

New Directions Towards Disaster Risk Management in Kyrgyzstan: The need For Participation

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Abstract:

Kyrgyzstan, because of its geological, physical and climatological conditions, has always been plagued by natural disasters. Climate change is prospected to make these events even more frequent and intense, thus posing significant challenges to the economic development and security of the country, as well as to the very survival of its population. So far, responses have been scattered and always centered on the *post*-disaster phase, thereby operating more in terms of mitigation and reparation of damages. In the future, however, a stronger focus on prevention will be required in order to minimize both economic and human losses. An extensive literature on adaptive capacity exists, investigating the conditions that favor the flexible response, and hence the resilience, of natural systems vis-à-vis changes and uncertainty. Nevertheless, this type of analysis has typically been applied to natural resources and ecosystems management. The present work will prove that interesting insights from studies on adaptive capacity and adaptive governance can also be drawn from the field of disaster risk management. On this line, the conditions that are required to build the adaptive capacity of institutions dealing with disaster risk management in Kyrgyzstan will be assessed by recurring to qualitative expert interviews. These will be combined with a presentation of some of the initiatives that have been put in place to ensure the participation of the public and civil society in disaster risk management. In conclusion, and facing the fact that the overall adaptive capacity of the system for disaster risk management is still very low due to a number of institutional barriers, some recommendations on how to best address them in the future will be proposed.

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1. Introduction: Kyrgyzstan and natural disasters, the need to prevent.

Kyrgyzstan has, throughout its history, been plagued by numerous natural disasters such as earthquakes, mudflows, landslides, floods and snow avalanches, which have severely hit its territory and population. The geological, physical and climatological conditions of a predominantly mountainous country like Kyrgyzstan clearly increase its vulnerability to these processes. In addition, wrongfully planned economic activities intervene to worsen the impacts of natural calamities. For example, the practice of cattle breeding on mountain slopes, as well as the construction of houses in flood plains and the irrigation of agricultural sites with high levels of underground water, all lead to a major exposure of the territory to disasters risk.

Climate change is prospected to make this already sobbing scenario even worse. According to the vulnerability assessment conducted by the Kyrgyz government for the compilation of the 2nd National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) (Kyrgyz Republic, 2009), climate change will result, in the short term, in an increased amount of water falling in form of heavy precipitations over the country; furthermore, the rapid melting of glaciers will make additional quantities of water available downstream.¹ These two factors combined, in turn, will enhance the risk of landslides and avalanches formation, especially in the Central and Northern regions of the country (Shkurov et al. 2007)², as well as of mudflows and floods hazards (UNISDR 2010, 29), and of water outbursts from high altitude lakes (UNISDR 2010, 29). Figure 1 (below) shows the evolution of the number of registered disasters caused by natural hazards from 1990 to 2009, thus visually documenting the increased frequency with which especially mudflows and flows, but also other extreme meteorological events, are happening. Similarly, tables 1 and 2 (below) report the natural disasters registering the highest number of affected people and economic damage from 1992 on.³ Nevertheless, despite the evidence of these events happening more and more frequently, much of the discourse on disaster

¹ Modeling of glaciating conditions show that climate-warming trends will lead to a 30-40% reduction of the territories covered by glaciers (Kyrgyz Republic 2009, 125). As a consequence of glacier melting, from 1973 to 2000, the total river flow has increased by 6.3% compared to the previous period (Shkurov et al. 2007).

² It has been observed that landslide processes have become more active in recent years, and new locations of landslide hazard have emerged even in those regions where, due to geological conditions, landslides were less likely to happen (UNISDR 2010, 27).

³ Source: "EM-DAT: The OFDA/CRED International Disaster Database, www.emdat.be - Université catholique de Louvain - Brussels - Belgium". Data version: v12.07. <http://www.emdat.be/result-country-profile> [last accessed: Oct 21, 2011].

risk management in Kyrgyzstan is still concentrated on timely intervention and reparation of damages, instead of preventive action.

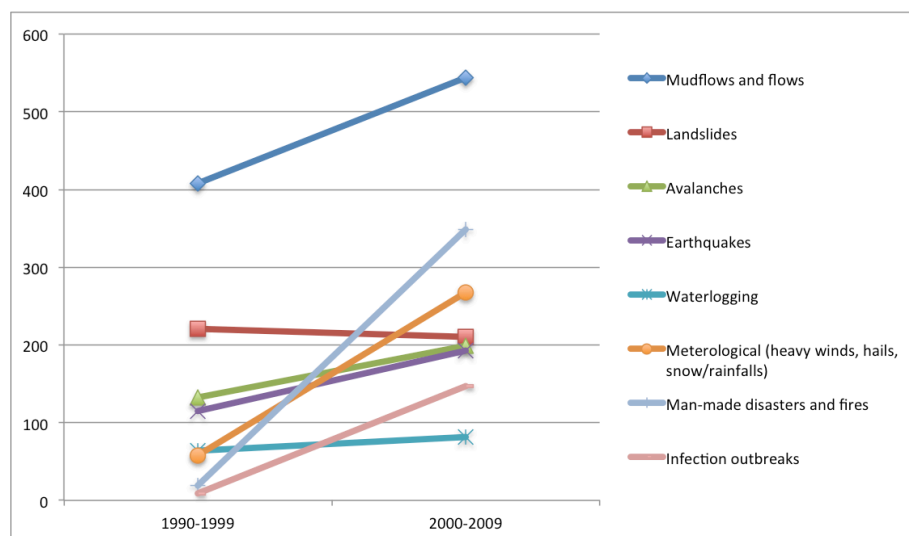


Figure 1: Evolution of the number of registered disasters caused by the most widespread natural hazards. Data from: Monitoring, Forecasts of Hazardous Process and Phenomena on the Territory of the Kyrgyz Republic, 2009, MoES KR (Source: UNISDR 2010).

