India

Phitsamai Khammanivong
Project Associate
Disaster Risk Management Systems Department
Asian Disaster Preparedness Center
Thailand

Puji Pujiono
Regional Adviser Disaster Risk Reduction
UNESCAP
Thailand

ISSUE / PROBLEM / CHALLENGE

Overall
› Lack of co-ordination among relevant actors and sectors
› Too many different models for engagement (limits scale up)
› Limited local resources / funds
› Funding mechanisms for DRR and CCA (case to damage ratio)
› Insufficient funding (external and national government)
› Access to information resources and services
› Linking community capacity and knowledge to scientific knowledge (e.g. risk assessments and information)
› Chronic poverty caused by recurring hazards
› Lack of access to resilient crop varieties
› Evolving threat due to changes in environment, political priorities ad increased disasters
› Unable to prioritize resilience due to other immediate demands – food / housing
› Lack of ownership of processes by local authorities
› Not working enough with faith based organizations and religious
› Gap in understanding between outsiders and community
› Underutilizing local capacities
› Limited technical knowledge / expertise
› New emerging threats, climate change, other hazards
› Decisions made at higher levels of governance
› Lack of motivation from the leaders

SOLUTION

› Design programs that match local priorities
› Mainstreaming DRR
› Climate resilience
› Livelihoods
› Allocate resources to local people which they can decide on
› Strong commitments from the community and political will from the local government
› Need for all of society participation and engagement
› Increasing funding sources for resilience work
› Improve agriculture extension service
› Decentralize decision making and disbursement of funds
› Policy / legal frameworks
› Integrate science in hazard and risk assessment / vulnerability and capacity assessment
› Cross-sectoral integration of development plans
› Strong partnership and collaboration with government, private sector, INGOs/NGO etc.
› Partnerships: practitioners, communities, private sector, local authorities, scientific communities and knowledge for information sharing

SOLUTION

Promoting cooperation over competition
› Community experiences can used as inputs for mitigation of risks
› Bridge science community and local community practitioners
› Make indigenous or local knowledge accessible and available
› People participation in disaster risk activities
› Making anniversary of paste events to keep memories alive
› Permanent flood markers
› Building scenarios of hazard events (so communities understand how hazards can affect then and what should change?)
› Enhancing coordination and collaboration among DRR Practitioners
› Technical solution and key learning point
› Innovative and participatory approaches to help communities understand and make decision
› Invest on capacity development by government
› Awareness raising and advocacy and law enforcement
› How to feed the individual risk perceptions into common resilient characteristics
› Consensus between partners on common resilient characteristic across all global frameworks (SFDRR,SDG,CCA)
› Incentivize risk-informed development investment
› Create awareness on how resilience can be enhanced
› Investing in local government capacity
› Local 'demystification' of Sendai @ local level
› Regional Peer to Peer knowledge sharing
› Locally adapted methodology tools

ISSUE / PROBLEM / CHALLENGE

Understanding Risks
› How to communicate risk/science to community effectively
› Access to indigenous knowledge
› Lack of early warning system (EMS)
› Bring together evident – based and scientific information for sharing
› Lack of information sharing among DRR practitioner, policies, SoP and guidance
› Proper vulnerability assessment

