

Perception, Interpretation and Management of Risks from Climate Change and Related Natural Hazards in Tajikistan

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Risks from climate change and related natural hazards are heavily menacing the people of Tajik communities in almost every corner of the country (Figure 1). The view on and the perception of these risks and the interpretation of subsequent disasters are strongly influenced by the Muslim culture on the one side and on the other side by the difficult economic conditions of individuals, households, communities and the society as a whole. The investigations in Southern Khatlon and Kuhistani Badakhshon in Tajikistan (Figure 2) contribute to the understanding of Central Asian Muslim's perception and interpretation of nature and their views and approaches to today's environmental changes and risks.



Figure 1: Dasht village destroyed by a mudflow, Shakhdara, Viloyati Mukhtori Kuhistani Badakhshon (August 2003)



Figure 2: Study Areas in Southern Khatlon and Kuhistani Badakhshon (Geology.com©2008)

Tajikistan is highly disaster-prone; climate-induced disasters like floods, droughts, mud flows, cold waves or snow avalanches constitute a major threat to people's live, livelihood and (sustainable) development. Whereas scientific technical knowledge about climate change and resulting natural hazards and environmental degradation exists to a certain extent, the knowledge about local people's perceptions and interpretation of nature and its hazardous development is scarce. This gap was addressed by fieldwork using ethnographic methods in selected villages in Southern Khatlon and Kuhistani Badakhshon. A total of 230 interviews and focus group discussions were conducted between 2010 and 2013 in these two geographically very different areas.

The studies in Southern Khatlon and Kuhistani Badakhshon revealed a clear distinction between a rational, technical view and a cultural and religious interpretation of nature, climate change and related natural hazards and subsequent disasters. Whereas villagers have a bias towards the spiritual side, clerical people are often using both, technical explanations and spiritual interpretation for the occurrence of risks and disasters. This coincides with the views the Islamic academic community has in general about the topic: Muslim scientists use in parallel a scientific-technical framework as well as a strong spiritual one. In contrary, the cultural and religious realm in the discussion of the topic is completely missing in the official Tajikistan (national and local authorities) as well as in Tajik media. Here the scientific-technical (and Western) view prevails.

The interviews provided a rather clear picture about the importance and perception of problems, risks and threats people face: health, economy (poverty) and education are unanimously considered to be at the forefront (Figure 3). Environmental changes, risks from natural hazards and effects of climate change are observed (Figure 4), but they are not at the forefront of people’s mind, neither in Khatlon nor in the Pamir.

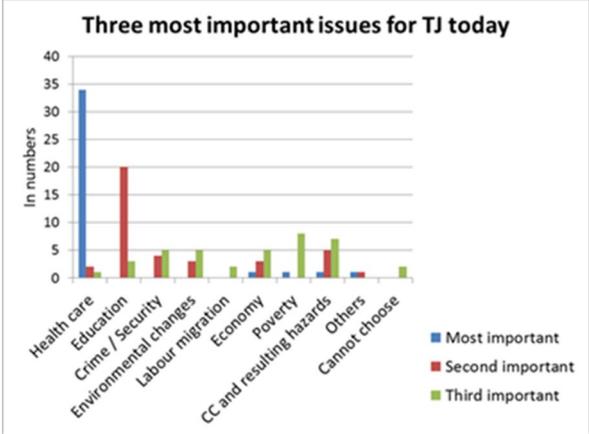


Figure 3: Southern Khatlon – Three most important issues for Tajikistan today in numbers

