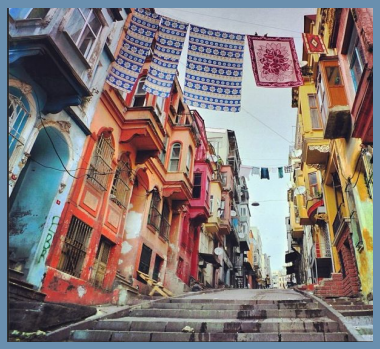

Antalya Report

Antalya, Turkey

10th-13th February 2015

Disaster Risk Reduction (**DRR**) in a Changing Climate: Lessons Learned about Lessons Learned

Coordinator: Michael H. Glantz

Editors: Arielle Tozier de la Poterie, Robert J. Ross

Antalya Statement can be found at ccb-boulder.org

June 10 2015

The Antalya Report

(Including Antalya Statement)

Expert Forum on Disaster Risk Reduction (DRR): Lessons Learned about Lessons Learned about Disaster Risk Reduction in a Changing Climate

Antalya, Turkey
February 2015

~

Coordinator: Michael H. Glantz
CCB Boulder

Editors: Arielle Tozier de la Poterie, Robert J. Ross

Report Date June 10th 2015

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The Antalya Report
June 9, 2015

Coordinator: Michael H. Glantz
Editors: Arielle Tozier de la Poterie, Robert J. Ross

Forum Objectives

This Forum was convened to discuss and share lessons learned about lessons learned about hydro-meteorological Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA). The Forum was not intended as a scientific conference focused on the natural science aspects of hydro-meteorological hazards. Instead, it was about the usability of the lessons identified from scientific and societal findings related to DRR in a changing climate. Key reasons for convening the Forum focused on a review of hydro-meteorological DRR including the following:

- Enhancing existing effectiveness and efficiency of DRR programs
- Sharing technical and societal experiences among the DRR and CCA programs
- Raising awareness and concern about climate change and its consequences for extreme climate, water and weather events
- Discussing the possibility of increasing numbers and intensities of extremes in an age of flat-lined disaster assistance budgets
- Searching for a way to "link" the autonomous communities of DRR and CCA more effectively
- Diagnosing institutional and individual resistance to change
- Searching for "resilient adaptation" to a changing climate

Forum Rationale

The reason for convening the Expert Forum is that many "lessons learned" have in fact only been "identified" without further evaluation or application. There are no preset criteria for calling a lesson "learned" nor does identifying a lesson guarantee application in the case of future, similar disasters.

Just about every organization searches formally or informally for good and bad lessons (especially bad ones) from its past activities in order to improve efficiency, effectiveness, organizational image, or the financial bottom line. Marlin (2008) suggested "It would be nice to say most of the learning comes from our successes, but the reality is that most of the learning comes from our failures" (p. 1). Individuals and governments are in the lessons learning business so-to-speak. For governments it is the politically correct thing to do. For individuals and groups the search for lessons is undertaken as a matter of survival. Information gathered from Internet searches shows that there are many competing views about what constitutes a lesson as well as on the value and limitations of using them as input to future policy making.

Various studies of hazards and disasters undertaken over decades contain direct as well as indirect references to lessons previously identified but apparently not implemented, only to be "re-discovered" following the next disaster. During the recent study "Working with a Changing Climate not Against it," a similar realization occurred. This study of Disaster Risk Reduction (DRR) projects identified lessons from a set of case studies of hydro-meteorological projects. The similarities between lessons identified and recommendations across contexts were evident. The questions then became "Why are similar lessons repeatedly identified for similar disasters." Shouldn't past lessons lead to better outcomes in the future? Is there a problem with the process of learning lessons by individuals and by institutions, including governments? Why do people and organizations so often not learn from past experiences? Where do lessons come from and does that influence their potential "re-usability" by future decision makers? Can organizations learn?

Questions such as these must be addressed if collecting lessons from disaster-related experiences is to continue to be considered valuable to DRR as well as to CCA (climate change adaptation) decision-making processes.

http://resilienturbanism.org/dlallemant/learning-lessons-learned-from-past-disasters/

Have we been looking in the right direction when it comes to DRR "lessons learned?" Is the missing aspect a focus on the need for management of "lessons identified?" One could argue that lessons not stored, re-used, or shared run the risk of producing nothing of value for long-term use. But there may be good reasons not to rely on past lessons. For example, a critique of military strategies has been that generals tend to prepare for the last war without considering different types of threats that might occur in the future. Is this what happens in DRR activities for hydromet-related disasters?

Forum Format

This session underscored the need to share with and listen respectfully to other participants. Each Forum attendee brought examples of lessons (identified, learned, lost, and missed). Throughout the Forum, there were appropriate times to share lessons and to listen to the lessons of others from different disciplines, countries, and disaster-prone areas.

The 20 or so sessions fell into one of the following categories: awareness-raising, education, exploration and action-oriented. Participants were drawn from different disciplines, countries,

and cultures, and had different educational and work experiences directly or indirectly related to coping with hydro-meteorological hazards and disasters in a changing climate. Thus, the organizers sought to provide participants with a common understanding of principle challenges facing DRR organizations in order to reinforce or to complement their personal and institutional knowledge-base.

Several of the sessions during the Forum were calls to action. Others provided pathways to respond to those calls, such as the preparation of an Antalya Statement, which represents a consensus of the experts at the Forum as recommendations for the future. Ramification statements were proposed to accompany any disaster-related lessons or recommendations identified. Such a ramification statement informs decision makers of the likelihood of problems if the recommendations are not pursued.

Resilient adaptation represents a flexible approach to societal and individual adjustments to the potential but still uncertain impacts of a warmer atmosphere and ensuing climate change. As new science about climate change is discovered, existing plans for climate change adaptation must be re-evaluated given a newly identified scientific reality.

Tuesday	Wednesday	Thursday	Friday
7:30-8:45am Registration	**9:00-9:45am** Lesson Learning Processes in Organizations and Networks: **"Organizations do not learn, individuals do." (Berg 2000)** **Q. How do organizations learn?**	**9:00-9:45am** Comparing the consequences of "bridging, integrating or blending DRR and CCA": **To what extent do DRR and CCA activities overlap, interact or inform each other's decision making processes? What are the differences among blending, bridging or integrating? "What a difference a word makes".**	**9:00-9:45am** Breakout Session Mixed Groups: Antalya Statement considerations: **This session requires the participants to separate into small groups to identify small number (5 or so) of urgent but sustainable calls-to-actions that can be the heart of the Antalya Statement.**
9:00-9:45am Forum Introduction: **Welcome by sponsors, organizers and hosts** **USAID/OFDA, WMO, Turkish Government Representatives, CCB.**			
9:45-10:30am Forum Background: What we hope to accomplish: **A lesson identified is not necessarily a lesson learned. "Keep an eye on the prize" enhances the value of DRR Lessons Identified.**	**9:45-10:30am** Analysis of Lessons that World Bank teams identified/learned: **Identifying approaches to integrate good practice in hydro-met modernization activities.**	**9:45-10:30am** Do disaster preparedness & disaster recovery provide a linkage between DRR & CCA? **How can meaningful cooperation be achieved y using DRR and CCA's similarities and differences?**	**9:45-10:30am** Plenary session: **Presentation of the breakout groups' calls-to-action items for discussion and selection. A ramification statement about risks of not acting must accompany each recommendation.**
Break 10:30-11:00	Break 10:30-11:00	Break 10:30-11:00	Break 10:30-11:00
11:00-11:45am The Global Setting of DRR & CCA: **2015 is a critical time for DRR. How do climate change and sustainability processes and goals impact the work of humanitarian organizations.**	**11:00-11:45am** Donor-led Roundtable & Open Discussion:" Learning in Partnering" **Enhancing coordination to align good practice in program or project preparation and implementation.**	**11:00-11:45am** DRR Pilot Projects: Pros and Cons: **Do donors and recipients of DRR assistance for projects and programs have different understandings of what is supposed to take place at the end of a project?**	**11:00-11:45am** **The "Antalya Statement" discussion & resolution of selected Action**
11:45-12:30pm About Change/About Lessons **Is the "lessons learning process" working effectively? Are we learning as fast as the world is changing?**	**11:45-12:30pm** NGOs and DRR Lessons Identified & Lessons Learned: **What are the impacts on NGOs (and others) of changing concepts: development guidelines or development fads? Does this affect the use of past DRR lessons identified?**	**11:45-12:30pm** Technology and DRR: **"Technology is the answer for improved DRR, but what is the question?" There is a need to enhance the value of new technologies, which can be of great benefit in DRR by involving societal users in meaningful ways.**	**11:45-12:30pm** **Develop a Plan of Action for Next Steps about Lessons Learned after the Sendai, Japan World Conference on Disaster Risk Reduction, as a follow-up to the Expert Forum in Antalya.**
Lunch 12:30-1:30pm	Lunch 12:30-1:30pm	Lunch 12:30-1:30pm	Lunch 12:30-1:30pm
1:45-2:30pm Where do DRR lessons come from? **Case Studies based on research and experiences of past disasters … but in a changing climate do past DRR lessons have future uses?**	**1:45-3:15pm** Next Generation involvement in DRR. **A discussion on the importance of including youth and young professionals in hydro-meteorological DRR activities, how to enhance participation, and magnify the impact of such collaboration.**	**1:45-3:15pm** Breakout Session Early Warning Systems and DRR: Where the technical meets the social: **Are DRR case studies of EWS past hydromet disasters reliable, in general, as providers of the earliest warnings of potential hydro-met and EWS effectiveness for various agencies, governments, NGOs? "A chain is as strong as its weakest link", so also are EWSs.**	**1:45-2:30pm** Closing Session: **The Way Forward**
2:30-3:15pm El Niño & its teleconnections: Lessons from case studies **Can case studies from a recurring natural event provide reusable lessons about it global consequences?**			**Wednesday Evening** **7:30pm – 9:30pm** **Voluntary** *TBD*
Break 3:15-3:30pm	Break 3:15-3:30pm	Break 3:15-3:30pm	
3:30-5:00pm Breakout Session A **SWOC*** review for the use of Case Studies in identifying DRR lessons learned **Small groups assess the value and limitations of Case Studies, a major source of lessons identified from past hydromet hazards and disasters**	**3:30-5:00pm** Breakout Session How do DRR organizations "manage" the knowledge process? **How effective is DRR organizational management in accumulating, using, archiving, sharing, and re-using previously identified lessons? Is there a need for a lessons learned "clearinghouse"?**	**3:30-5:00pm** Breakout Session Evaluation of DRR & CCA: **What is the role of DRR project evaluations in the lessons learning process? When to evaluate? Who does the evaluation? What criteria might be used in the evaluation? What is done with information form the evaluation?**	*(Strengths, Weaknesses, Opportunities & Constraints)