OPPORTUNITIES

Evidence-based community resilience / DRR
› Personalization of technology (hand-held devices, mobile, apps, crown-sourcing)
› Outside funding support
› Providing capacity for risk assessment
› Exchange learning and practices on disaster risk reduction
› Empowering communities
› Improve community access to information
› Documentation on good practices to sharing and learning
› Participatory projects
› Empowering local champions
› National and regional government funding increasing
› Development funding
› Knowledge sharing/networks DRM platforms/institutions
› Exploring technological options for adapting/diversifying/ strengthening livelihoods
› Developments in science and technology
› Technology IT
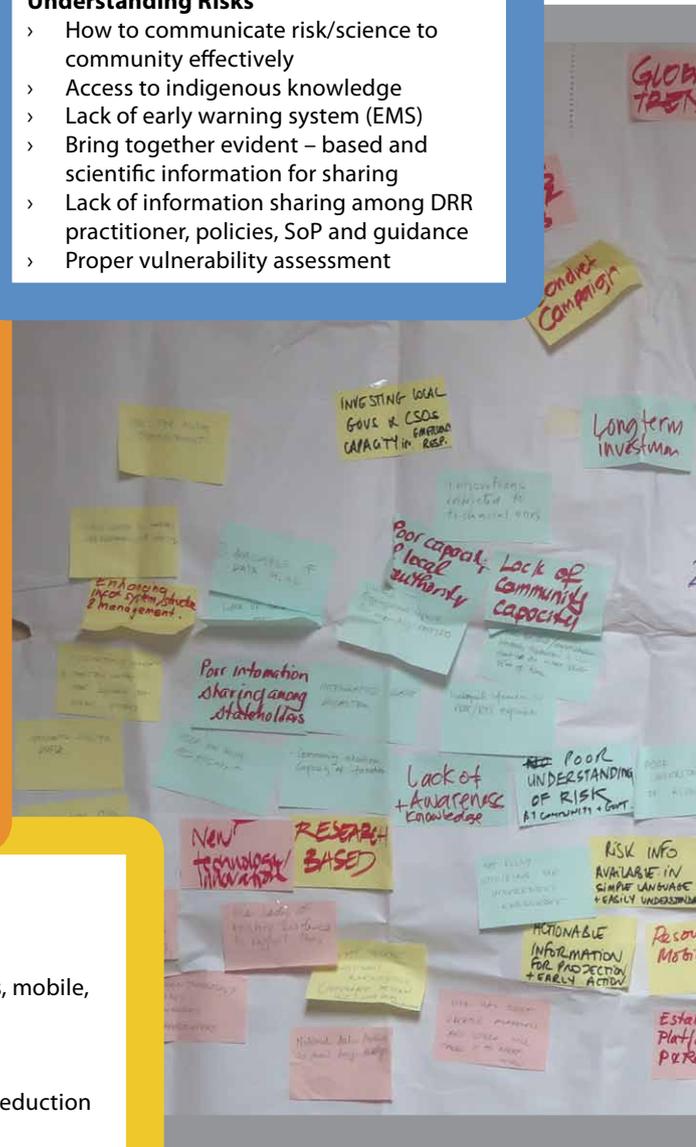
ISSUE / PROBLEM / CHALLENGE

Inclusive resilience
› Inaccurate information (on weather)
› Gender inequality
› Culture boundary

SOLUTION

› Connectedness with institutions
› Good facilitator
› Enhancing tools e.g VCA
› Usage of minimum standard as a tool
› Mobile Apps
› One person to disseminate messages (Audio voices, messages, apps

OPPORTUNITIES

› Collaboration with media to adapt messages
› Using the volunteer, loudspeakers to disseminate information

ISSUE / PROBLEM / CHALLENGE

Risk Governance
› Coherence in legal framework
› Lack of linkages, resources distribution, best practice and legal frameworks
› Lack of cooperation between different ministries
› Issues and challenges (local ownership, community and government, prioritization and lack of cooperation
› Issue and challenges (enhance capacity awareness for local/national authorities)
› Lack of culture of accountability for local, national government
› Political agenda
› Resources distribution from government perspectives

OPPORTUNITIES

Private sector untapped

SOLUTION

› Long term point society advocacy for community based DRM replication by government (Vietnam)
› Adopting legal frameworks in DRR – refer UNDP/IFDR focus on this
› Active involvement from governments in streamlining DRR in educational sectors – examples from Cambodia and Pakistan in partnership with national/international NGO and donors
› Dedicated budgets from governments

ISSUE / PROBLEM / CHALLENGE

National platforms

SOLUTION

› Need for all of society participation engagement
› Local ownership
› Strong commitments from the community and political will from the local government

OPPORTUNITIES

› Building local level partnerships/coalition
› Effective feedback from community
› Institutional support
› Government endorsement for sustainability to the platforms
› Need of government to put many frameworks in national plans 2016-2017
› Agree on standardized indicators with donors
› Including donors
› Including private sector

ISSUE / PROBLEM / CHALLENGE

Fund raising for community resilience
› Written contact can lead to misunderstanding
› Conceptualization
› DRR with in community
› Responsibility

SOLUTION

› Social activities in communities
› Mainstreaming resilience into development
› Unearmarked fund
› Government allocates national budget for CBDRM
› Developed countries allocate for developing world
› Philanthropy
› Community based fund raising crown funding
› Forecast based financing
› Mainstreaming resilience into development program
› Engagement with private sectors (as business contingency)

OPPORTUNITIES

› Changing mind set among donors
› Frequent disaster
› Research expenses showing investment in DRR is worth
› Government priority investment in DRM
› Growing awareness
› Increase understanding of resilience by development agencies
› Global resilience is getting more attention