Disaster	Date	No Total Affected
Drought	2009	2000000
Earthquake (seismic activity)	19.08.92	86806
Mass movement wet	14.04.94	58500
Earthquake (seismic activity)	22.05.92	50000
Earthquake (seismic activity)	26.12.06	12050
Storm	January 2006	9075
Mass movement wet	03.06.10	8350
Flood	18.05.98	7728
Earthquake (seismic activity)	13.01.08	3000
Flood	10.06.05	2050

Table 1: Top 10 Natural Disasters for the period 1900-2011 sorted by number of affected people. Source: "EM-DAT: The OFDA-CRED International Disaster Database", www.em-dat.net - Université Catholique de Louvain, Brussels, Belgium.

Disaster	Date	Damage (000 US\$)
Earthquake (seismic activity)	19.08.92	130000
Mass movement wet	14.04.94	36000
Earthquake (seismic activity)	22.05.92	31000
Flood	10.06.05	2660
Flood	18.05.98	2400
Earthquake (seismic activity)	09.01.97	2000
Mass movement wet	mai.02	1500
Flood	17.04.07	200

Table 2: Top 10 Natural Disasters for the period 1900-2011 sorted by economic damage cost. Source: "EM-DAT: The OFDA-CRED International Disaster Database", www.em-dat.net - Université Catholique de Louvain, Brussels, Belgium.

As climate change is so clearly impacting on the frequency and intensity of natural hazards in the Kyrgyz case, it would be natural to think that a strategy for adaptation is in place at the country level. Yet, this is not the case – the only mention to climate change adaptation is made in the 2nd National Communication of the Kyrgyz Republic to the UNFCCC (Kyrgyz Republic 2009), where it is vaguely stated that: “[c]limate change adaptation activities aimed at water resources basically are determined by particularities of water consumption [...]; in selecting adaptation actions, it is necessary to take into account the anticipated reduction of surface water flow and also emergency climatic situations that currently cannot be predicted” (Kyrgyz Republic 2009, 132). A National Committee on Climate Change has been established, together with a specific working body, the Climate Change Centre. However, their mandates are still very vague and their effective functioning depends on the supervision and support of international actors.⁴ Also, the Ministry of Emergency Situations (MoES) is working with the United Nations Development Program (UNDP) to prepare a National Adaptation Strategy; though, efforts in this sense are only at a very initial stage and it is not clear when the document will be available.

Since adaptation is not tackled, one would expect at least an integrated and comprehensive discourse on disaster risk management (DRM) to be in place.⁵ Nevertheless, the very idea of DRM has not been fully internalized within sustainable development planning and across sectoral policies and practices. The limited budget of the MoES, which should be the responsible state authority for disaster and climate risk management, and the low awareness of its staff about the importance of disaster prevention and early warning, partially account for this weakness. In addition, decentralization reforms in the DRM sector have not been thoroughly promoted across other ministries, with the result that interventions in this sense have been uneven, limited and deficient, particularly at the local self-governance level. This last aspect becomes even more critical in light of the fact that, within the context of ongoing administrative reforms, local self-governments are steadily becoming the designated core providers of services to the public; this despite the fact that they still

⁴ The National Committee on Climate Change and the Climate Change Centre have been established by Resolution 281 of the President of the Kyrgyz Republic, dated 18 July 2005.

⁵ The concept of disaster risk management (DRM) is taken in this work to encompass disaster risk response (DRR), as well as disaster risk reduction and prevention. When reference is made to only one of these components, its specific denomination (and not the more general one of disaster risk management) will be used.

have very limited capacity and resources to effectively address DRM challenges and priorities.⁶

Understanding what would actually take to the governance framework for disaster risk management in Kyrgyzstan to respond to the current and future challenges that are posed by natural hazards, therefore, emerges as a priority. In other words, what are the conditions that build the adaptive capacity of institutions to face extreme events in such a way as to prevent their impacts rather than merely address their consequences? In order to attempt an answer to such a pressing question, the present paper will start by exploring the relevant literature investigating the concept of adaptive capacity. Further, qualitative data drawn from thirty interviews conducted with decision-makers and experts working in the field of disaster risk management in Kyrgyzstan will be presented.⁷ These will fundamentally reveal that the participation of two range of actors – internationals and the general public- is crucial in order to first build and then ensure the sustainability of a system for disaster risk management that contemplates preventive actions and early warning mechanisms. In other words, while still owned by state and local governmental authorities, the governance framework for DRM should be primarily based on the principle of participation in order to guarantee its comprehensiveness and efficiency.

2. What makes adaptive capacity? Indicators and their performance in the Kyrgyz case

In recent times, the challenges related to managing the impacts of an increasingly uncertain and changing climate, especially in terms of natural hazards and extreme events, have become more evident than ever. This has spurred a considerable amount of literature investigating the conditions that are required in order to achieve an effective and sustainable governance framework for adapting to the new climatic conditions, for example by putting in place early warning systems and preventive mechanisms that would mitigate, if not avoid, the most disastrous outcomes. On this

⁶ Information is taken from a personal communication of the author with UNDP staff working on projects related to DRR in the Kyrgyz Republic (Bishkek, October 25th, 2011, h.15.00).

