

Rethinking the Communication of Climate Knowledge: Towards Decision-based, Game-enabled Exploration of Forecasts

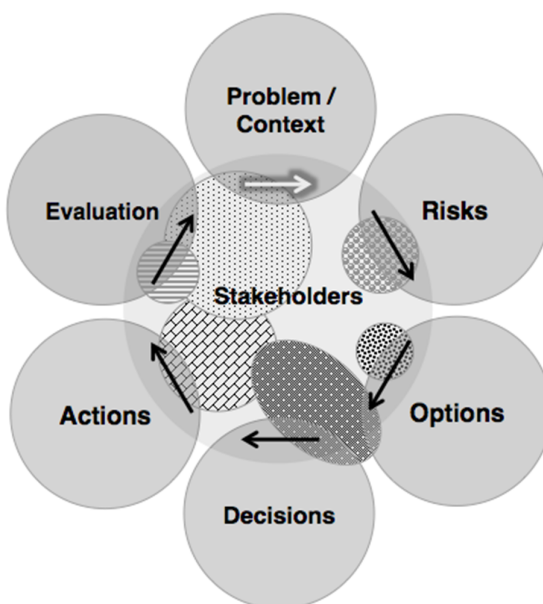
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Climate science can help us make better decision, but in the humanitarian sector –like in many other sectors– it often doesn't. When it comes to health, shelter, water, food security and other areas of humanitarian work, many future decisions and their outcomes will be affected by climate-related events that, in many cases, can be anticipated with reasonable levels of skill. With temporal and spatial scales of forecasts ranging from highly localized tornado alerts and short-term tropical cyclone tracks to seasonal rainfall predictions based on El Niño and long-term sea level rise caused by global warming, three key questions emerge:

- Will humanitarian staff, volunteers and people at risk be able to access, understand and trust forecasts about impending hazards?
- Will individuals, communities, NGOs and government agencies know what the risks are and what can be done before, during and after a predicted event in order to reduce losses?
- Will human and financial resources be available in a timely, appropriate and sufficiently generous manner to avert predictable and potentially catastrophic outcomes?

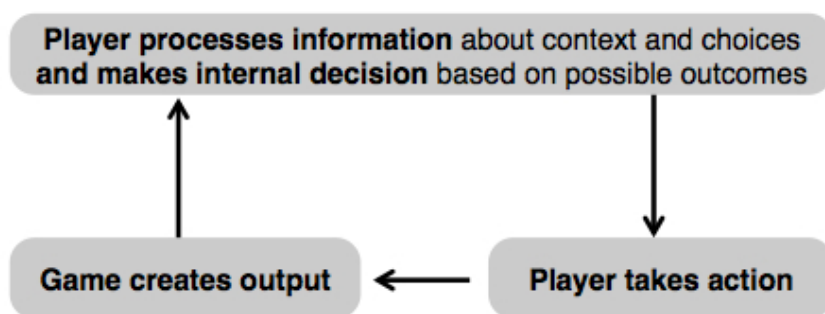
It is difficult to answer these questions with optimism given the impacts of recent disasters. There are many constraints limiting the usefulness of science-based forecasts among people at risk, including *credibility, legitimacy, scale, cognitive capacity, procedural and institutional barriers*, and *available choices*. There are also many different views on what can be done about our communication challenges. One thing is clear: the communication of climate knowledge needs to be embedded in a risk management approach that focuses on decisions that can be made given how different stakeholders understand the problem and its context, what is known about climate-related risks, and available options - based on an evaluation of the multiplicity of likely outcomes of plausible actions.



Can forecasters and risk managers build common ground, designing smart forecast-based decisions as well as simple decision-based forecasts? Preventing avoidable losses from somewhat predictable events requires learning and dialogue among very diverse stakeholders, who often lack a shared understanding of core concepts such as uncertainty, probability, or attribution. Publications, powerpoint presentations and other conventional approaches used to communicate these complex concepts are usually unable to properly convey feedbacks, thresholds, trade-offs, and other important emergent properties of climate-sensitive systems affecting whether a forecast-based decision will lead to acting in vain, or failing to act.

Managing climate risks requires new kinds of decisionmaking - in familiar contexts under unfamiliar circumstances – with effective solutions often involving a trial and error process. Decision science has shown that experience, because of the emotional pathways it triggers, is a much better teacher than mere exposure to information. Well-designed games, like disaster management processes, involve decisions with consequences. Games can help people and organizations to “inhabit” the complexity of climate risk management decisions, allowing us to explore, then test a range of plausible futures.

A MODEL OF THE GAMEPLAY EXPERIENCE



This intensely interactive short session offers an innovative approach to learning and dialogue for linking climate knowledge with humanitarian action: “Inhabitable games” are playable dynamic models that meaningfully engage people in experiencing complex systems - to better understand their current or potential role in transforming them - in a way that is serious and fun. Drawing from experience in Latin America and the Caribbean as well as global processes, we will share the design, implementation and evaluation of participatory games that explicitly embed changing probability distribution functions, risk management mechanisms, cost of information, and other fundamental yet elusive elements and relationships shaping how we can collectively understand and address the humanitarian consequences of extreme events and climate change.

Like in the real world, your individual decisions will have collective consequences. There will be winners and losers – and prizes.