ISSUE / PROBLEM / CHALLENGE

Investing in risk reduction – school safety
› Lack of integration in school curriculum – should target both primary and secondary
› Lack of / low awareness
› Challenge of integrating school safety approach and wider develop plans
› School infrastructure is not disaster resilient

SOLUTION

› Integrate DRR into school curriculum
› Follow building codes when constructing / rehabilitating school or retrofitting

OPPORTUNITIES

› Children as agents of change
› Mainstream DRR into education at all levels

Guidelines are available on resilient infrastructure = implementation

ISSUE / PROBLEM / CHALLENGE

Data / information accessibility
› Availability of data (H,V,C)
› Lack of data about the past events
› Poor information sharing among stakeholders
› Poor on risk assessment
› Integrated disaster data
› Availability of Independent information

Capacity
› Poor capacity of local authority
› Lack of community capacity
› Limited organizational capacity for expanding Peer/Res
› Innovations restricted to technical ones
› Community retention capacity of information
› Local preparedness and response capacity weak and under resourced

Knowledge
› Lack skilled/experiences human resources if we want to do within short span of time
› Lack of awareness knowledge
› Poor understanding of risk by community/government
› Not fully utilizing the indigenous knowledge

Resources / investment
› Long term investment
› Resources/budget constrains
› Comparatively higher investment in INGO preparedness than in CSO preparedness
› Government agencies don't want to give people cash
› Resources for multiple responses within 3-6 month period

Engagement/organization of stakeholders
› Weak coordination/engagement among all stakeholders
›   (CBDRM) Communities not sufficiently linked to government
› Lack of standard procedures so different organization may end up with different document - difficulties to compile

Prioritization and approach to disaster issues
› Intangible
› DRR only project not a movement
› Disasters not a priority
› More challenging issues than disaster
› Poor enforcement of policies etc.
› Big task if it is in multi hazardous vulnerable area/community
› Complex preparedness of types of vulnerability/hazard changes – flood area become drought area. (salinity etc. due to climate change)
› Doing Preparedness/Response in similar fashion will not bring efficiency over time
› Turnover in politically appointed officials (whose capacity to build?)
› Engaging private sector in preparedness/response
› Preparedness to response within development projects
› GAPS + Disconnect between emergency response and DRR practitioners

SOLUTION

Knowledge / Awareness / Stakeholder engagement
› Increase awareness
› Research based
› Do not ignore indigenous knowledge
› Risk info available in simple language and easily understanding
› Actionable information for protection and early action
› Engage everyone in preparedness and response
› Target advocacy
› Strengthening coordination and collaboration networking
› Be more transparent to each other and to community
› Broader discussion on innovation to include everything that could potentially impact DRR

Data / assessment
› Tools for risk assessment
› Open data on hazard, vulnerability and capacity
› Enhancing info system structure and management
› Systematically collect / maintain data about response for future events
› Integrated disaster data
› Online risk assessment tools

Finance / Resources
› Investing local governments and CSOs capacity in emergency response
› Resource mobilization

Governance /Mainstreaming
› Work with governments to design expandable safety net/ social protection programs
› Innovative capacity building approach
› Developing special directive to enforce the policy
› Integrating DRR into local development programs

OPPORTUNITIES

Awareness

› Huge interest in innovation more broadly at the moment – talk to those outside DRR community
› Networking still required
› Global trends

SFDRR / Global Frameworks and platforms
› HFA has built greater awareness and SFDRR will take it to next level
› Support SFDRR and SDGs
› Establishing platform on preparedness and response
› Monitoring SFDRR indicators

Investment / Innovation / Private sector / Stakeholders
› New technical innovation
› Modern technology provides tremendous opportunities
› National data archive to draw during analyzing
› Use various innovative ways of engaging everyone
› Business continuity
› Provide sector collaboration
› Donor and Government Interest in DRR growing
› Improvement and scale up
› Developing long term plans for DRR
› More community interventions/Action

ISSUE / PROBLEM / CHALLENGE

Data / Information

› **Lack of required data**
  • Lack of information on damages and losses
  • Lack of comprehensive and consolidated data including disaster profile, vulnerability, social development, land use planning allocation of resources

› **Data collection method**
  • What data is relevant
  • Facilities for data collection
  • Cost of collecting data

› **Credible sources of data**
  • Everyone can relay or share the information but who assess the reliability of the sources
  • How to decide reliable sources of information by who?

