



# Mind the Gap?

*Local practices and institutional reforms for water allocation in Afghanistan's Panj-Amu River Basin*

Vincent Thomas

with

Wamiqullah Mumtaz and Mujib Ahmad Azizi



European Commission





**Afghanistan Research and Evaluation Unit  
Case Study Series**

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## Acronyms

ANDMA	Afghanistan National Disaster Management Authority
AREU	Afghanistan Research and Evaluation Unit
CPR	common pool resources
ET <sub>o</sub>	reference evapotranspiration
EU	European Union
GIS	Geographic Information System
IDLG	Independent Directorate for Local Governance
IWRM	integrated water resources management
KRBP	Kunduz River Basin Program
LKSB	Lower-Kunduz Sub-basin
LML	Landell Mills Limited
MAIL	Ministry of Agriculture, Irrigation and Livestock
MEW	Ministry of Energy and Water
MoI	Ministry of Interior
MWP	Ministry of Water and Power
RBM	river basin management
MSP	multi-stakeholder platform
MP	member of parliament
NDS	National Directorate of Security
NDVI	normalised difference vegetation index
NGO	nongovernmental organisation
NRM	natural resources management
PARBP	Panj-Amu River Basin Program
PARBP-TA	PARBP technical assistance team
PC	Provincial Council
RBA	River Basin Agency
RBC	River Basin Council
SOGREAH	Societe Grenobloise d'Etudes et d'Applications Hydrauliques
SRI	System of Rice Intensification
TSB	Taloqan Sub-basin
WAC	Water Allocation Commission
WMD	Water Management Department
WSS	water sector strategy
WUA	Water Users Associations

## Glossary

<i>abandâz</i>	a customary, temporal agreement on the allocation of water between upstream and downstream communities during periods of drought or water scarcity (see Box 3 on p. 36)
<i>mirab</i>	water master
<i>haqabah</i>	a fixed system of water rights, in contrast to <i>abandâz</i> (see Box 3 on p. 36)
<i>chak bâshi</i>	<i>mirab's</i> assistant
<i>malik</i>	village headman

## Executive summary

Since 2004, policymakers and international donor agencies have been trying to introduce “good” water governance concepts in the reform of Afghanistan’s water sector. The 2009 Water Law is based around the “holy trinity”<sup>1</sup> of: integrated water resource management (IWRM), river basin management (RBM) and participation in decentralised decision-making via Multi-Stakeholder Platforms (MSPs). Since 2005, the Panj-Amu River Basin Program (PARBP) has been piloting the introduction of these imported concepts in north-eastern Afghanistan.

International experience shows that institutional change rarely follows models as they are originally designed, as implementation often faces resistance on the ground. Piloting the implementation of complex water governance reforms at sub-basin level requires using the lessons learned from actual practices and outcomes of implemented strategies to anticipate the opportunities and challenges in the adaptation of policies and strategies, including for MSPs, in a given river basin.

With this context in mind, this research attempts to provide a better understanding of how local institutions deal with water allocation at the sub-basin level during dry years, and discuss further policy challenges and opportunities. It begins by describing the existing institutional arrangements shaping water allocation, going on to assess their performance, before identifying and analysing the gaps between existing policies and ground realities. The overall focus is on how decision-making processes and power relations shape water allocation at sub-basin level.

This case study outlines research from the Taloqan Sub-basin (TSB) and Lower-Kunduz Sub-basin (LKSB), exploring how and why local institutions address water allocation problems at sub-basin level. In doing so, it highlights how this is often done through procedures which fall far from the sanctioned discourse on “good” water governance promoted in the Water Law, and away from the ideal MSP set-up. On one hand, institutional reforms emphasise the devolution of decision-making power to water users, with the government taking the role of advisor and facilitator. The reality in the LKSB on the other hand, shows that the local Government—the Water Management Department (WMD) and Governors at district and provincial level—are still the main legitimate actors shaping decision-making. What is more, they are eager to impose decisions, skipping participatory processes when the power balance is in their favour. The Water Law also talks about translating existing water rights into permits. However, this is complicated by the fact that the traditional water allocation system of *abandâz*<sup>2</sup> currently applied in the LKSB does not formally recognise rights of downstream communities along the sub-basin. Finally, the governance model behind the Water Law praises decentralisation in decision-making. However, the reality in the TSB shows that parliamentarians, central ministries and even the president’s office were a driving force behind water allocation during the dry year of 2011. This approach has most notably been embodied in a recent presidential decree that effectively denies the core principles of the Law. The research thus indicates that the state may once again be attempting to exert its power over water management decisions, even in the face of an official discourse that defines it as a technical advisor only.

Furthermore the formation process and composition of current MSPs is again largely divergent from what policy proposes. Current regulation suggests a single decision-making platform such as a river basin council (RBC) organised along hydrological boundaries, with a fixed composition mainly based on water use categories. However, existing practices favour multiple platforms, each addressing water allocation issues at a specific scale, and focusing on a single sector, such as irrigation. The organisational arrangement shows a clear demarcation along provincial boundaries rather than hydrological boundaries. Such MSPs are flexible in their composition, adaptive, and shaped by practical problems rather than theoretical models.

1 J. Warner, “The Beauty of the Beast: Multi-Stakeholder Participation for Integrated Catchment Management,” in *Multi-Stakeholder Platforms for Integrated Water Management*, ed. Jeroen Warner (Farnham, UK: Ashgate, 2007), 2.

2 *Abandâz* (literally “releasing water”) is a traditional water allocation practice at sub-basin or canal level, whereby upstream water users release water to downstream users under certain conditions. Decisions on duration and occurrence belong mainly to upstream water users as *abandâz* does not guarantee any rights to downstream users.

Field results also indicate that despite defying the governance principles of the Water Law, the institutional arrangements at work in 2011 led to relatively positive—albeit limited—outcomes in terms of water access for downstream users. Analysis of the factors that triggered this also suggests that a strict application of the promoted policy models (i.e. decentralisation and devolution of decision-making power to water users) may be counter-productive for water access in downstream areas, at least in the short term. In other words, what may be gained in terms of “good water governance” may come at a cost in terms of water access results.

Finally, the paper raises doubts about the impact of the PARBP which has been trying to pilot institutional reform in the study area since 2005. In the intervening years, the PARBP has facilitated the formation and the development of a sub-basin working group. It was expected to lead the transition towards a river basin management approach based on the core principles of the 2009 Water Law. However, in 2011, this sub-basin working group still lacked the capacity for social learning as a way to support resolution of practical water management problems. It has failed, as a group, to learn from past experiences such as the 2008 dry year. Unsurprisingly, none of the sub-basin working groups has been playing any role in the management of the 2011 dry year. What transpires instead is that PARBP efforts have mainly been focusing on infrastructure rehabilitation, as well as on the regulatory aspects of water sector reform through supporting the development of strategies, laws and policies. It has failed, in the mean time, to appear as a relevant and legitimate actor in resolving practical water management problems. Consequently, local institutions continue to function or evolve effectively independently, developing along their own path that is often outside of the reform framework.

Among several recommendations, we suggest that the pilot PARBP start working more closely with existing institutions on the resolution of practical problems related to water allocation, rather than piling up more regulations. More resources should be devoted for developing the social learning capacity of current working groups and future sub-RBCs. Programmes devoted to the introduction of “good” water governance should also work more closely with power brokers in Kabul as well as governors in concerned provinces. It appears also necessary to rethink the composition and structure of decision-making platforms at the sub-basin level, and explore the possibility of multiple and flexible MSPs at different scales rather than a single, fixed sub-RBC. Last, although developing better governance structure is necessary, it may also be wise to increase resources to support a wide adoption of on-farm water saving methods to decrease irrigation water demand, and thus support better water access to downstream areas.

# 1. Introduction and Conceptual Framework

## 1.1 The need for a better understanding of institutional development in the water sector

Since the 2002 Kabul Conference on Water Resource Management and Development in Afghanistan,<sup>3</sup> the water sector has been under reform in Afghanistan. In 2004, a Strategic Policy Framework for the water sector provided an initial road map. In 2008, a Water Sector Strategy was adopted, and on 26 April 2009, a new Water Law was published in the official Gazette, supplanting the 1991 version.

The Water Law follows the “holy trinity”—to quote the words of Warner<sup>4</sup>—or three key principles internationally sanctioned in the global “good water governance” discourse. It places integrated water resource management (IWRM), river basin management (RBM) and participation through decentralised decision making via multi-stakeholder platforms (MSPs) at the formal core of water resource management in Afghanistan.

In the river basin management model promoted by the 2009 Water Law and related regulations,<sup>5</sup> decentralised decision-making and implementation of plans are mediated through MSPs in the form of river basin agencies (RBAs) and river basin councils (RBCs). Both institutions are ideally responsible for managing water allocation and resolving conflicts between groups of water users. The RBAs are composed of line ministries and act in a technical advisory role, with RBCs composed mainly of water users responsible for actual decision making. The model also suggests the formation of sub-RBCs and sub-RBAs (see more details of this organisational structure in Figure 5).

Since July 2005, at the time when river basin management models were already mentioned in the draft Water Sector Strategy and draft Water Law, the Afghan government has been piloting the application of this new model through the ambitious European Union (EU) funded Panj-Amu River Basin Program (PARBP). In its initial years, the PARBP—formerly known as Kunduz River Basin Program (KRBP)—was involved in the formation and development of MSPs in the Taloqan and Lower-Kunduz sub-river basins (see Maps 1 and 2). A working group was formed in each sub-basin, composed of both government representatives (who were then intended to form a sub-RBA) and water users’ representatives (to form a sub-RBC).

For three years, discussions were held mainly around issues of river basin profile, dry year and flood forecasting and management, and composition of sub-RBCs. However, Varzi and Wegerich’s 2008 study cast shadows over the significance of these achievements, whether in terms of the learning experience of this working group or its tangible outputs. They bluntly summarised the initial three years’ experience as “much ado about nothing.”<sup>6</sup>

From April 2008 until February 2011, the working groups did not meet once and remained inactive. During that period, work focused instead on legislative issues, including the finalisation of the Water Law and river basin management regulations which included terms of reference for sub-RBAs and sub-RBCs.

As of the time of this study in summer 2011, the PARBP was in the process of formally establishing and staffing RBAs and RBCs. Policymakers and advisors who shaped the water sector reform expect that with the adoption of appropriate legislation, these MSPs will function and perform as planned, with the support of adequate capacity-building programs. A progressive phasing-out of the EC’s support for PARBP is anticipated to start in 2014.

3 Also known as the “Kabul Understanding.”

4 J. Warner, “The Beauty of the Beast: Multi-Stakeholder Participation for Integrated Catchment Management,” in *Multi-Stakeholder Platforms for Integrated Water Management*, ed. Jeroen Warner (Farnham, UK: Ashgate, 2007).

5 At the time of writing, the “Procedure on the frame work for water resources management in the river basins” (Kabul: MEW, 2011) was still in final draft stage.

6 M.M. Varzi and K. Wegerich, “Much Ado About Nothing—Sub-Basin Working Groups in Kunduz River Basin, Afghanistan,” *Central Asian Waters* (2008): 47.

International experience shows that new models of governance are rarely adopted on the ground as intended in their design. Actors resist change to protect their interests, or develop new institutions which draw from both past and current experiences (see the discussion on the concepts of “path dependency” and “institutional bricolage” below). Experimentation, analysis and learning from experience is needed to facilitate the development of beneficial institutions. Consistent efforts are required to find a balance between incorporating existing local practices considered as legitimate and effective into formal policies, and introducing new procedures to address bottlenecks and limitations in existing practices.

Since 2005, evaluations, reports or even informal studies from the Ministry of Energy and Water (MEW), Ministry of Agriculture, Irrigation and Livestock (MAIL) or PARBP on the performance of river basin management institutions have been almost totally absent. This raises questions about the interest of leading actors in the water sector in adapting management policies and practices that draw from unfolding experiences.

In 2011, a severe dry year hit the Panj-Amu River Basin. In the absence of operational sub-RBAs and sub-RBCs, local institutions and actors organised to tackle the issue of water allocation along sub-river basins. In the process, various informal water allocation commissions (WACs) were formed. Significantly, the actors involved in this process were in fact the same ones who were expected to be sitting in the formal MSPs (i.e. RBAs and RBCs). This dry year put both existing and emerging institutions to the test and thus provides a unique opportunity to describe and analyse their practices, evaluate their effectiveness in water allocation issues as they developed in the sub-river basins. In the context of institutional transition, it also provides an opportunity to use the lessons learnt from actual practices to anticipate the opportunities and challenges in the application and adaptation of the policy models for MSPs in river basins as defined in the Law and subsequent regulations.

This research thus aims at learning from the experience of the WACs and other informal institutions in dealing with water allocation during dry years to better inform strategies and programmes for the development of MSPs and river basin management institutions.

### *Research objectives*

Two objectives have shaped the design and implementation of this research:

1. To provide a better understanding of the functioning of local water institutions in dealing with water allocation at sub-river basin level by:
  - **Describing** the institutional arrangements at work regarding water allocation at sub-basin level during dry years
  - **Assessing** the performance, relevance and viability of local institutions in dealing with water allocation along the Taloqan sub-basin (TSB) and Lower-Kunduz sub-basin (LKSB)
  - **Identifying and analysing the gaps** between policy models and practices on the ground concerning water allocation at sub-river basin level
2. To suggest recommendations for future MSP development programmes, including those concerning RBAs and RBCs.

### *Research questions*

1. How did local institutions (including WACs) deal with water allocation at sub-basin level during the dry year of 2011?
2. What was the level of performance (in terms of effectiveness and efficiency) and viability of the Lower-Kunduz and Taloqan WACs in resolving water allocation issues during the 2011 dry year?
3. What are the gaps between stated policy models for RBM procedures and actual practices on the ground?
4. Are adopted policy models likely to address bottlenecks identified in existing practices?



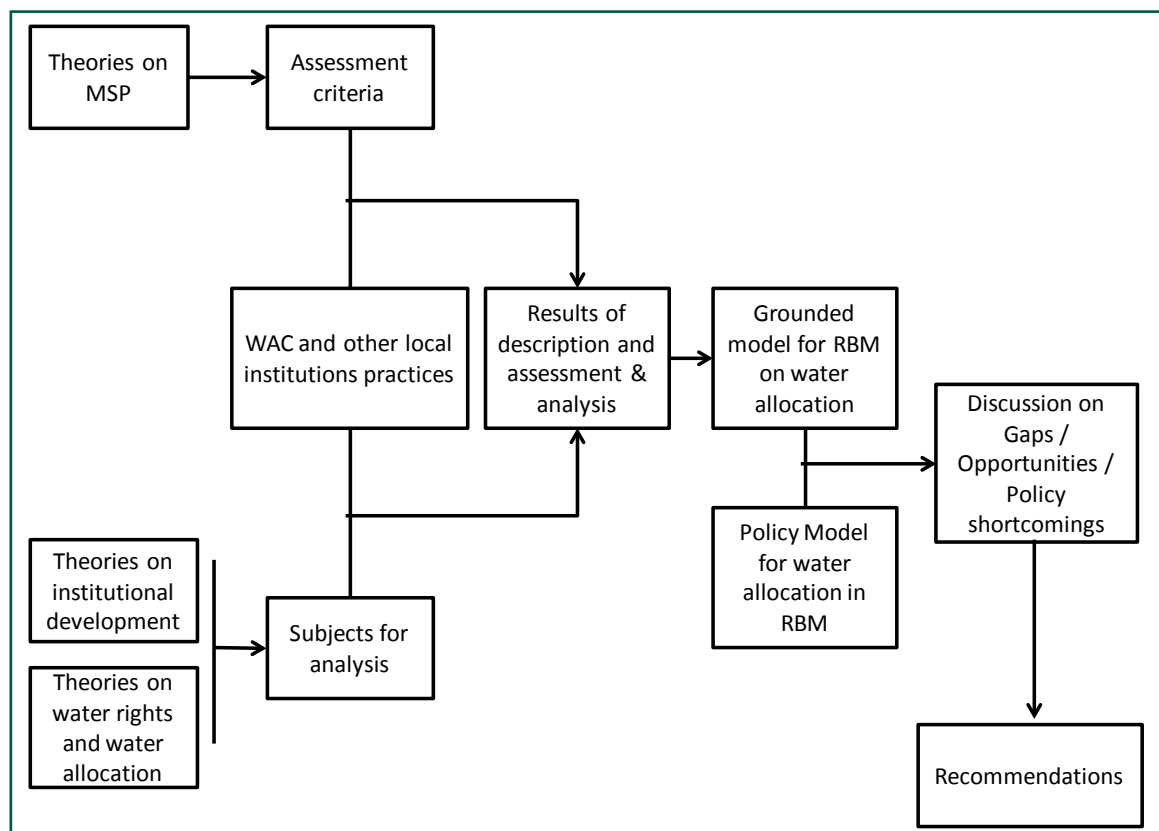
5. What room should forthcoming policies and regulations provide for including successful institutional arrangements in solving RBM issues?

## 1.2 Conceptual framework

This study focuses on providing a better understanding of the functioning of local water institutions at sub-river basin level, with the aim of using this understanding to inform and adapt management policies and practices. In this approach, it draws on a number of concepts and definitions related to institutional development and water governance.

An overview of the conceptual framework is provided in Figure 1 below. Theories on institutional development (e.g. institutional bricolage and path dependency), water rights and water allocation offer a number of ways to analyse WAC practices regarding water allocation at sub-basin level. Theories on MSPs provide us with assessment criteria to evaluate the performance of WACs in light of their status as embryos for future MSPs. On the basis of the results of this assessment, an empirical model for MSP that reflects water allocation practices on the ground will be proposed. This grounded model will then be compared to the current policy model proposed in the Water Law and related river basin management regulations. The consequent analysis will provide the basis for defining and debating gaps, opportunities and policy shortcomings in river basin management with a focus on MSPs and water allocation, and ultimately for providing recommendations for the future.

*Figure 1: Overview of the conceptual framework*



### *Defining institutions in the context of natural resources management*

In policy development, institutions in natural resources management (NRM) are often approached through a managerial and functionalist perspective. Through this lens, institutions are defined as rules, regulations and conventions directing users' actions and behaviour toward more

### **Box 1: Water rights and water allocation definitions**

For this study, water rights and water allocation are defined as follows:

#### **Water Rights**

The right to take and use water subject to the terms and conditions of the grant.

#### **Water Allocation**

The process in which an available water resource is distributed (or redistributed) to legitimate claimants.

Adapted from S. Burchi and A. D'Andrea, "Preparing National Regulations for Water Resources Management Principles and Practice," in *Food and Agriculture Organization Legislative Study No.80* (Rome: Food and Agriculture Organization, 2003).

appropriate collective management of their resources.<sup>7</sup> Mehta et al. argue that such views on institutions have often shaped classic policy approaches which consist of "getting the institutions right" to stabilise and steer uncertain behaviours. The early literature on common pool resources (CPR) has been influential in shaping this view. However, while the work on CPR has been very useful in developing a critical understanding of the factors that facilitate collective actions in the commons, critics have argued that the conception of institutions in CPR has often failed to match reality. In practice, theories and policies that are strictly focused on defining rules, regulations and rights have thus not usually been adapted to comprehend and respond when natural or common-pool resources are managed through multiple, complex and overlapping social relations and practices.<sup>8</sup> As a consequence, the policy responses inspired via materialist or functionalist approaches have often had disappointing impacts. Among the main reasons put forward to explain these limitations is the fact that institutional analyses have not been sufficiently rooted in local history and social context of traditions, culture and norms.<sup>9</sup> Others have argued that this approach does not sufficiently explain the linkages and articulation between formal and informal as well as local and non-local institutions that give shape to NRM practices, thus limiting understanding of the messy middle ground and overlap between different institutional domains.<sup>10</sup>

An alternative way to view institutions is to consider the more dynamic aspects of their development. This more anthropologically-oriented approach places greater emphasis on understanding how institutional practices are structured by social, cultural and political contexts. The focus is thus on what people do and believe rather than on rules and regulations, based on the assertion that the existence and functioning of institutions depend on whether they are constantly practiced or invested in repeatedly over time.<sup>11</sup> This approach also improves the understanding of institutions by better investigating local/non-local and formal/informal interfaces and the overlap between institutional domains.<sup>12</sup> In the Afghan context, the government has devoted substantial

7 Douglas North, *Institutions, Institutional Change and Economic Performance* (New York: Cambridge University Press, 1990); L. Mehta, M. Leach, P. Newell, I. Scoones, K. Sivaramakrishnan and S.A. Way, "Exploring Understanding of Institutions and Uncertainty: New Directions in Natural Resources Management" (Brighton: Institute for Development Studies, 1999).

8 Mehta et al., "Exploring Understanding of Institutions and Uncertainty."

9 D. Mosse, "The Symbolic Making of a Common Property Resource: History, Ecology and Locality in a Tank-Irrigated Landscape in South India." *Development and Change* 28 (1997): 467-504; Frances Cleaver, "Incentives and Informal Institutions: Gender and the Management of Water," *Agriculture and Human Values* 15, no. 4 (1998): 347-60; F. Cleaver and T. Franks, "How Institutions Elude Design: River Basin Management and Sustainable Livelihoods" (Bradford, UK: Centre for International Development, 2005); B. Campbell, A. Mandondo, N. Nemarundwe, B. Sithole, W. De Jong, M. Luckert and F. Matose, "Challenges to Proponents of Common Property Resource Systems: Despairing Voices from the Social Forests of Zimbabwe," *World Development* 29, no. 4 (2001): 589-600.

10 Mehta et al., "Exploring Understanding of Institutions and Uncertainty."

11 Cleaver, "Incentives and Informal Institutions: Gender and the Management of Water."

12 Mehta et al., "Exploring Understanding of Institutions and Uncertainty: New Directions in Natural Resources Management."

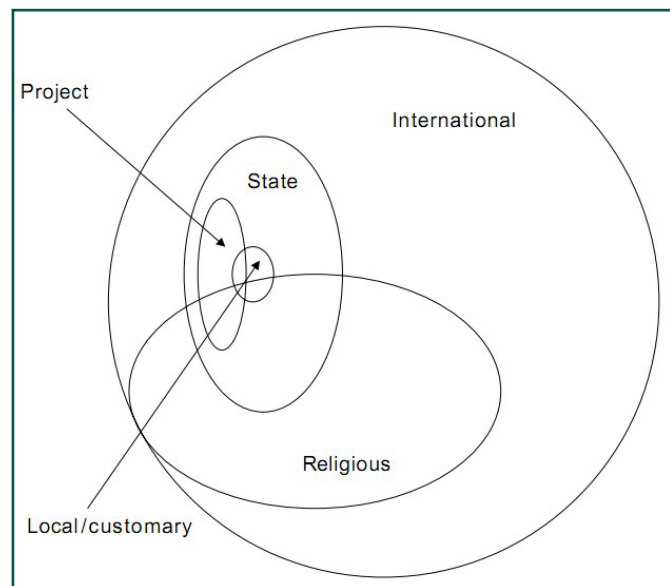
effort to developing new river basin institutions through defining new formal rules, regulations and norms (e.g. the Water Law and new RBM regulations). However, much less effort has been invested in trying to understand the actual practices that give shape to evolving institutions. This research is an initial attempt to fill the gaps between theoretical models and local realities and provide policymakers an alternative view when planning further interventions in the field of RBM.

### **Water allocation, water rights and legal pluralism**

The concept of legal pluralism in the context of NRM implies a conceptualisation of law as plural, contested and a source of various interpretations.<sup>13</sup> Acknowledging legal pluralism in NRM and CPR management has emerged as a response to the limitations of the functionalist theories on institutions (see above) and the unsuitable view of a single “rule of law” when it comes to understanding and dealing with CPR management.

In an increasingly large number of documented cases of NRM (including in irrigated systems), formal and informal water laws<sup>14</sup> exist together, overlapping and influencing each other across different scales and geographies.<sup>15</sup> Actors make reference to different legal orders to give meaning to and justify their practices and behaviour regarding the use of water resources.<sup>16</sup> These legal orders may derive from various contexts including, religious, local or customary practices, state law, international laws or specific local projects and interventions (see Figure 2).

**Figure 2: Overlapping legal orders related to water**



Source: Meinzen-Dick and Nkonya, “Understanding Legal Pluralism.”

Afghanistan is no exception. On the one hand there are various customary water distribution practices at the canal and basin levels.<sup>17</sup> On the other hand, a new national Water Law promotes internationally praised principles of “good water governance,” including for water allocation at river basin level.

In such contexts, people draw strategically or opportunistically on these various legal orders (a process sometimes described as “legal shopping”) to reach their goals. While early work on CPR tended to ignore the messy interface between overlapping legal orders, from local

<sup>13</sup> S. E. Merry, “Anthropology, Law and Transnational Processes,” *Annual Review of Anthropology* 21 (1992): 357-79.