DAY 1
Tuesday

Formal Opening Session

The Expert Forum began with welcome comments from representatives of the Turkish State Meteorological Service (TSMS), US Agency for International Development (USAID), World Meteorological Organization (WMO), and the Consortium for Capacity Building (CCB). Dr. Mustafa Yildrim, Deputy General Director of the TSMS, remarked that disasters have increased in recent years and that investing in early warning and forecasting will help to make his country more resilient in the face of a changing climate. At present, Turkey uses the radio and the Internet to communicate warnings throughout the country. He was followed by Mr. Robert Leavitt, Assistant Deputy Administrator of USAID, who emphasized the importance of making warnings intelligible and relevant to actors at the local level. He cited Médecins sans Frontières as an example of an organization able to admit and learn from its mistakes, thereby improving their delivery of health during the recent West African Ebola crisis. He urged other organizations to do the same. On behalf of the WMO, Claudio Caponi encouraged participants to contribute freely to the meeting and, in the spirit of sharing lessons, to listen to the perspectives of others attending the Forum. CCB director Michael Glantz, who outlined CCB's concern with so-called lessons learned for DRR, offered concluding comments in this session. He emphasized the importance of enhancing the societal use of lessons identified from previous hydro-meteorological events in order to improve disaster risk reduction in the face of an uncertain climate future.

The Global Setting of DRR & CCA

Presentation: **Ilan Kelman**
University College London, UK
11:00am - 11:45am

A key feature of the global setting for lessons learned about lessons learned for hydro-meteorological (hydromet) DRR in a changing climate is that 2015 has three separate, major, top-down international processes defining guidelines for future development, humanitarian, and environmental activities. First, in mid-March in Sendai, Japan, the World Conference on Disaster Risk Reduction (WCDRR) under the UN International Strategy for Disaster Reduction (UNISDR) produced a voluntary, consensual, international agreement for defining how to create a more resilient world (UNISDR, 2015). In September, governments will assemble at the United Nations in New York to adopt the Sustainable Development Goals (SDGs), also a voluntary agreement. The current draft has 17 SDGs listing over 150 targets across many sustainability sectors. The third international, sustainability-related process will convene in Paris in December under the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP21), following the DRR and SDG agreements. At COP21, climate change

negotiators will seek a legally binding international treaty on climate change mitigation and adaptation.

Despite the fact that all three processes are being carried out separately and distinctly, there are some connections among them within the broader global setting. In addition to being mentioned in several draft SDGs, climate change has its own SDG goal (#13): "Tackle climate change and its impacts." The footnote to this goal states that, "Targets under a climate change goal may be part of and complementary to possible targets to be agreed within the framework of the UNFCCC negotiations." It seems odd that the SDG climate change targets are "part of and complementary to" the UNFCCC negotiations, rather than being considered as exactly the same. Disasters and climate change are also mentioned in several draft SDGs, but DRR does not have its own goal, although some targets might be considered to be specifically related to DRR. There is no footnote, however, mentioning the UNISDR-organized Sendai conference (WCDRR) or its agreement.

The discussions at the international WCDRR regarding the agreements include assisting those most affected by climate change, yet least responsible for greenhouse gas emissions, such as Arctic communities and Small Island Developing States (SIDS). The Many Strong Voice program (http://www.manystrongvoices.org) assists these two communities in adapting to climate change within the wider sustainability processes. Arctic and SIDS peoples have their own knowledge, wisdom, and traditions, and they are doing their best to place their current experiences in the context of history and analogies. They recognize the connections amongst DRR, CCA, and other activities as related to environmental sustainability. It is obvious to these communities to bring together DRR, CCA and sustainability, and they are already making it happen. By analogy other actors who learn about and apply hydro-meteorological lessons could increase their efforts to reduce the separation of the above-mentioned international activities in order to achieve greater effectiveness of their overlapping, desired outcomes.

About Change, About Lessons

Presentation:
Fernando Briones
CIESAS, Mexico City, Mexico
Patrick Pigeon
Université de Savoie, Chambéry, France
11:45am - 12:30pm

This session focused on the lessons learning process, the concern being that the DRR lessons learning process is "broken" and ineffective or, at least, not working well. The distinction between a "lesson identified" and a "lesson learned" is extremely important but often not realized. When lessons or recommendations are made after a disaster has taken place, there is a general belief on the part of civil society that identified disaster-related problems are going to be addressed until resolved by those in office. History shows, however, that time and again this is

not the case for a variety of reasons (e.g. no funds, no interest, low priority policies).

This session provided two examples of such limitations, one from Mexico and another from France. Each case stressed similar issues despite obvious differences in their national, local, political and geographical contexts. Key points raised during the discussion included the distinction between existing knowledge that is not yet used (e.g. "selective inattention"), ignorance and "ignore-ance." Ignorance is defined by the Merriam dictionary as a "lack of knowledge, lack of education, or illiteracy." "Ignore-ance" (a made-up word) on the other hand refers to having the knowledge and education about a certain situation but choosing to ignore any information they may come across that is in conflict with his/her preconceived views. This issue can also be addressed by cognitive dissonance. It helps explaining why stakeholders knowing existing risks still behave as if they were not having such knowledge, such as deciding to settle on snowslide-exposed areas without taking the existing and known risk under consideration.

Different actors (public, private, civil society, NGOs) have different needs, concepts, and protocols, which may help to explain why existing knowledge is not necessarily used or shared for DRR. Sometimes not using existing, relevant knowledge may be a deliberate choice. In order to transform DRR-related knowledge into effective decisions, there must be recognition of the inherent conflicts between decision makers' long and short-term interests. Political terms for elected officials often conflict with the need for a longer-term perspective, which is really required for sustainable CCA and DRR. In addition, we must be more aware of the local and indigenous conditions and priorities. More inclusive decision-making and the developing of local ownership of, as opposed to partnership for, DRR policies must become more widespread.

Uncertainty in science and policy does not help to reduce these gaps. Understanding the limits of scientific and of policy processes may help to explain why stakeholders and institutions in general do not necessarily use existing knowledge during a DRR process.

The presenters addressed what to do about this apparent reluctance, if not failure, to learn. Perhaps organizations can learn from the insurance industry's efforts to integrate lessons learned into its risk-reduction decision-processes and translate such lessons into fiscal (I would rather refer to "more prevention oriented" policies here) policies. Knowledge management systems (KMS), or knowledge clearinghouses—such as ONRN in France (Observatoire National des Risques Naturels), which includes information from insurance companies—can be valuable sources of information and potential learning. (http://www.onrn.fr)

> Having ownership of an activity is different from a partnership in that activity. The difference relates to possession and responsibility. When a partnership activity ends, neither party is obligated to continue to work with the other party on that activity or to maintain the activity on their own. For such projects, the goal of the partnership may itself be time-limited (two or three years is common); whether objectives have been met to the satisfaction of either or both of the involved partners, the project ends when the project end-date has been reached. Ownership, however, suggests that the aid recipient is committed

> to using its own resources to continue the activity until it takes hold. Continued commitment by the recipient also demonstrates that it actually values the activity and considers it of benefit to its affected stakeholders."
> Source: M. Glantz & M-A Baudoin, (2014). "Working With a Changing Climate, Not Against It", p. 121.

Any platform for sharing knowledge must provide useful input in a ***usable***, ***user-friendly*** format, one that acknowledges the existing limits of both scientific and traditional knowledge and assesses the quality of shared contributions.

Case Studies Based on Research and Experience of Past Disasters in a Changing Climate: Do Past DRR Lessons Have a Future Use?

Presentation: **Gregory Pierce**
Lund University, Sweden
1:45pm – 2:30pm

Where do DRR lessons come from? They are frequently drawn from case studies and personal experience. Case studies can provide concrete, practical knowledge of ground-level circumstances. They show how disasters in many ways are not just naturally occurring problems (devoid of societal aspects) and therefore should not be simplified in distillation into purely technical problems. They also provide a rich pool of information about specific contexts that are unique in time and space.

There are arguments against as well as in favor of a reliance on case studies for insight into DRR decision-making. An example against case studies comes from World Bank economist Elliot Berg who in 2000 suggested, "Past failure is a bad guide to present action." Several climate change researchers have made suggestions along the same lines, arguing that the future climate will not be like past climates. So, how useful might hydromet history be in a changing climate? The debate over the value of case studies notwithstanding, case studies remain an effective way to gain information about and insight into what decision makers might have done in a particular disaster situation that could have lessened adverse consequences. Case studies can also provide a glimpse of the future in terms of what might happen if lessons identified are not taken seriously.

A persistent assumption is that case studies are based on a weak methodology. This assumption persists because case studies continue to be thought of as unscientific or at best quasi-scientific. The case study is thought of as a method of the "soft" social sciences, which for many hydromet scientists trained in physical science methods continues to be viewed as a lower form of knowledge generation. Notably, this belief perseveres even though physical scientists often use case studies as a method in their own work.

A longstanding debate also continues to take place over the general value of case studies and more specifically their value for DRR decision-making. In the social sciences case studies are contested for a variety of reasons. The thought is that because they are often place-based, which

of course makes them rich in detail; their findings have little predictive value. They are, in other words, difficult to "scale-up." This is a problem similar to that of scales in geography. Local scales rich with details are often relatively poor in terms of visibility, that is, they are short-sighted. More global scales, on the other hand, despite their being less detailed, are broader in scale and have clear analytical frames.

But in the real world of DRR applications, this problem resolves itself once it is realized that the dichotomy is little more than a theoretical red herring. Preparing for and responding to disaster situations as they arise in the world requires us to deal with both scales at every turn. What needs to be understood, therefore, is that it is possible to scale-up without paying the price of a loss of detail. While doing so may be difficult, especially in deriving useful generalizations from hydromet events in one time and place that are applicable to other events in other times and places in the future, the *status quo* of repeatedly identifying similar lessons across a range of different events without ever actually learning the lessons of those events suggests that generalizations based on such principles as "forecasting by analogy" are warranted. Denying the usefulness of this form of generalizability mistakes the real world for a theoretical model of the world.