› **How to utilize the data**
  • No database
  • Data interpretation
  • Languages
  • Lack of communication on where to get what data on disaster risk
  • Information sharing
  • Lack of climatic information for community
  • Development is not risk-informed

SOLUTION

Data collection / assessments
› Information recipients are trained on how to interpret info and make decisions appropriate to local contexts
› Tap local counterparts (agriculture technician)
› Effective and efficient data dissemination systems in place
› Ownership of data and use of it
› Mandating by IFIs risk assessment/similar to environmental assessment
› Use technology as an aid to collect data
› Strengthen existing data system management
› Agreed portal for reliable information e.g. CRED
› Remote sensing (satellite)
› Big data analytics

OPPORTUNITIES

› National funding and DRR planning
› Political will at regional / national level
› Framework development and policy
› Post 2015 development framework implementation

ISSUE / PROBLEM / CHALLENGE

Governance / Frameworks / Policy
› Weak political ownership for risk-informed development
› Lack of policies regulating coordination mechanism among government agencies
› Policies inappropriate to local context realities
› Political ownership not risk-informed
› Lack of coherence across post - 2015 development frameworks
› Weak accountability

SOLUTION

› Political ownership (supporting governance)
› Joint actions to influence policy and practice and practice
› Clear regulation
› Special legal frameworks to use technologies for DRR (e.g IPR)
› Well aligned to SFDRR, SDGs, UNFCCC (Kyoto – II)
› Clear policy statements to support DRR in line with existing initiative/activities

OPPORTUNITIES

› Exchange existing ideas / tech
› Disasters as leverage point for change
› Learning from past disasters
› New Media (social media)
› Well informed public and youth
› Risk communicator to lead people
› Utilize mobile apps for real time data
› Take existing good practices and use new tech / innovations to make them even better
› Oculus for DRR

ISSUE / PROBLEM / CHALLENGE

Innovation Technology
› Lack of technology and information (GIS)
› Misleading feeling that innovation will be the answer to the problems
› Negative impacts brought by new-tech innovations
› How virtual social network replaced the traditional social network on DRR?
› Obstacles in employing innovative solutions due to IPR
› Innovation not well utilized/incentivized for DRR

SOLUTION

› Develop private sector engagement framework to make use of innovations
› Linking with insurance companies with a minimum premium
› Earthquake early warning system
› Market creation for technology
› Invest on the early warning system technology resources
› Customized research
› Crowd sourcing
› Social Media
› Applying new technology into DRR, GIS map, computerization of data
› Encourage champions to increase DRR knowledge
› Training communities to crowd source
› Awards/rewards for innovation include grants, scholarships
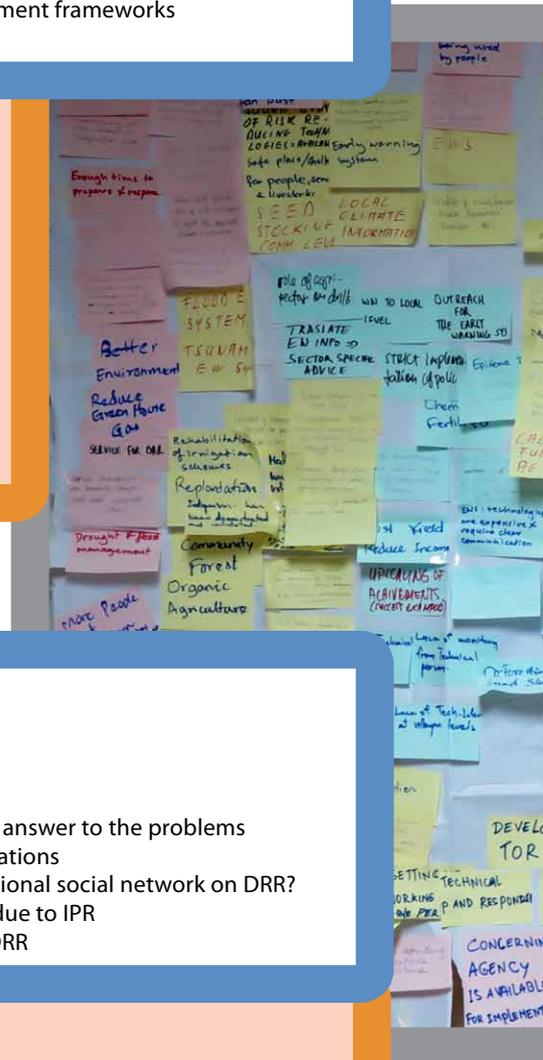
ISSUE / PROBLEM / CHALLENGE

Capacity / Skills / Awareness
› Lack of documentation guidance, SoP, and strategic direction
› Awareness of local authorities on mainstreaming DRR
› Lack of understanding of DRR
› Limited knowledge and skills
› Research, needs, market = GAP