⁷ More specifically, thirty experts from international organizations, government offices at the national and sub-national level, and NGOs were interviewed in order to retrieve information on the current governance framework for disaster risk management, as well as on eventual measures to address climate change. The interviews were semi-structured in order to allow for flexibility while maintaining a general configuration that guided the discussion. Qualitative data were then transcribed, coded and analyzed using the NVivo9 software. A list of the organizations that have been contacted for the purposes of this work is presented in Annex 1.

line, some authors have started proposing “adaptive management” as an approach to balance robustness and flexibility in the management of social-ecological systems (Roux et al. 2007). To this end, the institutional capacity to adapt to and shape change in a given system is considered as an important prerequisite (Berkes et al. 2003). These observations consequently spurred a number of other works looking at the conditions that favor and/or hinder the response of institutional systems to situations of abrupt change and uncertainty. These, however, have mostly focused on natural resources and ecosystems management, and have not adequately been extended to other issue areas, such as disaster risk management. This section will try to address this gap by reviewing the literature on adaptive capacity and governance, and see how it applies, and contributes to disaster risk management.

The concept of adaptive management was formulated almost twenty years ago in response to the first concerns related to climate change and, more general, the sustainable management of environmental resources (Walters 1986). Already then, adaptive management focused on the principles of broad stakeholders’ and public participation, cross-sectoral analysis and policy integration, polycentric and decentralized governance, and multiple scales of action (Walters 1986). From here, the concept of adaptive governance was then articulated, describing the process of creating *adaptability* and *transformability* in social-ecological systems (SESs). More precisely, adaptability refers to the system’s capacity to absorb disturbance while undergoing change, so as to essentially retain the same core function, structure, identity and feedbacks. Transformability instead, indicates the ability to create a fundamentally new system when ecological, economic, or social (including political) conditions make the existing one untenable (Walker et al. 2004).

In sum, the literature identified adaptive governance and the importance of learning mechanisms as essential tools for managing socio-ecological systems during periods of abrupt changes (Folke et al. 2005; Pahl-Wostl 2007; Armitage 2008). A number of authors also observed that adaptive governance systems often self-organize as social networks, with teams and actor groups that draw on knowledge systems and experiences for the development of common understandings and policies (Folke et al. 2005). What lies at the basis of, and what essentially activates adaptive governance is adaptive capacity. This concept is particularly present in the literature on adaptation to climate change, which, in the last ten years, has indeed focused on illustrating the conditions that build adaptive capacity, including economic resources, technology,

information and skills, infrastructure, institutions, equity, social capital and collective action (Pelling and High 2005; Adger 2003; Yohe and Tol 2002; IPCC 2001; Folke et al. 2005, Olsson et al. 2004). Among these determinants, however, scholars identified democratic decentralization (increased participation and representation), as well as social capital and networks, as *the* fundamental elements that construct the adaptive capacity of a system and hence its potential to respond to abrupt changes and situations characterized by a high degree of uncertainty (Engle 2007; Eakin and Lemos 2006; Brooks et al. 2005; Haddad 2005; Ivey et al. 2004; Adger 2001).

These observations are groundbreaking especially if taken within the framework of theories of new institutionalism, which have dominated the understanding of institutions in political science and international relations all since the 1990s. New institutionalism fundamentally assumes that “institutional structures impose elements of order on a potentially inchoate world, as institutions present a certain robustness against changes in external environments, as well as deliberate reforms” (Olsen 2001). According to this logic, since policy-making is future-oriented, the only possible way to grant satisfactory decisions is to rely on previous practice (Olsen 2001) and to avoid uncertain patterns and innovations as much as possible (Simon 1997). In the case of institutions for DRM, however, we are facing exactly the opposite case, as these are, by their very nature, fundamentally required to show flexibility rather than immobility, and to adapt to changes in the external environment in order to guarantee their effectiveness, legitimacy and overall credibility.

Nevertheless, institutionalizing flexibility is not an easy task: as Roux et al. (2007) observed for the management of social-ecological systems, decisions are often based on insufficient or uncertain data and information. As climate change introduces an additional factor of uncertainty into environmental policy-making, moreover, it becomes no longer possible to rely on past experience to determine future strategies and actions. Consequently, the conditions for an institution to operate in a learning mode should be developed in a deliberate way. To this end, “positively, persistent and adaptive people with a culture of empathy for other knowledge systems and levels” (Roux et al. 2007, 275) are required. Besides, their knowledge must be “transdisciplinary, moulded by a common future focus, acquired by patiently engaging their prior knowledge and learning by doing in an environment of social knowledge sharing” (Roux et al. 2007, 275).

In theory, therefore, more flexible, democratic, and participatory designs are required to increase the institutional adaptive capacity of a system by building a new operational mode based on dynamic learning rather than immobility and standard procedures. If stakeholders are (i) represented, (ii) given the opportunity to participate actively, and (iii) making decisions equitably and democratically, they will be more likely to buy-in and be empowered to effectively respond to sudden changes and emergency situations. The literature also seems to introduce the idea that mechanisms for broad and active public participation in decision-making processes determine the formation of self-organized social networks, which, in turn, greatly favor the adaptive capacity of governance systems vis-à-vis external changes. This happens because social networks allow the sharing of knowledge systems and experiences for developing common understandings and policies (Roux et al. 2007).

Applying these theoretical considerations to the issue area of disaster risk management leads to conclude that the learning potential of institutions is activated when their constituent parts are able and willing to co-produce a culture of empathy for other knowledge systems and levels, as well as a more transdisciplinary approach that is achieved by putting together people with different professional backgrounds and experience. In addition, the inclusion of the international community in the decision-making process and institutional framework for DRM integrates local knowledge systems with international and/or regional best practices, know-how, and eventually technological and financial support, thus reinforcing the capacity of the system to respond to changes. This combination of actors permits the establishment of a community-based system to respond to disaster risks, which is tailored to the specific geographical and situational context, and works at different scales. At the upper level, international organizations are required to participate in the system by inputting it with their expertise and resources. Then, national authorities have the fundamental task to coordinate activities and projects by means of policies and legislation promoted by competent ministries. Finally, the implementation of responses needs to happen at the local level in order to guarantee the specificity of the interventions and their effective responsiveness to the necessities of the territory and population on the ground.