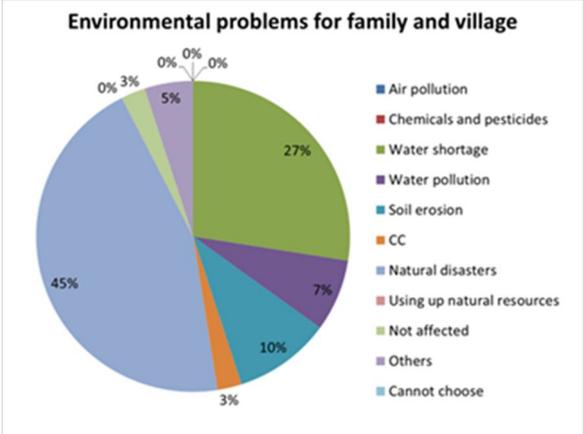


Figure 4: Kuhistoni Badakhshon – Environmental problems in percentage

The most obvious observation in Southern Khatlon (Figure 5) is the fact that people know that their environment is changing and deteriorating. They observe rising temperatures and, as a result, vector-borne and other dangerous diseases, including malaria, spreading significantly. They complain about the Afghan wind that becomes stronger every year and even makes the sun to disappear behind a yellowish-grey fog and let people feel uncomfortable. They narrate from the more frequent and intense extreme weather events, like floods or heat waves. In general, villagers also discuss the possible reasons and often directly blame others: neighbours, government, Afghan or Chinese people, or Western countries. Only few respondents acknowledge the villagers’ own responsibility: hurting their environment with the pollution of water or soil, cutting trees, causing the overgrazing of pastures and committing other environmental sins.



Figure 5: Old Tajik men in Southern Khatlon (2012)



Figure 6: Pamirian girls in Khorugh (2015)

Almost half of the respondents answered that the last disaster was “an act of God” or more pronounced, “a divine punishment” that one has to accept. The majority of the other half considered general human misbehaviour vis-à-vis nature to be the main reason for losses (this includes administrative negligence and disregard of nature’s laws). Few made the harsh environmental conditions responsible. Most residents expect assistance from the outside in case of a disaster, arguing that they do not have the means and the technology to do anything on their own.

Rarely people try to solve environmental problems by themselves and only few individuals have ideas, like the farmer who cultivated different cereal varieties to test which grows best under a changing climate. All in all, answers in Southern Khatlon are rather diverse and show an overall dissatisfaction with the current situation, including the deteriorating environment.

In contrary, Pamirians first praise their beautiful environment and their gratitude towards God (Figure 6). Then they explain that they have to live with natural hazards for centuries and as last issue they mention observing some changes in the climate. Almost half consider the geography and the nature of the area to be the reason of the last disaster and several explained that the last disaster happened “because people did not fulfil the demands of nature’s law”. Only one third of the respondents answered that the last disaster was a “divine punishment”. Although they fear the effects of climate change, e.g. the melting of glaciers, they are not really aware about the long-term consequences. Few respondents also see positive effects of climate change, like better harvest or the possibility to plant new cereals because of warmer summers. Furthermore, they judge the possibility to be hit by a natural disaster higher than the “far away” effects of climate change.

Knowledge about climate resilience of individuals, households and communities is crucial for mankind’s wish to adapt to climate change and to reduce disaster risks. Unfortunately, relatively little attention has been paid to the role of motivation and incentives in the process of adaptation till today. Whatever external pressures individuals experience, they need to have motivation and ability to adapt and in particular they need a tangible and direct incentive.

The goals of the United Nations Framework Convention on Climate Change (UNFCCC) suggest that the climate change problem is manageable and self-contained. However, it is part of a wider system of risks people are facing and relationships between people and their environment. Risks from climate change and natural hazards cannot be detached from other risks and from people’s views on it. Thus, full comprehension of the adaptation process may require further segmentation of the complex relationships among the characteristics of individuals, of their present (economic) conditions, how they perceive and acquire information about risk, and the role of social identity in their motivation to act. Many factors determine risk perception: People balance perceived risks with tangible benefits, risks to society are judged higher than those to individuals (e.g. because of personal adaptation capacity or expected state compensation), far away risks are overshadowed by more directly experienced everyday threats or resentment due to the feeling of lacking personal power to influence anything.

Risks from climate change and natural hazards are not top on peoples’ agenda in both study areas. Poor and sometimes even hungry people only want to survive; they have a value system which focusses on imminent needs and not on environmental or other issues which are farther away. This is an occasion where the government or development agencies have to raise awareness and convince people of the benefit of the long-term environmental programmes like disaster risk reduction or climate change adaptation. But they also have to underline the importance of direct (double) benefits to people. Agencies who implement climate change adaptation and disaster reduction programmes clearly have to provide an added value to the communities which might not be directly linked to risk reduction but need to have a tangible benefit like improved livelihood or health conditions. Communities need to feel this benefit, be it material or psychological, like empowering local communities to take action on their vulnerability to climate change. Moreover, the cultural and religious aspects might further determine the success of such type of activities.

This research of Béatrice Zimmermann will soon be fully published.