ISSUE / PROBLEM / CHALLENGE

Resources / funding / financing
› Lack of funds
› Budget constraints
› Lack of insurance financing
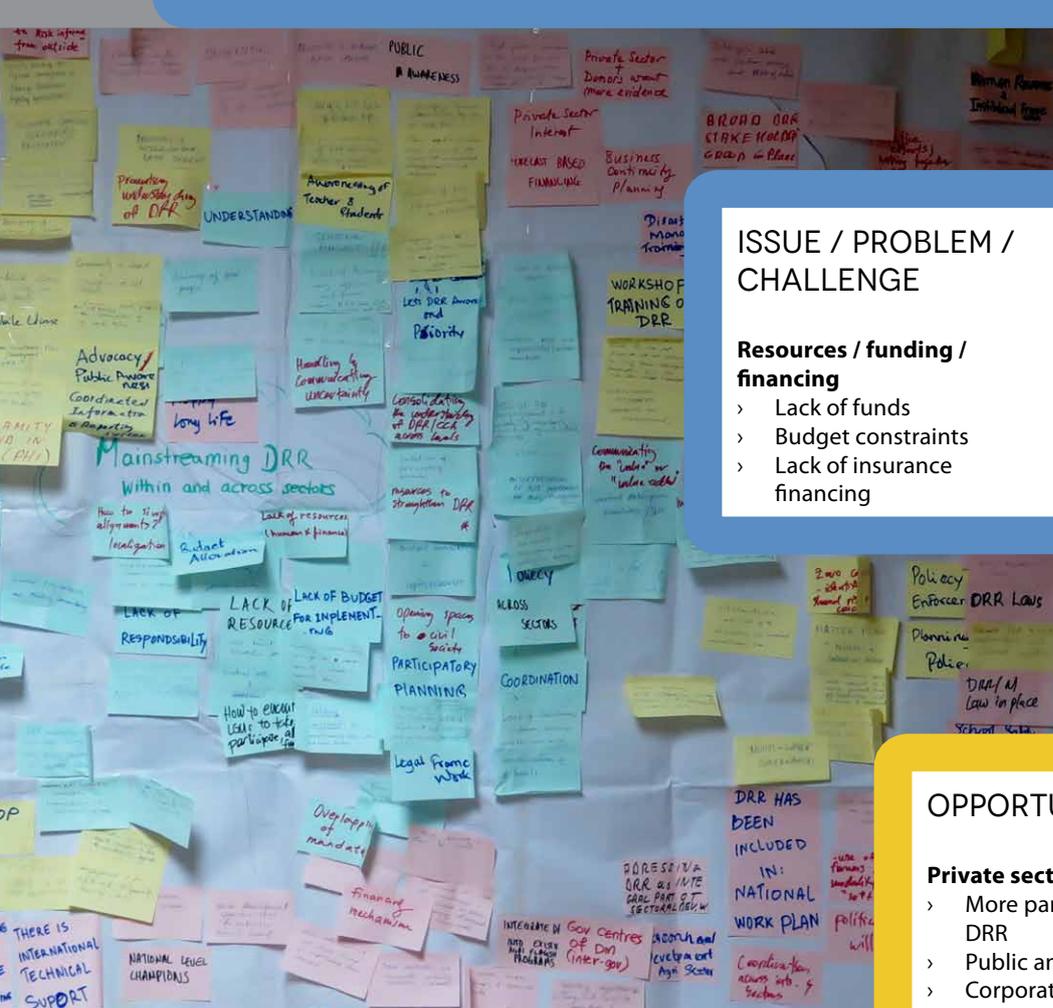
OPPORTUNITIES

› Leveraging funds to DRR
› Climate adaptation funding
› Funding support donors
› Carbon credit 'community'
› Budget allocation/ raising using existing funding mechanism
› Insurance financing

OPPORTUNITIES

Private sector
› More participation of private sector in DRR
› Public and private sector partnership
› Corporate Social Responsibility

ISSUE / PROBLEM / CHALLENGE

Stakeholder engagement
› Limited inclusion, citizen engagement
› Weak multi-stakeholder collection and coordination mechanisms

SOLUTION

Collaboration / Partnership
› National/Regional/ Global collaboration
› Strengthening collaboration among DRR practitioner (network) platforms
› Develop holistic plan among stakeholders
› Working together with DRR practitioner to develop documentaries based
› Participatory methodologies
› Increase public awareness engagement
› Engage with private sector