<sup>14</sup> The term is used generically and is distinct from Afghanistan’s officially gazetted Water Law.

<sup>15</sup> R. Meinzen-Dick and R. Pradhan, “Legal Pluralism and Dynamic Property Rights,” (Washington, DC: International Food Policy Research Institute, 2002); R. Meinzen-Dick and L. Nkonya, “Understanding Legal Pluralism in Water Rights: Lessons from Africa and Asia,” in *African Water Laws: Plural Legislative Frameworks for Rural Water Management in Africa* (Johannesburg, South Africa: 2005).

<sup>16</sup> Meinzen-Dick and Pradhan, “Legal Pluralism and Dynamic Property Rights.”

<sup>17</sup> V. Thomas and N. Sabawon, “Sharing Irrigation Water Equitably,” in *Afghanistan Human Development Report 2011—The Forgotten Front: Water Security and the Crisis in Sanitation* (Kabul: Center for Policy and Human Development, 2011); J. Lee, “The Performance of Community Water Management Systems” (Kabul: AREU, 2007); J. Lee, “Water Management, Livestock and the Opium Economy: Social Water Management” (Kabul: AREU, 2006); V. Thomas, and M. Ahmad, “A Historical Perspective on the Mirab System: A Case Study of the Jangharoq Canal, Baghlan” (Kabul: AREU, 2009); Chokkakula, Srinivas, “Interrogating Irrigation Inequities: Canal Irrigation Systems in Injil District, Herat” (Kabul: AREU, 2009).

to non-local,<sup>18</sup> the legal pluralism literature shows how “legal shopping” may actually be more effective,<sup>19</sup> particularly in contexts of uncertainty such as the water availability issues characterising the areas focused on in this study.

Better understanding of overlapping legal orders on the ground may help in explaining how and why certain flexible and (re)negotiated practices—instead of fixed rules—are emerging in specific contexts.<sup>20</sup> Understanding how these legal orders are contested is critical, particularly when working out how to account for customary rights and practices during the preparation and implementation of modern legislation. As Meinzen-Dick and Nkonya warn:

*Efforts to improve water allocations may be ineffective or even have the opposite effects from those intended, unless grounded in a good understanding of social institutions that shape rights to water, a careful assessment of the options available for improving water management and a willingness by those involved to experiment, adapt and learn from experience.*<sup>21</sup>

The concept of legal pluralism is useful for this study since the research investigates how claims for water rights are debated and contested among local and national actors in the face of the limitations of customary water allocation principles of *abandâz* (a customary, temporal agreement on the allocation of water between upstream and downstream communities during periods of drought or water scarcity. For more information, see Box 3 below). As will be shown, the imposed introduction by the state of fixed water rights (expressed as a percentage of river flow) in the TSB has created tensions among water users from different provinces. Based on their experience in Africa and Asia, Meinzen-Dick and Nkonya suggest that in such cases, the introduction of fixed water rights as a way to reduce conflicts is risky when people are used to flexibility and principles rather than fixed rules.<sup>22</sup>

### *Institutional bricolage and path dependency*

#### **Institutional bricolage**

The concept of institutional bricolage is useful in understanding how new institutions emerge. It rejects the idea that institutions suddenly and smoothly change in line with new policies or regulations. There are a growing number of examples in the literature that suggest institutional design is not easily applied in practice, especially when those doing so are unfamiliar with the complexity of local context.<sup>23</sup> In fact, the literature on institutional bricolage shows that institutions such as those promoted in the new Afghan Water Law (i.e. sub-RBAs and sub-RBCs) emerge and evolve by referring constantly to positive past experiences, habits and values.<sup>24</sup> This, it is argued, is the basis from which new institutions gain legitimacy.<sup>25</sup>

However, there remains a strong belief among actors involved in Afghan water sector reform that good governance practices will simply fall into place once RBA staffs are recruited and RBC members elected.<sup>26</sup> By adopting the concept of institutional bricolage, this paper asserts

18 Mehta et al. “Exploring Understanding of Institutions and Uncertainty.”

19 F. Benda-Beckmann, K. M. de Bruijn, H. van Dijk, G. Hesselting, B. van Koppen and L. Res, “Rights of Women to the Natural Resources Land and Water” (The Hague: Netherlands Development Assistance, 1997).

20 Mehta et al., “Exploring Understanding of Institutions and Uncertainty.”

21 Meinzen-Dick and Nkonya, “Understanding Legal Pluralism in Water Rights,” 2; S. Burchi and A. D’Andrea, “Preparing National Regulations for Water Resources Management Principles and Practice,” in *Food and Agriculture Organization Legislative Study No.80* (Rome: Food and Agriculture Organization, 2003), 2.

22 Meinzen-Dick and Nkonya, “Understanding Legal Pluralism in Water Rights.”

23 B. Bruns, “Metaphors and Methods for Institutional Synthesis,” paper presented at the Workshop in Political Theory and Policy Analysis, Bloomington, IN, 3-6 June 2009.

24 Cleaver and Franks, “How Institutions Elude Design”; J. Sehring, “Path Dependencies and Institutional Bricolage in Post-Soviet Water Governance,” *Water Alternatives* 2, no. 1 (2009): 61-81.

25 H. C. Komakech and P. Van der Zaag, “Understanding the Emergence and Functioning of River Committees in a Catchment in the Pangani Basin, Tanzania,” *Water Alternatives* 4, no. 2 (2011): 197-222.

26 Personal observation during numerous workshops as well as informal discussions with MEW senior officers between 2005 and 2011.

that, beyond legislative paperwork and administrative inputs, it is an understanding of current practices that is critical when attempting to shape future institutions.

The term “institutional syncretism” is also used to define the processes of rearrangement, reconfiguration and recombination that yield new institutional arrangements.<sup>27</sup> In this context, the environment of legal pluralism described above offers a particularly suitable setting for institutional bricolage to take place.<sup>28</sup>

### Path dependency

This concept is useful to explain how existing (local) institutions resist change and may persist despite attempts at reform.<sup>29</sup> More often than not, processes of institutional changes are locked in a particular pattern that reinforces the status-quo despite external reforms.<sup>30</sup> This is in part because existing institutions serve certain interests.<sup>31</sup> The study of power relations is thus useful in approaching and understanding path dependency and the challenge it poses to institutional change. As part of this research, the LKSB provides an illustration of how upstream users have resisted attempts to shift from the traditional *abandâz* allocation system toward a more permanent and secured (from downstream users’ perspective) system of water rights. The case of the TSB offers an example of resistance by upstream water users against top-down and prescriptive allocation decrees initiated by downstream users through their constituencies in parliament.

Bruns suggests that in addition to path dependency, it is important to grasp the issue of timing in understanding adaptive institutions. He refers to the work of Gunderson and Holling<sup>32</sup> to highlight how seemingly ordered institutional arrangements may collapse following periods of stress accumulation and tension, creating space for new re-organisations to take place. He therefore suggests that the need and possibility for change is not uniform but conditional and opportunistic.<sup>33</sup> In the study area, dry years are clearly moments that put local institutions to the test and provide opportunities for change and institutional adaptation. The experiences and new practices that emerge during dry years could eventually form the basis for defining new local institutional arrangements in future.<sup>34</sup> Establishing an understanding of such events is thus critical for policy interventions.

### Defining multi-stakeholder platforms in river basin management

Afghanistan has been adopting RBM and participation through MSPs as core principles of its water sector reform. In the current model, sub-RBCs and sub-RBAs will form the MSPs in charge of deciding about and implementing sub-river basin water management plans. However, even though the Water Law was passed in 2009, sub-RBAs under the PARBP were still in the process of developing TORs and recruiting personnel at the time of the 2011 dry years, while sub-RBC members had also not yet been elected.

27 D. Galvan, *The state must be our master of fire: How peasants craft culturally sustainable development in Senegal* (Berkeley, CA: University of California Press, 2004); J. Sehring, “Path Dependencies and Institutional Bricolage.”

28 Meinzen-Dick and Pradhan, “Legal Pluralism and Dynamic Property Rights”; Komakech and Van der Zaag, “Understanding the Emergence and Functioning of River Committees.”

29 Sehring, “Path Dependencies and Institutional Bricolage.”

30 P. Pierson, “Increasing Returns, Path Dependence, and the Study of Politics,” *American Political Science Review* 94, no. 1 (2000): 251-67.

31 Sehring, “Path Dependencies and Institutional Bricolage,” based on K. Thelen, “Historical Institutionalism in Comparative Politics,” *Annual Review of Political Science* 2 (1999): 369, 404.

32 Lance H. Gunderson and C. S. Holling, *Panarchy: Understanding Transformation in Human and Natural Systems*. (Washington, DC: Island Press, 2002).

33 Bruns, “Metaphors and Methods for Institutional Synthesis.”

34 L. M. Kumler and M. C. Lemos, “Managing Waters of the Paraiba Do Sul River Basin, Brazil: A Case Study in Institutional Change and Social Learning,” *Ecology and Society* 13, no. 2 (2008).

Instead, informal WACs were formed to address the situation. Although seen as an interim solution—as they would be replaced by RBAs and RBCs—these were composed of many of the same actors who would ideally have been involved in the RBAs and RBCs, and focused on issues pertinent to the mandate of these formally designated MSPs. Even though certain aspects of the WACs may have fallen beyond this mandate, it is still nonetheless important to study and evaluate them in a similar light. The following sections therefore define and present the evaluation criteria for MSPs as used in this research.

### *Unravelling multi-stakeholder platforms*

One of the most quoted definitions of an MSP comes from Steins and Edwards, who define it as a “decision-making body (voluntary or statutory) comprising different stakeholders who perceive the same resource management problem, realize their interdependence for solving it, and come together to agree on action strategies for solving the problem.”<sup>35</sup> Warner and Verhallen add that “genuine MSPs represent multiple, relevant identities, facilitate ‘real’ negotiation and generate ‘real’ outputs.”<sup>36</sup> Setting-up MSPs as a vehicle for “good water governance” is becoming part of the sanctioned discourse in water management.<sup>37</sup> As Warner puts it, MSPs in fact form the third part of the “holy trinity” of integration, river basin management, and participation.<sup>38</sup>

The first part, integration, is promoted through the IWRM principle. IWRM is about “the coordinated development and management of water, land, and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.”<sup>39</sup> Warner summarises IWRM as “decompartmentalising water management” in response to the limitations of sectoral approaches.<sup>40</sup>

River basin management—the second part—promotes the planning and management of land and water resources using hydrological boundaries (river basins or watersheds) rather than administrative boundaries (districts, provinces, regions). However, several critics have questioned the relevance of the watershed as an accepted unit of governance, underlining that a RBM approach is not a cure-all that will systematically lead to better management.<sup>41</sup> Critiques include the fact that the boundaries of specific water management problems—in other words, the “problem-shed”—do not naturally coincide with the physical boundaries of a river basin.<sup>42</sup> This is in part due to the fact that as well as practical considerations, political factors can play a part shaping the “problem-shed” for a given water management issue.<sup>43</sup> Evidence from this study seems to support this argument, demonstrating that in some instances, the watershed may not be seen by all actors as the best level for taking decisions. For example, decisions that influence water allocation at sub-river basin level may be taken by actors outside the “natural” boundaries of the basin in the service of interests not directly

35 N.A. Steins and V. M. Edwards, “Platforms for Collective Action in Multiple-Use CPRs,” Paper presented at Crossing Boundaries: The Seventh Annual Conference of the International Association for the Study of Common Property, Vancouver, 10-14 June 1998, 1.

36 J. Warner and A. Verhallen, “The Nature of the Beast: Towards a Comparative MSP Typology,” in *Multi-Stakeholder Platforms for Integrated Water Management*, ed. Jeroen Warner (Farnham, UK: Ashgate, 2007), 21.

37 Based on documented international experience, MSPs are expected to add value in three broad areas of development: conflict resolution, adaptive governance, and participation and empowerment in decision making. See more details in Warner, “The Beauty of the Beast.”

38 Warner, “The Beauty of the Beast,” 2.

39 “Integrated Water Resources Management” (Stockholm: Global Water Partnership Technical Advisory Committee, 2000), 24.

40 Warner, “The Beauty of the Beast,” 2.

41 J. A. Allan, *The Middle East Water Question: Hydro-Politics and the Global Economy* (London: I.B. Tauris, 2001); P. Wester and J. Warner, “River Basin Management Reconsidered” in *Hydro-Politics in the Developing World: A Southern African Perspective*, eds Turton and Henwood (Pretoria: African Water Issues Research Unit, 2002); A. Cohen and S. Davidson, “The Watershed Approach: Challenges, Antecedents, and the Transition from Technical Tool to Governance Unit,” *Water Alternatives* 4, no. 1 (2011): 1-14; Warner, “The Beauty of the Beast.”

42 J. A. Allan, *The Middle East Water Question*; Warner, “The Beauty of the Beast.” Note that authors sometimes refer to watershed or catchment area instead of river basins, though these terms may be used interchangeably.

43 Wester and Warner, “River Basin Management Reconsidered.”

related to water issues. Cohen also raises doubts about the river basin approach in cases where there is a lack of enforcement capacity or a fair and legitimate judiciary.<sup>44</sup> This point is highly relevant to the Afghan context and has even been underlined in the draft Water Sector Strategy of February 2008.<sup>45</sup>

The third part, participation, is advocated through decentralised decision-making at the river basin level. This is where the formation of new institutions such as MSPs is believed to be particularly relevant. Such institutions are expected to ensure that all concerned stakeholders have their voices heard—and listened to—in issues of land and water management. Warner sees the MSP as a “logical companion to IWRM,”<sup>46</sup> since ideally, the variety of interrelated uses and users reflected in IWRM should be represented in the platform. In fact, the MSP ideal is basically a Western liberal ideal-type of arrangement, which assumes the universality of equal representation and voice, open dialogue, in line with the EU emphasis on meaningful participatory IWRM in the European Water Framework Directive, Section 14.<sup>47</sup> The translation of the concept into Southern contexts is deeply problematic, as the concept meets the realities of power differences, patronage and manipulation.<sup>48</sup> For Watson, IWRM usually requires an institutional set-up radically different to conventional organisational structures, formulated along the lines of MSPs.<sup>49</sup> However, Cohen argues that there is currently an unfortunate conflation between using the watershed or river basin as a technical tool for water management and the assumption that it is therefore the most appropriate unit of governance. He therefore questions the widespread assumption that taking a river basin approach automatically means genuine participation in decision-making.<sup>50</sup> In a meticulous effort to unpack MSP, Warner further explores each element of the acronym as follows:<sup>51</sup>

- **Stakeholders:** “Individuals, groups or institutions that are concerned with, or have an interest in the water resources and their management.”
- **Multi:** “The diversity of identities of stakeholders” as opposed to “single-sector” forms of interaction (i.e. those limited to a specific sphere such as irrigation or hydropower). Ideally, stakeholders should include actors from different levels of government as well as representatives from civil society and the private sector. Referring to the work of Gavin and Pinder,<sup>52</sup> Warner makes a useful distinction between primary stakeholders—the ones that are directly and most affected—and secondary stakeholders—those with an intermediary role.<sup>53</sup> However, the WACs that form the focus of this research are primarily concerned with “single-sector” issues since they are mainly involved in water allocation among irrigation canals. This means that the “Multi” element of MSP may not technically apply in this case.
- **Platform:** Although in an ideal situation this would imply that “joint action takes place on a raised but level playing field,” Warner refers to the work of Edmunds and Wollenberg<sup>54</sup> to highlight the flaws in this assumption due the influence of “obvious power gaps, or indeed politics, between the participating actors.”<sup>55</sup>

44 Cohen and Davidson, “The Watershed Approach.”

45 “Draft Water Sector Strategy—February 2008” (Kabul, Government of the Islamic Republic of Afghanistan, 2008), 2

46 Warner, “The Beauty of the Beast,” 3.

47 Moster, Erik. “Public Participation And The European Water Framework Directive: A Framework for Analysis” (Inception report of the Harmonising Collaborative Planning project, 2003), 13.

48 See for instance Edmunds, D. and E. Wollenberg, “Disadvantaged Groups in Multistakeholder Negotiations” (CIFOR Programme Report, 2002).

49 N. Watson, “Collaborative Capital: A Key to the Successful Practice of Integrated Water Resource Management,” in *Multi-Stakeholder Platforms for Integrated Water Management*, ed, Jeroen Warner (Farnham, UK: Ashgate, 2007).

50 Cohen and Davidson, “The Watershed Approach.”

51 Warner, “The Beauty of the Beast,” 11.

52 T. Gavin and C. Pinder, “Impact Assessment and Project Management Cycle,” <http://www.enterprise-impact.org.uk/word-files/stakeholderanalysis.doc> (accessed 16 April 2012).

53 Warner, “The Beauty of the Beast,” 12.

54 D. Edmunds and E. Wollenberg, “Disadvantaged Groups in Multi-Stakeholder Negotiations,” <http://www.cifor.cgiar.org/publications/pdf> (accessed 16 April 2012); Warner, “The Beauty of the Beast,” 12.

55 Warner, “The Beauty of the Beast,” 12.

## Expectations from MSP in river basin management: conflict resolution, adaptive governance and empowerment

With increasing physical water scarcity,<sup>56</sup> countries are under growing pressure to find adaptive water re-allocation procedures and manage the conflicts associated with this scarcity.<sup>57</sup> However, this requires the different actors involved to realise their interdependency in the management of water resource.<sup>58</sup>

A lot of efforts in MSP formation and development have been devoted to finding the right composition and association to promote democratisation and empowerment of people at the local level. The classic approach suggests compositions based on water user groups or categories including irrigation, drinking water, municipalities, industries, fisheries and others. In addition, different studies have suggested other forms of non-sector based representation, including ethnic, linguistic, cultural, age and gender.<sup>59</sup>

Warner argues that it would be naïve to assume that MSPs will automatically fulfil goals of democratisation and empowerment since genuine and inclusive participation does not always result in best management practices.<sup>60</sup> In fact, this research suggests that better results regarding equitable water access between upstream and downstream water users along a sub-basin may not necessarily come from the most advocated participatory processes.

## Evaluating multi-stakeholder platforms for river basin management: dimensions and criteria

The assessment of the WAC in this study draws heavily on the framework of Verhallen et al.<sup>61</sup> The terminology and definitions of the criteria are slightly adapted,<sup>62</sup> as proposed in Table 1 below:

**Table 1: Categories and dimensions or assessment criteria for Multi-Stakeholder Platforms**

<i>Categories</i>	<i>Composition and decision-making</i>	<i>Outcomes and results</i>
<b>Assessment dimensions</b>	Arenas / Domains	Generating results and support
	Power balance	Issues and fact-finding
	Decision space	Synergy
	Adaptability	
	Favourable and conducive context	

Source: Adapted and redesigned based on Verhallen, Warner and Santbergen, "Towards Evaluating MSPs for Integrated Catchment Management."

56 For a comprehensive discussion on water scarcity in Afghanistan, see V. Thomas, and N. Eqrar, "Managing Water Resources, Scarcity and Climate Shocks," in *Afghanistan Human Development Report 2011–The Forgotten Front: Water Security and the Crisis in Sanitation* (Kabul: Center for Policy and Human Development, 2011).

57 L. Ohlsson and A. R. Turton, "The Turning of a Screw—Social Resource Scarcity as a Bottle-Neck in Adaptation to Water Scarcity" (London: School of Oriental and African Studies 1999).

58 Steins and Edwards, "Platforms for Collective Action in Multiple-Use CPRs."

59 J.F. Warner and E. Simpungwe, "Stakeholder Participation in South Africa: Power to the People?" Paper presented at the International Symposium on Integrated Water Resources Management (IWRM): Towards Sustainable Water Utilization in the 21st Century, Stellenbosch, South Africa, 22-24 January 2003.

60 Warner, "The Beauty of the Beast."

61 A. Verhallen, J. Warner and L. Santbergen, "Towards Evaluating MSPs for Integrated Catchment Management," in *Multi-Stakeholder Platforms for Integrated Water Management*, ed. Jeroen Warner (Farnham, UK: Ashgate, 2007).

62 Verhallen et al. have proposed nine assessment dimensions to gauge the performance of participatory processes of MSP. Criteria are organised according to three categories: process, content and context. Ultimately, such assessment facilitates the identification of the weaknesses and strengths of MSPs, as well as bottlenecks and opportunities for change. Their work builds on B. Mitchell, "Integrated Catchment Management and MSPs: Pulling in Different Directions?" in *Multi-Stakeholder Platforms for Integrated Water Management*, ed. Jeroen Warner (Farnham, UK: Ashgate, 2007). In this paper, the framework has been re-organised around two categories and eight criteria.



## Composition and decision making

This part relates to the composition of the actors involved in MSPs and the power balance between them.

### *Arenas/Domains*

These refer to the types of actors—from single- to multi-sectors—and number of parties—government, private sector, civil society, nongovernmental organisations (NGOs), etc—involved. MSPs characterised by multi-partite and multi-sector arenas are usually considered the most suitable for ensuring all interests are taken into consideration. One of the challenges is finding a balance between a number of participants that is high enough to ensure broad representation, but low enough number to ensure effective facilitation and decision-making. Furthermore, the number of participants may not be as important as the complementarities between the different competencies and capacities brought by each participant to address a specific water management problem.<sup>63</sup>

### *Power balance*

Whether one actor is dominating the discussions or whether there is, more ideally, a power balance among the various actors or parties involved. In this respect, the existence and neutrality of a facilitator is deemed critical to facilitate the possibility of a level playing field. This leads to the key question of what role the state plays in the decision-making process. As Warner notes: “many states are still not relinquishing much of their power primacy.”<sup>64</sup> The case of Afghanistan is somewhat unusual in this regard; when the idea of MSPs in RBM as formal institutions was adopted several years ago,<sup>65</sup> the government had very little power to exercise on matters of river basin management. However, this research suggests that the state is once more attempting to exercise its power on water management decisions in the face of an official discourse that defines it as only a technical advisor.

### *Decision space*

Adequate decision space relates to the mandates and legitimacy given to the MSP. Ideally, an MSP should have a large decision-making mandate. It is expected to provide the largest room for dialogue, which in fact depends on the commonality in interests and positions among actors (see Figure 3).

Especially relevant to this study is the fact that the effective actions of an MSP are not merely determined by the existence of an enabling law. Irrespective of the enabling external environment which provides their “external legitimacy,” representatives must also be considered as legitimate by their constituencies (“internal legitimacy”).<sup>66</sup>

### *External favourable and conducive context*

This relates to whether the MSP is functioning in an environment safe from severe conflicts. In the context of this research, the assumption was that the security situation could be a critical hurdle for planning, monitoring and enforcement of water allocation plans. A conducive context would also refer to an environment excluding two extremes: non-intervention by any authority “in a chaotic, unwanted and contested situation,” or full authoritative control that could result in coercion.<sup>67</sup> Verhallen et al. refer to the work of Kok<sup>68</sup> to explain that depending on the level of interdependency and the parallelism of interests between stakeholders, different

63 Verhallen, Warner and Santbergen, “Towards Evaluating MSPs for Integrated Catchment Management,” 267.

64 Warner, “The Beauty of the Beast,” 12.

65 Though MSPs were formally referenced in the Water Law of 2009 (as River Basin Agencies and River Basin Councils), the government-led “Kunduz River Basin Program” has been piloting the formation of MSPs from as early as 2005.

66 Warner and Verhallen, “The Nature of the Beast,” 26.

67 Verhallen, Warner and Santbergen, “Towards Evaluating MSPs for Integrated Catchment Management,” 264.

68 A. Kok, *Internationaal Onderhandelen. Problemen Bij Internationaal Zakendoen* (Deventer, Holland: Kluwer, 1998).

**Figure 3: Four dialogue and negotiation strategies**

		<i>Interests</i>	
		Parallel interests	Opposite interests
<i>Positions</i>	Strong interdependence	<i>Strategy:</i> <b>Maximum cooperation is possible</b>	<i>Strategy:</i> <b>Fighting or... accomodating</b>
	Low dependency	<i>Strategy:</i> <b>Optimum cooperation is possible</b>	<i>Strategy:</i> <b>Take it or leave it</b>

Source: A. Kok, *Internationaal Onderhandelen. Problemen Bij Internationaal Zakendoen*. (Deventer, Holland: Kluwer, 1998)

negotiation strategies and conflict intensities can be expected (see Figure 3). For instance, in case of strongly opposite interests and no sense of interdependency among actors (bottom right corner of Figure 3), Verhallen et al. argue that solutions such as courts of justice or mediation may be more appropriate than negotiating water allocation through an MSP.<sup>69</sup>

This research shows that there is a well-articulated belief among some influential and powerful leaders at national level that the conflict intensity and opposition of interests between upstream and downstream provinces (particularly along the Taloqan sub-basin) requires a national level intervention—instead of decentralised negotiations through MSPs— to settle water allocation issues.