3. Participation and disaster risk management in Kyrgyzstan: some initiatives

While the literature on adaptive capacity and adaptive governance, not to mention that on climate change adaptation, are undoubtedly abundant and highly informational, thus far, there are relatively few examples of empirical research that attempts to explore how institutions and governance mechanisms systematically build –or not- the adaptive capacity of systems for disaster risk management. The present work specifically tries to provide an answer to this question for the case of Kyrgyzstan. On this line, a number of initiatives to reform the system for disaster risk management in Kyrgyzstan towards decentralization, thereby trying to increase the participation of stakeholders and the general public, will be first presented in this section.

Formally, disaster risk management falls under the competencies of the Ministry of Emergency Situations (MoES). In addition, a National Platform on Disaster Risk Reduction (DRR) has recently been established to bring together key stakeholders to promote cooperation and strategic planning. At a more general level, efforts at disaster risk management in Kyrgyzstan are also taking place under the flag of the international community. A Disaster Response Coordination Unit (DRCU) has been established, in its current form, in 2009; it consists of a high level forum with a mandate to harmonize the efforts of United Nations (UN) organizations, the Red Cross and Red Crescent Movement, and local and international NGOs in disaster preparedness and response. The DRCU falls under the Kyrgyz Republic's Inter-Ministerial Commission on Disaster Management, and is chaired by the UN Resident Coordinator. Seven sector groups (on health, emergency shelter and camp management water, sanitation and hygiene, education, food security, protection, and early recovery) have been established within it to improve sector-specific coordination. In addition, the DRCU is supported by two Rapid Emergency Assessment and Coordination Teams (REACTs) (one based in Osh, and the other in Bishkek) to provide joint assessments of humanitarian needs in emergencies. The REACT teams are composed of personnel from UN organizations, the Red Crescent Society, and international and local NGOs. Figure 2 offers a more visual representation of the structure of the DRR sector in Kyrgyzstan.

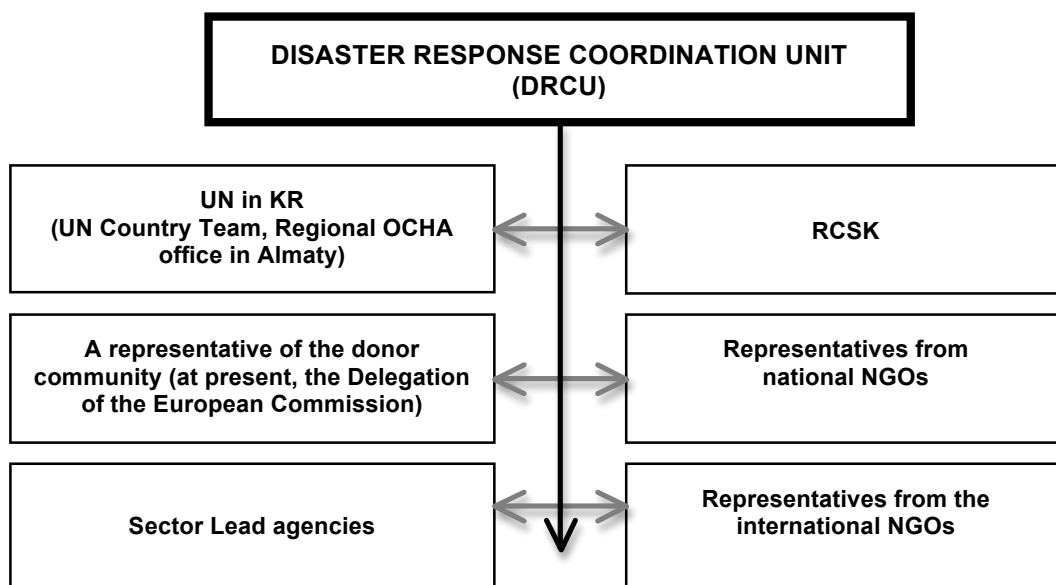


Figure 2: Structure of the Disaster Response Coordination Unit (DRCU) in Kyrgyzstan. Source: DRCU Secretariat, 2011.

Kyrgyzstan’s development strategy for DRM is based on the “Hyogo Framework for Action” (HFA 2005-2015)⁸, a ten-year program for the improvement of DRM, which was established by the UN in 2005. At the global level, the HFA is complemented by a consortium of NGOs, the “Global Network for Disaster Reduction”, which collaborates in securing a stronger voice for communities and more effective implementation of the Framework.⁹ As part of this network, the Agency for Technical Cooperation and Development (ACTED) is coordinating the “Views from the Frontline” project in Kyrgyzstan, aiming at gathering the views of stakeholders at the local level in order to assess progresses and challenges (ACTED 2011, 1).¹⁰ Concretely, the VFL Project resulted in a comprehensive assessment of institutional capacity in the DRR sector, and contributed to supporting the effective implementation of the HFA to build the resilience of vulnerable people and communities at-risk of disasters (ACTED 2011, 2). ACTED has a long history of involvement in DRR activities in Kyrgyzstan, where it has worked since 2006 with

⁸ Available online at: <http://www.unisdr.org/2005/wcdr/intergover/official-doc/L-docs/Hyogo-framework-for-action-english.pdf> [last access: October 26th, 2011].

⁹ Views from the Frontline (VFL) is a participatory monitoring project initiated within the framework of the UN Global Platform for Disaster Risk Reduction. VFL aims to measure ground level progress towards the implementation of the Hyogo Framework for Action (HFA) across signatories in developing countries. Initiated in 2009, the VFL project has been highly effective at the international level culminating in presentations from over 7000 respondents from 48 countries (ACTED 2011, vi).