ISSUE / PROBLEM / CHALLENGE

Agricultural practices and sector specific risks:
› Deforestation and land slides
› Chemical fertilizers
› Epidemic diseases
› Lost yield resulting in reduced income
› Lack of technologies at village levels
› Role of agri-sector on drills
› Limited knowledge about mitigation and prevention of disaster risk

Risk assessment/Communication/Data management/Early Warning/ information/ awareness raising:
› Need to translate early warning information into sector specific advice
› Limited outreach for the early warning system to communities
› EWS technologies are expensive and require clear communication
› Need to enhance mechanisms for early warning system that cover/are relevant for all sectors
› Illiteracy of local people
› Limited ITC Materials and Media communicating
› Lack of coordination at multiple levels for EW and data sharing
› Communication/information flow from local to national levels and vice versa
› Lack of sectoral reliable data
› Limited ITC Materials and Media communication
› Lack of understanding risks at community level
› Localized climate change scenarios applicable for agriculture sector is not available
› No seasonal forecasts available to take early action
› Limited interpretation of risk information for agri-planning
› Communicating the "value" on "value added"
› Awareness of local authorities in risk and DRR
› Lack of coordinated information exchange within and across sectors
› Lack of awareness, among officials and farmers about DRR and CCA (less convinced of the efforts of DRR)

DRR financing and financial resources within and across sectors
› Need to enhance transparency/ accountability
› Less budget, fund and resources (human and financial) allocation for DRR
› How to encourage local government units to take part, participate, allocate funds?
› Lack of budget for implementing
› Funding mechanisms set up on issues – specific/sector – specific basic
› Funding constraints for mainstreaming DRR within and across sectors

Institutions/ Governance / Mandates/Policy/ Planning / Mainstreaming:
› Overlapping of mandates
› Consolidating the understanding of DRR/ CCA across levels
› Limited input into participatory processes
› Coordination/integrated planning for DRR – across sectors. While ensuring integration into sectoral plans
› Less or no engagement of community members in international, regional, national DRR forums
› Institutionalization of DRR in sectoral agencies
› Missing policy framework for DRR
› Limited cross- sectoral collaboration
› No prioritization at DRR & CCA in sectoral planning
› Lack of action plans for DRR in different sectors
› Need to include to civil society and participatory planning
› Lack of concept of relationship between DRR & Development and the relationship disaster management and resilience
› No DRR local framework in place
› Weak institutional set-up to lead the implementation of DRR in sectoral agencies
› Tradeoff between a media present needs with longer term future needs
› Capacity constraints in sectoral agencies to deliver DRR
› Limited outreach to local level
› Lack of political buy-in
› Need for clarification of roles & mandates for DRR across sectors
› DRR already integrated into some sectors but no M&E system yet in place to capture results

- › Multiple agencies/ministries with responsibilities of different sectors
- › Need for good governance within and across sectors
- › Interdependence/connectedness of DRR issues requires clarity of responsibility in their delivery
- › DRR is not yet a high priority by concerned governments

- › Strict implementation of policies
- › DRR traditionally seen as a standalone / independent practice
- › Upscaling of good practices from pilot testing towards large scale replication
- › Upscaling of achieve exists (success examples)
- › Focus on what can do best rather than on what is needs at grass route level

SOLUTION

Agriculture practices- sector specific solutions
- › Build safe place/shelter for people, seeds & livestock
- › Introduce seed stocking techniques at community level
- › Establish a calamity fund in Agriculture (e.g. Philippines)
- › Conduct a Symposium forum for farmer and local actors
- › Support to create "Model farms" for integrated DRR
- › Guide field trials at farm level by farm technical group themselves
- › Model farms should be established for CBDRR in relation to specific disasters for technology development/trails and extension
- › Ensure risk-proofed rehabilitation of irrigation schemes
- › Replantation of deforested lands
- › Promote community forests
- › Support farmer water user groups (FWUG)
- › Support commune investment development plan on DRR
- › Good practice options GPOs for both CCA and DRR (synergies)
- › Climate adaptive variety

Risk assessment/Communication/Data management/Early Warning/ information/ awareness raising: Establish a nationally coordinated information and early warning system to encompass all sectors and regions
- › Enhance sector specific early warning systems
- › Improve the availability of local climate information
- › Establish food early warning systems
- › Establish/improve tsunami early warning system
- › Put new technologies like robotics, VR and special data tools directly in the hand of local communities