### ***Adaptivity***

This refers to the aptitude of and constraints on the adaptive capacity of MSPs. Ideally, an MSP should strike a balance between a clear focus on well-defined land and water management issues, and a degree of flexibility in doing so. At a practical level, adaptivity may relate to whether changes in composition are allowed both in theory and practice. In the context of this study, the timeframe for assessing adaptive capacity is too short. Instead, the focus has been on the aptitude or constraints to change in the composition and strategies of the WACs over the duration of a single irrigation season.

### **Outcomes and results**

This part refers to MSPs' capacity to generate and analyse data, get results and provide an overall added value to existing practices of collective water management.

### ***Issues and fact-finding***

Ideally an MSP should have a strong capacity to gather and collectively analyse data and knowledge that will enhance understanding and definition of water management plans. Low consensus on data or knowledge as well as values can make the MSP irrelevant unless careful joint fact-finding is undertaken. A desirable decision or plan starts with joint fact-finding or diagnosis and continues with open, accessible and inclusive information exchange. The level of

<sup>69</sup> Verhallen, Warner and Santbergen, "Towards Evaluating MSPs for Integrated Catchment Management," 264.

uncertainty on data or knowledge and the consensus level on values will ultimately shape the type of problems that the MSP has to deal with (see Figure 4).

**Figure 4: Problem types and related resolution strategies**

		<i>Consensus on values</i>	
		Low	High
<i>Certainty on data/knowledge</i>	Low	Unstructured problem <i>Policy as learning/ joint fact-finding</i>	Poorly structured problem <i>Policy as negotiation</i>
	High	Poorly structured problem <i>Policy as pacification</i>	Structured problem <i>Policy as regulation</i>

Source: Verhallen, Warner and Santbergen, "Towards Evaluating MSPs for Integrated Catchment Management."

### **Generating results and support**

Increasingly, social science focuses not only on the quality of the participatory process within MSP frameworks, but also on the performance of these MSPs (and collaborative processes) in delivering tangible outputs.<sup>70</sup> The capacity of MSPs to deliver results is in fact a critical dimension in the assessment framework proposed by Verhallen et al. Indeed, they argue that without tangible results, such platforms will likely lose their legitimacy as well as political and financial support.<sup>71</sup> In the context of this research, outputs are evaluated in terms of improved water access for downstream provinces as compared to the previous dry year of 2008, when the definition and implementation of water allocation agreements were reportedly unsuccessful. It is also based on the capacity of the WACs to reduce or contain conflicts, and their capacity to mobilise support from other institutions.

### **Synergy**

Ideally, participation in an MSP should bring members and contributors added value in expanding their awareness, perceptions and understanding of the complexity of problems experienced by different actors. This in turn feeds into defining comprehensive and informed solutions. In other words, the MSP should facilitate social learning toward resolution of water management problems.<sup>72</sup> However, if actors are not ready to explore and negotiate solutions that go beyond their "narrowly defined interests," the MSP may add no more value than the existing status quo.<sup>73</sup>

70 Moellenkamp et al., "Informal Participatory Platforms for Adaptive Management."

71 Warner, "The Beauty of the Beast."

72 Kumler and Lemos, "Managing Waters of the Paraíba Do Sul River Basin, Brazil."

73 Warner and Verhallen, "The Nature of the Beast," 26.



## 2. Methodology

This research has been conducted as two comparative case studies in the Taloqan and Lower-Kunduz sub-basins. The focus of analysis is the WACs, including their formation process, activities, decisions and actions. The activities of the WACs concern water allocation at sub-basin level, specifically its allocation for irrigation among canals located along the Taloqan and Lower-Kunduz sub-basins. Water allocation within individual canals is thus beyond the scope of this study as it falls outside of these responsibilities and activities.

### 2.1 Qualitative and quantitative methods

Though the enquiries for this study mainly depended on qualitative methods, the research has also relied on quantitative methods including satellite imagery analysis to better assess the impact of water allocation at sub-basin level.

#### *Qualitative methods*

The study of the WACs includes a process description and an analysis of their activities. The methods used consist of a review of WAC meetings minutes; direct observation of WAC meetings between August and September 2011; field-trips with WAC members during monitoring of water allocation plans; semi-structured interviews with WAC participants (including both government actors and representatives of water users) and semi-structured interviews with the WAC facilitators (PARBP staff). Additional interviews were conducted with *mirabs*<sup>74</sup> and Water User Association (WUA) leaders who have been concerned by or involved in water allocation. Snowball sampling was used to design interviews with key informants informally or formally involved in the issue of water allocation, such as members of parliament for the provinces involved. Overall, the study interviewed in three provinces (Takhar, Kunduz and Baghlan) along two sub-basins (TSB and LKSB), as well as national stakeholders in Kabul. The number of interviews in each province/sub-basin is summarised in Table 2.

**Table 2: Interviews in different sub-basins and provinces**

<i>Sub-basin (Provinces)</i>	<i>Number of in-depth interviews</i>
Both LKSB and TSB (Kunduz)	11
LKSB (Baghlan and Kunduz)	39
TSB (Takhar and Kunduz)	46
National and key informants	18
<b>TOTAL</b>	<b>114</b>

Note: A detailed list of interviewees is provided in Annex 1.

Considering the logistical, time and security constraints it was not possible to cover all 97 canals in the LKSB and TSB. However, the sample of canals was designed to cover the largest possible irrigated area with a balanced representation from upstream to downstream. The table below indicates that interviews encompassed representation from canals covering an average of 88 percent of the total command area of the sub-river basins involved.<sup>75</sup>

A desk study of the Water Law and related regulations provides the basis for the analysis of the gaps between the grounded model emerging from the assessment of the WACs and the policy model for MSPs and RBM.

<sup>74</sup> According to the *Afghanistan Human Development Report 2011*, a *mirab* can typically be defined as “a community-based water service provider responsible for the following: (a) Ensuring water distribution according to specified allocation norms, including defining and implementing a schedule of water turns among irrigators; (b) Organizing collective maintenance by supervising resource mobilization, including materials and labour in villages and monitoring implementation; (c) With variations across levels of authority, assisting in the prevention and resolution of conflicts over water distribution and maintenance.” See more details in Thomas and Sabawon, “Sharing Irrigation Water Equitably.”

<sup>75</sup> Note that the canal areas representing the 12 percent not covered in our sample do not happen to present different physical, social or political conditions.

**Table 3: Number of canals covered through interviews and coverage in the entire sub-basins**

Sub-basin (Province)	No. of canals covered / Total number of canals	Percentage of total irrigated area covered
LKSB (Kunduz)	10 / 17 (59 %)	84 %
LKSB (Baghlan)	11 / 31 (35 %)	91 %
TSB (Kunduz)	22 / 26 (85 %)	94 %
TSB (Takhar)	8 / 23 (35 %)	81 %
<b>TOTAL</b>	<b>51 / 97 (53 %)</b>	<b>88 %</b>

### Quantitative methods

As part of the evaluation of the outcomes and results of the WAC activities a Normative Difference Vegetation Index (NDVI) analysis was conducted<sup>76</sup> (see definition in Box 2). On the basis of satellite imageries, NDVI analysis provided a visual and statistical description of the zones that were irrigated versus those not receiving sufficient quantities of water to avoid crop failure during the dry year. This has been used as a proxy indication of the outcomes of water distribution along the Taloqan and Lower Kunduz sub-basins during the period of July to September 2011. A comparison with the previous dry year in 2008 also gives a sense of the changes that have occurred in terms of improved equity in water distribution.

#### Box 2: NDVI as water distribution proxy

NDVI is a technique that is widely used to monitor vegetation through an assessment of biomass by the spectral signature of photosynthesising chlorophyll. Through NDVI, we obtained a spatial distribution of three categories of irrigated land which are used as proxy to water access:

1. Rice crops/good water access.
2. Non-rice crops/normal water access.
3. Dry land/no or very low water access.\* The analysis has been done for three years:
  - 2008: a very severe dry year\*\* during which WACs were not formed
  - 2009: a very wet year used as a reference for water access in good surface water availability
  - 2011: a very severe dry year during which WACs were formed

\* Details on the NDVI methodology: We assume that the signal between rice crop/non-rice crops/dry land is sufficiently different so that the three NDVI classes can capture the three classes of crops. However, when comparing a dry year (2008 and 2011) and a good year (2009), one has to be cautious in assuming that a zone growing rice (or non-rice crops) in 2008 and the same zone growing rice (or non-rice crops) in 2009 would have the same result in terms of productivity (i.e. yield). Indeed, as shown in the Map 17 in Annex 4, the NDVI values for a similar class can be much higher in 2009 than 2008 (or 2011). In other words, the yield in a “non-rice crop” area in 2008 or 2011 is likely to be lower than in a “non-rice crop” area in 2009. The class map that we discuss in this report thus captures broad changes in water access that led to changes in cropping patterns—for instance the change from “rice” to “non-rice” or the change from “non-rice” to “dry.” It does not precisely assess the impact on yield, which would require a much more detailed survey which was not feasible for this study (partly due to security constraints in Kunduz, but also because of budget and time limitations).

76 Joel Fiddes was contracted for the NDVI analysis.

### 3. Afghanistan's Water Sector Reform

#### 3.1 From pre-war “hydraulic era” to post-war “good governance” reforms

Afghanistan is largely characterised by informal irrigation systems (90 percent),<sup>77</sup> the vast majority of which are managed by community-based service providers called *mirabs* and operated through indigenous infrastructure.<sup>78</sup> However, it is important to treat the notion of a long tradition of community-based management in most canals in Afghanistan<sup>79</sup> with a note of caution, as the so-called “*mirab* system” is in fact quite recent in areas such as the Taloqan and Lower-Kunduz sub-basins.<sup>80</sup> Furthermore, such systems have been influenced throughout their history by external stakeholders (including the state) and interests beyond the realm of the community.<sup>81</sup>

At the state level, the period from the late 1940s to the early 1980s was characterised by an era of water resource development and engineering.<sup>82</sup> At institutional level, from early 1970s onward, a split within the then-Ministry of Agriculture and Irrigation (MAI) led to the transfer of responsibility on irrigation and water management to the Ministry of Water and Power (MWP, which focused on engineering and infrastructure development. The MWP identified large-scale multipurpose infrastructure projects encompassing both irrigation and hydropower, and conducted feasibility studies. These activities were aimed at both developing new irrigated areas and “improving” existing informal systems.<sup>83</sup> Several MWP projects fall within the study area, including the Khanabad diversion dam and main canal (Kunduz Province—TSB); The Sharawan main canal and intake (12,950 hectares [ha]; Takhar Province—TSB); Gawargan intakes and main canals (5,034 ha; Baghlan Province—LKSB)<sup>84</sup> and Qelagay intakes and main canals (1,958 ha; Baghlan Province—LKSB). In the late 1980s, the Ministry of Irrigation, Water Resources and the Environment was created alongside the MEP to pursue the “hydraulic mission.” However, the civil war hampered the development of major projects while weakening the influence and capacity of government institutions. In fact, a lot of state projects were left only partially completed after the onset of war. During the ensuing 25 years of conflict, canals systems in Afghanistan (including the formal ones) effectively became farmer-managed systems with infrastructure rehabilitation support from a few NGOs.

Following the fall of the Taliban, in May 2002 the “Kabul Understanding on Water Resource Management and Development in Afghanistan” laid the foundations for an ambitious attempt at water sector reform. A Water Sector Strategy (WSS) officially completed in February 2008 proposed several short- and long-term objectives, including the development of sustainable water resources management policies and structures through the progressive implementation of IWRM.<sup>85</sup>

77 This figure may have applied in the late 1970s. However, by the fall of the Taliban, even so-called government managed systems were in fact operated and managed “de-facto” by water users themselves.

78 B. Rout, “How the Water Flows: A Typology of Irrigation Systems in Afghanistan” (Kabul: AREU, 2008); Thomas and Sabawon, “Sharing Irrigation Water Equitably”; Lee, “The Performance of Community Water Management Systems”; Lee, “Water Management, Livestock and the Opium Economy: Social Water Management”; B. ter Steege, “Infrastructure and Water Distribution in the Asqalan and Sufi-Qarayateem Canal Irrigation Systems in the Kunduz River Basin” (Bonn: University of Bonn, 2006).

79 Lee, “The Performance of Community Water Management Systems.”

80 “Kunduz Khanabad Irrigation Study—Final Report” (Grenoble, France: Société Grenobleise d’Etudes et d’Applications Hydrauliques, 1966); J. Pasquet, “Participatory Management of Irrigation Systems (PMIS): Farming Systems Research; Final Report” (Plaisians, France: Groupe URD, 2007). Note that before the early years of the 20th century, the Taloqan and Lower-Kunduz sub-basins were barely populated, the land was not cultivated and canal systems were not dug.

81 V. Thomas and M. Ahmad, “A Historical Perspective on the Mirab System: A Case Study of the Jangharoq Canal, Baghlan” (Kabul: AREU, 2009).

82 Rout, “How the Water Flows.”

83 N. Rivière, “Lesson Learning: From the Transition between Relief and Development in Afghanistan—Water Sector Review.” (Plaisians, France: Groupe URD, 2005); “Draft Water Sector Strategy—February 2008.”

84 “Report and Recommendation of the President to the Board of Directors on the Proposed Loan and Technical Assistance to Afghanistan for the Gawargan-Char Darrah Project,” (Manila: Asian Development Bank, 1970).

85 “Draft Water Sector Strategy—February 2008.”

**Table 4: Main developments in the water sector and related institutional context from 1960s to 2011**

<i>Timeline</i>	<i>Main Development</i>
<p><b>1960s-1970s:</b> Ministry of Agriculture and Irrigation (MAI).</p> <p><b>1971-1972:</b> Split within the MAI between agriculture and irrigation; a “survey for soil and water” department is created, then a general directorate, which finally becomes an independent Ministry of Water and Power (MWP).</p>	<p>Construction and establishment of formal and large multi-purpose irrigation schemes including the development of hydropower.</p> <p><b>End 1970s:</b> MWP was in charge of administering the irrigation and hydropower sub-sectors, while the Rural Development Department was responsible for the water supply and sanitation sector and traditional irrigation systems, and the Ministry of Public Works controlled urban water sanitation; the Ministry of Agriculture, Animal Husbandry and Food (MAAHF) could keep on influencing research work on the irrigation and water management topics within its research department.</p>
<p><b>1981:</b> Formulation and adoption of the first Water Law.</p>	<p>The Water Law combines traditional Islamic laws or principles with new principles and inputs brought in by the Soviet regime.</p>
<p><b>1988:</b> The Ministry of Irrigation, Water Resources and Environment (MIWRE) is created alongside the MWP (Ministry of Water and Power) to manage hydrological networks, the development of water resources, and large-scale irrigation facilities.</p>	<p>The MIWRE and MWP had a mandate focusing mainly on hydraulic infrastructure/civil engineering development.</p> <p>During the 1980s the MAAHF lost influence and were relieved from any role in irrigation and water management.</p>
<p><b>1991:</b> Formulation and adoption of a new Water Law.</p>	
<p><b>2002:</b> Kabul Conference (“Kabul Understanding”)</p> <p><b>2004:</b> Strategic Policy Framework for the Water Sector</p> <p><b>Mid 2004:</b> Start of the Kunduz River Basin Programme (KRBP) seen at the MEW and at the institution level as a pilot project for the implementation and development of the river basin/IWRM approach that forms the basis for the new water policy.*</p> <p><b>December 2004:</b> Merger of MIWRE and MWP into the Ministry of Energy and Water (MEW).</p> <p><b>2004-05:</b> “Water Resource Management Policy and Strategy” and “Irrigation Policy.”</p> <p><b>2005:</b> Formation of the Supreme Council for Water Affairs and Management.**</p> <p><b>2008:</b> Water Sector Strategy</p> <p><b>2009:</b> Water Law</p> <p><b>2011:</b> Regulations on WUAs</p>	<p>During the 2000s, water sector reform pushes for the introduction of “good water governance” concepts including IWRM, RBM and Decentralisation/participation, largely at the instigation of international donors and advisers.</p> <p>The development and adoption of the Water Law has been led by MEW, with MAIL effectively marginalised from the process.</p>

Source: Completed and adapted from Rivière, “Lesson Learning.”

\* A similar programme funded by the Asian Development Bank was initiated in May 2006 in the Western Basin (Harirod-Murghab).

\*\* According to article 9 of the Water Law, the SCWAM was formed “for better coordination and provision of facilities in the implementation of water affairs programs, development and operation of water resources programs.” Among the key functions expressed in the WSS, the SCWAM should “ensure proper compliance of the Water Law by the member ministries and agencies”. It should also “collect and compile all national and international legal documentation and contracts regarding the water issues.” The members of the SCWAM are appointed by the president.



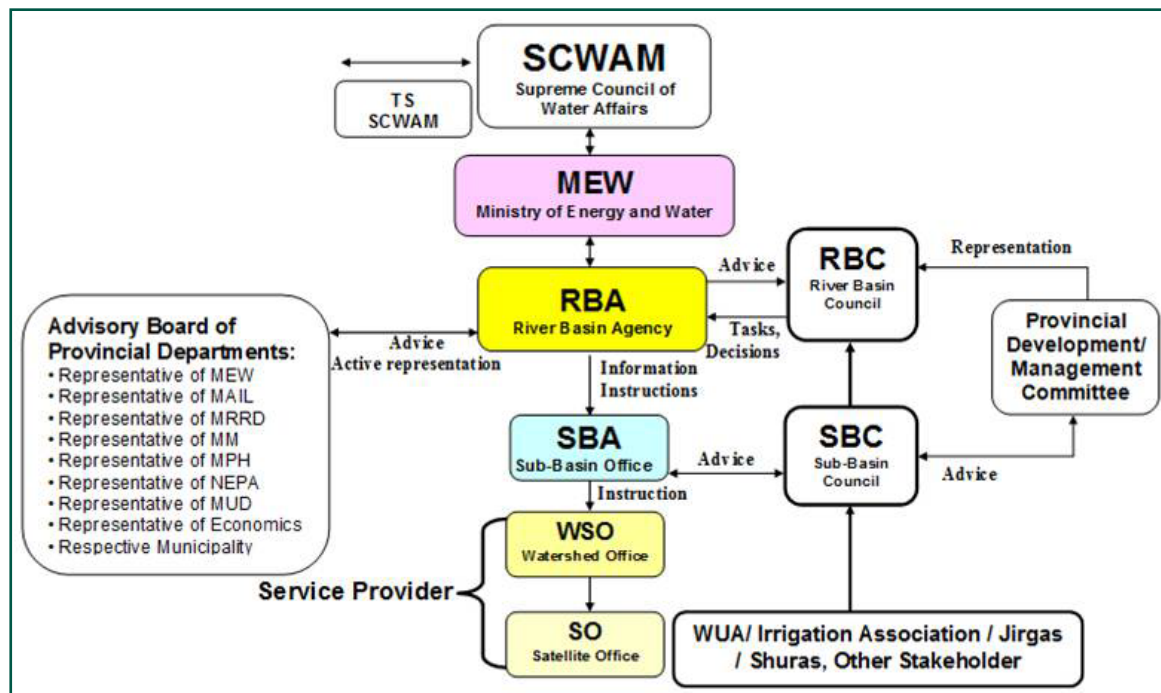
The Afghanistan Water Law officially gazetted on the 26 April 2009 set an important legislative milestone, the product of a long process of legislative development, negotiations and turf wars involving various ministries (including both MEW and MAIL), national and international consultants and advisors, and, to a much lesser extent, NGOs and civil society. Overall, the new Water Law attempts to find a balance between respecting traditions and introducing new governance and water allocation procedures at both the local, sub-basin and river basin levels.<sup>86</sup> The new water governance approach followed in the Water Law follows the path suggested in the WSS, enshrining IWRM and the river basin approach as core principles for land and water management:

*Integrated water resources management and development for the purpose of sustaining supply and conserving water resources and protecting the environment is carried out using a river basin approach in accordance with this law.<sup>87</sup>*

Furthermore, the Water Law provides a legal framework that defines the duties of decentralised MSPs at the river basin level in the form of RBAs<sup>88</sup> and RBCs.<sup>89</sup> At the local level (i.e. within irrigation canal command areas), the Water Law promotes the formation of WUAs and Irrigation Associations. Subsequent regulations have since further specified the roles, responsibilities and authorities of these newly-defined institutions (see Figure 5). The Law also lays out the responsibilities of the ministries as well as other government institutions.<sup>90</sup>

The “hydraulic era” that had been on hold since the early 1980s was thus finally replaced after 2002 by strong shift toward “good water governance” principles, driven by the support and influence of international donors.

**Figure 5: Organisational set-up for RBM according to the Water Law**



Source: “Procedure on the Framework for Water Resources Management in the River Basins (Draft)” (Kabul: Government of the Islamic Republic of Afghanistan, 2011).

86 Thomas and Ahmad, “A Historical Perspective on the Mirab System.”

87 Article 4, *Water Law* (Official Gazette No. 980), 2009 (SY 1389).

88 Article 12, *Water Law*.

89 Article 13, *Water Law*.

90 Articles 8-11, *Water Law*.

### 3.2 Signs of resistance to embracing the “good governance” challenge

Overall progress in implementing the reform is proving slow and inconsistent. The original targets proposed in the WSS have yet to be achieved owing to over-optimistic and faulty analysis according to Aria and Kakar.<sup>91</sup> These included the establishment of river basin organisations (such as RBA and RBC) in Balkh, Kunduz and the Western region) by the end of 2010. At the time of the research, none of these regions had RBAs or RBCs.

The 2011 *Afghanistan Human Development Report* expressed doubts about the receptiveness of local and national actors to the new water governance concepts at sub-basin level. These doubts owe partly to the absence of comprehensive studies and analysis to justify the relevance of IWRM, RBM and MSP approaches to improve the Afghanistan water sector in the post-Taliban era.<sup>92</sup> This position is further fuelled by the results of Varzi and Wegerich’s 2008 study on the early development of river basin organisation in the pilot Kunduz River Basin Program (KRBP—now relabelled as the PARBP).<sup>93</sup> In addition, a daunting overall lack of capacity—whether institutional, human resource or knowledge base—raises further questions about IWRM and RBM as a feasible option in the contemporary Afghan context.<sup>94</sup>

Large-scale programmes such as the pilot PARBP or the more recent Western Basin Project are taking an integrated approach by combining: (a) major infrastructure rehabilitation/development; (b) water institution building at canal level (WUAs, irrigation associations) and mid level (RBAs and RBCs); (c) on-farm water management; and (d) upper-catchment rehabilitation and conservation. However, the testimony of a number of prominent actors and informants in the water sector suggests that within this seemingly integrated package, the Afghan government is clearly less (if at all) interested in the governance aspects of water sector reform as it is in the large-scale infrastructure components.<sup>95</sup> As a senior key informant from MEW pointed out:

*The only interest of MEW and MAIL in having water user associations under their responsibility is because they can have associated infrastructure projects. Most of people in these ministries have construction companies involved in the rehabilitation and construction work of different projects.*

The fact that the WSS has been included in the “Infrastructure and Natural Resources” pillar of the Afghanistan National Development Strategy (ANDS) rather than the “Good Governance” or “Agriculture and Rural Development” pillars may be significant in this respect. A total of 45 programmes and projects for the water Sector listed in the WSS (Annex III) for a total cost of US\$ 3.76 billion.<sup>96</sup> However, close to 80 percent of these costs are attributed to dams and canal infrastructure rehabilitation. By contrast, water and sanitation (sometimes known as WATSAN) programmes or projects represent 4.5 percent of total costs while only seven programmes (representing a meagre 0.4 percent of the total costs) have a non-infrastructure component.<sup>97</sup> As the PARBP team leader summed up: “All they talk about in MEW is dams, dams, dams.”<sup>98</sup>

91 M. A. Aria, and K. Kakar, “The Need for Governance in the Water Sector,” in *Afghanistan Human Development Report 2011—The Forgotten Front: Water Security and the Crisis in Sanitation*. Kabul: Center for Policy and Human Development, (2011).

92 Aria and Kakar, “The Need for Governance in the Water Sector.”

93 Varzi and Wegerich, “Much Ado About Nothing - Sub-Basin Working Groups in Kunduz River Basin, Afghanistan.”

94 The challenge of developing capacity to a level matching IWRM implementation requirement was in fact already highlighted in an earlier draft of the Water Sector Strategy: “Water Sector Strategy—July 2007 (Draft)” (Kabul: Government of the Islamic Republic of Afghanistan, 2007).