The issue of transferability of lessons from one country (or continent or culture) to another is also a concern to decision makers. Because a DRR approach worked well in Lima (Peru) does not guarantee that it will work well in Dakar (Senegal). Nevertheless, despite this concern with case studies, our knowledge about hazards and disasters and about DRR successes and failures will continue to be derived from specific cases, in terms of both personal experience and institutional development. Uneasiness with the singular nature of cases is based more on assumption than accuracy. In truth the "force of example" is often underrated, especially in terms of specific events that contextually are, perhaps, disasters.

The point is that social planning for "disasters" *cannot* take a hard science, deductive approach. Social planning for disaster is inherently messy because it is in the real-world of real peoples' actual experiences of coping with uncertainty. This is because *disasters* are not 'natural kinds', which means that there is no universal specification of what constitutes a disaster. This truism serves to reinforce the need for more analogically-based generalizations.

The notion of a flood provides an example. According to the dictionary, a flood is basically "the rising of a body of water and its overflowing onto normally dry land." What turns a flood into a disaster depends on its consequences and on how people perceive and anticipate those consequences. This means that classifying a specific hydromet event as having become a *disaster* is always context-dependent. Solutions to floods must, therefore, be equally grounded in local contexts, which parallels the very logic of the case study, especially for identifying DRR lessons and learning from them.

The answer to the following question must be a resounding, "Yes!": "In a changing climate, do past DRR lessons have a future use?" The lessons of past DRR events can be (and are) well captured in lessons identified through case studies. Such studies capture what Nietzsche called

the "rich ambiguity" of the narratives of the world, especially as different narratives come together. In contrast to the view expressed by Berg at the beginning of this section, American philosopher George Santayana noted, "Those who do not learn from history are doomed to repeat it." While this is a popular, well-known idea, there are many instances in history, including in hydromet history, where people did not learn from history and suffered the consequences. While academic debate on the value of historical information for decision-making continues, case studies will continue to provide information that enables forecasting of the potential consequences by analogy from similar extreme, high-impact hydromet events that might have occurred in other but similar contexts.

Can Case Studies of El Niño & Its Worldwide Teleconnections Provide Useful Lessons for DRR?

Presentation: **Elsa Galarza**
Universidad del Pacífico, Lima, Peru
2:30pm - 3:15pm

Why Focus on El Niño?

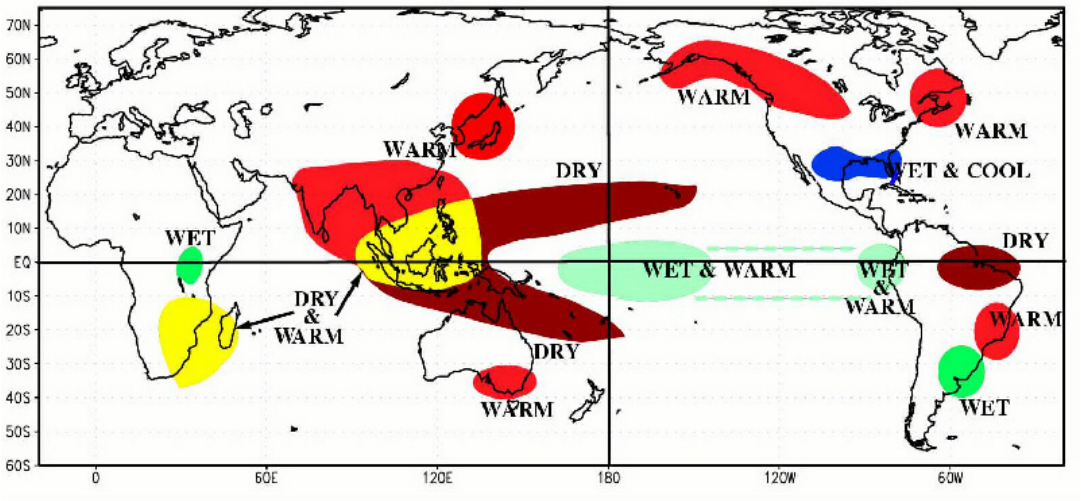
Since the year 2000, a number of El Niño events have been observed in Peru: in 2002–03, 2004–05, 2006–07 and 2009–10, but a strong El Niño has not occurred since the blockbuster event in 1997–98. The '97-'98 event was called the "El Niño of the Century." The value of focusing on El Niño centers on the fact that it is a recurring hydro-meteorological hazard-spawner, allowing governments, donors, and humanitarian assistance organizations to foresee regional hydro-met hazards. Although each El Niño event has different features, and impacts manifest differently even in the same location, the phenomenon produces local and regional patterns, allowing for the identification of lessons and potential learning from these recurring events. Some countries around the globe have a high probability of impacts (e.g. drought or flood or severe tropical storms) when an El Niño occurs.

What El Niño is

Seasonal warm currents in the tropical Pacific Ocean were named El Niño by fishermen along the coasts of Peru and Ecuador because the currents would appear around Christmas time and last for a few months. Every so often, the seasonal warming would continue into the rest of the year. That was the original meaning of El Niño. Today, however, El Niño—the warm phase of the El Niño Southern Oscillation (ENSO) phenomenon—is viewed as a Pacific basin-wide phenomenon, and is defined by prolonged warming in the central and eastern Pacific Ocean sea surface temperatures. It can recur between 2 to 10 years. The cool phase of ENSO is called La Niña. Both El Niño and La Niña cause anomalous changes worldwide of both temperature and rainfall.

The following map provides a generalized picture of the teleconnections that have been associated with El Niño. The term "teleconnections" refers to the different geophysical or statistical anomalies of an El Niño in the tropical Pacific Ocean. The location of reliable

teleconnections provides good candidate locations for DRR lessons learned about lessons learned; an opportunity to see whether identified El Niño lessons are taken into consideration.



https://pangea.stanford.edu/research/Oceans/ARTS/arts_report/arts_report_home.html

Peru and Ecuador are two countries directly affected by an El Niño event

Why Care About El Niño's Impacts (a Peruvian example)?

The Peruvian Ministry of Economics and Finance has developed economic instruments to prevent fiscal risks related to El Niño-generated hydromet disasters and for a more effective allocation of public resources. As part of that, in 2010 Climate Change and El Niño events were included in our multiannual macroeconomic framework, which is a short run planning tool for economic policy interventions. Also, in 2011 the National Disaster Risk Management System (SINAGERD) was created, which establishes the provision of incentives for public investment and other government regulations. Implementation of this system will eliminate perverse regulations as for example, the one that required infrastructure to be rebuilt, after a disaster, at exactly the same location, even if re-building in the same place might lead to increased vulnerability because of the use of inadequate materials or inappropriate sites.

The Peruvian Investment Office in the Ministry of Economy and Finance developed a social cost-benefit analysis (risk assessment) for public investments. They prepared guidelines and a number of manuals while still recognizing the need for more capacity building and knowledge to implement them.

In 2011 a new Peruvian insurance index scheme was created for El Niño events. It does not pay for the damages after a disaster but rather in advance, depending on an index that includes sea surface temperature considerations. The advanced payments can be used for risk mitigation or adaptation strategies. At the moment, only private sector agents such as fishermen and agriculture producers are using this type of insurance. It is expected that government regulations will allow regional and local governments to obtain insurance for their infrastructural assets. However, private insurance companies need relevant and open-access information to create an

index as well as reinsurance with international insurance companies. Forecasts constitute a valuable, key input for determining insurance payment fees. The Peruvian government has also agreed to set up contingency loans with multilateral banks. Those loans, however, are negotiated in advance with a low rate of interest and long repayment periods that become activated immediately after an emergency occurs. This is a useful mechanism for making economic resources for an emergency available faster and without depleting resources reserved for other purposes.

The bottom line is that El Niño's quasi-periodic return to the equatorial Pacific Ocean is associated with identified extreme hydromet events (droughts, floods, etc.) that recur in the same region. This allows practitioners as well as researchers to evaluate whether El Niño-related DRR identified lessons had been or are actually being learned.

SWOC Activity

3:30pm – 5:00pm

To further explore the usefulness of case studies in DRR decision-making and in the lessons learning process, Forum participants separated into small breakout groups in order to identify the strengths, weaknesses, opportunities and constraints of case studies: a SWOC assessment.

90+ participants from 40+ countries. Expert Forum, Antalya, Turkey

Because of the heavy use of cases and experiences for DRR, it is important to be aware of their strengths as well as their weaknesses in a continued reliance on them. The small group discussions showed that questions persist about the value of disaster-related case studies for identifying lessons. Some of the small group findings are presented in the following table.

Strengths	**Weaknesses**
• Narrative power • Explanatory power • Invites collaboration across different actors • Invites comparisons across events • Transferability of lessons • Context-specific • Generation of best practices • Demonstrate knowledge • Ability to generalize • Lessons learned in context • Powerful communication tool • Tool for decision-making under different conditions (social, economically, politically, environmentally) • Less expensive in contrast to other methods • Simpler to do • Link between different disciplines • Presents cause and effect relationship • Holistic view of the community / different stakeholders at a specific point of time, at a specific event • Involve local community	• Locality, local data needed • Context is very specific • Biased, researcher's bias • Study outcomes may not apply globally • Unknown transferability • Potential to use case studies for manipulation • Use of case studies out of context (social, economically, politically, environmentally) • Good vs. bad case study; what is a good case study? • Only somewhat generalizable • Usefulness is questionable • Can users understand case study analysis? • Clear actions moving forward cannot be discerned • Vertical vs. horizontal knowledge generation • Hard to draw differences • Inconsistent methodology • Incomplete information basis
Opportunities	**Challenges**
• Means to communicate lessons learned • Internalize knowledge • Proof to demonstrate intervention measures • Highlight cultural diversity under different conditions • Build better collaboration • Facilitate integration across sectors • Opportunity for collaboration between academe and practitioners • Highlight chain of information • Generate databases • Community / Stakeholder building • Discover indigenous knowledge, generate new ideas • Incorporation of other tools • Apply Science and Technology development at the local level • Encourage institutional capacity building • Dissemination of results to a wider audience • Innovate and enhance learning processes	• How methodology is organized • Comparability • Information is communicated in understandable manner • (Reliable and/or Primary) Data generation • Lack of trained people to conduct studies

Figure: Results of SWOC about case studies from the Expert Forum 2015, Antalya, Turkey

DAY 2
Wednesday

Lesson Learning Processes in Organizations and Networks

Presentation: **Asim Zia**
University of Vermont, Burlington, USA
9:00am – 9: 45am

One of the several definitions of organizational learning is as follows: "A process in which managers and employees within a company or organization learn to deal with new situations and problems and so become more skilled and experienced" (dictionary.cambridge.org). In the context of DRR and CCA, this would mean that emergency managers and development officials learn from the previous mistakes, failures, and even successes to better prepare for future hazards. While many organizations acknowledge, at least in theory, the importance of learning lessons from previous activities, there are several reasons (some legitimate, some not) that they do not engage in a formal process of learning lessons. Some of the barriers to effective lessons learning in organizations are suggested in the following figure.

