World Resources Report

Putting Vulnerable People at the Center of Communication for Adaptation: Knowledge Sharing through Participatory Games and Video Tools

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Question Five: How can information for adaptation decision making be collected and disseminated so as to advance integration of climate risks into plans and policies and be useful for those who need it most?

This paper stresses the importance of involving those people who are most vulnerable to climate change in spreading knowledge about adaptation, saying that participatory approaches can greatly improve the benefits of climate information. It examines innovative approaches to communications which can allow communities to share their stories about adaptation and act as powerful tools for teaching concepts like micro-insurance or disaster risk management. Participatory games, video-enabled approaches and other creative tools are allowing people to understand and engage in adaptation, helping design and scale up successful pilots.

It is often argued, irrefutably, that those who contributed least to the causes of climate change are also the ones who most suffer its consequences. In that context, current inequities in the patterns of flow and use of information make it very difficult for national and sub-national governments, humanitarian and development organizations and other stakeholders to reach the "last mile" where adaptation measures are most needed. Subsistence farmers, shantytown dwellers and other vulnerable people cannot easily learn about the problem – or about possible solutions. What can be done to help the most vulnerable access, understand, trust and act upon useful information about changing climate risks?

Research demonstrates that participatory approaches to community-level risk management can significantly improve the benefits of using climate information (Patt et al. 2005). This requires treating the end users of information not merely as a target audience but as partners in co-learning through processes and products that reflect their own contributions (Roncoli 2006). There are numerous success stories about adaptation among the most vulnerable, but they are derived mostly from pilot projects. The imperative is now to accelerate the process of replication and dissemination of best practices. Adaptation needs to go viral, and this requires innovative approaches for knowledge sharing. This paper discusses two promising approaches: *participatory video* and experiential learning through *games*.

1. Participatory video

Increasingly affordable communication technologies can help to capture, process, store and disseminate relevant information, thus extending the benefits of knowledge to those who most need it. Participatory video is a particularly relevant methodology: it involves a group in shaping, creating and filming their own film, from storyboarding to interviewing and camera operation (Lunch and Lunch 2006).

Figure 1: Subsistence farmers became filmmakers using participatory video methods during a project by the Malawi Red Cross and Meteorological Services. Their short film on climate change was screened in neighboring communities and accelerated the dissemination of climate adaptation measures (Photos: F. Baumhardt).

Participatory video is fully aligned with the growing recognition among disaster risk reduction scholars and practitioners that end users of information need to be co-producers of knowledge. Scholars have argued convincingly that effective learning depends on the richness and multi-sensory nature of the content, active engagement and student-centered learning. Participatory video encourages stakeholders to actively narrate and discuss their experiences through a multi-dimensional peer-teaching format. The process of making, reviewing and disseminating the videos becomes a powerful process, following the key steps of the reflective cycle that have been successfully applied to many disciplines and demonstrated to improve professional practice and the learning process (Kolb, 1984). Indeed, according to Kolb (1984:38) “learning is a process whereby knowledge is created through transformation of experience”.

There is a substantial body of literature exploring, reporting and rigorously analyzing the use of video tools for health risk management and other fields. A work commissioned by the Health Education Authority of the United Kingdom a decade and a half ago systematically reviewed 175 studies of video-based projects to assess video tools for health promotion and education (Eiser and Eiser 1996). The report concludes that audiovisual tools can produce changes in attitudes and knowledge, and outlines the key elements for success. Given the similarities in how

information can shape decision making, it is reasonable to assume that the findings from the health sector are applicable to climate risk management.

Farmers become filmmakers: scientists and the humanitarian sector innovate

The Malawi Red Cross and Malawi Meteorological Services embarked on a joint project to advance adaptation among subsistence farmers, piloting participatory video methods in the village of Mphunga. Food insecurity due to flood and drought is becoming more severe, with many families chronically dependent on relief due to failed crops, drowned chickens and other impacts. People reported not knowing why the rains had been so bad in recent years, and suspected that it could be either bad luck or divine punishment. As one of the farmers put it, "If god wants to punish me, I will be punished. There is nothing I can do about it. Why should I do things differently?"

Through a series of workshops, Mphunga villagers learned more about changing risks, and discussed options for adapting to expected future conditions. Then, with support from university students versed in participatory video methods, a smaller group of farmers, along with some local Red Cross volunteers, learned the basics of how to operate camera equipment, develop a script, shoot, and contribute to the editing process. Farmers made a video to help other farmers prepare for more floods and droughts (see Figure 1) which highlighted six adaptation strategies, including duck rearing, diversification of crops, and flood warnings with whistles. The Malawi Red Cross organized screenings in neighboring villages during July 2008. Baumhardt et al. (2009) found among surveyed participants a substantial increase in willingness to embrace adaptation strategies. Mphunga villagers are now selling ducks to neighboring communities. When floodwaters rose in January 2009 in the neighboring village of Kasache, farmers who had seen the video managed to get their bagged harvest to high ground, whereas others saw their harvest ruined, and needed food aid.

Other participatory video projects illustrate how this innovative communication tool relates to key adaptation issues addressed in the WRR expert paper series. For example:

- In Nepal, children made a film describing the climate-related health, food security, environment and education problems they experience (Plush 2009). The film raised awareness for action and advocacy from the bottom up, promoting the message that the state must implement effective community-based adaptation strategies.