95 Interviews # 79; 82; 31.

96 Out of this \$3.76 billion, only \$167 million had been secured.

97 This includes “social water management projects mainly focusing on WUA formation and development, rehabilitation of hydrological stations (information), an integrated water resource management in the Western Basin, creation of green zones, catchment development programs, groundwater study (information), and technical assistance provision for the Amu-darya River Basin Program.”

98 Interview # 82.

On the one hand, the interest in large infrastructure rehabilitation and development may be viewed as legitimate given that Afghanistan has one of the lowest storage capacities in the world and is regularly affected by strong intra and inter-annual hydrological variations causing dry years and floods.<sup>99</sup> However, this has meant that the governance component pushed by donors and forming the basis of the Water Law now seems far from the main concern. The 2011 *Afghanistan Human Development Report* warns that this imbalance could have negative implications for conflict resolution and addressing equity issues<sup>100</sup> in water sharing.<sup>101</sup>

Conducted more than two years after the adoption of the new Water Law and related “good governance” principles, this research looks into how various stakeholders including the government have addressed governance challenges in a context of a dry year. In doing so, it demonstrates how and why local institutions currently address water allocation problems through procedures which fall far from the sanctioned discourse on “good governance” and the ideal MSP set-up.

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99 Thomas and Eqrar, “Managing Water Resources, Scarcity and Climate Shocks.”

100 In the 2011 *Afghanistan Human Development Report*, and throughout this paper, equity is defined as receiving a water share proportional to amount of land entitled to water rights.

101 Thomas and Sabawon, “Sharing Irrigation Water Equitably”; Aria and Kakar, “The Need for Governance in the Water Sector.”

## 4. Profile of the Taloqan and Lower-Kunduz Sub-river Basins

This section presents a general profile of the two main study areas for this paper. This includes a brief recap of their historical development, along with an outline of their current key physical, hydrological, agricultural and socioeconomic characteristics.

### 4.1 Hydrological versus provincial boundaries and the upstream/downstream divide

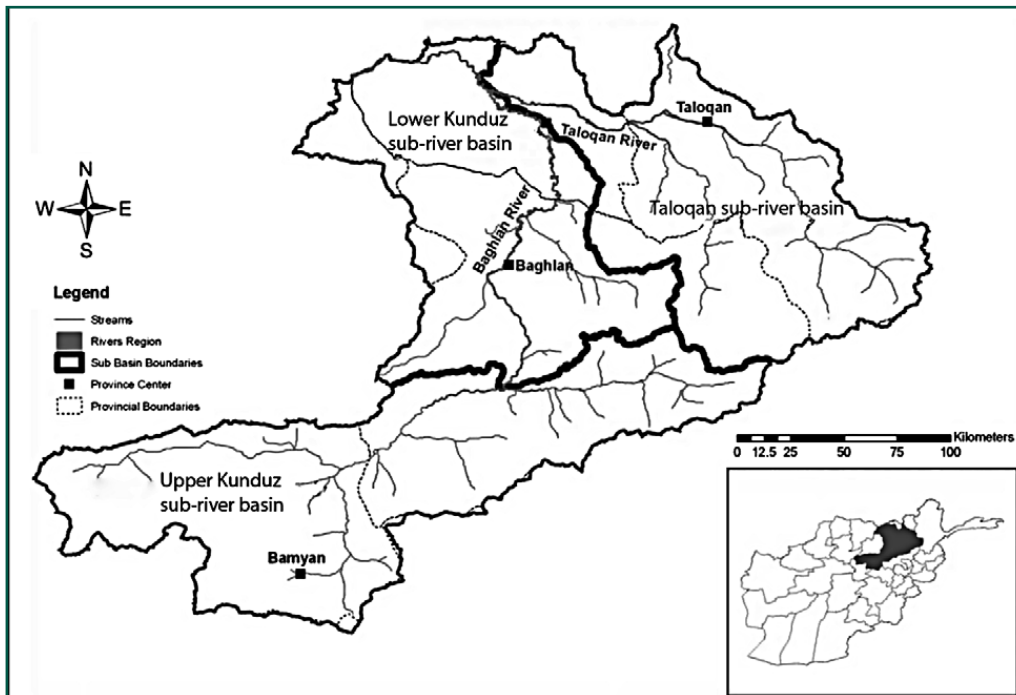
The Taloqan and Lower-Kunduz sub-basins are located within the Panj-Amu River Basin (see Maps 1 and 2). The satellite imagery on Map 3 shows how both sub-basins are characterized by two large and distinct irrigated areas of approximately a hundred thousand hectares. Each of these two large irrigated areas is located in a different province along a clear-cut upstream/downstream divide. In this case, the upstream/downstream divide thus mirrors administrative demarcations. Evidence from this research shows how these configurations strongly shape how people organise water allocation negotiations and decision-making processes. This indicates that switching water management from administrative boundaries to hydrological boundaries may not be as “natural” as policymakers have assumed.

*Map 1: The five river basins and 34 sub-basins of Afghanistan*



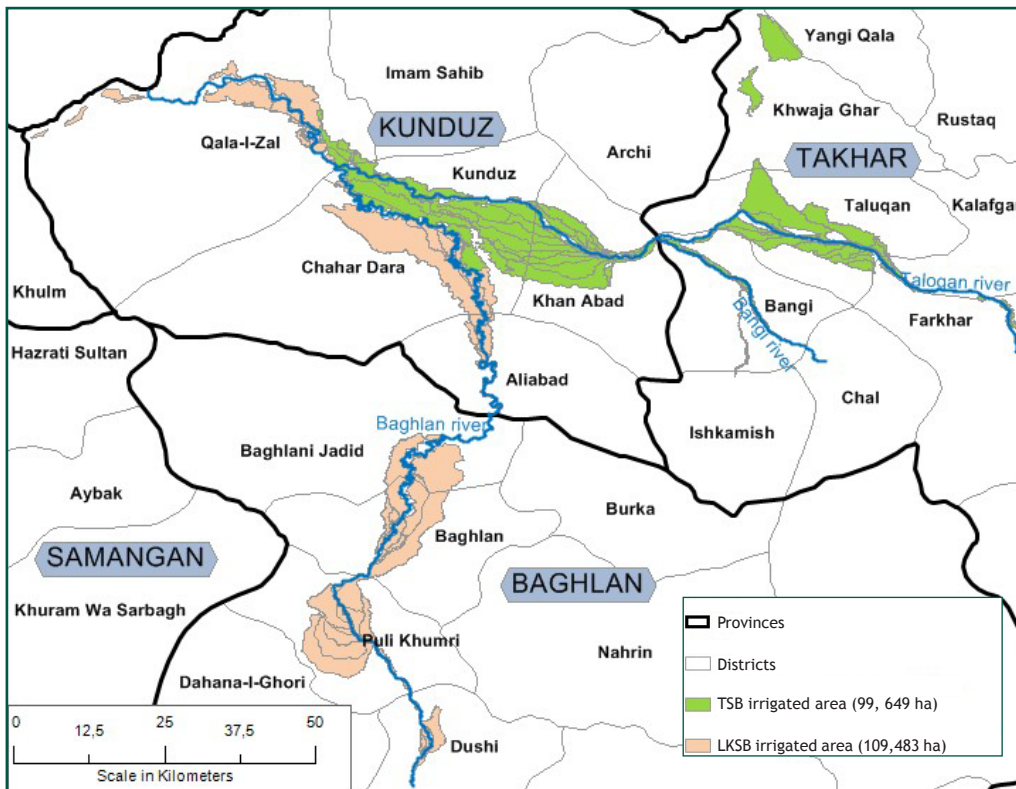
Source: “Procedure on the Framework for Water Resources Management in the River Basins (Draft)” (Kabul: Government of the Islamic Republic of Afghanistan, 2011).

**Map 2: Location and borders of the Taloqan and Lower-Kunduz sub-basins**



Source: V. Thomas, A. Osmani, and K. Wegerich, "Local Challenges for IWRM in Afghanistan," *International Journal of Environmental Studies* 68, no. 3 (2011): 313-31.

**Map 3: Irrigated areas of the Taloqan and Lower-Kunduz sub-basins**



Source (irrigation data): Varzi and Wegerich, "Much Ado About Nothing."

## 4.2 Historical development of the social structures in the basin and the implications for water management

### Early settlements

Unlike some other parts of Afghanistan, the Taloqan and Lower-Kunduz sub-basins have a relatively recent history of settlement and irrigation development.<sup>102</sup> In the second half of the 19th century, most of the basin was uninhabited, with its large areas of swampland not yet developed for agriculture.<sup>103</sup>

The need to populate the Russo-Afghan Border that was delimited in 1887 initiated an intensive effort to send settlers in the area. However, the movement remained slow and inconsistent until the 1920s, partly due to the devastating effects of malaria in the plains around Kunduz.<sup>104</sup>

Under the initiative of King Amanullah in the 1920s, Pashtun settlers from the South and the East were strongly encouraged to acquire cheap and fertile land available in the North. Simultaneously, refugees escaping repressive Soviet policies in Bukhara settled in the same area. Other settlers from the mountainous valleys of the Hindu Kush and Badakhshan also took part in this migration. During this period, the earliest parts of the current canal system were dug, enlarging and expanding as new settlers arrived.<sup>105</sup> However, even by the 1940s, large portions of irrigable land (especially in Baghlan) were still uninhabited and not developed for irrigated agriculture.<sup>106</sup>

The period between the early 1940s and 1955 saw a further increase and completion of settlement as well as a sharp advance in land development. Drainage and acquisition of cheap land progressed rapidly due to a serious effort to eradicate malaria,<sup>107</sup> combined with the emergence of cotton factories and sugar refineries.<sup>108</sup> According to the *Societe Grenobloise d'Etudes et d'Applications Hydrauliques* (SOGREAH), this intense period of immigration ceased in 1955.<sup>109</sup>

As it progressed, this rapid settlement and subsequent development of irrigated agriculture was characterised by a lack of official support and systematic planning in settlement, with the exception of parts of Baghlan after the 1940s. It also resulted in a scattered distribution of various and heterogeneous ethnic groups.<sup>110</sup>

A map of the ethnic distribution in both sub-basins was drawn in 1966<sup>111</sup> (see Map 4) at a time when the waves of migration to this part of the country had already ceased. The map indicates a predominantly Uzbek population in the Taloqan plain—especially on the right (northern) bank of the Taloqan River—but with a relatively balanced distribution between Tajiks and Pashtuns. The map also indicates a balanced ethnic distribution in the Kunduz irrigated area. It also shows the generally geographically scattered nature of this distribution.<sup>112</sup> Pasquet explains that in contrast to the Taloqan plain, the Baghlan irrigated area was mainly colonised by Pashtuns.<sup>113</sup>

102 “Kunduz Khanabad Irrigation Study: Final Report”; Pasquet, “Participatory Management of Irrigation Systems (PMIS).”

103 Pasquet, “Participatory Management of Irrigation Systems (PMIS).”

104 “Kunduz Khanabad Irrigation Study: Final Report.” For a long time, an Afghan proverb went as follows: “If you want to die, go to Kunduz.”

105 Thomas and Ahmad, “A Historical Perspective on the Mirab System.”

106 “Kunduz Khanabad Irrigation Study: Final Report.”

107 The proverb, “If you want to die, go to Kunduz” subsequently became, “If you want to be rich, go to Kunduz.”

108 “Kunduz Khanabad Irrigation Study: Final Report”; Pasquet, “Participatory Management of Irrigation Systems (PMIS)”; Thomas and Ahmad, “A Historical Perspective on the Mirab System.”

109 “Kunduz Khanabad Irrigation Study: Final Report.”

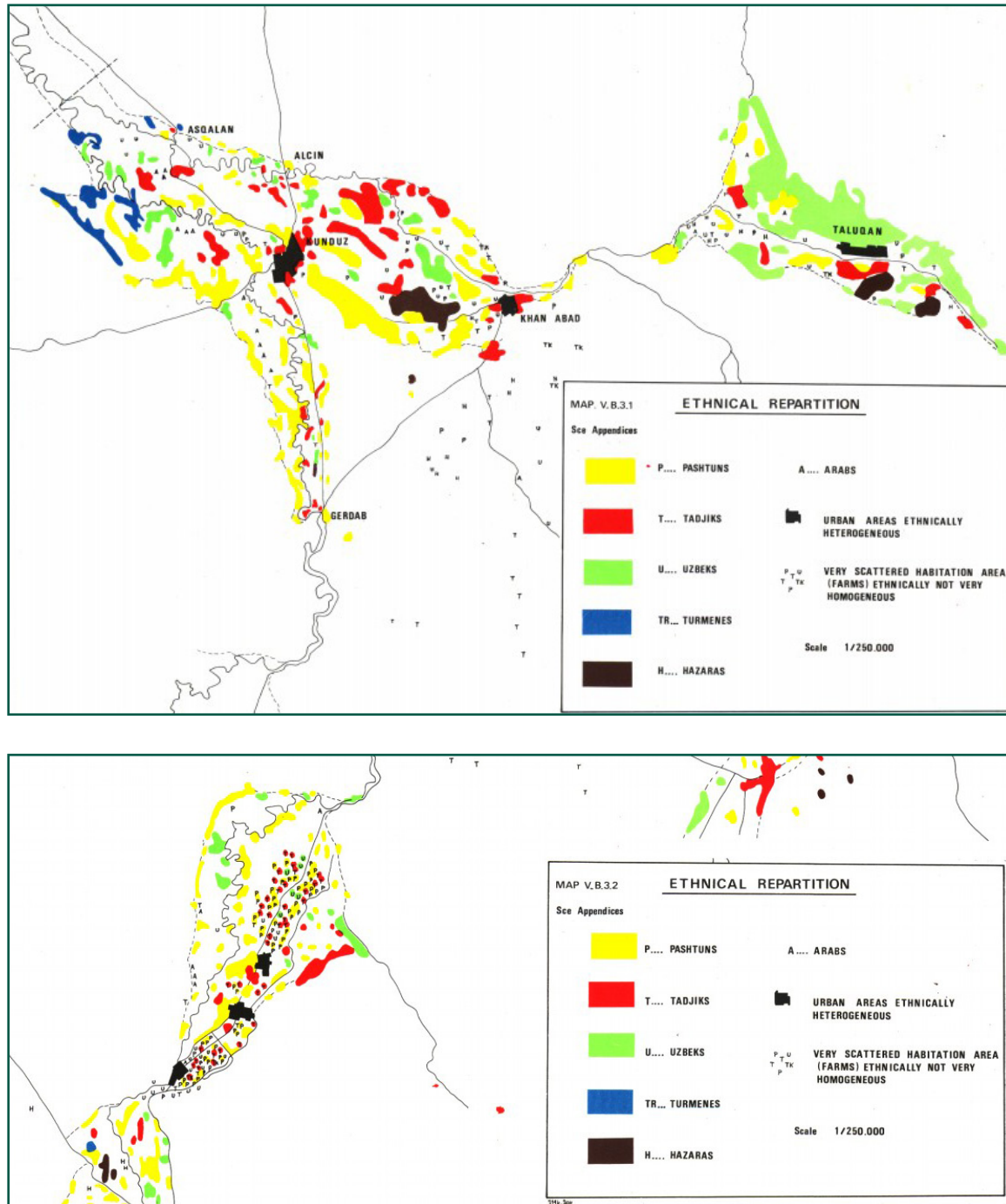
110 “Kunduz Khanabad Irrigation Study: Final Report.”

111 The map of 1966 is not based on official census but based on data collected in the field from various sources. See “Kunduz Khanabad Irrigation Study: Final Report” (Volume 2, Chapter 5).

112 With the exception of the Turkmen population, who are mainly found in the most downstream parts of the LKSB, especially in Qala-i-Zal District in Kunduz, close to the banks of the Amu Darya.

113 Pasquet, “Participatory Management of Irrigation Systems (PMIS).”

**Map 4: Ethnic distribution along the TSB (top) and the LKSB (bottom) in the mid-1960s**



Source: “Kunduz Khanabad Irrigation Study: Final Report.”

Note that the map of the Baghlan irrigated area (Map 4, lower section) does not include Doshi District, which is predominantly populated by Hazaras.<sup>114</sup> It also has limited coverage of the Pul-i-Khumri area, which now has a predominantly Tajik population. These limitations in coverage in the 1966 map may explain why more recent statistics (see Figure 7) indicate a higher percentage of Tajiks and Hazaras when compared to the 1966 study.

<sup>114</sup> United Nations High Commissioner for Refugees (UNHCR), “District Profiles,” [http://www.aims.org.af/afg/dist\\_profiles](http://www.aims.org.af/afg/dist_profiles) (accessed 16 April 2012).

### ***Salient features of social structures in the late 1960s***

The settled populations in the mid-1960s were considered “unintegrated” and characterised by the “rareness of social contacts” among different ethnic groups. Latent ethnic antagonisms based on cultural and linguistic differences were in particular “aroused by the subject of the distribution of irrigation water.” This assessment painted a pessimistic picture of social structures “far from conducive to the rational organization of irrigation.” Formation of groups for agricultural extension work was thus considered a challenging task.<sup>115</sup> Family ties were considered as much stronger than tribal ties, due to the non-organised migration and settling period. The status of landlords in the rural environment was already considered as critical particularly when it came to mediate conflicts, due to their ability to move across different cultural spheres: rural life, political life and commerce.<sup>116</sup>

### ***The 1970s to the Soviet invasion and occupation***

This period was characterised by a flourishing economy led by the sugar beet industry and cotton factories, mainly in Kunduz and Takhar.<sup>117</sup> During this period, the Agriculture Department had a particularly strong influence on water distribution at the canal level—at least among those located along the main road—using both incentives and coercion methods to satisfy the demand for industrial crops such as sugar beet and cotton.<sup>118</sup> This period also saw the modernisation and extension of existing traditional canals—such as Gawargan in Baghlan, Chahar Dara in Kunduz or the Kunduz-Khanabad scheme in Kunduz—to support the production of industrial crops. For instance, the Asian Development Bank projects in Gawargan and Chahar Dara were supposed to cover 25,300 ha, and expected to boost wheat production in the area from 9,000 to 28,000 tonnes/year; sugar beet production from 18,000 to 48,000 tonnes/year; and cotton production from 4,000 to 19,000 tonnes/year.<sup>119</sup> New schemes were also initiated in that period, such as the Canal-i-Proje<sup>120</sup> in Baghlan Province.

### ***The 1980s to 2001***

The war period was characterised by a collapse of industry and state authority. With the increase in grain prices, rice cultivation expanded.<sup>121</sup> This trend accelerated after the fall of the Taliban, leading to increased pressure on the system in terms of water demand. Migration in the 1980s led to a decrease in canal maintenance capacity, although during the 1990s some refugees began to return (a process that would accelerate significantly after 2001). In the 1980s and particularly the 1990s, the conflicts among different factions and the related emergence of new powerbrokers (warlords) led to a severe erosion of social capital between communities in some areas.<sup>122</sup> However, while this did not favour collective action for canal system management, it seems that during dry years the traditional system of *abandâz* did not break down.

### ***2001 to present***

The recent period has been characterised by efforts to rehabilitate canal infrastructure—for instance, through the World Bank Emergency Infrastructure Rehabilitation Project or through the integrated PARBP. Part of PARBP also focused on formation and development of WUAs at canal level, on-farm Water Management such as the System of Rice Intensification (SRI)<sup>123</sup> and the formation and development of RBAs and RBCs.

115 “Kunduz Khanabad Irrigation Study: Final Report.”

116 “Kunduz Khanabad Irrigation Study: Final Report.”

117 L.W. Adamec (ed.), *Historical and Political Gazetteer of Afghanistan, Volume 1: Badakhshan Province and Northeastern Afghanistan* (Graz, Austria: Akademische Druck–U. Verlagsanstalt, 1972); Pasquet, “Participatory Management of Irrigation Systems (PMIS).”

118 Thomas and Ahmad, “A Historical Perspective on the Mirab System.”

119 “Proposed Loan and Technical Assistance to Afghanistan for the Gawargan - Char Darrah Project,” 4.

120 Canal-e-Proje construction continued during the early 1980s.

121 Pasquet, “Participatory Management of Irrigation Systems (PMIS).”

122 Thomas and Ahmad, “A Historical Perspective on the Mirab System.”

123 V. Thomas and A.M. Ramzi, “SRI Contributions to Rice Production Dealing with Water Management Constraints in Northeastern Afghanistan,” *Paddy and Water Environment* 9, no. 1 (2011).



### 4.3 Current socio-economic profile and recent state of development

#### Population

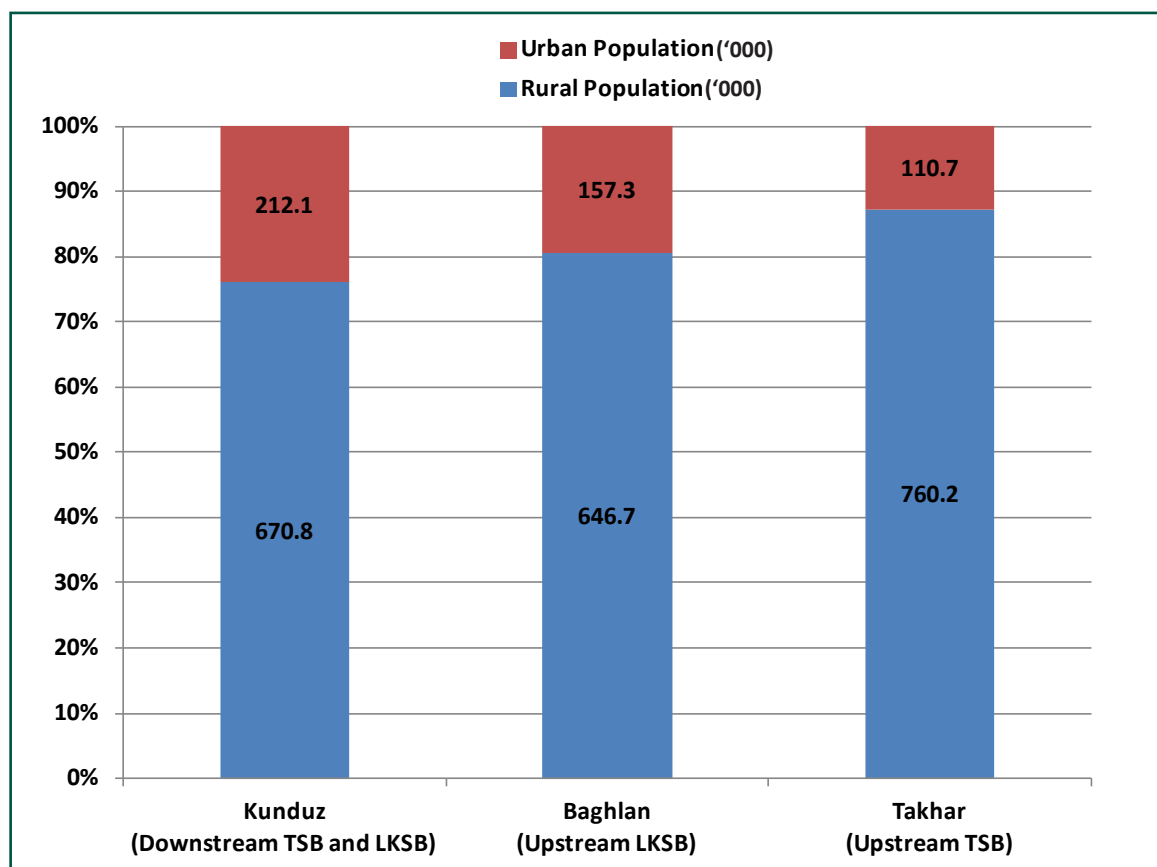
There is no information of the population at sub-basin level. However, the accumulated populations of the districts falling at least partially within sub-basin borders give an approximate estimation. The three provinces covering the Taloqan and Lower-Kunduz sub-basins have similar population sizes and are predominantly rural (see Figure 6).

**Table 5: Population within the limits of the TSB and LKSB**

Provinces	Population ('000)
Kunduz (except Imam Sahib and Archi districts): Downstream TSB and LKSB.	595.5
Takhar (except Yangi Qala, Rustaq, Darqad and Chah Ab districts): Upstream TSB.	586.4
Baghlan (except Andarab and Khinjan districts): Upstream LKSB.	753.1

Note: Only the districts which are fully outside the borders of the sub-basins have not been considered in the calculation. Source: "Afghanistan CSO Population data 1387 (2008-9)" (Kabul: Central Statistics Organization, 2009).