- › Promote the publication and sharing of best practices among different sectors in different countries as well as within countries
- › Improve establish EWS with relevance for the sectors
- › Mobile clinic
- › Establish risk data base at all levels
- › Use Coming ICT tools for disaster management
- › Advocacy on public awareness
- › Put in place coordinated information & reporting systems
- › Develop a curriculum on DRR in schools
- › Raise the awareness on risk and DRR of teachers & students
- › Promote News - media practices which articulated the value of integrated development and risk reduction
- › Integrating DRR knowledge (lessons/ lectures) in pedagogical system from kindergarten to universities
- › Improve regional and International data sharing
- › Promoting understanding of DRR
- › Developing common understanding of DRR
- › Capacity building for regional counterparts on damage assessment repeating system (DARS)
- › National level risks vulnerability assessment (e.g. Lao PDR, Cambodia, Myanmar, Philippines)
- › Development of risk maps for differed hazards (prioritized hazards)
- › Cross-sectoral data integration, including physical risk, demographics, economics etc.

DRR financing and financial resources within and across sectors
- › Creation of cross-sectoral funding requirements
- › Create pooled funds for use of disaster relief dollars in long term development projects – blur the line between relief and development
- › Creation of cross-sectoral funding requirements

> Advocacy at all levels and sectors for DRR funding

Institutions/ Governance / Mandates/Policy/ Planning / Mainstreaming:
> Seek technical assistance from outside (Techniques, designs and etc.)
> Integrate science / traditional practices in planning frameworks
> Promote DRR and CCA complementarily and eliminate competition
> Setting up working group and responsible persons of DRR in sectoral agencies
> Develop ToR on DRR issues/integrate DRR in ToRs in sectoral agencies
> Identification of change agents/champion to drive the mainstreaming agenda
> Seek the engagement of national planning ministry (Govt)

> Creating of local/regional disaster-preparedness committees (e.g. Philippines)
> DRR Policy enforcement
> Improve DRR Planning and policy in sectors
> Foster a multi-layer governance
> Co-ordination mechanism (enhanced and strengthened)
> Mapping of roles and responsibilities for DRR in and across sectoral agencies, CSOs, academia and private sector
> Build an administration system for DRR
> Incorporate DRR context into national/ sectoral development plan
> Develop a national action plan incorporating all sector-specific action plan
> Create ownership development at each level
> Community committees – commune committee for DM (CCDM)

OPPORTUNITIES

Agriculture practices- sector specific potentials/innovations
> New cultivation patterns
> WIBI (weather based insurance index)
> GPO (Good practice options) adapted by farmers
> Crop insurance
> Diversifying agriculture activities
> Rain harvesting at scale
> Farmer Water User Community (FWUC): technical maintenance and empowerment for farmers
> Farmers have more access to climate risk information
> Integrate DRR into existing agri-flagship programs
> Agriculture represents grassroots engagement
> Promote Business continuity planning into agriculture
> Drought and flood management
> Environmental protection efforts and interventions to reduce greenhouse gas emissions
> Sound body of risk reducing technologies available
> Technical exchange and advisory
> Plenty of good DRR practice know how exists - this should be enhanced, accessed

Risk assessment/Communication/Data management/Early Warning/ information/ awareness raising:
> Certain technologies are becoming cheaper and more accessible e.g. drones

> Improved access to risk information from outside
> More accurate understanding of risk based on integrated data
> More rapid and accurate disaster data can empower local actors
> Availability of weather, seasonal and climate forecasts
> Availability of data on damages / losses agriculture
> Early warning – more available and accurate than in the past
> Availability of the monitoring tools for hazards
> Universities (data and scientific models)
> Regional and international data sharing is easier through forums and platforms
> Higher public awareness on the need for DRR due to frequent major disasters worldwide (Nepal, Japan, Philippines)
> Increased awareness by EU on importance of DRR for development
> Decision support tools (ICT)
> Saving more lives and changing minds to improve risk resilience
> Climate change scenario(s) developed

DRR financing and financial resources within and across sectors
> Cash transfer
> Risk financing / Micro-finance
> Private sector CSR moving from charity to business sense
> Pro-poor risk financing systems
> Green Climate Fund for DRR resource mobilization

- › Improved prioritization of investment in risks based on better understanding of present/future trade-offs
- › Forecast based financing
- › International technical support
- › Less dependence on outside assistance
- › More efficient use of funds based on expressed local demand
- › Donor coordination of funding accessibility and reports