Figure: Shows different aspects of organizational learning. (Marlin 2008. P.2)

To the question "Do organizations learn?" the answer is "yes and no; some do and some don't. Economist Eliot Berg (2000) of the World Bank suggests that the question "Do organization learn?" may be the wrong question to ask. He wrote: "Organizations don't learn, individuals do." Obviously an organization is made up of people and people gain knowledge over time, both individually and in teams. That personal knowledge may be shared with others within the organization or outside of it. So, there are four levels of lesson learning that can take place: individual, team-based, organizational, and inter-organizational (networks).

At the individual level, the role of emergency managers is critical in at least testing, if not adopting, the lessons from previous disaster-related mistakes or successes. Many DRR and CCA tasks are team-oriented, hence team-based learning is also crucial. Organizational learning focuses on the way in which an organization creates and organizes knowledge relating to their functions and the organization's culture. At the highest level, inter-organizational learning is the way in which different organizations in a network collaborate on shared goals, exchange knowledge and learn from each other. DRR and CCA lesson-learning processes involve each one of the four levels of organizational learning.

Some organizations have institutional processes that apparently work for identifying and acting upon identified lessons related to its mission, such as NATO and NASA. Other organizations have critically reviewed (periodically) the problems associated with using the DRR lessons that they had acquired (identified) from previous disaster situations (the World Bank, for example). So, it seems that organizations have a wide range of responses to why, how, or whether they even look for and verify, store, share, or re-use their own identified lessons.

Assessing whether agencies have a routinized lessons learning process in DRR is a critical need in this changing climate. Further, whether DRR related agencies are "muddling through" or rationally tracking organizational learning processes is another important assessment need. **A task of DRR management in the face of a changing climate is to make agencies capable of joint performance in identifying, storing, evaluating, sharing and re-using identified lessons in order to make organizational strengths effective and weaknesses irrelevant.** A global assessment of knowledge creation, knowledge retention and knowledge transfer for lessons learned in DRR by both the public sector and non-governmental organizations is needed to ultimately improve the lesson-learning process in organizations and networks.

Knowledge transfer and lesson learning processes can be integrated into DRR and CCA decision-making in three different ways (as shown in the following figure): (1) Reacting; (2) Reframing and (3) Transforming. In the reacting approach (also known as **single-loop learning**), decision makers adjust the actions and strategies to improve the efficiency of desirable outcomes. For problems that persist despite adjustments in actions and strategies, the second approach of reframing the problem (or **double-loop learning**) is advisable. The agencies and decision makers are advised to re-think their desirable goals in this reframing approach. In some highly complex situations, even reframing does not resolve persistently "wicked" problems. Such situations call for deep transformative learning (also known as **triple-loop learning**). The figure below shows these three ways to integrate lessons learned from prior successes and failures for the case study of flood management.

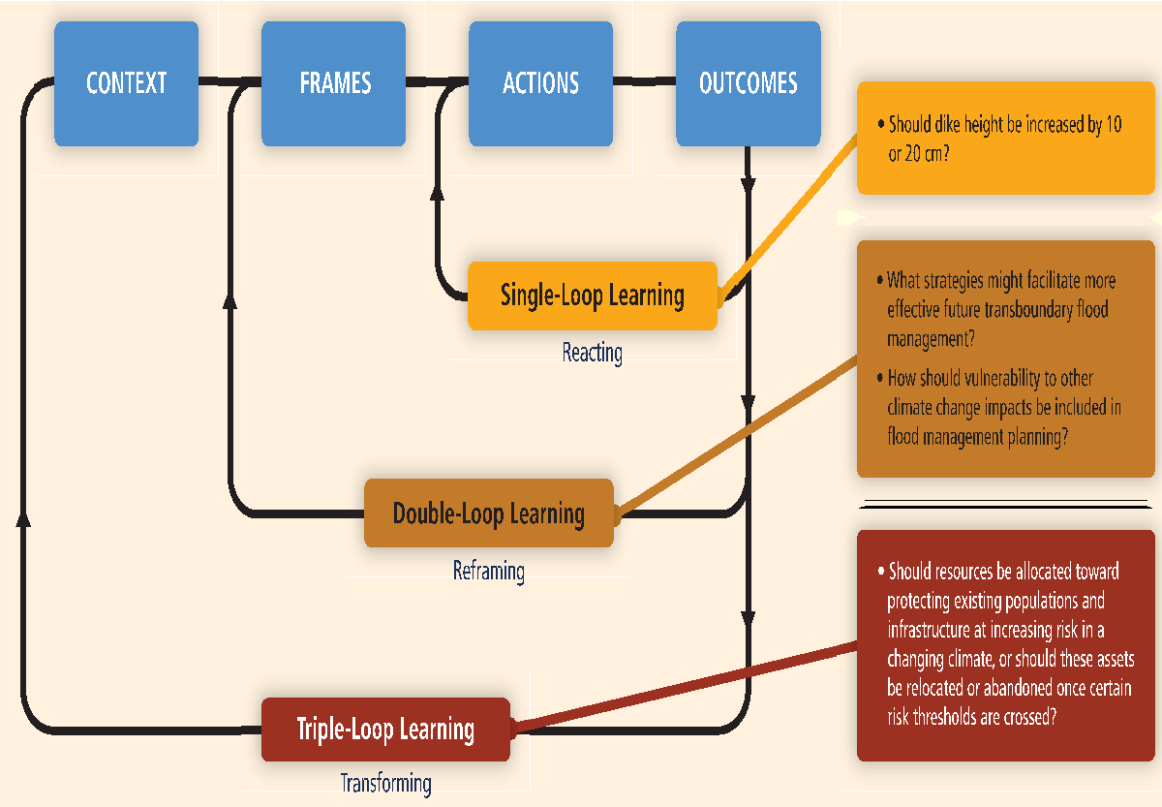


Figure: Three approaches to learning lessons. **Source**: IPCC SREX 2012: 53

From the breakout sessions, the groups learned that DRR and CCA related knowledge transfer processes are generally implemented at the "reacting" level (single-loop learning). Deeper learning that requires reframing and transforming are typically lacking in existing knowledge management and transfer processes across DRR organizations and networks. Forum participants pointed out that both the lack of leadership and of institutionalization of learning processes were some of the key missing factors in many DRR agencies to incorporate deep learning. One of the challenges to institutionalizing knowledge management and deep learning processes is a practical concern vis-á-vis resource allocation faced by public sector agencies. One participant for example stated that "Organizations need to balance between investment in learning processes vis-á-vis operational and organizational priorities: how do we integrate learning within performance and delivery of services." Another participant pointed out that DRR agencies "need to address the disparity between short term and long term benefits" of institutionalizing deep learning mechanisms in organizations and networks. Currently, there are capacity and structural issues in the organizations that inhibit (deep) learning. Many agencies and networks were formed in the 20th century, to cope with 20th century problems, and have to adapt to 21st century problems and needs. One fundamental question thus concerns how organizations can be restructured to institutionalize deep learning processes that meet the needs of 21st century problems such as those associated with climate change.

Analyses of Lessons from Donor-sponsored Hydro-met Projects

Presentation:
Daniel Kull
GFDRR, Geneva, Switzerland
Sezin Tokar
USAID, Washington D.C. USA
11:00am – 11:45am

At issue in this session was raising awareness of the distinction between lessons learned and lessons identified in an organizational context. Discussion in two sessions focused on how to improve the sustainability of donor-supported hydromet projects and accept the strong need for donor coordination and standardization for DRR and development related projects. The discussion also focused on identifying means of reducing "knowledge discontinuities" in hydromet modernization activities, in both the donor organizations as well as in the DRR-related projects.

Integrating Good Practice into Hydromet Modernization Investment
Daniel Kull, World Bank Group and GFDRR

The modernization needs of NMHSs (national meteorological and hydrological services) in developing countries are high, while financing sources are insufficient. For a host of reasons, not just financial, modernization efforts in low-income countries have generally not produced the desired outcomes.

The presenter raised issues of incentives, leadership and culture. What is needed are commitment to learning and knowledge sharing. The following actions are important to consider:

- Quality reviews that move beyond compliance to technical and delivery issues.
- More flexibility to address problems in projects ("learning from failure", less burdensome restructuring, etc.).
- Easily applied learning tools such as checklists as opposed to lengthy reports.
- Enhanced incentives (not just financial) from management and peers.
- Storage and accessibility ("findability") of lessons and experiences.

The presenter then highlighted what would be needed to modernize the NMHSs: institutional strengthening (capacity building and capacity development), modernization of observation infrastructure and forecasting, and enhancement of service delivery system to meet the needs of end users. To both gain support for modernization and optimally target limited resources, socio-economic benefits must be understood, assessed and discussed in comparison with

investment costs.

The presenter suggested some technical lesson learned by the GFDRR:

- Ensure appropriate technical support:
- Everyone talks about the weather, this does not mean they are experts
- Partnership must prioritize client needs
- Operational verses "soft" expertise
- Innovation verses reliability, scale and sustainability
- Procurement – getting the right stuff to do the right thing for the right people at the right cost
- Build in equipment training and warranties

The following considerations were noted by Forum discussions:

1. Provide incentives to support the need to collect lessons throughout a project, not only at the end of the project. The notion of a project "scribe" was raised.
2. Donors and recipients can explore ways to provide downstream incentives for individuals' and institutions' "built capacity" to stay on the job, as well as foster enhanced donor coordination. Such incentives would minimize if not overcome "knowledge discontinuity"
3. Involve younger generations (youth and young professionals) in DRR and CCA activities.