**Figure 6: Urban/rural population distribution in Kunduz, Takhar and Baghlan**



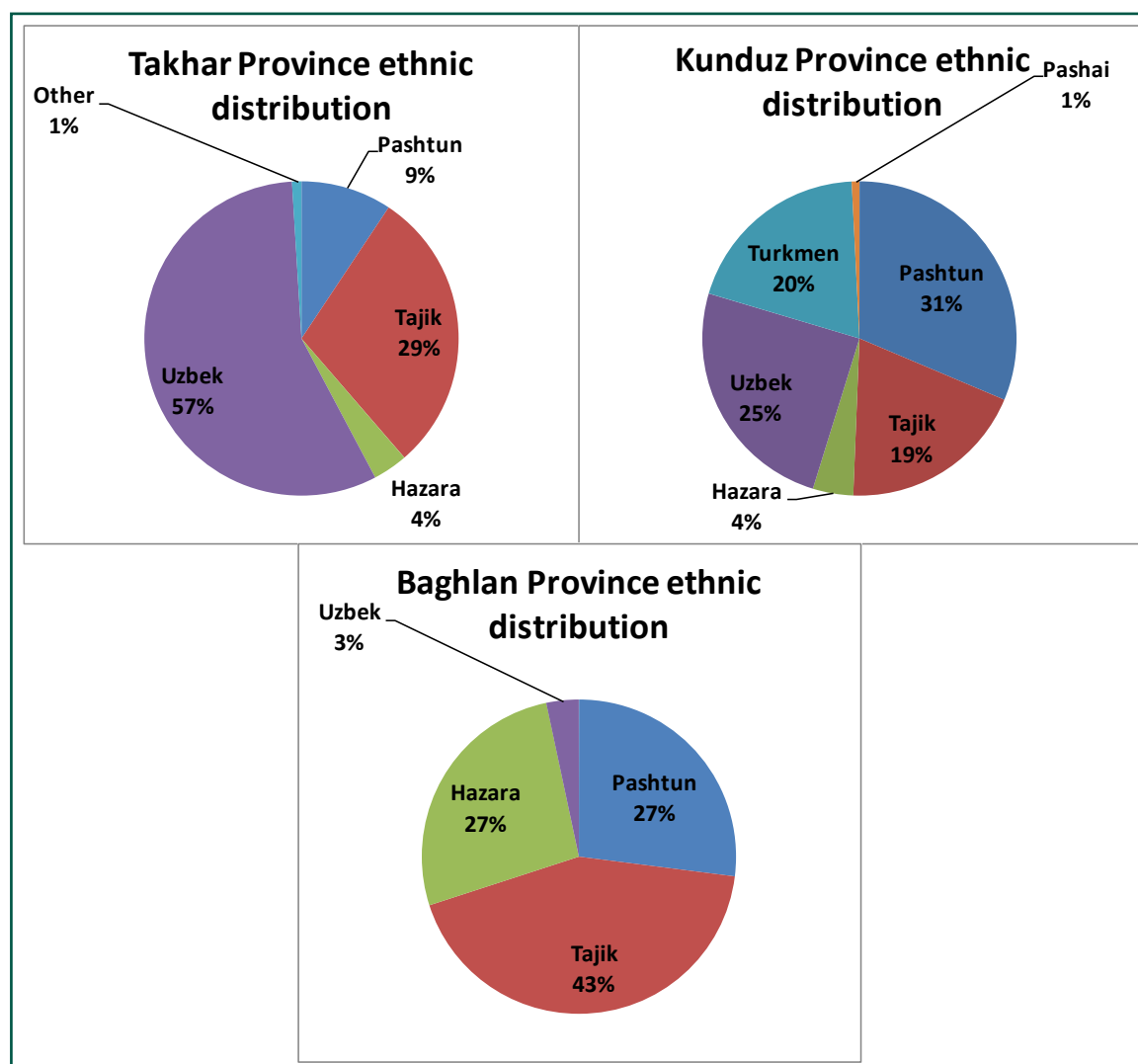
Source: "Afghanistan CSO Population data 1387 (2008-9)."

### Ethnic distribution

There is a sharp contrast in ethnic distribution between Takhar (upstream TSB) and Kunduz (downstream TSB and LKSB) provinces, and also to a lesser extent between Baghlan (upstream LKSB) and Kunduz provinces. The downstream part of the TSB and LKSB (Kunduz Province) has a relatively balanced ethnic distribution. Takhar Province however is largely dominated by Uzbeks (57 percent) and Tajiks (43 percent) while Baghlan has a majority Tajik (43 percent) population.<sup>124</sup>

During this research, the larger Pashtun population in Kunduz (downstream TSB) compared to Takhar (upstream TSB) was cited by Takhar interviewees as a driving motive for the formulation of a presidential decree on water allocation between Takhar and Kunduz. According to Takhar stakeholders, this decree favours Kunduz water users (see TSB case study in Section 6 for more details).

**Figure 7: Ethnic distribution in Kunduz, Takhar and Baghlan provinces**



Source: Compiled from UNHCR, "2002 District Profiles."

### Sources of income

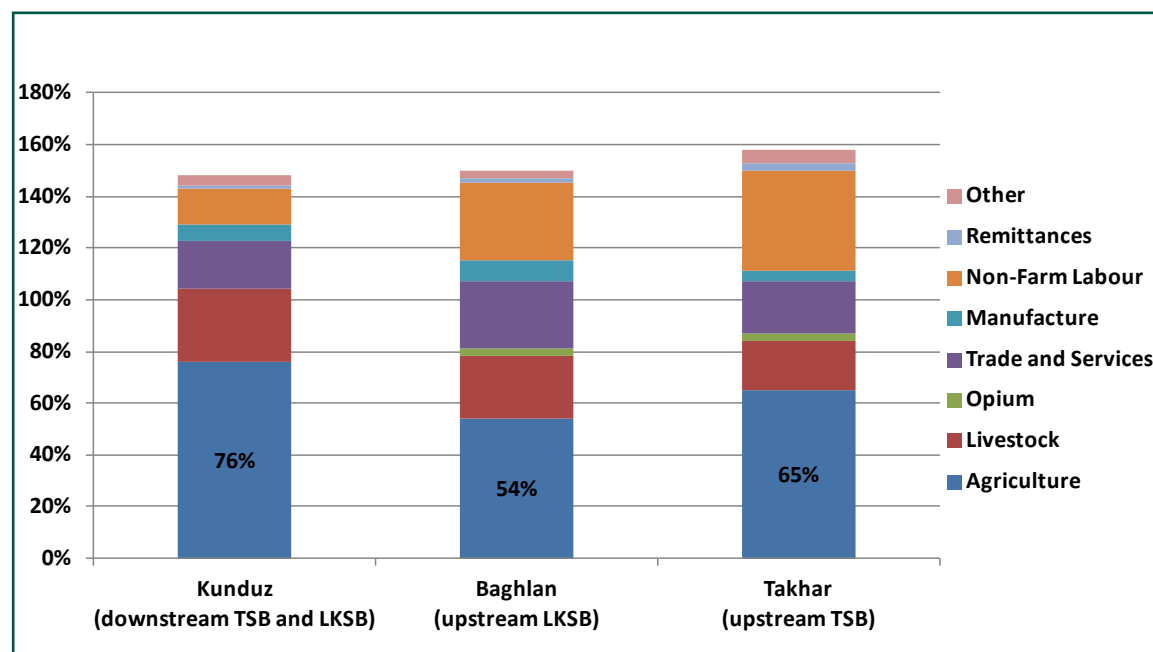
In all three provinces covered by this study, agriculture (excluding livestock rearing) is an important source of income for a majority of the rural population. Considering the large proportion of the

124 "Afghanistan CSO Population data 1387 (2008-9)."

population that has access to irrigated land—from 48 percent in Takhar up to 85 percent in Kunduz<sup>125</sup> (see Figure 11 below)—the issue of water scarcity during dry periods is thus a significant problem for household income generation.

#### 4.4 Hydrological characteristics

*Figure 8: Sources of income in rural households in Kunduz, Takhar and Baghlan provinces*



Source: Ministry of Rural Rehabilitation and Development, and Central Statistics Organization, “National Risk and Vulnerability Assessment 2004/5: A Profile of Afghanistan” (Kabul: Central Statistics Organization, 2005).

#### *Reference evapotranspiration (ET<sub>o</sub>)/rainfall*

Only limited data are available on ET<sub>o</sub> in Baghlan and Kunduz from the mid-1960s to late 1970s. For the first crop (mainly wheat) cultivated in spring and harvested at the beginning of June, irrigation is mainly complimentary and comes predominantly during April and May. The second (summer) crop depends entirely on canal water diverted from the river as there is virtually no effective rainfall. Springs are also very limited. The peak period for crop water demand corresponds to the peak water availability at river level. It is important to note that the water demand in Kunduz (downstream the TSB and LKSB) is on average 64 percent higher than in Baghlan during the irrigation season (June-September),<sup>126</sup> largely due to the more windy conditions in the open plains of Kunduz (see Figure 9).

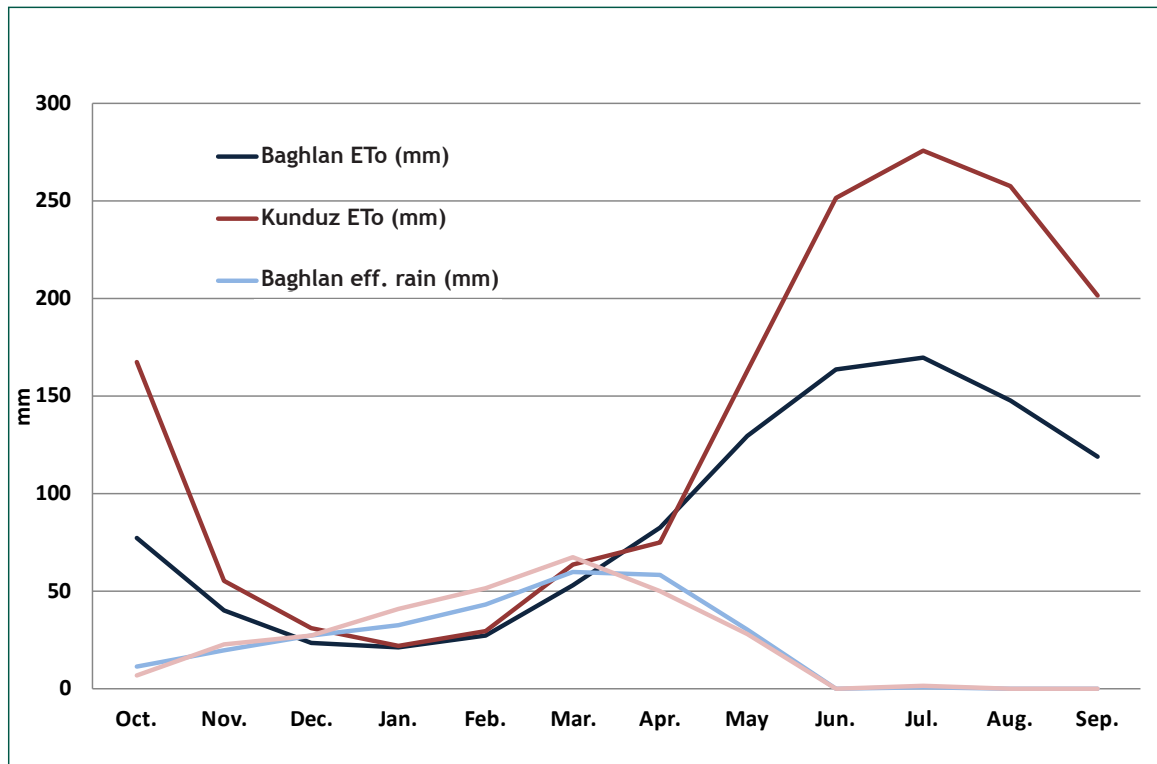
#### *River discharge profile*

The river regimes in the Taloqan and Lower-Kunduz sub-basins are typical of unregulated snow-fed rivers, with very high intra and inter-annual variations (see Figure 10). The spring months are characterised by a rapid increase in discharge, causing floods with a high risk of river bank erosion and the destruction of traditional canal intakes. The peak river discharge period during summer allows the cultivation of a second crop such as rice, melons, mung bean, corn and cotton. Peak water availability in June-July corresponds approximately to the peak period in evapotranspiration in July-August. The river flow usually starts receding in July.

<sup>125</sup> Ministry of Rural Rehabilitation and Development, and Central Statistics Organization, “National Risk and Vulnerability Assessment 2004/5: A Profile of Afghanistan” (Kabul: CSO, 2005).

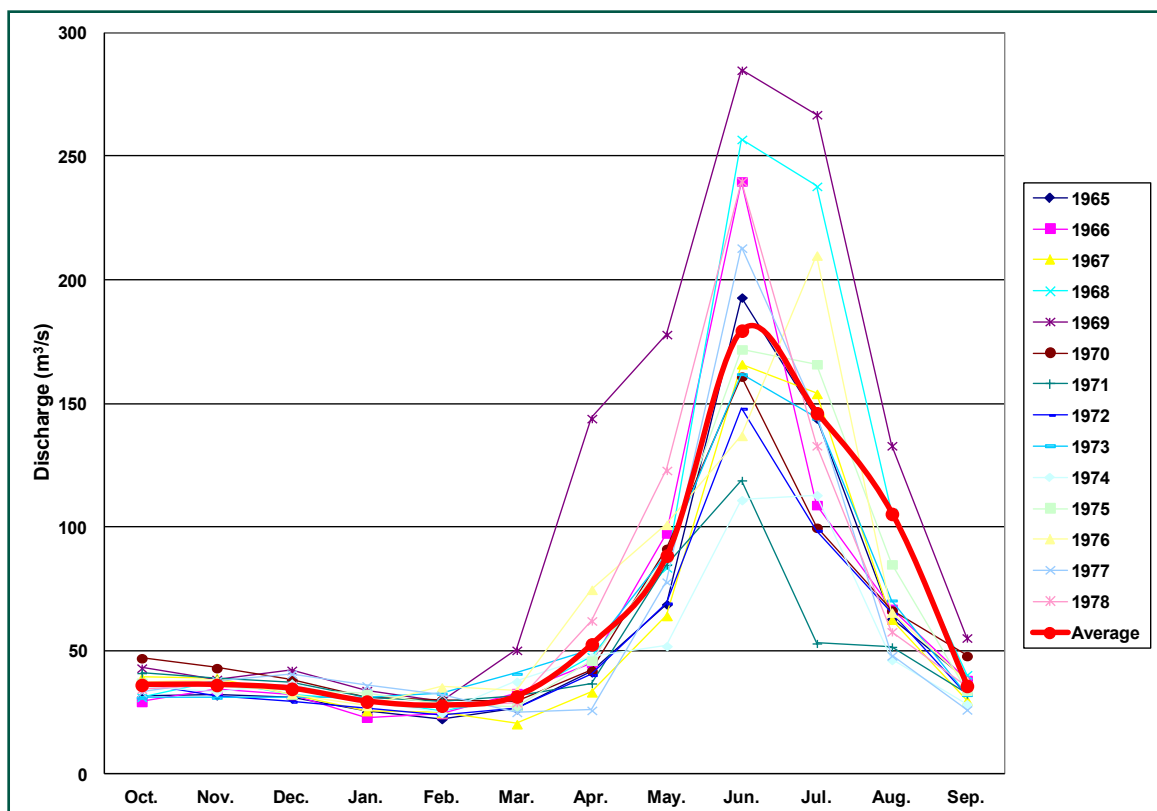
<sup>126</sup> Based on Cropwat 8.0 calculations using Climwat 2.0 data from Baghlan and Kunduz stations.

**Figure 9: ETo and effective rainfall in Baghlan (upstream LKSB) and Kunduz Province (downstream LKSB and downstream TSB)**



Source: Cropwat 8.0 with ClimWat 2.0 files Baghlan and Kunduz stations; accessed October 2011.

**Figure 10: Discharge profile characteristics of the Taloqan river as recorded during the 1965-1978 period**



Source: Thomas et al., "Local Challenges for IWRM in Afghanistan."

Figure 9 also indicates large inter-annual variations in the absence of storage and regulation infrastructure. Records from 1965 to 1978 indicate three- to five-fold variations in discharge for the months of June and July, owing to variations in snow coverage from one year to the next.

Water availability in rivers during the summer irrigation season is thus characterised by high levels of uncertainty. This means that farmers and local water institutions regularly have to cope with a dry year or a more prolonged dry period. Over the past decade this has been the case in the years 1999-2001, 2008 and 2011. The rest of the time in normal or wet years, river-level water supply surpasses demand, and water allocation along the sub-basins becomes largely irrelevant. In fact, average annual water availability is above levels of water scarcity.<sup>127</sup> However, the absence of regulating infrastructure exposes water users to the impact of episodic dry years. It is also important to note in this context that the issue of water allocation is primarily an irrigation water use issue rather than one of inter-sectoral allocation.<sup>128</sup>

## 4.5 Irrigated agriculture profile

### *Cropping patterns and water demand evolution*

A comparison of the cropland in the 1960s and during the current period gives a clear indication of the increasing pressure in terms of crop water demand. This is primarily owing to an increase of rice cultivation as well as a general increase in irrigation intensity. In the TSB for instance, rice cultivation was limited to the most downstream and water logged parts of the Taloqan plain<sup>129</sup> while Kunduz (downstream part of the TSB) was already largely a rice growing area. The increase in rice cultivation in the Taloqan plain over the past decades is an important factor that has made water allocation during dry years more sensitive during the current period.<sup>130</sup> Similarly, in the LKSB, rice cultivation in the 1960s was limited to the left bank of the Baghlan River within the upstream part of the LKSB. It was also absent in most parts of the downstream areas of the LKSB within Kunduz Province. Rice has since expanded significantly in both of these areas<sup>131</sup> as illustrated in Table 5. This again makes water allocation a difficult task during dry years. Figure 11 (following page) summarises the cropping pattern calendar for the main crops grown in the sub-basins.

On top of expanding cultivation, other factors also need to be taken into account in explaining the increasing pressure on the system for dealing with water allocation in dry conditions. This includes for instance the erosion of social capital<sup>132</sup> and the increase in new forms of water demand such as micro-hydropower and mills.<sup>133</sup>

**Table 6: Evolution of rice cultivation in the TSB and LKSB**

Year	1966	2007	2008	2009
Estimated rice coverage (ha)	Average	Normal year	Dry year	Wet year
Taloqan and Lower-Kunduz sub-basins	44,700	97,500	55,780	113,954

Source: Thomas and Sabawon, "Sharing Irrigation Water Inequality."

127 Here we refer to a technical dimension of scarcity, based on the Falkenmark indicator of 1,700 m<sup>3</sup>/capita/year. There are however more comprehensive ways to approach this concept. See for instance: F.R. Rijsberman, "Water Scarcity: Fact or Fiction?" *Agricultural Water Management* 80, no. 1-3 (2005): 5-22.

128 Personal observation of the 2008 and 2011 dry years. See also Varzi and Wegerich, "Much Ado About Nothing."

129 "Kunduz Khanabad Irrigation Study: Final Report," Map in Volume 1, V-43.

130 Thomas and Sabawon, "Sharing Irrigation Water Equitably."

131 Thomas and Sabawon, "Sharing Irrigation Water Equitably"; Thomas and Ahmad, "A Historical Perspective on the Mirab System."

132 Thomas and Sabawon, "Sharing Irrigation Water Equitably."

133 V. Thomas, A. Osmani, and K. Wegerich, "Local Challenges for IWRM in Afghanistan," *International Journal of Environmental Studies* 68, no. 3 (2011): 313-31.

Figure 11: Cropping calendar, water management and irrigation needs in the TSB and LKSB

	January	February	March	April	May	June	July	August	September	October	November	December
RIVER	Jaddi	Dalwa	Hoot	Hamal	Saur	Jawza	Saratan	Assad	Sombola	Mezan	Agrab	Qaus
	LOWEST RIVER LEVEL PEAK RIVER LEVEL RISKS OF INTAKE WASHED AWAY DECREASE IN RIVER LEVEL											
CROPS	WHEAT SPRING SOWING PERIOD WHEAT HARVEST IF RICE AS 2 <sup>nd</sup> CROP WHEAT HARVEST IF NO RICE WHEAT HARVEST Land preparation + water layer + Transplanting Nursery preparation Rice harvesting WINTER WHEAT SOWING PERIOD											
	Vegetables (ex: Water Melon)											
CLIMATE	LOW ETo demand (25 - 30 mm/month)											
	PEAK ETo demand (250-275 mm per day in Kunduz) (Usually) NO RAIN RAIN > ETo RAIN > ETo											
IRRIGATION NEEDS	RELATIVE LOW WATER DEMAND FOR IRRIGATION + LOWER RISKS OF TECHNOLOGY FAILURE = low risk of water shortage											
	HIGH WATER DEMAND + RISKS OF TECHNOLOGY FAILURE = RISKS OF WATER SHORTAGE + POTENTIALLY CONFLICTIVE PERIOD											

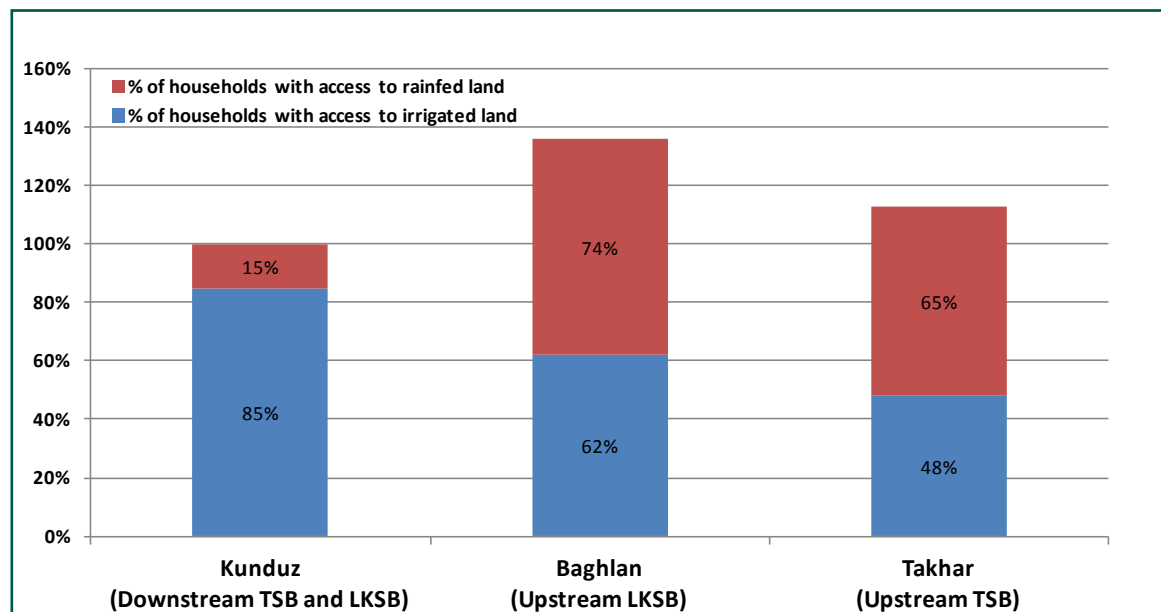
Note: Although the example above was designed for Takhar Province (upstream TSB) it can apply more generally to other parts of the TSB and LKSB with small variations.

### Access to irrigated and rainfed land

A very large majority (85 percent) of the Kunduz population has access to irrigated land, while only a few (15 percent) have access to rainfed land (see figure 12). Considering that agriculture is a major source of income for 76 percent of the Kunduz population, a lack of water access for irrigation would have a direct effect on almost the entire population of the province. By contrast, in the upstream part of the TSB in Takhar, slightly under half of the population (48 percent) have access to irrigated land, still a significant proportion. Non-farm labour is thus a more widespread source of income in Takhar (38 percent) than in Kunduz (14 percent).<sup>134</sup>

## 4.6 Water allocation and distribution at river basin level

**Figure 12: Access to irrigated and rainfed land in Kunduz, Takhar and Baghlan provinces**



Source: "National Risk and Vulnerability Assessment 2004/5."

While a few studies and reports have already touched on the issue of water rights and water distribution at canal level within the Panj-Amu river basin,<sup>135</sup> there is very little information available on water allocation issues at sub-river basin level. In the mid-1960s, at a time when both population and irrigation water demand were significantly lower than at present, the study from SOGREAH in 1966 clearly excludes the existence of formal rights:

<sup>134</sup> MRRD/CSO, "National Risk and Vulnerability Assessment 2004/5."