¹⁰ Author interview with ACTED representative, Osh, October 17th, 2011.

local NGOs, governments, and other actors, also organizing cross-border trainings and shared activities with neighboring Tajikistan.¹¹

ACTED is also piloting another initiative with the Ministry of Emergency Situations (MoES), aiming at the full implementation at the municipal level of the decree on the “Establishment of Commission of Civil Defense (CCDs)” (ACTED 2011, 17). Civil Defense Commissions have been operating at the district level since the Soviet period, but authorities at the municipal level (AOs) were never involved. Today, these Civil Defense Commissions, also known as Disaster Risk Reduction Management Boards (DRRMBs), serve to provide the local community with a forum for direct communication with officials on issues related to the DRM and to ensure that disaster-related problems are included into municipalities’ development strategies. For now, ACTED has established Civil Defense Commissions in four southern provinces – AO Taldy-Bulak in Jalal-Abad, AO Kenesh and AO Gulistan in Osh, and AO Beshkent in Batken (ACTED 2011, 17). CCDs include representatives of AO Officials, Voluntary Rescue Teams (VRTs), and village leaders – all of these actors are responsible for decision-making at different levels of the community, and have been trained by MoES personnel in DRM and related matters. Presently, these efforts are being conveyed into the drafting, at the national level, of a comprehensive legislation for disaster risk management, thus transforming these externally driven projects into permanent and sustainable institutions within the country.¹²

Another interesting initiative in the DRM field is the project that the UNDP has put in place, as of July 2008, on “Mainstreaming Disaster Risk Management into Decentralization Process in Kyrgyzstan”.¹³ The project started from the recognition that disaster risk management is a core function of local and national government entities and that a decentralized structure can be more effective to deal with the local dimension of economic, social and physical vulnerabilities to disaster impact.¹⁴ On this line, the UNDP, with the collaboration of the MoES and the National Agency for Local Self-Governments, is now trying to strengthen the disaster risk management capacity of *ayil ökmötüs* (local self-governments), with a view to then mainstream their role into the ongoing decentralization process. In the next program-cycle (2012-

¹¹ Personal e-mail communication with ACTED representative, November 16, 2011.

¹² Personal e-mail communication with ACTED representative, November 16, 2011.

¹³ See: <http://www.undp.kg/en/resources/project-database/article/1-projects/870-mainstreaming-disaster-risk-management-in-the-decentralization-process-in-kyrgyzstan> (last accessed: November 11th, 2011).

¹⁴ Author interview with UNDP representative, Bishkek, October 25th, 2011.

2016), this project will evolve into covering climate risk management, thereby tying it to efforts at disaster risk reduction. In this sense, the main objective of the UNDP initiative will become to shift the focus of national and local disaster risk management policies and practices from post-disaster response and recovery to comprehensive DRM by: a) building long-term and sustainable local level capacity in disaster risk reduction; b) integrating DRM issues with administrative reforms and climate change adaptation strategies; c) mainstreaming DRR into sectoral, regional and local development programs.¹⁵

4. Analysis: current barriers to DRR

As noted in the previous section, the Kyrgyz system for disaster risk management has witnessed some efforts at decentralization in recent years, with a view to mainstream DRR at all territorial and governmental scales and to increase the participation of concerned stakeholders. Nevertheless, the overall adaptive capacity of this framework is yet to be built, especially vis-à-vis future scenarios that depict more numerous and disastrous extreme events as a consequence of climate change. By looking back at the literature, it is clear that some crucial conditions for adaptive governance are still missing in the Kyrgyz context, a consideration that is substantially confirmed by the results from the interviews that the author has conducted with decision-makers, experts, professionals and general stakeholders at the international, national and local levels. More specifically two main categories of barriers to adaptive capacity have been identified: 1) vertical, horizontal and inter-generational fragmentation; and 2) resources constraints.

4.1 Vertical, horizontal and inter-generational fragmentation

According to the literature, one of the main reasons for promoting local governance relates to its potential to encourage the inclusion and participation of civil society. This, in turn, leads to the formation of self-organized social networks, which, by allowing an easier sharing of knowledge systems and experiences, as well as the development of common understandings and policies, favors the adaptive capacity of governance systems vis-à-vis external changes. However, in the Kyrgyz case, the promotion of local governance through decentralization reforms, at least in the DRM

¹⁵ Author interview with UNDP representative, Bishkek, October 25th, 2011.

sector, has been severely hampered by what is here defined as “fragmentation”, or the disconnection between the various levels and scales at which decision-making happens. More precisely, DRM in Kyrgyzstan seems to be characterized by: a) *horizontal fragmentation*, meaning that there are limited connections between subjects working and interacting at the same level; b) *vertical fragmentation*, implying that communication does not flow smoothly across the different scales at which action is undertaken, mostly because of a lack of central coordination; and c) in the specific case of disaster risk management, *inter-generational fragmentation*, which consists in the fundamental difficulty to pass on tasks and mandates in relation to disaster response and prevention from one generation to the other.

As for horizontal fragmentation, especially local interviewees complained about the limited connections that are established between governmental authorities and decision-makers as well as volunteer groups and rescue teams within the same communities, or across different communities in the same region.¹⁶ Of course, given the fact that disasters do not hit specific administrative areas, but their impacts are felt across villages and regions, this lack of communication and coordinated action represents an important pitfall of the system. In addition, some interviewees highlighted the lack of efforts from the governmental side (both at the local and national levels) to pursue partnerships with the business sector, as well as with the academia.¹⁷ It was noted that instead, this could help, for example, develop an insurance sector that specializes on climate risk and natural hazards. At the same time, the academia could play a critical role in terms of training future personnel with specific competences and expertise in disaster risk management, as well as collecting and making available the required data and information for early warning and adaptation purposes.¹⁸

Vertical fragmentation is another critical issue: the difficulty of coordinating activities at different scales hampers the overall efficacy of the system for both preventing and responding to disasters. This aspect was particularly stressed by international organizations; their observations pointed to the strong disconnection between decisions taken at the national level and their effective implementation at the

¹⁶ Author interviews with representatives of local self-governments and communities, Osh and Jalal Abad, October 17-18, 2011.