Institutions/ Governance / Mandate/Policy/ Planning / Mainstreaming:
- › Proactive Local Government Units / communities
- › Implemented DRR at the ground by NGOs in collaboration with sub-national organizations
- › Some local officials come up with ordinances to support disaster preparedness
- › Availability of experts and technologies – ADPC, UNESCAP, ASEAN committee for Disaster Management
- › Co-ordination – access across multiple sectors
- › Political will greater than in the past
- › DRR has been included in national work plan(s)
- › More development opportunities for national and community level
- › Government Centres of Disaster management (inter-governmental)
- › Established DRM working group
- › Working together for target results (long term) – more manageable risks

- › Building on existing frameworks
- › Improved collaboration between international and local actors
- › Presence of RC networks – branches and volunteers at local and community levels
- › Integrate DRR into sector strategies and plan of action
- › Enhanced institutionalization of DRR governance at the local level
- › Legal mechanism establishment for DRR interventions (DRM Law)
- › Human resources and institutional frameworks
- › Solidarity between local people and stakeholder organizations
- › Cross sectoral programming for DRR (implement SFDRR)
- › Collective efforts – working together at different institutions
- › Community exchange and participation
- › Use of thematic forums as a modality for 'soft advocacy'
- › School safety plans
- › National level champions
- › Civil / military response

Private Sector
- › More responsive private sectors
- › Private sector and donors want more evidence
- › Business continuity planning
- › Standards and incentive systems

Disaster Risk Reduction
John Twigg

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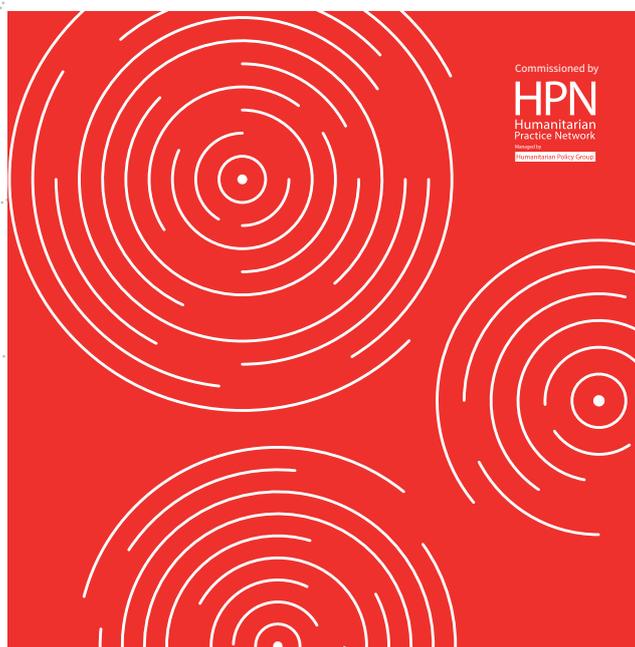
BOOK LAUNCH: GOOD PRACTICE

REVIEW 9 – NEW EDITION

The Humanitarian Practice Network (HPN) launched book Disaster Risk Reduction written by Dr John Twigg as part of the Good Practice Review (GPR) with technical and funding from DFAT, GIZ and DFID This Good Practice Review identifies and discusses the principles and practice of disaster risk reduction (DRR), drawing on experiences from around the world. It gives guidance on the main issues that should be taken into consideration when carrying out projects and programmes, and ways of addressing these issues in practice. DRR is a wide-ranging field of activity, as the following pages show, and each of the 18 chapters addresses a specific theme.

The book is intended primarily for practitioners, principally project planners and managers already working in the DRR field or planning to undertake DRR initiatives, mainly at sub- national and local levels. The Good Practice Review is a practical document, but it is not a manual. Its emphasis is on the process of planning and implementing risk reduction initiatives, looking at key issues and decision points. The descriptions and discussions are supported by case studies, which aim to give a sense of the range and diversity of the practical approaches that can be used. Extensive further reading can be found at http://www.goodpracticereview.org/9.

The panelists highlighted the fact that there is now far more evidence and literature on DRR than there was a decade ago. Nevertheless, there is still much that we do not fully understand, and a lot of good practices remain undocumented or unpublished. This new edition has case study material in areas such as vulnerability and capacity assessment, urban risk management, long-term recovery, monitoring and evaluation.

For further contact

Aslam Perwaiz
Asian Disaster Preparedness Center
SM Tower, 24th Floor 979/69 Paholyothin Road,
Samsen Nai Phayathai, Bangkok 10400 Thailand
Tel: +66 2 298 0682-92
Fax: +66 2 298 0012
E-mail: adpc@adpc.net

www.adpc.net   Asian Disaster Preparedness Center   @ADPCnet