<sup>135</sup> See for instance, "Kunduz Khanabad Irrigation Study: Final Report,"; Thomas and Ahmad, "A Historical Perspective on the Mirab System"; Lee, "The Performance of Community Water Management Systems"; Lee, "Water Management, Livestock and the Opium Economy"; P.P. Mollinga, "Boundary Concepts for Interdisciplinary Analysis of Irrigation Water Management in South Asia" (Bonn: University of Bonn, 2010); and Thomas and Sabawon, "Sharing Irrigation Water Equitably." Note that the SOGREAH study only attempts to describe customary principles which seem to define informal rights at the canal level. In the process of ongoing settlement in the area, canals were often progressively extended and enlarged. The order of precedence (with priority upstream) was considered as a "de-facto" right. See "Kunduz Khanabad Irrigation Study: Final Report." Thomas and Ahmad found in their case study of one canal in Baghlan that such canal extension did not lead to extended discussion or conflicts over water rights due to the abundance of water as compared to the limited demand, at least in the first few decades of the canal command area development. In general, there is an absence of specific study across different parts of the basin. But in Baghlan, Thomas and Ahmad's study suggests that "de-facto" water rights have evolved under the influence of internal as well as external interests with significant consequences for the level of water access for downstream areas (see: Thomas and Ahmad, "A Historical Perspective on the Mirab System: A Case Study of the Jangharoq Canal, Baghlan").

### Box 3: *Abandâz and haqabah*

The term *abandâz* (literally “releasing/throwing water”) has to be distinguished from *haqabah* (“water rights”). In contrast to *haqabah*, *abandâz* is not considered a permanent and secured water right for the downstream water users who may benefit from it. Instead, it is a temporal agreement whereby upstream users accept to limit their water acquisition (for example, by totally or partially closing their canal intakes) for the benefit of canals downstream the river. Although there is an implicit moral obligation which makes it unlikely for upstream users to refuse *abandâz* during the irrigation season, the water released is not considered a right for downstream users. The duration and number of *abandâz* occurrences during an irrigation season may be based on negotiations or imposed by authorities (as was the case during Taliban period). Power relations thus play a critical role in the (re)definition of *abandâz*.

*Haqabah*, on the other end, is a mutually recognised right, sometimes defined as a fixed percentage of a river flow more or less proportional to the amount of land owned by farmers (for instance the *paykal* system in Balkh), that can also take into consideration the type of crops grown (see the case of Presidential decree for the TSB, discussed in this study) or the amount of labour put into canal maintenance (for instance with the *bel* system practiced along individual canals in Kunduz).

*There are no legally defined water rights as such, and no legal text was found which could even remotely concern rights to water in any part of the Kunduz and Khanabad river valleys.*<sup>136</sup>

An abundance of water (as compared to water demand) was the prime reason put forward to justify this absence of formal rights, which stood in contrast with other river basins in Afghanistan such as Balkhab, Sar-i-Pul or Shirin Tagab. In fact, even informal systems of *abandâz* (see definition in Box 3) have only been practiced in dry years (see timelines up to 2008 in Table 7-8).

The timeline in Table 7 highlights several important points relevant to this study:

- Historically, *abandâz* has been established in Baghlan and Kunduz provinces during the most severe dry periods, even in very difficult times of armed conflict (with the exception of the second year of the drought during the administration of Dr Najib). Local institutions thus have a relatively long experience on how to deal with water allocation at sub-basin level in times of drought.
- Water demand from the 1960s to the early 2000s was less than it was in 2008 or 2011. Less paddy cultivation and lower irrigation intensity—in some periods a result of out-migration—were among the main reasons.<sup>137</sup> Consequently, it was easier for Baghlan to provide *abandâz*—even in times of severe drought such as 1959-1960—when compared to the present, when water demand in both provinces is higher.
- The dry year of 2008 was an example of inequitable water access between provinces.<sup>138</sup> The comparative Map 5 (see following pages) provides a visual perspective on the difference in crop production between 2007 (a good year) and 2008, demonstrating the level of inequity between upstream and downstream canals. The increased water demand as compared to past dry periods, the relatively limited government authority, the lack of experience of government staffs<sup>139</sup> and the disagreements/tensions among provincial authorities and among water users were some of the main factors behind unsuccessful water allocation decision and implementation.
- At the meso-level (i.e. beyond the local community level), governors, other government authorities and local commanders have always been critical actors in decision-making and

136 “Kunduz Khanabad Irrigation Study: Final Report,” Volume 2, 69.

137 Pasquet, “Participatory Management of Irrigation Systems (PMIS);” Thomas and Ahmad, “A Historical Perspective on the Mirab System.”

138 Thomas and Sabawon, “Sharing Irrigation Water Equitably.”

139 Most of them had not experienced any dry years, including during the Taliban period.



**Table 7: Timeline of the most severe dry years and water allocation at sub-basin level (LKSB)**

	1959-1960 (1 year) Reign of King Zahir Shah	1970-1971 (1 year) Reign of King Zahir Shah	1988-1989 (2 years) Government of Dr. Najib	1999 to 2001 (3 years) Taliban period	2008 (1 year) Karzai Administration
<b>Water demand compared to 2011</b>	Less (little paddy cultivation, more fallow land)	Less (little paddy cultivation, more fallow land)	Less (migration)	Less (migration)	Similar
<b>Water allocation agreements</b>	<i>Abandâz</i> : Three days (two times)	<i>Abandâz</i> : Three days (one time)	1st year: <i>Abandâz</i> : Three days but failed after one day due to pressure from mujahiddin in Baghlan  2nd year: No water allocation agreements	Every year: <i>Abandâz</i> : Three days (three times)	<i>Abandâz</i> : Three days but not respected for even one day (one time)
<b>Political context</b>	Influential government in the Qataghan area (covering current Takhar, Kunduz and Baghlan provinces)	Influential government	Civil war; Fights among several armed groups and government forces	Taliban regime; strong authority	Limited government authority (including in Baghlan Province) compared to 2011; limited experience of government staff
<b>Key actors for decision making and settling conflicts</b>	Governor of Qataghan, Agriculture Department, <i>maliks</i>	Governors of Baghlan and Kunduz, Agriculture Department, <i>maliks</i>	Provincial governors, Agriculture Department, several local mujahiddin commanders	Mullah Noorullah "Noori" (Amir of North-eastern region, encompassing Takhar, Baghlan, Kunduz and Badakhshan)	Water Management Department (WMD), governors, elders/ <i>mirabs</i> (but no joint decisions due to tensions among officials)
<b>Severity of dry year(s) compared to 2011*</b>	More severe (less water in the river)	Similar	Less severe (more water in the river)	More severe (less water in the river)	Less severe (more water in the river)

\*Severity is based on a qualitative and subjective assessment by respondents of water levels in the river during the irrigation season.

Source: Compiled from interviews # TL-1; TL-2; TL-4; TL-5.

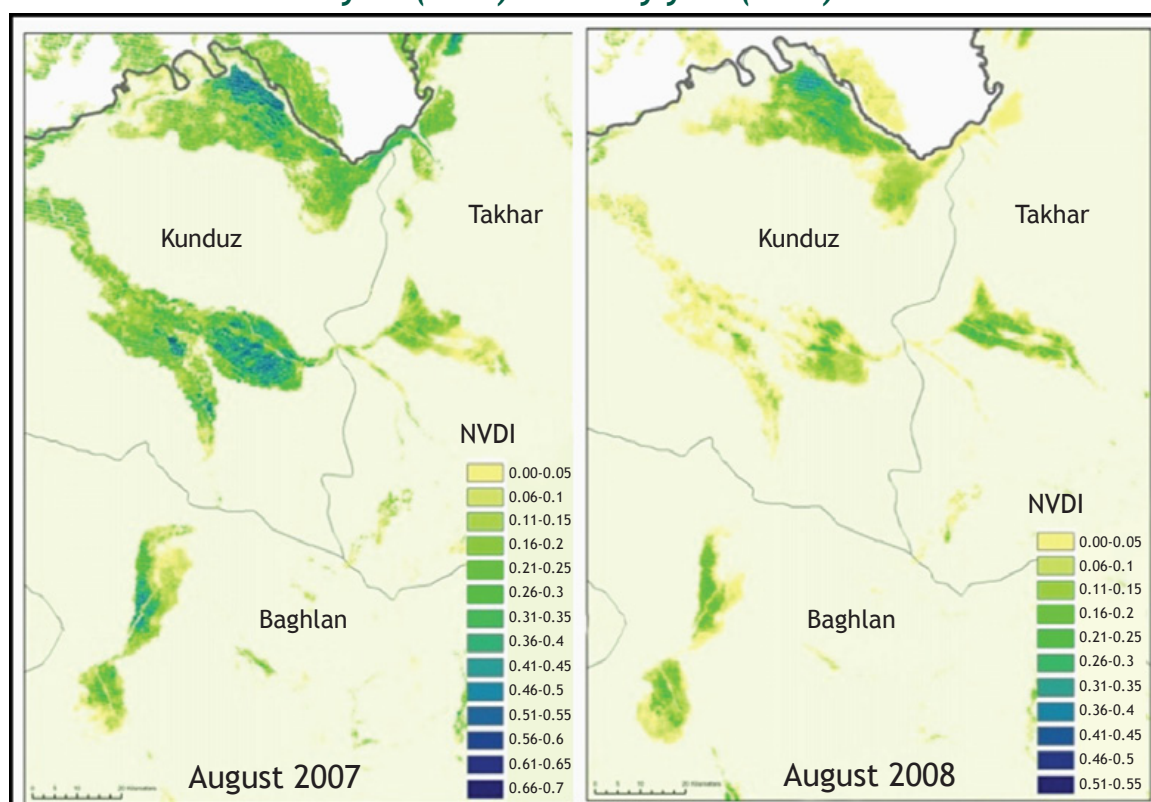
providing authorisation for *abandâz*. In Kunduz especially, these mid-level authorities have consistently been the focal point of requests for *abandâz*. State actors and other political authorities have thus always been considered as relevant—if not legitimate—stakeholders when dealing with water allocation at sub-basin level. In the 1960s and 1970s, the authority of the government made it easier for decision-making and implementation of *abandâz*.

- It appears that decision-making has historically taken place among the concerned actors within each province. By contrast, respondents did not refer to direct and formal orders or instructions from the central government in Kabul during interviews. Nevertheless, during the

reign of Zahir Shah, Kabul was able to exert a degree of indirect influence on the Governor and Agriculture Department. As one elder and former *mirab* of Ajmir canal in Baghlan explained:

*During Zahir Shah's time, the government was thinking about agriculture and irrigation more than everything. If some jeribs [unit of land measurement roughly equivalent to one-fifth of a hectare] of land were becoming dry, the government asked why they were becoming dry and who was responsible for it. In that time, the government was supporting the nation and the nation was supporting the government.*<sup>140</sup>

**Map 5: NDVI for the LKSB and TSB in a normal year (2007) and a dry year (2008)**



Source: Beekma and Fiddes, "Floods and Droughts: The Afghan Water Paradox," in *Afghanistan Human Development Report 2011—The Forgotten Front: Water Security and the Crisis in Sanitation* (Kabul: Center for Policy and Human Development, 2011).

Similarly, there are several key points to draw from Table 8:

- Prior to 2008, *abandâz* was the main water allocation method between Takhar and Kunduz provinces.
- As in the case of the LKSB, water demand was significantly lower in Takhar due to less water consumptive cropping patterns.
- During the 1960s and 1970s, the governor and other government authorities were among the most important and most legitimate actors involved in decision-making, as well as in providing the authority for implementation and enforcement.
- Despite political instability in the late 1980s, *abandâz* between provinces could still be organised by the government. Mujahiddin commanders did not go against the decision except within Kunduz, due to localised animosity affecting downstream canals.
- During the Taliban period, the regime's strong authority in Kunduz and parts of Takhar meant that the implementation of *abandâz* decided by the Taliban leadership was widely respected.

140 Interview # TL-5 (Baghlan). For other accounts of the strong government involvement in irrigated agriculture development at the canal level during that period, see Thomas and Ahmad, "A Historical Perspective on the Mirab System."

**Table 8: Timeline of the most severe dry years and water allocation at sub-basin level (TSB)**

	1960 (1 year)	1970 (1 year)	1988 (1 year)	2000-2001 (2 years)	2008 (1 year)
<b>Water demand compared to 2011</b>	Less (little paddy cultivation, more fallow land)	Less (little paddy cultivation, more fallow land)	Less (migration)	Less (migration)	Similar
<b>Water allocation agreements</b>	No issue between provinces; only intra-Kunduz, ad hoc agreements	<i>Abandâz</i> : 4-5 days (1 time)	<i>Abandâz</i> : 3 days (1 time)	Both years: <i>Abandâz</i> : 3-4 days (2 times)	WMD proposal for <i>abandâz</i> : 10 days—failed after 3 days  Continuous flow: (MEW and WMD proposal) 30% of flow for Kunduz—Failed  50%-50% for each province (MEW, WMD and PARBP proposal)—Not implemented
<b>Political context</b>	Strong and influential government	Strong and influential government	Civil war; some tensions between communist government and mujahiddin; downstream canals slightly affected by disturbance from mujahiddin inside Kunduz.	Taliban regime; strong authority for implementation  Strong support from Taliban for pro-Taliban Khanabad area, but parts of Takhar belonging to Northern Alliance outside of Taliban control.	Taliban presence in Kunduz supporting demonstrations (roadblocks)  Pressure from Kunduz MP on Kabul MEW  Low government enforcement power
<b>Key actors for decision making and settling conflicts</b>	Governor of Qataghan, Agriculture Department, <i>maliks</i>	Provincial governors, Agriculture Department, <i>maliks</i>	Provincial governors, Agriculture Department; some disruption of implementation from mujahiddin in downstream Kunduz	Mullah Noorullah “Noori” (Amir of North Eastern region)	WMD, Kabul MEW, Provincial governors, elders/ <i>mirabs</i>
<b>Severity of dry year(s) compared to 2011</b>	Less severe (more water in the river)	Similar	Less severe (more water in the river)	More severe (less water in the river)	Similar to slightly better

\*Severity is based on a qualitative and subjective assessment by respondents of water levels in the river during the irrigation.

Source: Compiled from Interviews # TL-3; 74 and Thomas and Sabawon, “Sharing Irrigation Water Equitably.”

Informants from Kunduz recalled that despite low levels of water in the river, *abandâz* was properly implemented—including within Kunduz—as no-one was prepared to oppose Taliban authority. However, some parts of Takhar (including Taloqan City and eastern parts of the province) were outside of Taliban control.

- In 2008, the increased water demand compared with previous dry years, relatively limited government authority, inexperienced government staff,<sup>141</sup> and disagreements among and between provincial authorities water users were the main factors behind that year's unsuccessful water allocation decisions and implementation. Despite attempts by MEW in Kabul to assist local WMDs and water user representatives in finding water allocation agreements, the performance in water sharing remained very low and the downstream areas of the sub-basin were severely affected. In that year, demonstrations blocking the roads were organised in Kunduz, with the support of Taliban leaders active in downstream Kunduz at the time.<sup>142</sup>

## 4.7 Summary and conclusion on sub-basin profiles

Both sub-river basins are characterised by two distinct upstream/downstream pockets of irrigation which align with formal provincial boundaries. At less than one hundred years, the history of their development is relatively short. It first consisted of the rapid settlement of a heterogeneous population with low levels of interaction or organisation between communities, a context not particularly conducive to collective management. This was followed by a period of booming infrastructure, agriculture and industrial development in the 1970s, which was in turn put to an end by the Soviet invasion. The war period weakened the state's capacity to support agriculture and water management, and a shift from industrial crops to water-intensive rice further increased the pressure on the system in terms of water demand.

In absence of storage dams, farmers are currently exposed to episodic dry years despite both sub-basins having, on average, a relative abundance of water. So far, water users and administrative authorities have always referred to the system of *abandâz* when dealing with the allocation of water between provinces. This continued even during the collapse of state authority with the involvement of other local and mid-level leaders. Nevertheless, the 2008 season raises serious concerns about equity in water access through *abandâz*.

Currently, in both sub-basins, irrigated agriculture is still a key source of livelihood and income for local farmers. The area remains "the grain basket" of Afghanistan, and thus a strategic area for food security at national level.

## 4.8 The premise of multi-stakeholder platforms in the Taloqan and Lower-Kunduz sub-basins

As part of the post-2001 move toward water sector reform, the MEW initiated the KRBP in 2004. This integrated pilot programme had various components, including primary infrastructure development and rehabilitation, formation and development of canal-level WUAs, and the formation and development of MSPs such as RBAs and RBCs. It also included an upper-catchment development component. Funded by the EU, the programme ultimately aimed to pilot the introduction of the "trinity" of IWRM, decentralisation and participation to the country's water sector.<sup>143</sup> The consultancy company Landell Mills Limited (LML) was given the main tasks of infrastructure rehabilitation and forming the MSPs, while playing a coordination role with other implementing partners such as NGOs, who would be working on the social water management (SWM) and upper-catchment components. In coordination with LML, the German state-owned Technical Cooperation Agency (Gesellschaft für Technische Zusammenarbeit, or GTZ) took a leading role in supporting the MEW in its efforts to develop the Water Law.

In April 2005, LML initiated its work through monthly workshops and roundtables with a working group composed of actors such as water users and line ministries, who fit the profile of future RBA and RBC members. This decision to coordinate through a single working group was justified by the absence of an official Water Law or regulations on river basin organisations.

141 Most of them had not experienced any dry years (including during the Taliban time).

142 Interview # TL-3.

143 Warner, "The Beauty of the Beast," 2.

According to Varzi and Wegerich, the years between 2005 and 2008 were characterised by a general lack of buy-in and a subsequent poor level of progress in MSP development.<sup>144</sup> In analysing why this was the case, they offer the following three reasons:

- A mismatch between the immediate concerns of water users or line ministry representatives—such as infrastructure construction and rehabilitation or flood emergency repair—and the agenda defined by facilitators raised frustration among participants. From 2005 to 2008, the agendas were suggested by the KRBP technical assistance team and focused mainly around sub-basin profiling, role playing, identification of water users and uses, discussions on the composition of RBCs, and fee collection. As a case in point, a mapping exercise of all different categories of water users was conducted in May 2007 as a classic step in designing a river basin profile—even though stakeholders themselves had never highlighted any sectoral water conflicts.<sup>145</sup> Similarly, attempts were made to quantify water demand for different water uses despite the known absence of the infrastructure and equipment required to actually measure the amount water available and consumed at a specific time. This not only rendered the exercise impractical; it was also perceived as irrelevant since competition for water was seen as limited to the irrigation sector in times of very dry years, which did not occur between 2005 and early 2008.
- Frustration among both water users and line ministry representatives in the absence of tangible progress in resolving critical issues of flood and emergency repairs as well as infrastructure rehabilitation. The slow progress of infrastructure rehabilitation as well as the numerous issues of construction quality also played a role in eroding the credibility of the KRBP team (LML) as a credible partner in dealing with institutional issues.
- High turnover in participants, which disrupted the learning process and limited decision-making.

In April 2008, both sub-basin working groups stopped meeting and held no more discussions through this platform until January 2011. The fact that this MSP was designed to deal with water allocation during dry periods yet did not even meet once when a water shortage did occur raised some serious concerns about the relevance of such platforms in the eyes of their own constituents.<sup>146</sup> The Water Management Department (WMD) did not take any initiative to pursue meetings and did not question why they had stopped after LML ceased sending invitations. From the point of view of the PARBP technical assistance team (PARBP-TA), the main obstacle to the continuation of sub-basin working group meetings in early 2008 was the absence of an official legal framework,<sup>147</sup> since the Water Law had still not yet been passed.

In any case, during the dry year of 2008, water allocation and dispute-resolution decisions were taken informally through different avenues and platforms. Between 2008 and 2011, the MEW and support agencies including LML and GIZ focused on the development of river basin management regulations. It was only in January 2011 that LML (through the PARBP-TA) took the initiative to re-start the facilitation of sub-basin working group meetings. Despite the fact that the sub-basin working groups were formed again, they once again did not take the lead in dealing with the 2011 dry year. Between June and September of that year, water allocation and dispute resolutions at sub-basin levels were taken care of by informal WACs, which form the unit of analysis for this research.

144 Varzi and Wegerich, “Much Ado About Nothing.”

145 The only inter-sectoral issues mentioned at the time were between mills and irrigation water use but they were defined as intra-canal issues mainly falling within the authority of WUAs. See more details in Thomas and Wegerich, “Local Challenges for IWRM in Afghanistan.”

146 Thomas and Sabawon, “Sharing Irrigation Water Equitably.”

147 Interview # 82.

## 5. Lower-Kunduz Sub-basin Case Study

### 5.1 Decision-making space, power balance and multi-stakeholder platform composition in the LKSB

Decision-making power over water allocation in the LKSB has been developing according to different processes, at different scales along the length of the basin. A distinction therefore needs to be made between water allocation decisions between or within provinces.

#### *Decision making process between upstream and downstream provinces: traditional abandâz*

#### Initiating decision-making platforms within the downstream province: the formation of a WAC in Kunduz

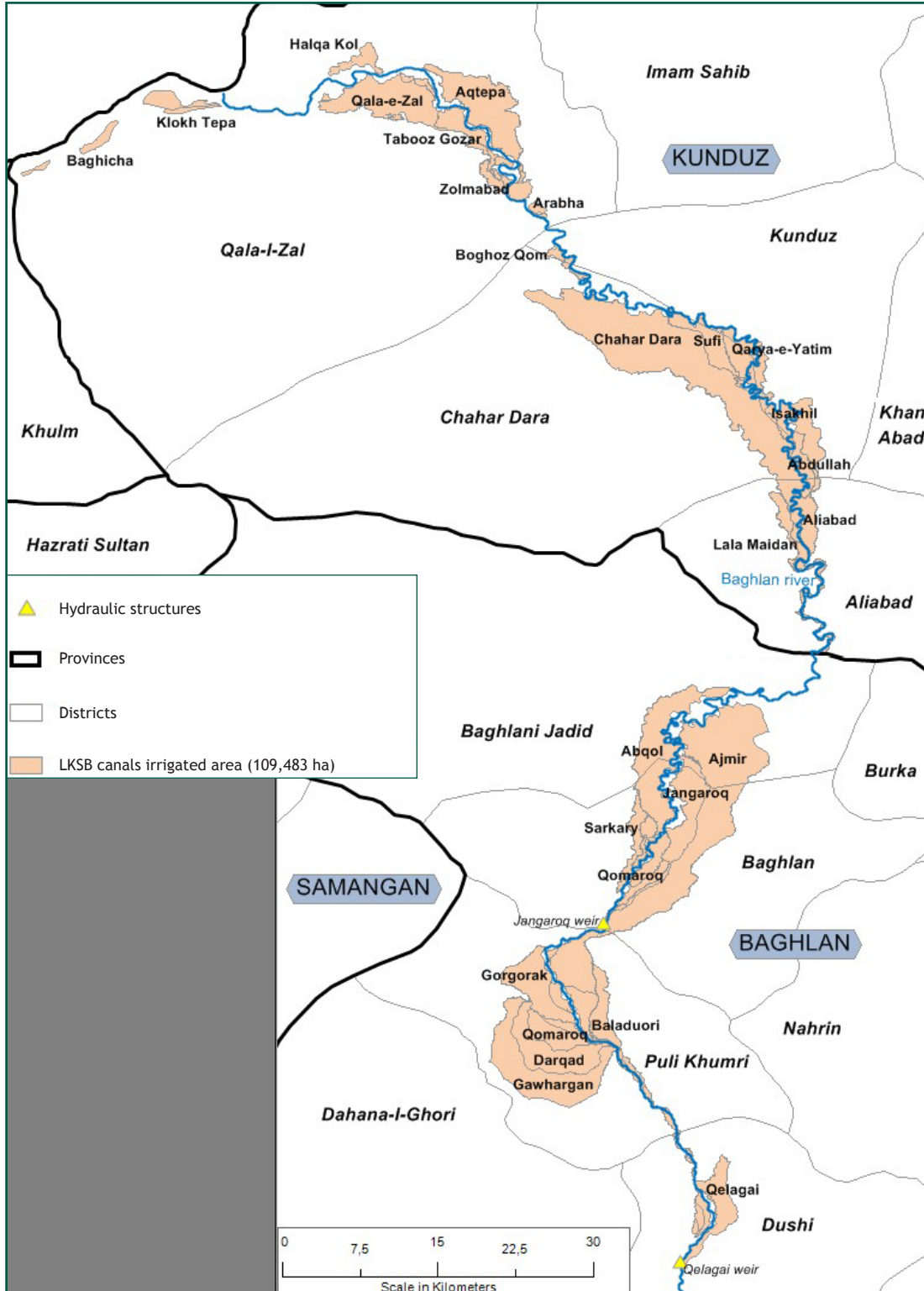
On 12 July 2011, a formal WAC (see Table 9) was formed within Kunduz Province in order to respond to the practical problem of low water levels in the Kunduz River in a way that would satisfy the demand of all canals. This WAC was formed under the responsibility of the Kunduz WMD director and governor, following requests from water users' representatives such as *mirabs*, WUA members and elders. In this process, state and line ministry representatives were seen as legitimate actors in organising the resolution of water distribution among canals.<sup>148</sup> This legitimacy was itself based on past experiences of the state's role (see time-line in Table 7) in facilitating water allocation discussions at the meso level.