¹⁷ Author interviews with representatives of NGOs, Bishkek, October 2011.

¹⁸ Author interviews with representatives of the academia and international NGOs, Bishkek, November 2011.

local level.¹⁹ This problem can be further illustrated by looking at the case of Voluntary Rescue Teams (VRTs). The Government of the Kyrgyz Republic passed the order on the “Preparation of Voluntary Rescue Teams (No.430)” on September 29, 2008 (ACTED 2011, 11). However, the establishment of VRTs at community level has generally been driven by international NGOs over the last few years, and these groups have not been effectively connected to government structures to support their continuation and effectiveness.²⁰ This way, vertical fragmentation, by fundamentally impeding the transfer of financial resources and human competencies between levels, plays against the sustainability of VRTs in this specific case, and of the local system for DRM more in general. In addition, it appears that an appropriate mechanisms for monitoring is not in place. Typically, this function is performed by some authority at the national level; it will probably be the National Platform on DRR in the future, once its capacity is fully built. For the moment, however, efforts at harmonizing the different interventions are primarily made by the DRCU— meaning that external actors are performing the role that would instead naturally belong to national authorities. Of course, the DRCU works in collaboration with the MoES and within the mandate that it is given by the MoES itself. Still, this *status quo* adds further elements of confusion to the whole system, which is already far from being able to work smoothly.²¹

Last, but not least, interviews highlighted the presence of another type of fragmentation – the inter-generational one, basically consisting, in the case of Kyrgyzstan, in a lack of efforts to involve children and youth into the DRM system. At present, decision-makers and governmental staff with competences in matters of disasters risk management come from, and were formed during, the Soviet period. Like in all other public sectors, today this is a profession that pays little money and requires important sacrifices in terms of education and training. Therefore, the younger generation has less and less incentives to engage in DRM, which raises important questions for its future sustainability.²² In addition, children and the youth, because of their age, are less likely to have experienced a disaster event in their life,

¹⁹ Author interviews with international organizations, Bishkek, November 2011.

²⁰ These results are presented in: ACTED (2011), p. 12. However, the same results also emerged from two interviews that have been conducted with a number of UN agencies and NGOs, Bishkek, November 2011.

²¹ Author interviews with representatives of MoES and international organizations, Bishkek, October-November, 2011.

²² Author interviews with representatives of civil society, Osh and Jalal Abad, October 2011.

which leaves them deprived of practical experience and knowledge in relation to how to act in case of a calamity. In reality, according to some interviewees, the general public, and not only children and the youth, is poorly informed about DRM. This risks depriving an entire population of the necessary tools to cope with the extremes of nature, hence increasing the chance of destructive effects and economic and human losses.

4.2 Resources constraints

The second major category of barriers to the implementation of an effective (i.e. adaptive and sustainable) framework for disaster risk management at multiple scales, and hence what hampers the effectiveness of decentralization efforts aimed at increasing the broad participation of stakeholders, refers to financial, political, and human resources. In the interviews, specific questions were posed about the sufficiency of the budget that is allocated to the DRM sector, the adequateness of expertise and human capital that is deployed for responding to disasters, and the presence or absence of the required political will to address such situations. Interestingly, however, these three factors were also coming up in the responses that were given to more general questions concerning the challenges that the DRM system in Kyrgyzstan is currently facing, thus indicating the strong priority that is given to the need to address financial, political and human constraints.

More specifically, and according to most interviewees especially at the community level, the main impediment to effective implementation of DRM strategies and actions is the lack of financial resources.²³ This is because, in addition to them being limited, financial resources are also poorly administered, as a consequence of the fact that mechanisms for central coordination are not adequately institutionalized and made operative.²⁴ Local governments complain that, while a number of tasks in terms of disaster response and post-disaster needs assessments are now attributed to them, they have not been provided with the corresponding financial capacity to actually comply with these new mandates.²⁵ As reported by some international organizations, an important factor constraining the effectiveness of the DRM system in Kyrgyzstan is represented by the limited capacities and resources to

²³ Author interviews with community representatives and provincial governments, Osh and Jalal Abad, 18-19 October, 2011.

²⁴ Author interview with representative of international NGOs, Osh, October 17, 2011.

²⁵ Author interviews with local self-governments, Osh, October 17-18, 2011.

build resilience that exist especially at the local level.²⁶ Several interviewees denounced the limited training opportunities for community members and local government officials in terms of DRM strategies, especially as far as prevention is concerned.²⁷ Finally, the lack of political will at the state level was seen as a strong impediment to DRM. According to some respondents, the problem would be that national and local authorities in the country still tend to perceive disasters as phenomena that naturally happen, and for which only ex-post interventions and reparations can be put in place. As a consequence, adequate policies and laws to strengthen the capacity of national and local governments in performing their DRM responsibilities are insufficient and often underutilized.²⁸

5. Conclusion and recommendations

Building an efficient and effective system for disaster risk management is a crucial need for a country like Kyrgyzstan, which, due to its mountainous landscape and geographical location in a highly seismic zone, is prone to multiple disasters. Climate change scenarios, in addition, are forecasting a gloomier future characterized by more frequent and intense extreme events, and call for significant responses to be adopted especially in terms of prevention and adaptation. At present, the system for disaster risk management in the country is strongly dependent on the financial, technical and managerial support of the international community. Reforms aiming at its decentralization and mainstreaming into other relevant areas of policy-making (e.g. health, water management, etc.) have been attempted in recent years mostly under the savvy guidance and expertise of UN agencies, international organizations and NGOs, and donors. However, participation of concerned stakeholders, especially at the community and local level, has, so far, remained very limited. According to the literature, this represents a major shortcoming in terms of efforts to build the adaptive capacity of the DRM system to respond to increased changes and uncertain conditions.