Develop post-project incentives for transitioning from partnership to ownership of successful pilot programs.

NGOs in DRR: Lessons Identified and Lessons Learned

Presentation: **Marcus Oxley**
The Global Network, London, UK
11:45am - 12:30pm

This session synthesized key lessons for DRR from a civil society perspective, examining why, across a variety of contexts, the Hyogo Framework for Action (HFA) failed to achieve its goal of reducing disaster losses. The group identified and discussed the following interrelated challenges to achieving DRR goals.

One of the primary challenges hindering progress in DRR is a failure to mainstream DRR concerns with development and CCA. Although DRR is a development challenge, and the crossover with CCA is strong, HFA's DRR goals are not widely recognized or acted upon outside of the DRR community. International DRR targets and frameworks are negotiated

independently from the rest of development. There is a dire need to integrate DRR with existing and future development plans at all levels.

The gap between national and international policy and local practice also hinders progress toward DRR goals. At the local level, it is unclear who is responsible for reducing losses and who is accountable in the case of continued losses. In order for national policies to translate to local action, there needs to be greater clarity regarding responsibilities and accountability.

Funding cycles, funding silos, and "the project treadmill," in which organizations must continually seek funding for their own survival and influence, provide few incentives for organizations to collaborate within or across sectors. As a result of this fractured, short-term funding environment, few organizations are able to focus on the larger picture, leading to duplication of efforts and inefficiency. **In order to better address DRR, the policy environment needs to foster collaboration, learning and adaptation, rather than the pursuit of individual, isolated, and short-term projects.**

Perhaps most importantly, the international community cannot legislate top-down resilience. Local resilience requires attention to local norms and values. At the local level, there is substantial under-reporting of small-scale disasters, yet the vast majority of losses result from small-scale, invisible disasters that do not get national or international attention. Systems are conditioned by extremes, not average conditions. All systems have safe operating limits. Although it is hard to know where a community's limits really are, those working in disasters are at the forefront of examining the critical limits. They are constantly learning from the challenges they face.

At the local level, people face multiple inter-connected risks, not just those posed by potential hydro-meteorological hazards. Hydro-meteorological risks interact with other sources of insecurity, including poverty and conflict, to produce unpredictable results; therefore scientific forecasting is only one piece of a larger puzzle. In this context, it is even more important to understand how communities themselves approach coping with multiple hazards. Local-level strategies are more likely to be holistic, flexible, and incremental, gradually incorporating learning from past experience. International frameworks should take this into account, as there is no point in investing in strategies that address a single, specific, “silo-ed” hazard.

In order to address this disconnect between global and local actors, primary bearers of risk should be more central to the decision-making. Governance processes need to be extended to the sub-national and local levels, bringing people into the decision-making space. There is a need for a policy environment that fosters genuine multi-stakeholder collaboration between people and governments.

Disasters can unlock resources, mobilize political will and leadership, secure commitment and present an opportunity to change, but often recovery efforts just re-configure the same risks without trying to achieve a deeper understanding of what causes vulnerability. In many instances, corruption or other non-local priorities take precedence over community needs during

the reconstruction process. The above challenges need to be addressed in order to improve progress toward HFA goals.

NGOs are working at the grassroots level with communities and people at high risk to climate, water and weather related hazards. They are also involved is sustainable development issues. Because of their ties to local actors and actions, NGO staff may be more connected to community needs and wants and may have access to details that higher-level actors (and donors) might not be aware of. NGO staff may also be familiar with local and indigenous knowledge related to coping with hydromet variability and extremes and about what projects work or do not work in a given cultural context. They can serve as the link between national and international DRR agencies and the local populations, helping to connect higher-level DRR decision-makers with the local knowledge base, thereby connecting "expert" project planners in distant capital cities or foreign countries to local priorities. **"Bubbling up" of local knowledge from grassroots, stakeholders and gatekeepers to the national level is a necessity.**

Youth Session – Next Generation Involvement in DRR
DRR Expert Forum Antalya

Presentation: **Lydia Cumiskey**
Youth Beyond Disasters, Delft, Netherlands
1:45pm – 3:15pm

More than half of the World's human population is under the age of 35, yet they have limited representation in many forums that make decisions that directly, or indirectly, affect them individually and as a generation. Youth and young professionals are the next wave of decision makers in various sectors of society including government. In most countries around the globe groups of youth and young professionals have come together to focus their attention on hydro-meteorological DRR, climate change, and their potential consequences in the future. The inclusion of youth and young professionals in DRR awareness-raising, decision-making processes, research, and project implementation is crucial to fostering and building a sustainable inter-generational "global culture of safety and resilience."

There are clear signs that youth in different regions around the globe have been contributing to the SGDs, to the Post 2015 Framework on DRR, to the Habitat III, and to the World Humanitarian Summit, among others. Despite an increase in youth participation in such meetings, there is still an apparent "glass wall" as well as a glass ceiling that keeps them from becoming treated as true partners and integrated into influential meetings and decision processes.

During this session, the presenter posed the following question to the Forum participants; "What is the added value of having young people involved in your DRR/ CCA activities?" The key positive influencing factors identified by the youth presenters included youths' motivation, creativity, innovation, proactive and persistent nature, adaptive capacity and resilience to failures, open minded and inclusive approach, strong skills in communication and technology,

and their ability to work outside of power dynamics. **Youth and Young Professionals are at the grassroots of society.** These characteristics were also reflected in the participant's responses, adding that their simplicity, honesty, curiosity and charm have the potential to add value to DRR activities.

An encouraging 75% of the Expert Forum participants indicated that they are working with young people in their organization or institution. The identified roles of young people included involvement in research and data generation, especially regarding challenging fieldwork. Youth and young professionals are much more conversant in new electronic technologies and in ways of transmitting and sharing information through social media and social networks. New technologies can make information transmission much more timely and effective. As agents of change and communication, youth, broadly defined, have the capacity to innovate and educate, reach to their families, peers and wider community, to raise awareness and change behavior to reduce the risk of disasters. Youth are acting as data collectors for risk assessment, analysis and planning before, during and after disaster events using open-source tools and crowdsourcing techniques, e.g. the Philippines Red Cross currently has a team of young people in the field doing risk assessments.

In order to enhance and foster the youth's potential in DRR and CCA it is essential that youth recognize their own value in this sector. This requires placing emphasis on appropriate training, capacity building, and formal and informal academic programs for youth. Apprenticeships among youth and young professionals will strengthen their skills and simultaneously foster intergenerational-learning through interaction and sharing. This will accelerate as well as facilitate the integration of youth in the workforce within organizations and contribute towards producing skilled, well-equipped, and more dynamic decision makers of tomorrow. A number of youth networks were identified during the presentation (e.g. Major Group of Children and Youth, Youth Beyond Disasters, and Water Youth Network) and recognized as important in sharing knowledge, networking, formal and informal experiences, ideas and skills in DRR. Academic programs on the other hand must be accessible, affordable, and well designed. Furthermore, this transfer of knowledge among generations can begin with children in early education and should be facilitated.

The difficulties of youth integration were recognized and it was recommended that youth keep pushing to have their voice heard, stay determined, and not to give in to social constraints. It is important that youth continue to prove they can hold responsibility and use it appropriately, after which they can build trust with their peers and within their communities and undertake greater responsibilities.

The discussion revealed the existence of a strong pressure among youth to conform to the routine norms in organizations. It can be seen more and more that young people don't accept this and seek to find ways out, are motivated to set up small companies or act as freelancers where they can more easily take leadership.

In summary, governments, donors and lending institutions have a responsibility to increasingly recognize, foster, and support the active involvement of youth and young professionals as critical useful partners, acknowledging their key role in the DRR lessons learning process and as the next generation of society's decision makers.

Breakout Session: How do DRR Organizations "Manage" the Knowledge Process?

Participants broke into small groups to discuss the issue
3:30pm - 5 :00pm

At issue during this Breakout Session was the effectiveness of organizational management to identify, collect, organize, catalogue, archive, re-use, and share previously identified lessons.

DRR experiences and lessons identified are fragmented. Even if there are many platforms to share information and knowledge, most organizations have not institutionalized mechanisms to learn about previous disaster-related lessons identified in order to take advantage of acknowledged mistakes so as to not repeat them over and over.

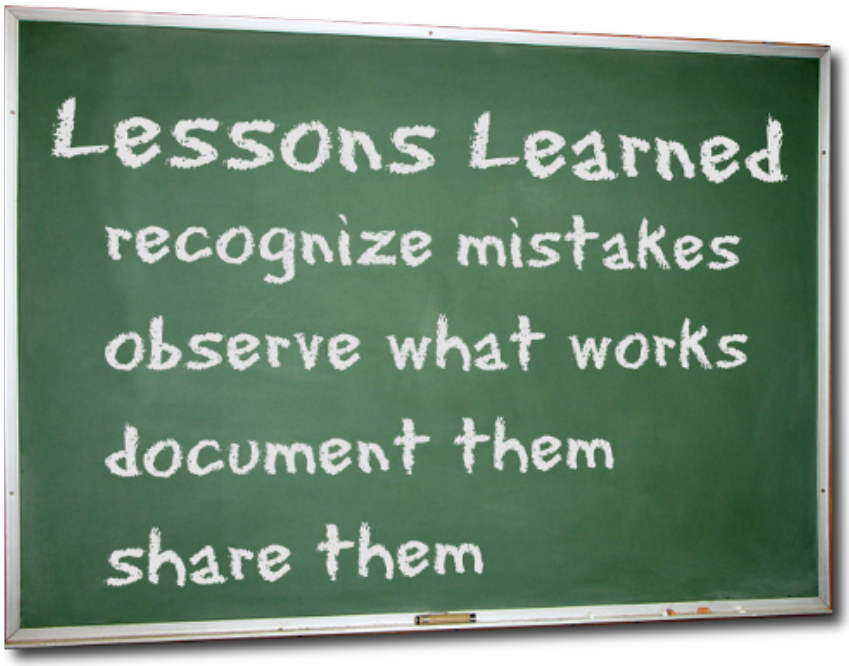
Through examples from France and Mexico the group discussed how, even when knowledge about DRR is available, outcomes may not match expectations, particularly at the local level. In France, for example, a national level platform (http://www.onrn.fr/) for collecting information on disasters and sharing information on best practices helps assessing gaps and shortcomings in existing DRR policies, yet do (did) not guarantee effective DRR policy implementation at local levels. In Mexico, plans to resettle Chiapas after the 1998 floods were developed without adequate options for people's livelihood and sustainability, and as a result, the resettlement failed. Nevertheless, after a landslide in 2007, rural communities were again resettled in modern, urban settlements without sufficient thought to developing acceptable livelihoods and without external aid.