**Table 9: Composition of the Kunduz Province WAC for the LKSB as formally defined by the WMD director and approved by the provincial governor**

Name	Position / Organisation	Location	Type of stakeholders
Mustafaqul	WUA chairman	Qala-i-Zal canal - Qala-i-Zal District	Kunduz water users
Sayed Shah	WUA chairman	Tarboz Guzar canal - Qala-i-Zal District	Kunduz water users
Bashir Bay/ Nematullah	<i>Mirab</i>	Abdullah canal - Ali Abad District	Kunduz water users
Hajji Mohammad Nashir	<i>Mirab</i>	Chahar Dara canal - Chahar Dara District	Kunduz water users
Mahmood Khan	<i>Mirab</i>	Ali Abad canal - Ali Abad District	Kunduz water users
Mohammad Saleh	<i>Chak bâshi</i> ( <i>mirab's</i> assistant)	Chahar Dara canal - Chahar Dara District	Kunduz water users
Eng Nezamudin	WMD representative (deputy WMD director)	WMD Kunduz	Kunduz - line ministry
Abdul Khalil	MAIL representative	MAIL Kunduz	Kunduz - line ministry
Abdul Salam Makhdoom	Governor's representative	Kunduz governor's office	Presidential representative
Khush Muhamad	Povincial council representative (PC member)	Kunduz provincial council	Kunduz elected representatives
Hajji Enayatullah	Kunduz security department	Kunduz National Directorate of Security (NDS) office	NDS representative
Ahmad Zai	Facilitator / PARBP	Kunduz PARBP office	Consultancy org.

148 Interviews # 10; 15; 16; 99.

Map 6: LKSB irrigated areas



The Kunduz WAC was composed of a broad range of stakeholders, albeit exclusively within the irrigation sector. Indeed the main—arguably the only—problem in the LKSB is the episodic question of upstream/downstream irrigation water allocation during dry periods.

The main role of the Kunduz WAC was first and foremost to formally request water from the authorities in Baghlan Province in the form of traditional *abandâz*. The presence of the deputy governor—and to a lesser extent, representatives of the WMD and the provincial council (PC)—was thus justified by their official responsibilities and legitimacy to engage with their counterparts in Baghlan in order to solve a shared problem.<sup>149</sup> As the WUA chairman of Jangharoq canal (Baghlan) put it: “The governor is the father of a province. If anyone wants to do something in the province, he should come first to the provincial governor.”<sup>150</sup> Given their main priority and responsibility is to ensure security in their provinces, governors cannot be bypassed when it comes to discussing issues as sensitive as water allocation during dry years. As discussed elsewhere below, requests for the police intervene in implementing *abandâz* are not uncommon, all of which requires the support of the governor. Historically (see time-line in table 7), governors—or their equivalents under the Taliban—have always been key stakeholders in decision-making for *abandâz*.

### Toward a traditional *abandâz*: engaging negotiations between Kunduz and Baghlan

When the Kunduz WAC interacted with Baghlan stakeholders on 19 July, it was state and line ministry representatives that took the leading role in establishing contacts and discussing water access constraints with their counterparts. On the Baghlan side, only the governor and WMD director were present. On the Kunduz side, the Kunduz WAC invited several additional elders and *Chak bâshis*. Though only the formal Kunduz WAC members actually took part of the discussion, the presence of these additional figures was deemed necessary to make Baghlan understand the gravity of the situation: “It was only the WAC that talked to the governor and WMD but we stayed outside in the corridor to show that there are a lot of *mirabs* who face the problem of drought.”<sup>151</sup> In contrast, the presence of Baghlan water user representatives was not deemed necessary since the purpose of the meeting was only to initiate contacts and for the Kunduz officials to submit a formal request to their Baghlan counterparts.

The request was about defining *abandâz* (see definition in Box 3), and no decisions were taken during this meeting. The Kunduz delegation was hoping for a permanent flow or at least ten days of *abandâz*, but the Baghlan WMD director explained that although he was willing to support Kunduz, this request would be hard for water users in his own province to accept.<sup>152</sup> However, Baghlan’s governor promised that water would be released as support from Baghlan to Kunduz. The Baghlan WMD director ultimately promised that he would get Baghlan water users to release water for seven days. As a second step in the decision-making process, Baghlan’s WMD department attempted to impose a seven days *abandâz* for the entire province (i.e. 31 canals), and its director organised a meeting of representatives from different canals to inform them about the decision. The sequence of meetings and the different actors who participated are illustrated in Figure 13 and Table 10).

Water user stakeholders interviewed felt that the composition of the Kunduz WAC was appropriate, and those canal representatives who were not directly present said that they felt represented by at least one person present in the WAC.<sup>153</sup> When it came to interacting with Baghlan, it was felt that the WAC members were speaking with one voice, whether they were water users or government representatives. It is important to note that no WAC has ever been formally constituted in Baghlan, although various actors have convened on an ad-hoc basis.

149 Interviews # 1; 2; 3; 6; 7; 9; 19; 20; 22; 23; 27; 28.

150 Interview # 65.

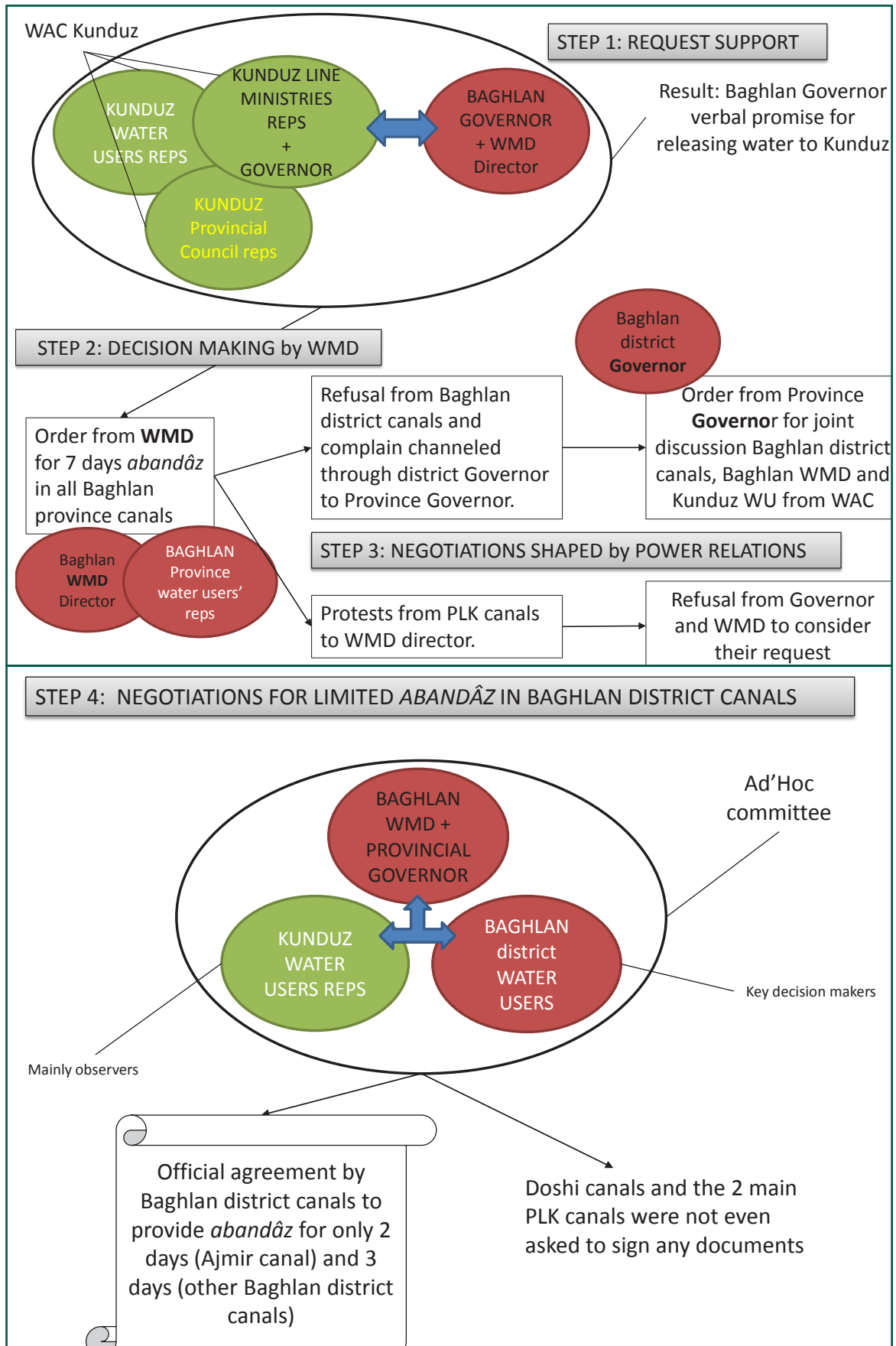
151 Interviews # 2; 4.

152 Interviews # 8; 60; 69; 66; 70; 1; 6; 7; 19; 23; 4.

153 For instance interviews # 20; 27; 28.



**Figure 13: Main steps in decision-making over *abandâz* between Baghlan and Kunduz provinces**



**Table 10: Actors involved in the various platforms/ meetings for water allocation decisions in the LKSB**

Scale	Type of agreement/ platform	Actors involved	Location
<b>Intra-provincial agreements</b>	Agreement for internal Kunduz water allocation	WAC members: 10 (Kunduz) Other water user reps: 5 (Kunduz) Other government reps: 5 (Kunduz)	Kunduz
<b>Inter-provincial agreements</b>	Initial agreement for water allocation between Baghlan and Kunduz ( <i>abandâz</i> )	WAC members: 7 (Kunduz) Other water user reps: 0 Other government reps: 2 (Baghlan)	Baghlan
	1st internal Baghlan agreement on <i>abandâz</i> definition	WAC members: 0 Other water user reps: around 12* (Baghlan) Other government reps: 2	Baghlan
	2nd internal Baghlan agreement on <i>abandâz</i> definition	WAC members: 0 Other water user reps: around 10 (Baghlan) Other government reps: 2 (Baghlan)	Baghlan
	Final agreement for water allocation between Baghlan and Kunduz ( <i>abandâz</i> )	WAC members: 10 (Kunduz) Other water user reps: 16 (Baghlan) + 9 (Kunduz) Other government reps: 3 (Baghlan)	Baghlan

\* The number is based on key informants and may not be exact as there were no minutes taken for this informal meeting. Nevertheless, this would represent approximately 40 percent of the concerned canals in Baghlan. Only the main canals were invited, covering approximately 85 percent of the total command area. The smallest canals which have little significance in terms of water usage were not invited.

### Various levels of Baghlan WMD authority, various degrees of decision-making for Baghlan water users

#### *Decision-making and decision space: Pul-i-Khumri and Doshi District canals*

Discussions on the duration of *abandâz* for canals in Baghlan's Pul-i-Khumri District were almost non-existent, and the WMD director took an authoritative stand in imposing a decision. In one illustration, the *mirab* of Gawargan—the largest canal in the district<sup>154</sup>—stormed out of a meeting of representatives of the Baghlan canals after insulting the WMD director, frustrated at being unable to change the decision.<sup>155</sup> In fact, representatives of Pul-i-Khumri canals explained that this meeting was not about discussions and finding compromises, but rather to present farmers with a *fait accompli*. In the view of Gawargan's *mirab*, the *abandâz* was an imposed measure; he himself was not ready to provide even a day of water to Kunduz due to the difficulties he had in ensuring distribution within his own canal. Similarly, the *mirab* of Darqad canal<sup>156</sup> was not even invited to the discussions. In fact, he was only contacted when the WMD director and a delegation from Kunduz and other Pul-i-Khumri *mirabs* arrived at the Darqad canal intake to close the headwork gates, learning on the spot that the intake would remain closed for seven days and that a decision had already been taken.<sup>157</sup> Similarly, in Gorgorak,<sup>158</sup> protests did not result in any reduction of the *abandâz* duration. Despite attempts to involve a PC representative to support

154 Covering 5,034 ha—33 percent of the entire Pul-i-Khumri irrigated area.

155 Interview # 52.

156 The second largest canal in Pul-i-Khumri, covering 3,082 ha or 20 percent of all Pul-i-Khumri canals.

157 Interview # 50.

158 Covering 2,567 ha—17 percent of Pul-i-Khumri canals.

#### **Box 4: The security context in Dand-i-Ghori (Pul-i-Khumri District)**

During the Taliban period, the area of Dand-i-Ghori was controlled by Mullah Alam (from the Hizb-i-Islami political party led by Gulbuddin Hekmatyar) who was in turn under the authority of Mullah Noorullah Noori, head of the Northeastern provinces for the Taliban.

At the fall of the Taliban, Mullah Alam fled the area and the transitional government replaced him with a figure who was closer to leaders of the Northern Alliance such as first vice-president Marshall Fahim and 2009 presidential runner-up Dr Abdullah. However, the government was too weak to completely clear the area of Taliban supporters and other insurgent groups, and its political influence remained limited. However, following the first national assembly elections in 2005, Mullah Alam managed to gather support from some influential MPs with ties to Hizb-i-Islami and convinced Karzai to authorize him to go back to Dand-i-Ghori. However, in 2007, the National Directorate of Security strongly suspected his involvement in a major suicide attack in Fabrica,\* Baghlan, along with other criminal activities along the Pul-i-Khumri-Mazar road, and the government decided to explore ways of removing him from the area. In 2008, Mullah Alam therefore openly decided to rejoin the Taliban, which had gained influence in Baghlan-i-Jadid District, as well as in Chahar Dara District in Kunduz. As a result, from July 2008 to late-2010, the government was unable to exert its control, and Mullah Alam became the main influential leader in the area. According to security commanders in Baghlan, he is allegedly behind the killing of 20 police officers, the kidnapping of seven NGO staff, the destruction of more than seven oil tankers, and the death or injury of 32 civilians.

However, in May 2011 the government decided to launch a major combined International Security Assistance Force/Afghan National Security Forces operation that succeeded in pushing Mullah Alam out of the area. Nevertheless, the government still proposed to reintegrate Mullah Alam as the leader of the Peace and Reconciliation *shura* in Pul-i-Khumri with guarantees for his security to prevent him from playing any further role in fomenting insecurity. In exchange, Mullah Alam had to ensure the cessation of insurgent activities and start supporting the government. As a consequence of these events, the government regained a strong position of authority in the area, this time with the support of Mullah Alam.

\* The attack took place on 6 November 2007. Approximately 75 individuals were killed, including six MPs.

Based on interview (# 75) with a high ranking security commander of Baghlan for the period 2006 to 2010.

in the negotiation of an agreement, the provincial governor and WMD excluded any possibility for change.<sup>159</sup> As one *mirab* from a Pul-i-Khumri canal explained: “the governor told us that we wouldn’t have water for seven days but, Kunduz was in a much worst situation. At this point, the PC representative took the side of the governor and tried to convince us to accept this decision.”

As a follow-up, a few canal representatives from Pul-i-Khumri District met with the main informal leaders in the district to organise a public demonstration against this decision. However, they were discouraged from doing so by the unfavourable security context.<sup>160</sup> The *mirab* of Jui Naw explained:

*When we mentioned to the community the decision of the WMD for abandâz in Pul-i-Khumri canals they wanted us to organise a demonstration. But Mullah Alam [an influential leader in Pul-i-Khumri] and Dr. Faisal [a Baghlan PC member] told us to avoid any demonstration. They said that few months ago the Dand-i-Gori area was full of insurgents who created problems for the government. There were attacks on the main road from Pul-i-Khumri to Mazar and some rockets were fired toward the city. Government forces have been fighting these insurgents. Therefore they said that if we were to start a demonstration the government would use the opportunity to arrest people and put them in jail. Then they would have to sell their land to pay the qazi [judge] and be released. We agreed with Mullah Alam and Dr. Faisal because if we had run this demonstration maybe some insurgent or some Taliban would have tried to conduct a suicide attack, and the organisers would have been held responsible.<sup>161</sup>*

159 Interviews # 50; 51; 52; 53; 62; 69; 72.

160 Interviews # 51; 62; 72.

161 Interview # 72.

In other words, an unfavourable socio-political context (see Box 4) weakened the ability of this group of water users to challenge government authority. The only notable exception has been Baladuri canal; in this case, an *abandâz* of three days was accepted by the WMD since it passed through Pul-i-Khumri City.<sup>162</sup>

In Doshi District,<sup>163</sup> the WMD did not face any complaints when they announced their decision to close the canal intakes for seven days. The WUA member for Qelagay—the district’s main canal—did not say anything during the meeting for the following reasons. First, he thought at the time that there would not be any serious monitoring and that the intakes would thus not be closed for any significant time in practice. Secondly, farmers along this canal felt that they would be able to cope with an *abandâz* of this duration since their crops consisted mainly of mung bean (a low water demanding crop) and melons, and their canal had enough conveyance capacity to avoid establishing water turns<sup>164</sup> during July.<sup>165</sup>

### Decision-making and decision space: Baghlan District canals

The case of the canals in Baghlan District presents a significant contrast to the above examples, underlining the limits of the WMD authority in the province. During the first meeting with the WMD, the water user representatives for Baghlan District canals kept quiet, claiming that they would first talk to their water users about the decision.<sup>166</sup> In fact, just after the meeting, they jointly submitted a series of major complains in a letter addressed to the powerful district governor. He then channelled their demands to the provincial governor who ordered the WMD director to facilitate the resolution of the issue with water users in the district. Prior to the meeting that ensued, all the Baghlan District canal representatives had met and agreed on their positions concerning the duration of *abandâz* (three days for all canals in the district, except in the case of Ajmir canal, where representatives would not agree to close their canal for longer than two days).<sup>167</sup> They also informally secured the support of the district governor regarding this decision.<sup>168</sup> The WMD director knew that he would not be able to force any decision and thus took the initiative of asking Baghlan District users to explain the challenges they were facing to water users in the Kunduz WAC. In the meeting that followed, the two sides laid out their respective water needs; however, the Kunduz water users were effectively present only as observers, and were in no position to press their case further.<sup>169</sup> As the WUA chairman of Tarboz Gozar canal and member of the Kunduz WAC for Qala-i-Zal District put it:<sup>170</sup> “Whether they give us seven, five or three days what can we say? Beggars receive sometimes twenty, sometimes ten, sometimes five Afghanis. Do you ever hear them making critical comments about the amount they get?”

Once verbal consensus had been reached on all decisions, a formal finalisation meeting was organised to sign the agreements on *abandâz* and establish a monitoring team from Kunduz to ensure that canal intakes remained properly closed.<sup>171</sup> However, the representatives of Doshi District canals as well as the main *mirabs* of Gawargan and Darqad canals in Pul-i-Khumri District were not even invited. A WMD staff member explained: “We invited only the people whom we thought we might have problems with and where we had little control.”<sup>172</sup> However, the signed

162 Interview # 54. Note that none of the municipality representatives were involved in this decision; only the *mirab* and WMD director.

163 The most upstream part of the provincial canal area, covering 6.5 percent of the total irrigated area of the Province.

164 Water turns involve distributing water through rotational turns between different secondary canals (or groups of secondary canals). When main canals have a large conveyance capacity, it is possible to avoid this practice and let water flow simultaneously in all secondary canals. This is an advantage as it limits additional delays in accessing water when the *abandâz* period ends.

165 Interviews # 58; 59.

166 Interviews # 64; 65; 66; 67; 68; 71.

167 Interviews # 63; 64; 65; 66; 68.

168 Interviews # 64; 66; 67; 68; 71.

169 Interviews # 1; 6; 7; 19; 23.

170 Interview # 23.

171 Minutes of meeting.

172 Interview # 69.

agreement contained a signature of a Gawhargan *chakbâshi*,<sup>173</sup> who when interviewed strongly denied signing any document on *abandâz*. As he explained, he would not be in any position to sign a document since the responsibility would have fallen to his *mirab*.<sup>174</sup> Others, like the representatives of Gorgorak canal, tried to raise further concerns about the difficulties they would have ensuring water access in the downstream areas of their own canal<sup>175</sup>— arguments that were dismissed as irrelevant by the WMD.

### **Abandâz implementation: strong government support, successful monitoring**

The implementation of the *abandâz* is summarised in Box 3, while the actual outcomes in terms of water access in Baghlan and Kunduz provinces are evaluated and discussed in section 3 below.

#### ***Doshi District***

The implementation mainly focused on the Qelagay intake but lasted only three days. After that, the Ali Abad monitors left as they were called home to deal with issues within Kunduz. After five days, the intake was reopened. During these five days, the Qelagay managed to negotiate with the Kunduz representatives to get a little stream of water in the canal, and it was not fully closed.

#### ***Pul-i-Khumri District***

Two canals (at least) tried to open their intake by sending a delegation of farmers headed by their *mirab*. However, tight control by Kunduz farmers with the support of the Baghlan authorities—including the WMD and governor—left their attempt vain. In both Gorgorak and Gawhargan, attempts were made by the *mirabs*—again backed up by water users—to disrupt the *abandâz* after four days. However, Kunduz water users and the Baghlan authorities ultimately managed to keep the intakes closed for the full seven days.

#### ***Baghlan District***

After pointing out that the security was not optimal in Baghlan District, the local governor suggested that monitoring the canals should be left to district WMD staff. Though no incident related to non-respect of *abandâz* was reported by both these individuals and the majority of canals representatives, it is harder to verify this information than for canals where Kunduz water users were in charge of the monitoring. One of the most downstream canals in Baghlan District acknowledged that it was opening its intake at night.

### **Vain search for a second Kunduz-Baghlan *abandâz***

It is important to note here that the *abandâz* described above was the only one conducted in 2011. By August, increasing water demand combined with reduced availability at the river level had left water users across Baghlan Province (especially Baghlan District) heavily exposed in the event of a second *abandâz*. Aware of this issue, the Baghlan's district governor made no promises to the Kunduz WAC when informally contacted by them. Instead, he preferred to leave the WMD in charge of handling the situation. As he explained:

*I have told Kunduz that I will support them if the WMD agrees to have a second *abandâz*; I told the same thing to their provincial governor. But we [both provincial and district governors] have told Engineer Naeem [the Baghlan WMD director] to kill time in order to avoid a second *abandâz*. It is the only way to avoid making Baghlan farmers angry and make Kunduz farmers unhappy. [...] It was completely impossible to have the second *abandâz* because the water in the river was decreasing and it was a critical time for irrigation.*<sup>176</sup>

173 *Mirab* assistant at local level (usually secondary/tertiary canal or village level).

174 Phone interview (23 November 2011).

175 Interviews # 53; 72; the satellite imagery seems to confirm that even during a wet year - with water abundant flow at river level - the most downstream part of Gorgorak (approximately 450 ha - 17% of the canal command area) faces severe shortage and some crop failure.

176 Interview # 61.

At the same time the complicit WMD director admitted he applied diplomatic skills to effectively “kill time.”<sup>177</sup> Aware of the difficulties during the first *abandâz* both in Baghlan and Kunduz provinces, the Kunduz WAC did not push the matter further and instead invested in other coping mechanisms.

### **Decision-making within Kunduz Province**

#### **A non-contested decision-making process but failure in implementation**

In comparison to Baghlan, the main issue regarding water allocation within Kunduz Province is primarily a lack of enforcement capacity, and arguably not the decision-making procedures involved. On July 17—before the agreements on *abandâz* with Baghlan—complaints emerged from Chahar Dara and Qala-i-Zal district representatives about the fact that canals upstream in Ali Abad District were taking all the water from the river. Indeed, due to low water levels in the river it was possible to block the river with sandbags and divert the water entirely into Ali Abad canals.

The issue was brought to the WAC via the governor and WMD director. The government representative within the WAC then convened all WAC members with the support of the PARBP facilitator, and managed to reach a consensus in which Ali Abad users agreed to reduce water acquisition at their intake.

On 18 July, the WAC met again to discuss a similar problem, this time with Chahar Dara canal users blocking the river and leaving no water for those downstream in Qala-i-Zal. Since Chahar Dara representatives did not respond to requests for a meeting, the WAC took the decision to request police support in closing the Chahar Dara intake for 72 hours in this unsecured area. On the 24 and 25 July, the WAC under the leadership of the WMD and the governor’s representatives managed to get all participants to formally agree on a time-based allocation schedule for the duration of the *abandâz* with Baghlan. This formal agreement was triggered by the failure in implementing a similar informal agreement passed on 21 July. On 27 July, after observing that Chahar Dara canal was again blocking the river, the governor and the WMD representatives again enlisted the support of the police to enforce the agreements previously accepted on unanimous base.