This paper has tried to understand the reasons why this is the case, or, to put it in other words, to uncover the barriers to effective decentralization. It has done so by first presenting some projects and initiatives aiming at the empowerment of local

²⁶ Author interviews with international NGOs and international donors, Bishkek, October 2011.

²⁷ Ibid.

²⁸ Author interviews with international donors and NGOs, Bishkek, October 2011.

communities and actors, mostly in relation to building their capacity to adequately respond to natural and humanitarian disasters in the areas where they live. Then, a discussion of the interviews that have been conducted with representatives of international organizations (UN agencies, NGOs, donors), national ministries and committees, state authorities at the provincial level, local self-government and civil society was presented. The results pointed to two main types of barriers that exist in the Kyrgyz case: horizontal, vertical and inter-generational fragmentation; and financial, political and human resources constraints.

On one side, the lack of coordination both between actors at the same level and between actors at different scales seriously impede the activation of mechanisms for all the constituent parts of the DRM system to adopt a transdisciplinary approach that integrates DRR into different policy areas. The formation of an empathic culture of information and knowledge sharing that would lead to effective collective action is also jeopardized. The failure to integrate the younger generation into the existing system for disaster risk management, in addition, threatens its sustainability and its effective capacity to successfully address natural and humanitarian disasters. Finally, the dramatic consequences of horizontal, vertical and what has been defined as “inter-generational” fragmentation are further compounded by the generally limited budget that is attributed to DRM, as well as by the limited expertise and political will that exist to address these very issues.

So far, the international community has met a big share of these requirements, but the Kyrgyz government, at all different levels, as well as the Kyrgyz people, of all different generations, will soon have to take their own initiative in this sense in order to be able to adapt and respond to the imminent threats posed by climate change. Indeed, climate change is only one face of a much more complex picture, which also needs to take into account the risks involved by humanitarian disasters. After the recent events of April and June 2010²⁹, in fact, Kyrgyzstan has learnt that natural hazards are not the only emergencies that could be occurring in the near future: the human element always plays a crucial part in the equation, and needs not to be

²⁹ In April 2010, a popular revolt made the President of the Kyrgyz Republic, Kurmanbek Saliyevich Bakiyev, leave the country and resign. Following his depart, people belonging to its clan in the South of the country started using violence too as a sign of protest which transformed in an ethnic unrest between against the Uzbek minority in the country. See: BBC News, Q&A: Kyrgyz Unrest, April 21, 2010. Available at: <http://news.bbc.co.uk/2/hi/asia-pacific/8608870.stm> [last accessed: November 2, 2011].

underestimated. Generally speaking, and on the basis of the analysis that has been conducted in this paper, the following recommendations can be made:

- ✓ The concept of disaster risk management needs to be fully institutionalized within the competent political structures at the national and local level; while the National Platform on DRR is a positive first step, more attention should be devoted to empowering all concerned stakeholders at all the different scales of action, by providing them with a precise mandate and adequate expertise, as well as financial and technical resources;
- ✓ Disaster risk management should fundamentally integrate the concept of disaster risk prevention, in addition to disaster risk response; this should be done by putting in place a comprehensive system for data collection and interpretation (including updating and potentiating existing hydrometeorological stations and services) that would allow the establishment of functioning early warning mechanisms at the community level;
- ✓ Coordination mechanisms, fundamentally managed by a central authority at the national level, should be institutionalized, together with an appropriate monitoring system (both for monitoring the effectiveness of responses and for early warning purposes) at different scales of action; while efforts of the international community in this sense are laudable, a gradual transfer of competences to local actors is required;
- ✓ The broader participation of all civil society in DRM-related decision-making, activities and projects should be guaranteed, thereby meaning not only the involvement of the private sector (for example, the insurance industry) and the academia, but also and especially the general public, including the youth, in order to re-address the inter-generational fragmentation that presently hinders the sustainability of the system for disaster risk management as a whole.