Examples such as these demonstrate the failure of DRR organizations and practitioners to use information to learn from previous experiences. They also demonstrate how local and regional actors have different needs, tools, and interpretations of risk. However, intermediaries may play an important role by facilitating interaction and understanding among different parties, and helping to identify appropriate timeframes and the kinds of information needed.

Participants emphasized the need for *accountability* in order to pressure organizations for better results. The implementation of DRR actions may be developed within realistic timeframes and based on sustainable development in order to achieve better results and not just produce short-term initiatives that may work to justify DRR actions but that may not work in the long-term.

Also, the need for a lessons learned clearinghouse was discussed in this session. A few organizations (e.g. NASA and NATO) have institutionalized learning processes because of

public pressure to show positive results. Incentives to look back to lessons may require changes to organizational culture, and any cultural change does not come immediately.



www.icedotatheletes.com/2013/09/learning-process/

DAY 3
Thursday

Do Disaster Preparedness and Disaster Recovery Provide a Linkage Between DRR and CCA?

Ilan Kelman
University College London, UK
9:00am - 9:45am

Presentation Part I

DRR and CCA have plenty of similarities, but according to their definitions from UNISDR and UNFCCC, what are the differences? First, based on the definitions, CCA deals with only climate while DRR deals with all hazards including climate. Second, CCA specifically deals with the long-term (since climate is defined as average weather) while DRR deals with all time scales, including sudden-onset hazards such as earthquakes and longer-term hazards such as creeping environmental changes. Third, DRR's definition is about "the causal factors of disasters", meaning responses to possible or actual hazards alongside addressing vulnerability, while CCA is "adjustment to actual or expected climate and its effects", meaning responding to actual or expected changes to the climate.

In all three differences, DRR (by definition) includes all of CCA (by definition) while CCA is much more focused. Consequently, DRR includes CCA and much more, meaning that CCA can sit as a subset within DRR. DRR is not the end story nor does DRR cover everything. DRR must be placed within its wider contexts of development and sustainability.

Without this approach, we could build a school which successfully incorporates CCA, but which collapses in the next earthquake. Similarly, a school that withstands all hazards in a country that does not permit the education of girls has not necessarily advanced the sustainability agenda. Instead, processes need to be considered together and need to be linked, with a definition-based mechanism being CCA sitting within DRR, which in turn sits within sustainability.

Presentation Part II

Disaster diplomacy (http://www.disasterdiplomacy.org) investigates how and why disaster-related activities do and do not influence conflict and cooperation. The key phrase is "disaster-related activities" which covers both pre-disaster efforts including prevention and mitigation and post-disaster actions including response and recovery. Disaster diplomacy case studies are not just about what happens when a volcano hits a war zone or about humanitarian aid from enemies. They also examine before a disaster, how warning systems can bring people together or how developing building codes can lead to ceasefires.

Overall, disaster diplomacy seems not to work. All case studies so far suggest that disaster-related activities do not create fresh diplomatic opportunities, but they sometimes catalyze conflict resolution in the short-term. Over weeks and months, disaster-related activities frequently have the potential to affect diplomacy, but a pre-existing basis must exist for the reconciliation, such as ongoing secret negotiations between political enemies or cultural and trade links, formal or informal. Over longer time periods, non-disaster factors have a more significant impact on diplomacy than disaster-related activities. Examples of non-disaster factors are leadership changes, mutual distrust, belief that an historical conflict or grievance should take precedence over present-day humanitarian needs, or desire for conflict.

Comparing the Consequences of "Bridging, Integrating, or Blending" DRR and CCA

Marie-Ange Baudoin
University of Cape Town, South Africa
9:45am - 10:30am

This session continued discussion of the similarities and differences between DRR and CCA as well as potential ways of better linking the two fields into a more collaborative relationship. Natural hazards—especially hydro-meteorological ones—are expected to change in frequency, intensity, and location as a result of climate change. This is despite stagnation of funding for development aid and expected increases in disaster impacts due mainly to vulnerability rather than due to changing hazards. In this context, there is a critical need to improve effectiveness of international development aid support. One way to foster such an improvement is to recognize their common, overlapping concerns.

There are several common, overlapping interests between the DRR and CCA fields of activities: a shared concern for improving hazard and disaster preparedness and response, and the desire to reduce vulnerabilities of at-risk populations and to increase societal resilience in the long-term. Both fields have been increasingly focused on climate-, water- and weather-related disasters but for different reasons.

Acknowledging the need for improved collaboration between DRR and CCA as a way to enhance the effectiveness and longer-term impacts of development activities, a question remains: how could one foster such collaboration? Some believe that CCA should be nested within DRR, which in turn, should be placed within the wider context of development and sustainability. Others have suggested the opposite (DRR is placed under CCA)—yet CCA by definition does not deal with earthquakes, volcanoes, or tsunamis amongst many other hazards. Still others believe that the two expert communities remain autonomous but bridge their activities that encompass a common concern. On the issue of integration, the group explored three possibilities: integrating, bridging, or blending DRR and CCA. Each possibility comes with its own potential risks and substantial gains.

Integrating DRR and CCA would be the most sensible pathway for forcing collaboration. It would mean completely merging both communities to form only one group. A DRR/CCA group would then deal with all activities including hydro-meteorological and other climate-related disaster, current, or future but not letting one hazard dominate, instead focusing on vulnerability reduction across all hazards and hazard drivers including climate change. This would mean less fragmentation of funding, but there is potential for one of the communities to dominate the other—which would have advantages and disadvantages. The challenge is that, because of the current international focus on CCA, CCA might become the center of all activities to the detriment of managing current disasters and reducing the vulnerability to non-climate hazards. There is also a risk that the support provided to emergency and relief interventions could be lessened, even though it remains necessary in various regions.

Bridging DRR and CCA would be the least demanding option. DRR and CCA would remain their own autonomous entities, managed under different units, but some collaborative interactions would be fostered. For instance, practitioners from each field may be required to attend workshops or meetings held by the other community to keep up to date and informed about each other's activities. However, this bridge would not guarantee concrete collaboration in developing projects that respond to current risks but also take into account future impacts of climate change.

Blending DRR and CCA represents an option in between bridging and integrating. The core idea behind blending DRR and CCA is that both fields of activity would gain from stronger partnerships on common concerns, while keeping their specific foci. Blending would open up the following opportunities: the ability of each field to learn from the other in terms of approaches and methods to implement projects; a reduction in the number of overlapping activities thus improving aid efficiency; the anticipation of future climate risks when planning DRR activities; the ability to root CCA projects at the local level; the possibility of enhancing resilience at the local level through risk anticipation; a focus of efforts on vulnerability reduction; and a reduction in funding fragmentation to improve overall effectiveness of development aid.

Bridging (linking without integrating) or blending (linking and integrating) DRR and CCA will require meaningful changes in the way these expert communities interact, which means that they can no longer remain quasi-independent in their fields of operation or even within the same agency. As such, successfully achieving this bridging is a major challenge for aid agencies, one driven primarily by the following factors: the two communities have different mandates; are focused on different aspects of development; have differing missions; have different timeframes of concern; employ different approaches to fulfilling their missions; require different resource streams and amounts; have different ways to access funds; and have different timeframes for evaluating successes and failures. Building on their common interest in addressing DRR in contemporary times and well into the future would effectively bridge or blend these two communities, much in the same way that hydrology and meteorology have overlapping interests that lead to hydromet concerns or that overlapping agriculture and meteorology interests have led to agromet as a specialized activity.

In the context of a changing climate, effectiveness and longer-term development gains demand that the DRR and CCA communities stop ignoring each other. Acknowledging their specificities and a need to keep some activities separated (e.g. emergency response for DRR; building soft sea walls against sea-level rise risks for CCA), their overarching goal, justifies blending a subset of activities of these two groups at some level in order to increase resilience among vulnerable communities and institutions facing an uncertain future.

DRR Pilot Projects: Identifying the Value of Pilot Projects

Presentation: **Marc Hufty**
Maison de la Paix, Geneva, Switzerland
11:00am - 11:45am

A pilot project can be defined as a preliminary or exploratory trial aimed at gaining experience in an uncertain context. It can refer either to a feasibility study aimed at testing the methods and procedures to be replicated on a larger scale ("scaled-up"), or to the test study of a particular research instrument. For many reasons, donors and recipients alike support pilot projects. Perhaps the most important reason is to test new DRR concepts before long-term commitments are to be made. Simply stated, it is like retail shopping: “try before you buy.”

The idea behind pilot projects is to discover potential problems and develop corrective measures, in view of improving the chances of success for larger projects. They facilitate the testing of new DRR/CCA concepts before long-term commitments are to be made. Donors and recipients alike support pilot projects as they have many advantages; they can be small, low cost, flexible, short-term (one to three years) and exempt of the heaviness of bureaucracy.

Pilot project replication is commonly assumed. Yet, it has been observed repeatedly that projects have a poor record in being scaled-up, and more often than not they are terminated at the end of the funding period. There may be different reasons for this.

First, a pilot project often starts out as a partnership between a donor organization and a recipient government. However, the parties may have different understandings of what is to take place at the end of the project. Recipients may legitimately expect, if not told otherwise, that if a pilot project proves successful according to preselected indicators, it will be continued, whereas donors may anticipate transitioning the project and the financial support for ongoing activities to local ownership. Where such misunderstandings arise, projects may be terminated or put on hold while the recipient government searches for a new source of support. This raises ethical as well as practical questions.

Second, because pilot projects are of relatively short duration, the individuals with newly acquired expertise or "capacity" as a result of the projects may have to move on to a different job requiring different skills, thereby creating a "knowledge discontinuity," as new, untrained, people have to be called in to replace them. Identifying incentives for the continuity of DRR/CCA built capacity and lessons learned should therefore be a major concern for donors, governments and implementing agencies.