- In Ethiopia, rural women engaged in a participatory video project to accelerate the adoption of fuel-efficient woodstoves. Their film, aimed at fellow women, explains the economic and health benefits of the new stoves, which the new filmmakers make and sell themselves. This effort has already led to visible improvements in forest cover in the Ebinat district, with benefits for soil and water resources.

- Numerous organizations are embracing participatory video methods for monitoring and evaluation of adaptation in Africa, improving decision making and governance. For example, a training project in Malawi uses video to monitor ability to adapt and evaluate local adaptation strategies.

2. Participatory games

The natural and social systems involved in adaptation have dynamic elements that are not easy to grasp through conventional, linear educational approaches. How to devise a communication platform that can successfully convey the existence and relevance of system complexity? Feedbacks, non-linearities, delays, unanticipated "side effects", and trade-offs between the macro and the micro levels are inherent in risk management decisions (Gonçalves 2008), and should be part of the learning experience of government officials and illiterate farmers alike. Well-designed games, like adaptation measures, involve decisions with consequences. Games are the medium of complex systems and can help people and organizations improve access, understanding, trust and utilization of information for climate adaptation.

At a fundamental level, games are "meaning machines": systems made up of interconnected parts which work together through a combination of rules, goals, narrative content, symbols, and the delivery platform - whether it be a deck of cards, people's own bodies moving about a conference room, or a website. Through games we can learn how climate-sensitive systems work and the system rewards us as we learn. The following two avenues of game-based initiatives for climate risk management illustrate the possibilities.

Games for forecast-based humanitarian decisions

It is indispensable to move beyond reactive approaches to climate risk. The Red Cross / Red Crescent Climate Centre is collaborating with the International Research Institute for Climate and Society (IRI) to link early warning and early action in order to routinely take humanitarian action before a disaster or health emergency happens, making full use of scientific information on all timescales. While predictions about likely hazards exist, people continue to suffer and die due to entirely predictable extreme events.

Usual approaches to training workshops for contingency planning, such as powerpoint-based talks and disaster simulation exercises, have proved generally unsuccessful at helping practitioners examine the complexities of using probabilistic forecasts. A new approach has been developed by the Red Cross with assistance from the Parsons School for Design in New York City to enable a thoughtful assessment of potential consequences of failing to act (i.e. avoidable losses occur) and acting in vain (i.e. perceived waste of resources and loss of trust). The results have been remarkable (see Suarez and Macklin, forthcoming). For example, the "Early Warning, Early Action" card game was designed to facilitate dialogue between forecasters, Red Cross personnel and vulnerable communities. When played in a fishing village in Senegal (watch video), it led to a new early warning system. The game "Weather or not", playable in an auditorium setting, confronts teams (i.e. rows) of participants with probabilistic forecasts: they must decide whether to reduce risk ahead of the event or wait and see – and all participants can see how different teams perform.

Games for micro-insurance and other climate risk financing instruments

There has been growing interest within the adaptation and development communities to consider micro-insurance (i.e. insurance tailored to the needs of the poor) to assist small-holder farmers in dealing with extreme events. Helping people understand how micro-insurance works is a crucial challenge: evidence shows that farmers with a poor understanding of insurance are less likely to use it. Game-based activities can help convey complex financial ideas through a set of simple rules that simulate an insurance market.

The IFAD-WFP Weather Risk Management Facility supported the design of a game involving index-based micro-insurance bundled with credit for agricultural inputs. Ethiopian and Malawian farmers (many illiterate and even innumerate) played using coupons, a die and real money - allowing participants to gain first-hand experience of the consequences of a range of plausible decisions. The survey analysis indicates that the game was at least as good as a conventional lecture approach in conveying key insurance concepts – and better at one key dimension: trust (Patt et al 2009).

Figure 2: Games that simulate financial markets can support learning and facilitate the process of participatory design, so that new microinsurance products are tailored to farmers' preferences (Photos: J. Mendler de Suarez).

Oxfam America, IRI and partners went even further in a project called HARITA: they used game-based tools to elicit cost preferences and to facilitate product design with Ethiopian farmers. A game with similar mechanics, called "Diving into the insurance pool?", was used during the UNFCCC conference in Cancun (December 2010) with country delegates and other stakeholders to accelerate learning of how regional insurance schemes can promote adaptation. Participants made difficult choices, engaged in intense deliberations and negotiations, and underwent several "aha!" moments. Individual and collective strategies evolved with acquired knowledge. Cheating was deliberately designed as a possibility in the game, and one player was caught in the act. Laughter, teasing and bragging were frequent, in a learning atmosphere unmatched by any other COP session attended by the players.

Future directions

While climate researchers and practitioners have long embraced the idea of cooperation with other fields, much remains to be done to establish collaborative teams of adaptation stakeholders and communication innovators. Participatory games, video-enabled approaches and other creative tools are allowing people to understand and engage in adaptation, helping design and scale up successful pilots. The experience from the case studies discussed above, and the literature from other disciplines suggest that the process needs to be iterative and deeply collaborative, maintaining a central decision-making role for people at risk.

Governments and donors interested in adaptation, and particularly in capacity building for the collection and sharing of information, need to take some risks and provide incentives to innovations – while of course promoting rigorous assessment and useful guidelines for replications. Given the long-term nature of climate change impacts, it is imperative to think ambitiously, with key stakeholders evolving towards knowledge-based entities that can rapidly absorb and act upon the lessons from communication practices.

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