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Annex 1: List of Interviews

No.	REGION	SECTOR	INSTITUTION	TYPE/LEVEL	ACTIVITIES	DATE AND TIME OF THE INTERVIEW
1	Kyrgyzstan	Gen	Zoï Environment Network	IO	AD, CC, ED, EP, ER	Geneva, June 1st, 2011
2	Bishkek	Dom	World Bank	IO	AG, ED, FIS, OM, TRA	Bishkek, October 6th, 2011 h:15.00-15.45
3	Bishkek	Agr	National Center for Mountain Regions Development of Kyrgyz Republic	NAT	AD, AG, CC, EP, INF, LM, TRA	Bishkek, October 5th, 2011h: 14.00-15.00
4	Bishkek	Agr	Institute of Ecology and Applied Sciences/Osh Technological University	RES	ER, INF, TRA	Bishkek, October 5th, 2011 h: 15.00-15.30
5	Kyrgyzstan	Gen	CAREC	REG	AD, CC, EP, ER, LOB, TRA	Bishkek, October 10th, 2011 h: 11.50-12.20
6	Kyrgyzstan	Agr	Helvetas	IO	AD, AG, CC, EP, LM, OM, TRA	Bishkek, October 10th, 2011 h: 14.50-16.00
7	Kyrgyzstan	DRR	Swiss Development Cooperation (SDC)	IO	AD, CC, ED, FIS,HUM, INF, OM	Bishkek, October 11th, 2011 h: 11.00-11.45
8	Kyrgyzstan	Gen	World Bank	IO	AD, CC, FIS, INF, OM, RM	Bishkek, October 11th, 2011 h: 15.00-15.45
9	Kyrgyzstan	Gen	State Committee on Water Economy and Amelioration	NAT	FIS, INF, OM, WM	Bishkek, October 11th, 2011 h: 09.30-10.15
10	Kyrgyzstan	Gen	State Agency on Environmental Protection and Forestry	NAT	EP, FIS, INF, LM, OM, WM	Bishkek, October 7th, 2011 h:10.00-10.45
11	Kyrgyzstan	Gen	OECD	IO	AD, CC, ED, FIS, INF, LOB, TRA	Bishkek, October 13th, 2011 h:20.00-20.45
12	Kyrgyzstan	Gen	Civic Environmental Foundation UNISON	NGO	AD, AG, CC, EP, INF, LOB, TRA	Bishkek, October 14th, 2011 h: 16.00-16.45
13	Osh	Gen	Osh BDWI	PROV	EP, FIS, INF, OM	Osh, October 17th, 2011 h: 9.30-10.15
14	Osh	Agr	Osh BDWI	PROV	FIS, INF, OM, WM	Osh, October 17th, 2011 h: 10.30-11.00
15	Osh	Gen	ACTED	IO	AD, ED, EP, FIS, INF, OM, RM, TRA	Osh, October 17th, 2011 h: 13.00-13.45
16	Osh	Dom	UNICEF, WASH Project (Project on Water, Sanitation and Hygiene)	IO	FIS,HUM, INF, LOB, OM, TRA	Osh, October 17th, 2011 h: 18.00-19.15
17	Jalal-Abat	Agr	Rural Advisory Services Jalal-Abat	LOC	AG, FIS, INF, LOB	Jalal-Abat, October 18th, 2011 h: 9.00-10.00

18	Jalal-Abat	Agr	Rural Advisory Services Jalal-Abat	LOC	AD, AG, CC, EP, INF, LM, OM, TRA	Jalal-Abat, October 18th, 2011 h: 10.00-11.00
19	Jalal-Abat	Agr	Water User Association (WUA), Jalal-Abad	WU	AD, AG, FIS, LM, OM, WM	Jalal-Abat, October 18th, 2011 h: 11.30-13.00
20	Nookat	Agr	Water User Association (Abshyr Tany)	LOC	AD, AG, FIS, LM, OM, WM	Bazar-Korgon, October 19th, 2011 h: 9.00-10.30
21	Nookat	Agr	Water User Association (Abshyr Tany)	WU	AG, LM, OM, WM	Bazar-Korgon, October 19th, 2011 h: 10.30-11.00
22	Nookat	Agr	Rural Advisory Services	LOC	AD, AG, CC, EP, INF, LM, OM, TRA	Bazar-Korgon, October 19th, 2011 h: 11.00-11.40
23	Kyzyl Kia	Agr	Public Foundation "Taian"	NGO	AG, ED, EP, INF, LM, TRA, WM	Kyzyl Kia, October 19th, 2011 h: 12.20-12.50
24	Ferghana Valley	Dom	Central Asian Alliance for Water	REG	AD, CC, ER, HUM, INF, LOB, TRA	Osh, October 19th, 2011 h: 14.50-15.30
25	Kyrgyzstan	DRR	UNDP	IO	AD, CC, EP, FIS, INF, RM, TRA	Bishkek, October 25th, 2011 h: 15.30-16.00
26	Kyrgyzstan	Tour	USAID	IO	ED, FIS, INF, TOU, TRA	Bishkek, October 28th, 2011 h: 15.00-15.45
27	Kyrgyzstan	Gen	OSCE	IO	AD, CC, ED, EP, FIS, INF, RM, TRA, WM	Bishkek, November 1st, 2011 h: 9.30-10.00
28	Kyrgyzstan	Gen	Ministry of Natural Resources	NAT	EP, FIS, INF, LM, OM, RM, WM	Bishkek, November 3, 2011 h: 9.00-9.45
29	Kyrgyzstan	DRR	Ministry of Emergency Situations	NAT	FIS, INF, OM, RM, WM	Bishkek, November 4, 2011 h: 9.00-9.45
30	Kyrgyzstan	DRR	United Nations in the Kyrgyz Republic	IO	FIS, HUM, INF, RM	Bishkek, November 11, 2011 h: 15.00-15.30

Legend	
Type of actor (described according to its territorial scope of action)	
International Organizations (including NGOs, multilateral/bilateral donors, UN agencies, regional organizations, e.g. UE, IFIs)	IO
Regional Organizations (e.g. IFAS)	REG
Local NGOs	NGO
National State bodies (Ministries, Committees, Agencies having a national scope of action)	NAT
Regional/Provincial authorities (Municipal/Oblast/Rayon administrations)	PROV
Water users (e.g. farmers)	WU
Self-governance bodies having a territorial/village scope of action (e.g. WUAs, ayil ökmötü)	LOC
Research Institutions, Universities	RES

Activities	
Adaptation	AD
Agriculture (including livestock)	AG
Climate change	CC
Economic development	ED
Environmental protection	EP
Education & Research	ER
Financial support	FIS
Hydropower (production)	HP
Humanitarian	HUM
Information (production of data, including weather forecasts, hydro-met services)	INF
Land management	LM
Advocacy, lobbying, information	LOB
Infrastructure operation and maintenance (including irrigation)	OM
Risk management (general)	RM
Tourism	TOU
Training (expertise, technology)	TRA
Water management (general)	WM
Sectors	
Industry and hydroelectric	Ind
Agriculture (including irrigation) and fishery	Agr
Domestic (drinking water, sanitation services, etc)	Dom
Tourism	Tour
General (WRM and natural resources management/environmental protection in general, all 4 sectors combined)	Gen