Third, the implementing agencies tend to identify the best conditions for initiating a pilot project, seen as a showcase for a specific method or instrument. They logically select the most favorable local context, a dedicated leader and team, and guarantee financial, technical and political backup for a given time period. Yet, these favorable conditions make the lessons learned from pilot projects hardly replicable at a larger scale or let alone under different, less appropriate conditions.

Fourth, scaling-up depends very much on the way evaluation is conceived within a project. Given the nature of pilot projects as experiments, they have a strong learning-by-doing orientation, for which tailored and reactive qualitative responses are crucial, thus departing from pre-selected indicators. Their evolutionary nature is to be taken into account in the evaluation process, built-in from the start, and their "replicability" should not be overestimated.

In sum, pilot projects have their own logic, which make them a specific instrument in DRR/CCA. Their role for acquiring lessons in view of potential upscaling depends on the conditions under which they are designed and implemented.

Technology and DRR

Presentation: **Lino Naranjo**
MeteoGalicia, Galicia, Spain
11:45am – 12:30pm

A question about technology often asked is as follows: "Technology is the answer, but what was the question?" With regard to DRR efforts, there is an apparent bias toward reliance on advanced technologies to reduce risk to hydro-meteorological hazards and disasters

(preparedness, response and recovery). While there is no doubt that new technologies and ways of doing things can be of great benefit to DRR in a changing climate and in the search for sustainable development, science alone is not enough to make the DRR process more effective. There are also many articles that warn decision makers about an over-reliance on technologies big and small (e.g. Farvar and Milton, 1972. The Careless Technology: Ecology and International Development), and about the potential of inappropriate technology that can increase risks (e.g. Schumacher 1972. "Small is Beautiful: Economics as if People Mattered").

What is often downplayed, if not overlooked, is a consideration of the capacity of a developing society to absorb new technologies and realize their potential benefits. Technology is not neutral; how societies use it determines its value. It is not enough to create good technical procedures while neglecting the social, political and cultural context of at-risk communities. Usable science and technology for DRR must involve active support for and from the communities as stakeholders.

Many countries have been successful at using technology in preparing for and responding to hydro-meteorological hazards and disasters. Yet, the global DRR experience suggests that many shortcomings still exist in the way that technological advances are used. One of the main problems is the lack of integration of technological advances with the social environment where they are to be applied. It is a major challenge to adequately coordinate technological applications, knowledge, and sustainable development processes at the community level.

The decade of 1990-1999 was deemed The International Decade for Natural Disaster Reduction (IDNDR). It was one of the first efforts in DRR that was supported with a lot of technology. However, an important weakness of that decade was the lack of a social perspective in the application of technology. In 2005 the Hyogo Framework for Action (HFA) tried to address this problem by placing a stronger emphasis on the political and social aspects of DRR. Despite advances in DRR since the Hyogo Framework for Action, there are still persistent problems and misuses of technology and a lack of adequate consideration of social factors (both opportunities and constraints).

There are many constraints on the effective use of technology, which include, but are not limited to, the following: lack of political interest; conflicting priorities; inadequate institutional mechanisms; lack of access to knowledge; technical capacity and funding.

For successful technology transfer it is not enough to give to a country access to the latest technology. Developing countries must take full control of and responsibility for it. To this end donors must invest in capacity building in the technology sector and ensure that technologies are appropriate for any given recipient's capacity.

Early Warning Systems and DRR

Presentation:
S.H.M. Fakhruddin
Water Consultant, Bangkok, Thailand
Curtis B. Barrett
USAID, Washington D.C. USA
1:45am – 3:15pm

Each word in the phrase Early Warning System (EWS) has a few definitions of its own which can lead to different combinations, and therefore interpretations, of what might constitute an EWS: How early is early? Who is to be warned? How are they to be warned? How are those warned to provide feedback to those issuing the warning about the usefulness of the warning? Forecasters may believe their job is done once they have provided a forecast, but was the forecast understandable by the lay public? Was it issued in a timely way? How was the warning delivered to at-risk populations? Did they understand the nature or urgency of the warning?

EWSs are key elements of DRR. Despite advances in forecasting and early warning, hydro-meteorological 'surprises' continue to result in loss of lives, livelihoods, and property (e.g. Indian Ocean tsunami in 2004, cyclone NARGIS in 2008, Pakistan Flood in 2010, etc.). In many such cases, problems with EWS were observed.

An EWS is a social process that embraces both social and technical aspects. The technical aspect must always be placed in its social context. The ISDR Platform for the promotion of EWS indicates that a complete and effective EWS comprises four elements, spanning knowledge of the risks faced through to preparedness to act on early warning. A failure in any one part of the system is, in essence, a failure of the whole system.

This session proposed the-end-to-end-to-end (three ends) concept where the feedback mechanism (from users to forecasters) is represented by the third end and most important for making a successful EWS. The traditional view is end-to-end, with forecasts producing a warning to end-users. The feedback in end-to-end is implicit, but adding the third "end" highlights feedback as an explicit, and essential, part of EWSs.

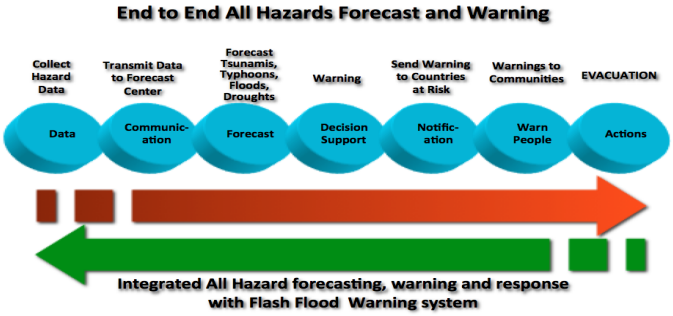


Figure: An "end to end to end" [E2E2E] early warning system

Scientific information almost always has a certain degree of uncertainty. The effectiveness of early warning information relies on how those uncertainties are translated, communicated, and managed. Hence, decision processes must clearly share roles and responsibilities among technical and social decision makers to contextualize warning information and hope to elicit appropriate, desired responses.

Most EWSs fail for one of three reasons: 1) Warning messages were not understood, lacked relevance, or were not conveyed to important segments of the population 2) Warnings are understood, but ignored, whether because people seek confirmation before acting or people make their own decisions based on experience or culture 3) People receive the warning and understand it, but cannot act because they lack resources, safe shelters, or evacuation routes. These failures occur because of the unidirectional chain of information flow. **A chain is *only* as strong as its weakest link; by analogy each component of an early warning system must be effective for the warning system to warn targeted recipients.**

In many places advances in generating hazard and disaster risk information have not yet been incorporated into operational forecast systems and, consequently, operational forecasts have not been integrated into decision-making processes in order to reduce disaster risks. An emphasis on enhancing the Concept of Operation (CONOPS) for EWS, which provides planning guidance and outlines operational concepts and consequence management responses, serves as the foundation for further development of detailed national, regional, and local forecast operations plans and procedures. It includes guidelines for notification, coordination and leadership with regard to response activities, supporting operations, and the coordination of public emergency information across all levels of government. It is supplemented by Standard Operating Procedures (SOPs) that provide standardized and documented procedures, functions, recommended data acquisition, data processing, and advisory/watch/warning message formulation and distribution. SOPs provide the detailed instructions and checklists that an organization (or individual) needs to fulfill its responsibilities and perform its assigned tasks.

Evaluation of DRR projects

Presentation: **Arielle Tozier de la Poterie**
University of Colorado-Boulder, USA
3:30pm – 5:00pm

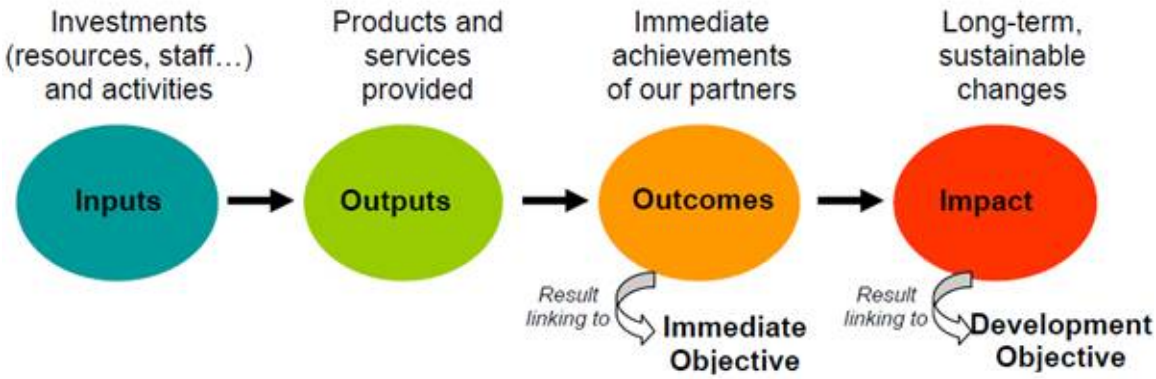
During this session the group considered basic principles of monitoring and evaluation (M&E), what is currently done with evaluation results, current incentives to apply lessons from previous projects, and what improvements might be made to current processes to encourage increased incorporation of M&E lessons learning into planning of future projects.

Monitoring and Evaluation have the potential to be a valuable source of lessons identified. They can serve to inform changes while the project is being implemented, and determine whether (and

why) projects are (or are not) meeting their objectives. However, if M&E is to function as a means of learning rather than simply identifying lessons, there must be a feedback loop and incentives for incorporating their findings into future project plans.

While some European DRR and development organizations appear to have effective, methodical systems in place for collecting from M&E, others have consistently failed to conduct M&E or to learn from evaluation results in a systematic way. In the latter case, because M&E is often not an integral part of implementation plans many evaluations rely on memories and project documents to reconstruct baselines, further complicating the ability to demonstrate reliable connections between programs and outcomes. Further investigation of the different incentives or structures that explain these radically different approaches to M&E might be useful in determining how organizations that currently lack systematic M&E feedback to governments and donors might begin to institutionalize learning from M&E.

Another important obstacle to using M&E findings, which was highlighted in the discussion, is the rigidity of project proposals. Funding that allows and encourages the implementing agencies to adjust activities in response to mid-term evaluations (mid-course corrections) would enhance the potential value of M&E findings.



Without feedback, results from M&E cannot be transformed into lessons learned and acted upon
Source: http://devosvaughan.com/services-programme-review.html

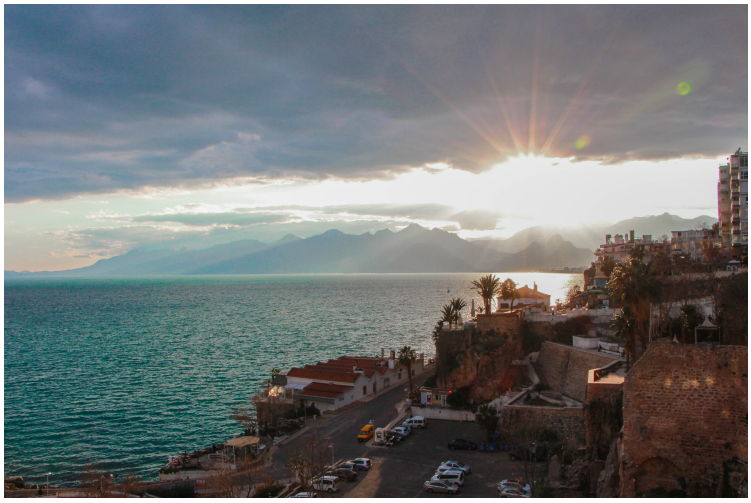
Although lessons from M&E have the potential to be useful, it is not always easy to locate or access relevant findings. The visibility and accessibility of such documents (e.g. transparency) has to be increased to make them more effective. Participants also acknowledged the important role that local actors should play in evaluating projects taking place in their communities, as well as the importance of broader stakeholder engagement. If evaluations are to inform the evolution of a project, "scribes" must be assigned to monitor implementation and feed information back to the donors and the recipients, e.g. the implementing partners. Scribes should be taken seriously and compensated specifically for this task as opposed to assigning an unpaid volunteer or to a project worker as an “extra” task to perform.

Using project-specific indicators, interventions can be evaluated based upon their effectiveness, efficiency, sustainability, outcomes and long lasting impact. Indicators such as these should

reflect how practitioners understand their projects. Most M&E protocols measure outreach and outputs, as these are more easily quantifiable and attributable to the project. Outcomes and long lasting impacts (the behavioral changes resulting from an intervention and subsequent changes in vulnerability or resilience), while more difficult to measure, are what enable implementers to test assumptions upon which projects are based.

Establishing a formal, pre-project baseline facilitates the tracing of outcomes and impacts to a particular intervention, but it cannot always overcome difficulties associated with establishing causality (e.g. attribution) in complex social environments. Advanced funding and planning are essential to M&E systems that collect lessons and provide incentives for their use in future projects. Stakeholders agreed upon the need for increased evaluation of outcomes and impacts, which can only be measured several years after project completion, a difficult task given the time-dependent funding that requires successes in the short-term and not many years after the project or program has ended.

Finally, evaluators face conflicting pressures when presenting their results. One the one hand, M&E should be designed to uncover important lessons pertaining to project successes and failures; however, this potential to expose inefficiencies, errors, or failures means that M&E results must be sensitive to the political environment. The reputations of donor and implementing organizations may be negatively affected by negative evaluations, potentially jeopardizing political or financial support for future programs. As stated by one participant "there is an institutional imperative to make sure that the credibility is not threatened." Those writing evaluations may therefore face significant pressure to put a positive spin on their results, emphasizing successes while downplaying areas in which improvement is needed. Consequently, the results of M&E studies may not accurately represent the key lessons to be drawn from a particular intervention. This may also explain the tendency of many evaluations to focus on the administrative aspects of a project (e.g. whether activities proposed were actually implemented or how the funds were spent) than on substantive changes that have resulted from project activities.



Winter sunset in Antalya, Turkey. Photo credit: Robert J. Ross

DAY 4
Friday

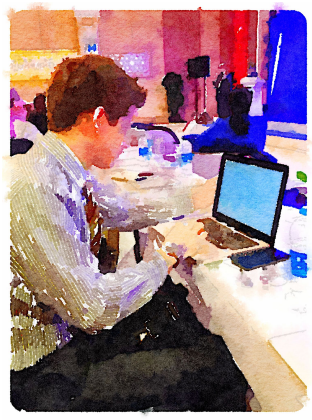
The Antalya Statement Process

9:00am – 12:30pm

During the last day of the Forum, the organizers focused on lingering concerns about "Lessons Learned about Lessons Learned about Hydromet-related DRR in a Changing Climate." The session separated the participants into small discussion groups, each focused on one of the 10 or so recurrent concerns raised throughout the Forum. Each group was asked to identify up to five urgent calls-to-action that it felt should be included in a formal Antalya Statement from the Forum. The group action items were presented to the plenary for discussion, selection, and combination to arrive at 10 or so key issues.

A list of 10 calls-to-action were selected for further consideration by a writing group that met for 3 days in Istanbul to refine the Antalya Statement. The final 6 Calls to Action were sent to all 94 participants for their comments, which were then incorporated into the final Antalya Statement. The English version was translated by several of the participants into their national languages: Italian, French, Philippine, Korean, Chinese, Japanese, Spanish, Arabic and Bangla. These 10 translations were then uploaded onto CCB-boulder website as supplemental material for CCBs panel on Lessons Learned about Lessons Learned at the World Conference on Disaster Risk Reduction (WCDRR) in March of 2015. Hard copies of the Statement were also dispersed at the conference. The Antalya Statement can be viewed below.

The Antalya Expert Forum ended with discussions about a "Way Forward." Though the Forum ended, the "Spirit of Antalya" cooperation among disciplines, government agencies, youth, scientists, applied science researchers, academics and program administrators will continue on into the future.



DRR Expert Forum

The Antalya Statement

February 17, 2015 Antalya, Turkey

An Expert Forum on Disaster Risk Reduction (DRR) in a Changing Climate: Lessons Learned about Lessons Learned, was convened by USAID, CCB/CU, WMO and TSMS with the support of NOAA and GFDRR in Antalya, Turkey, 10 to 13 February 2015.**

"The best time to have planted a tree here was 20 years ago. The second best time is now." ***-African Proverb***

So it goes for societal responses to hydromet disaster risk reduction in a changing climate.

** US Agency for International Development, Consortium for Capacity Building, World Meteorological Organization, Turkish State Meteorological Service, National Oceanic and Atmospheric Administration, Global Facility for Disaster Response and Recovery.

Disclaimer: The views expressed in the Antalya Statement are those of the writers and participants and do not necessarily reflect the views of any of the supporting organizations.

For more information please visit CCB-boulder.org
Contact: michael.glantz@colorado.edu

The Antalya Statement

Ninety participants attended the Forum from 43 countries, drawn from government agencies, humanitarian organizations, NGOs, academic and applied science research institutions, practitioners and youth & young professionals.

Forum Participants Statement of Concern

A review of our own studies and others' experiences with hazards and disasters reveals a wealth of lessons that were previously identified but had not been implemented, only to be "re-discovered" during the next similar disaster…even when the subsequent disaster occurred in the same location as a prior event. A key insight is that a lesson "identified" is not automatically a lesson "learned".

Possible Ramifications if lessons identified are not actually learned

The following calls to action are drawn from a larger set of concerns expressed by Forum participants. Ignoring these concerns will enable "business as usual" mindsets and mental models to prevail in this time of critical environmental and social change. DRR response costs are ever-rising even as demands on DRR budgets intensify in this time of growing uncertainties about climate, water and weather high-impact and record-setting extremes. Thus, we are now forced to develop truly collaborative approaches to achieve short-term and longer-term development goals. Failing to heed these calls to action will likely result in both unintended and obvious negative consequences by expending scarce resources with little effect on risk reduction.

Six Calls-to-Action

1. "Lessons Learning" Process: The Need for a "Lessons Identified" Portal

A user-friendly, innovative DRR knowledge portal should be established to focus specifically on collecting, verifying, cataloguing, archiving, transferring and sharing both positive and negative DRR-related lessons identified during previous DRR-related interventions. These lessons can then serve as the bases for more efficient and effective future interventions.

2. Incentives For DRR Learning for Capacity Building (and Pilot Projects)

Governments, development banks, UN, donors and implementing partners are called to improve the sustainability of DRR project outcomes by creating incentives (economic, financial and regulatory) for retaining past capacity building achievements of individuals and institutions. Transitions from pilot projects to longer-term DRR programs should from the

beginning consider past successes and failures. They are also called to select, design and implement projects in a spirit of true collaboration with each other as well as with recipients to clarify from the start all participants' expectations of outcomes.

3. Blend and Integrate DRR & CCA (Climate Change Adaptation): Fund "Orange"

DRR and CCA communities are called to meaningfully blend their overlapping DRR-related activities in mutually supportive ways for longer-term sustainability. The phrase *Fund Orange* is meant to metaphorically encompass this call: if DRR activities are "red" and CCA activities are "yellow," then mutually supportive funding would target the blend in their overlap—it would fund the "orange." Demands on DRR and CCA funding are likely to increase with future increases in global climate uncertainties. The window of opportunity for DRR and CCA to act alone as primary colors is closing.

4. Role for the Next Generation (Youth & Young Professionals)

Governments, development banks, UN, donors and implementing partners are called to increasingly recognize, foster and support the active involvement of youth and young professionals as critical partners, acknowledging their key role in the DRR lessons learning process and as society's next generation of decision makers.

5. Hydromet Warning Systems

Early Warning Systems (EWSs) developers and operators are called to pay more attention to the systems' weaker links and to seek and listen to feedback on what works and what does not from the concerned groups and communities further down the end-to-end warning chain. Listening to feedback adds value to EWS use even if only by identifying the limitations of the current science. EWS developers and operators can only benefit by taking into account --- at the outset of hydromet system planning --- local knowledge about the understanding of local to regional hydromet hazards and vulnerabilities as well as community-identified needs.

6. Governments, Banks, and Donors need to Improve Coordination

To enhance the use and value of limited resources, improved coordination among governments, donors and banks is a must! DRR financing institutions are called to match their interventions with specific end-users' absorptive capacity so as to foster people-centered development that highlights resilience and reduces vulnerability while building capacity at the community level. Doing so will reduce the risk of unwittingly supporting initiatives that operate at cross-purposes or provide unwanted or non-useful technological assistance (or both).