None of the WUA informants interviewed for this study questioned the above decision-making process, whether they were from Qala-i-Zal, Chahar Dara or Ali Abad.<sup>178</sup> Similarly, none of the WAC members interviewed contested the composition of the WAC, the legitimacy of its members or its decision-making procedures.<sup>179</sup> The leadership of the WMD and governor’s representatives and the facilitation of PARBP was considered as legitimate and adequate, and none of the WAC members interviewed felt that their opinion could not be voiced or that their claims were not taken into account.<sup>180</sup>

However, the critical problem in Kunduz has been WAC members’ inability to actually enforce agreements and prevent defaults. Between the 21-27 July, implementation was challenged by Ali Abad and more flagrantly by Chahar Dara canal. Despite a formal request of support made by the governor’s office to the chief of police on 27 July, government forces were also ultimately unwilling to risk an intervention in the volatile Chahar Dara area.

The Chahar Dara WAC representatives blamed non-compliance with these agreements on the influence of armed opposition groups in the area, who allegedly encouraged farmers to take water as they pleased.<sup>181</sup> Qala-i-Zal WAC representatives were mainly upset at the lack of support from the governor and police who failed, in their view, to make defaulters comply with the signed agreements. The Kunduz governor was also severely criticised for not following up on the issue in a serious enough manner.<sup>182</sup> In contrast, despite the fact that most downstream districts of Kunduz barely received

177 Interviews # 62; 4.

178 Interviews # 1; 3; 6; 7; 10; 19; 20; 22; 23.

179 Interviews # 1; 6; 7; 19; 23.

180 Interviews # 1; 6; 7; 19; 23.

181 Interviews # 6; 7.

182 Interviews # 3; 19; 23; 27; 28.



*Image 1: Kunduz WAC members witness unauthorised diversion of river flow into Ali Abad canal during monitoring on 23 July 2011*

any water during the *abandâz*, all representatives interviewed were appreciative of the efforts made by stakeholders in Baghlan Province, particularly those of the governor and WMD director.<sup>183</sup>

### Water allocation decisions

No reference to *abandâz* was made in decisions regarding the allocation of water within Kunduz Province. The idea was instead to adhere to the general principle of water allocation based on land area. During negotiations on 24-25 July, the Qala-i-Zal canal—representing 30 percent of the total command area in the province within the LKSB—were given priority in water access for three days, or around 43 percent of the time allocation. This “advantage” was justified as compensation for the fact that upstream districts had been limiting its access to water over the preceding days. In the absence of information on river flow and canal conveyance capacity, decisions on the number of days allocated to different canals were more negotiated than based on rational calculations. In contrast to the Baghlan case, however, none of the WAC representatives contested the eventual content of the signed allocation agreements.<sup>184</sup> The following section, discusses findings related to the composition and decision-making processes of the WACs both within and between provinces.

## 5.2 Discussion

### *How power relations shape participation and decision-making results within Baghlan Province*

Overall, the participatory nature of the 2011 *abandâz* was limited in Baghlan Province. In the case of the Pul-i-Khumri District canals, it is clear that the WMD used its influence in the area to

<sup>183</sup> Interview # 19.

<sup>184</sup> Interviews # 1; 3; 6; 7; 10; 19; 20; 22; 23.

impose its decisions unilaterally. In Baghlan District, while water users found room to raise their concern and obtain a limitation of the duration of *abandâz* in their canal, it was not exactly the outcome of a genuine participatory process. Indeed, it was not the primary intention of the WMD to include them in the *abandâz* discussions in the first place, and they were involved only under the pressure of more powerful stakeholders including the district governor.

The involvement of Kunduz water users—limited only to discussions with Baghlan District canals—was also not based on a genuine interest among government authorities in applying “good governance” principles. Instead, the idea was to show that the governor and WMD’s inability to provide a substantial *abandâz* duration to Kunduz was justified by water users’ lack of cooperation (and also to a lesser extent by specific intra-canal management constraints, for instance in the Ajmir canal). It was also done to put pressure on Baghlan District water user representatives and force them to take responsibility in their reluctance to release water to Kunduz. Prior to this meeting, the provincial governor further pressurised the Baghlan district water users’ representatives by explaining that he had already promised support to Kunduz.<sup>185</sup> By letting Kunduz and Baghlan water users argue about their respective needs and constraints, the head of the WMD tried to present himself as a referee to avoid alienating either side. In the end, his aim was to be seen as a deadlock-breaker, pushing for an agreement despite Baghlan water users’ resistance—and thus achieving what was expected of him by both the governor and the authorities in Kabul. Despite these efforts, however, the Baghlan district users still managed to obtain the reduction of *abandâz* they had initially demanded.

In other words, “participation” became in practice a convenient strategy for the WMD director to turn the situation to his advantage. In this context, Kunduz water users also had little bargaining power to argue against their upstream counterparts. As mentioned earlier, their role was limited to depicting the dire situation in their canals command area and calling hopefully for support.

The map of duration of *abandâz* for different canals follows to a large extent (although not exclusively) the areas of authority of the WMD within the realm of power relations as they play out among various stakeholders (see Map 7). The question thus becomes, “what explains these diverse areas of authority?”

One important factor is that canals such as Gawargan or Jui Naw in Pul-i-Khumri District (left bank) had been government managed systems in the pre-war period, at least to some extent.<sup>186</sup> Even though internal water allocation principles and distribution were effectively devolved to water users and their *mirabs* during the ensuing decades of conflict and into the early years of post-war reconstruction, the operation of intakes is now under the control of the WMD. This is particularly evident in the case of Gawhargan or Darqad canals, which have intakes located at hydropower dams<sup>187</sup> controlled and operated by the MEW (through the WMD).<sup>188</sup> As the *mirab* of Jui Naw—which share its intake with Gawhargan canal—explained:

*Our canal intake is located at the dam [Band-i-Balkh] site so there was no need for Kunduz farmers to monitor the intake during abandâz because WMD staff are nearby. Engineer Naem [the Baghlan WMD director] told the police at the checkpoint near the intake to keep the intake closed and call the WMD in case of problems.*<sup>189</sup>

The Baghlan WMD director explained that in past years, it had been difficult to control the territory covered by the Pul-i-Khumri canal command area due to insurgent activities. As a consequence, the government had been prudent in adopting coercive measures, even at the intake.<sup>190</sup>

Another key issue is the way that the authority of the WMD was indirectly strengthened by the security situation in Dand-i-Gori (an area which covers the largest part of the Pul-i-Khumri canal command

185 Interviews # 48; 50; 53; 58; 59; 63; 65; 56; 57; 67; 68; 69.

186 Rout, “How the Water Flows: A Typology of Irrigation Systems in Afghanistan.”

187 At Band-i-Balkh and Band-i-Do.

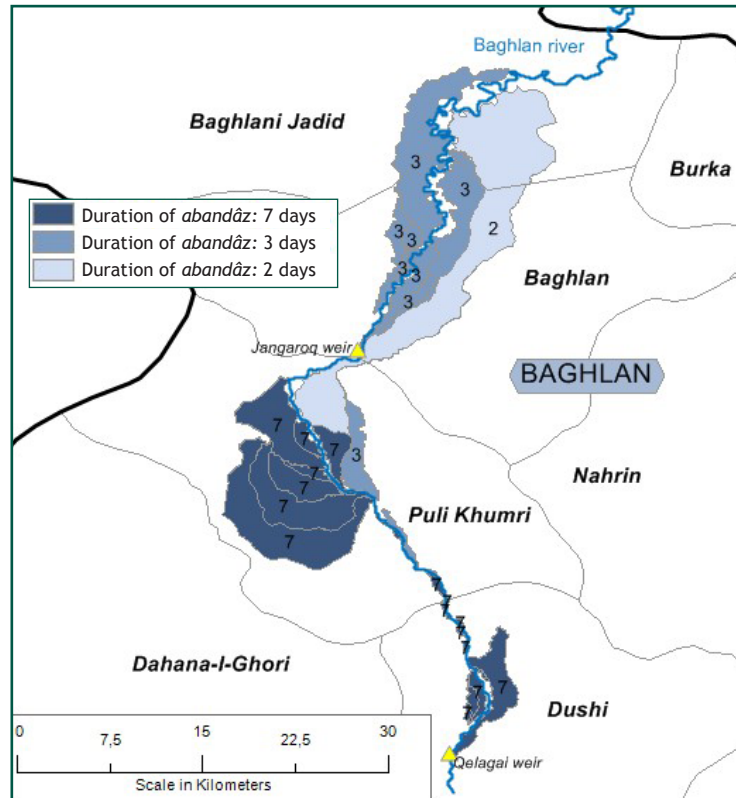
188 Interviews # 50; 52; 69; 72.

189 Interview # 72.

190 Interview # 62.



**Map 7: Abandâz duration in different canals of Baghlan province, as agreed for the month of July 2011**



area including the downstream zones) during 2011. Because of relatively significant insurgent presence of in the area just before the irrigation season and the subsequent government military efforts to take back control (see Box 4), local leaders discouraged any form of public demonstration against the decisions of the WMD and the governor. As one Pul-i-Khumri *mirab* explained, “After the military operation that weakened the insurgents, the government has kept strong pressure on us because we are from the insurgent area.” Another *mirab* in the area explained: “During the last drought [in 2008] I was able to operate the intake as I wanted but now this government is taking revenge on us.” He felt that ever since recent military action had strengthened state authority in the area, the government had been particularly harsh on its population—partly as a demonstration of power, and partly as a punishment for its previous support of the insurgency. Another PC member acknowledged that due to the previous tensions between Dand-i-Ghori and the local government in Pul-i-Khumri, the grievances of the population there are rarely taken seriously.<sup>191</sup>

On top of this is the fact that the WMD director has increased his personal influence in this area from 2008 onwards. As one key informant close to government leaders including the WMD director explained:

*Maybe you remember in 2008 that he [the WMD director] was not respected by local community leaders in Baghlan. [An elder in downstream Baghlan District] once even told him that his only skill was dyeing his hair black. But since then, he has skilfully gained influence. His brother-in-law became head of security in Baghlan; one of his close relatives became a PC member which got him very close to other PC members including the head of PC. In 2006, he could not even go to his land in the Darqad canal area. But recently, during the reconciliation process between Mullah Alam and the government he got very close to Mullah Alam and was able to get his land back. Now, the provincial governor is even selecting him as his main representative for most meetings outside or inside the province.<sup>192</sup>*

191 Interview, PC members Baghlan (24 November 2011).

192 Interview, key informant in Baghlan (21 November 2011).

As the balance of power tipped in the WMD director's advantage, he could therefore afford to make bolder decisions. As the same informant noted, "during this *abandâz* I think he [the WMD director] has been testing his power."<sup>193</sup>

Another final point is that, in contrast to Pul-i-Khumri district, the power of the WMD director in neighbouring Baghlan District is known to be very limited, especially under the current district governor Amir Gul.<sup>194</sup> As a key informant from the Baghlan District WMD explained: "He [the WMD director] doesn't have enough authority in Baghlan District. This is why he doesn't like to come to the WMD office here; this is also because of Amir Gul. They are friends, but if he comes here he has to accept what Amir Gul is saying."<sup>195</sup> The Baghlan district governor is also known to have strong relations with high-level security commanders all the way up to the national level, including with first vice-president Marshal Fahim.<sup>196</sup> *Mirabs* in Pul-i-Khumri canals referred to him as a major asset to the Baghlan district canals in comparison with their own: "He is the Karzai of Baghlan, he is taking care of his people, but we don't have anybody like this to defend Pul-i-Khumri canals."<sup>197</sup> He also has vested interests in the area as he has land in Ajmir and Jangharoq—two large canals in the district. In a further example of his authority, the Pul-i-Khumri WMD did not attempt to impose a longer *abandâz* than agreed on Ajmir canal in Baghlan District, even though they were the ones in charge of operating its intake due to its connection to a second hydropower station at Band-i-Do.

Overall, the room for participation in decision-making and the resulting decisions was thus shaped by the balance in power relations between the WMD director, the provincial and district governors, and water users themselves. In the case of the LKSB, the higher the relative power of the WMD was, the less room existed for decision-making among users, but the more advantageous the decisions for Kunduz in terms of the *abandâz* it received.

### Conducive context of dialogue and negotiation strategies between Kunduz and Baghlan

This section examines the parallelism of interests and interdependency that existed between actors, and its impact on effective water allocation decisions. In doing so, it refers to the work of Kok<sup>198</sup> (Figure 14) presented in the conceptual framework.

**Figure 14: Four dialogue and negotiation strategies**

		Interests	
		Parallel interests	Opposite interests
Positions	Strong inter-dependence	Strategy: Maximum cooperation is possible	Strategy: Fighting or... accomodating
	Low dependency	Strategy: Optimum cooperation is possible	Strategy: Take it or leave it

Source: Verhallen, Warner and Santbergen, "Towards Evaluating MSPs for Integrated Catchment Management."

The water allocation challenge in the LKSB is defined by a typical upstream/downstream imbalance, which is reinforced by the alignment of provincial boundaries with hydrological sub-units (see the description of sub-basin profiles above). In this set-up, Baghlan water users have a low level of dependency on Kunduz when it comes to accessing water. From a rational perspective, the interests of users in the two provinces are thus opposed in the sense that Kunduz needs the water to be released downstream while Baghlan needs water to remain within the province. Nevertheless, Baghlan stakeholders—including water users themselves—feel a moral obligation to release water through *abandâz*. As the

193 Interview, key informant in Baghlan (21 November 2011).

194 Interviews # 66; 67; 67; 70.

195 Interview, key informant WMD Baghlan (26 November 2011).

196 Interviews # 61; 66, and interview with key informant - High ranking security commander in Baghlan from 2006-10 (26 December 2011).

197 Interview # 72.

198 Kok, *Internationaal Onderhandelen. Problemen Bij Internationaal Zakendoen*.

historical overview of the management of dry periods in the sub-basin demonstrates, they have indeed always done so to some degree. In any case, the scenario, overall, appears to be, at first, close to one of “take it or leave it.”

On the other hand, key decision-makers in Baghlan such as the WMD director or the governor sometimes have a personal interest in ensuring that water reaches Kunduz in quantities sufficiently important to be seen as a supportive action. The Kunduz and Baghlan authorities may thus have parallel interests which then could orient discussion toward “optimum cooperation.”

However, the WMD and the governor in Baghlan cannot ignore that their interests may run counter to those of their water users, without whom no agreement with Kunduz can be reached—and even more importantly, effectively implemented. Their strategy has therefore been one of striking a balance between “fighting” (albeit not in the sense of physical violence)—as illustrated in the case of the Pul-i-Khumri canals—or “accommodating”—as in the case of the Baghlan District canals.

### ***How *abandâz* frames power relations in decision-making between upstream and downstream provinces***

#### **Different allocation principles at different scales**

The case of the LKSB shows how water allocation principles vary with the scale of the issue at stake. In this context, an implicit distinction appears to exist between intra and inter-provincial agreements. Within Kunduz Province, water allocation principles—although were very poorly implemented and enforced—were about equitable allocation on the basis of land area. No mention or references to *abandâz* were made during the discussions among the WAC members and other actors involved. When the water shortage situation was considered too critical to be addressed within Kunduz itself, a second level of discussions based on different water allocation principles followed. In the case of inter-provincial water sharing, the traditional principle of *abandâz* was applied, although it was contested.

#### **Different views on water rights between provinces**

Understanding how power relations, participation and decision-making are articulated requires looking at how the traditional water allocation system of *abandâz* shapes decision-making between upstream and downstream provinces. The informal *abandâz* system does not offer any secured right to downstream claimants beyond a minimum level of moral obligation (see Box 3). Subsequently, those claimants do not have much bargaining power and thus rely to a large extent on the good will of water users upstream in Kunduz, coupled with the opportunistic support of its provincial authorities. In this context, it is understandable that the involvement of Kunduz farmers was limited to making a request for assistance to their upstream counterparts through their governors and line ministry authorities.

Although the participatory nature of the process to find agreements is thus far from the ideal “level playing field” expected in ideal MSPs, this is largely due to the polarised and asymmetric nature of the upstream versus downstream problem, together with the long-established—though recently contested—water allocation custom of *abandâz*. In fact, the *abandâz* system fuels asymmetric power relations and inhibits participation on an equal level.

The policy response to this situation as suggested in the Water Law and subsequent regulations is to change the organisational structure of institutions and reshape decision-making process, with the hope that a better share of the water will reach downstream water users who are the most affected during dry years.<sup>199</sup> However, this approach does not really tackle the main cause of the water allocation, which is rooted in the current water rights system. Subsequently, the question becomes: “How much room is there (if ever) to challenge this system?” Table 11 summarises the claims that are made by different stakeholders as well as the discourses that are used as references.

<sup>199</sup> It is of course expected that certain users from the downstream province (for instance in the upstream parts of the most upstream canals) will do better than some users in the most upstream province (especially those in the downstream areas of large canals such as Ajmir). The point here is that on average, downstream water users are more likely to be affected by dry periods than upstream ones.

**Table 11: Water allocation principles used as reference by different actors and groups across the LKSB**

<i>Actors/Water allocation principles</i>	<i>Position</i>
<i>Abandâz</i>	With <i>abandâz</i> , upstream water users release water for downstream water users under certain conditions. Decisions on duration and occurrence belong mainly to upstream water users as <i>abandâz</i> does not guarantee any rights to downstream users. However it is considered morally unacceptable to refuse a minimum <i>abandâz</i> (i.e. a few days). Historically, upstream water users have never refused <i>abandâz</i> although their help has sometimes been very limited. This system has prevailed until 2011 and the introduction of the presidential decree.
Kunduz stakeholders	Kunduz stakeholders consider that it would be fair to introduce a system of water rights which would ensure a share of the river flow for each province in proportion to the amount of irrigable land.
Baghlan stakeholders	Baghlan stakeholders all continue to refer to <i>abandâz</i> , the prevailing traditional system.
Local religious leader (Baghlan)	The Mufti of the Qelagay Dar-ul-Hifaz referred to the Fatawa-i-Hindia, Book 5 to explain that “if water cannot reach the downstream area in conditions of normal irrigation in upstream areas, then there is no obligation to provide water to those areas. If channelling water to a downstream point means damaging crops upstream it’s not acceptable under Sharia.”* Friday speeches in the mosques therefore focus more on the value of generosity under Islam to justify support to downstream areas.
Islamic jurisprudence	Sunni jurisprudence: “For small rivers where the water must be stored to raise it to the required level (Ali ibn Muhammad 1903-8, 313 and 322) two general principles govern irrigation rights. When water is scarce, upriver pieces of land are irrigated first, but the quantity of water retained should not reach above the ankles; otherwise one can irrigate as much as one likes.”**
	Shia jurisprudence: “In the case of natural water courses, upstream landowners are entitled to first use of water. [...] The upstream proprietor is not obliged to let the water reach the plots downstream until he has finished irrigating his own crops in the described manner, even if the crops of downstream owners suffer as a result.”***
Afghanistan Water Law:	The determination of water allocation and the management of water rights in the river basin is the responsibility of the RBC (see Article 14 of the Water Law). The RBA (line ministry) plays an advisory role to the RBC on water allocation. Existing water rights should be gradually converted to permits (see article 20 of the Water Law).

\* Interview # 55.

\*\* Khalil ibn Ishak in Caponera, “Ownership and Transfer of Water and Land in Islam.”

\*\*\* Caponera, “Ownership and Transfer of Water and Land in Islam.”

All canal representatives in Kunduz—from *mirabs* and WUA leaders to those formally part of the WAC—indicated their wish to introduce a new system of water allocation establishing permanent rights for Kunduz in proportion to the amount of land irrigated in both provinces.<sup>200</sup> In other words, they would like to have a guaranteed fixed percentage of the river flow, irrespective of the hydrological situation. This system of permanent *haqabah* would clearly be more secure than the current *abandâz* system, and is in fact close to what has been imposed on Taloqan water users through presidential decree along the TSB (see TSB case study in Section 6).

The Water Law of 2009 explains in article 20-1 that “existing water rights will be gradually converted to permits in accordance with the policies of the relevant River Basin Agency.” However, as discussed earlier and confirmed by a key Afghan MEW advisor closely involved in the writing

200 Interviews # 1; 2; 3; 6; 7; 19; 20; 22; 23; 24; 27; 28.

of the Water Law, the conversion of the *abandâz* system into permits and licenses is unfeasible<sup>201</sup> because *abandâz* is not a right that downstream water users along the LKSB can actually claim. A permit and license system would therefore first require a change from *abandâz* to *haqabah*.

From the point of view of Kunduz stakeholders and the Water Law, the *abandâz* system would therefore need to be abolished, or at least significantly transformed. The experience of 2008 reveals that this may be a complicated and perilous task. When the Kunduz WMD and an accompanying delegation of commanders demanded permanent rights under *haqabah* in 2008, the Baghlan WMD director and water users took offense and used it as a justification to limit their efforts in releasing water. Indeed, Baghlan stakeholders from water users to elected representatives and government officials have always unanimously rejected the idea of granting formal water rights to Kunduz, including *haqabah*.<sup>202</sup> As one *mirab* put it as he reflected on *haqabah*: “It is not really common sense to kill yourself to give life to another person.”<sup>203</sup> Both the Baghlan district governor and the WMD director used the same expression to describe the issue: “choosing *haqabah* would be like putting your foot on the neck of Baghlan farmers to prevent them from swallowing their meal.”<sup>204</sup> In several interviews with water user representatives from Baghlan, people who might accept the idea of *haqabah* were denounced as “traitors.” Another WMD staff member saw *haqabah* as a recipe for conflict:

*Every time there will be a conflict between the government and the farmers to release specific haqabah, which will be another headache for everyone. Even if you bring a decree from Obama, the Baghlan people will not apply it.*<sup>205</sup>

Both Shia and Sunni jurisprudence explicitly confer priority to upstream areas in case of water shortage in rivers and natural water courses (see Table 11). Although such religious standpoints are not usually discussed openly during informal meetings on water allocation, they were sometimes referenced during interviews in Baghlan,<sup>206</sup> most notably by the WMD director. On the other hand, Friday sermons in mosques during 2011 sometimes included explicit emphasis on the value of generosity in reference to water sharing between Baghlan and Kunduz. One interviewee described how this had taken place in Doshi District of Baghlan Province:<sup>207</sup>

*Maulawi Abdul Bari [Chairman of the local Ulema Shura] has convinced the people [to release water to Kunduz] by explaining the value of sharing according to Islam. His role was very important because people respect him.*<sup>208</sup>

Nevertheless, the Mufti involved in the talks in Doshi District did not question the principles of *abandâz* and even indirectly justified it through religious references (see Table 11).

Overall, even though the *abandâz* system is not consensual at sub-basin level and ideas are voiced and referred to across different legal orders (see Figure 2 and the discussion on legal pluralism in Section 1), it remains clear that any change from the current *abandâz* system is likely to meet with strong resistance in Baghlan if no compensation is proposed. A policy intervention that proposes only a change in MSP composition and decision-making procedures may therefore be insufficient to address the key and contested issue of water rights.

### **Reasons for the strong support to Kunduz from the Baghlan WMD and governor in 2011 compared to 2008**

It could be argued that a seven days *abandâz* for the whole irrigation season is not particularly significant. However, this has to be understood within its historical context, especially the 2008

201 Interview # 79.

202 For instance, interviews # 48; 49; 50; 51; 52; 56; 57; 58; 59; 60; 61; 64; 65; 68; 70.

203 Interview # 62.

204 Interviews # 61; 62.

205 Interview # 70.

206 For instance, interviews # 48; 50; 52; 62; 64.

207 Interviews # 55; 58; 59.

208 Interview # 58.

dry year. This section reflects on some of the underlying reasons for this year's improvement in the *abandâz* negotiations between Baghlan and Kunduz.

There is little doubt among the Kunduz WAC that the water they were able to secure was, although not entirely satisfactory, obtained almost entirely thanks to the supportive role of the Baghlan WMD director and provincial governor. If negotiations had been conducted among water users alone, they felt that Kunduz would have been unlikely to secure as many days' *abandâz* as it did.<sup>209</sup> This belief is underscored by the efforts of some Baghlan *mirabs* and water users to disrupt the *abandâz* as it eventually occurred,<sup>210</sup> efforts that were contained largely by the intervention of the Governor and the WMD.

The supportive role of the Baghlan WMD in 2011 came as a surprise to many observers, representing a distinct contrast with the low levels of support offered by the same body under the same director to Kunduz in 2008.<sup>211</sup> As the team leader of the PARBP commented, "Engineer Naem has changed 100 percent this year."<sup>212</sup> The question is therefore, what triggered that change? Based on interviews with key informants, influential elders and WMD staff, four main factors have to be considered to explain the change in WMD director's attitude.

Firstly, recruitment for the future LKSB agency during the summer of 2011 came as a strong incentive for the Baghlan WMD director to show his consideration for all areas of the sub-basin—especially the most downstream parts in Kunduz—as per the terms of reference of his possible future position. This opinion was put forward by several water users and government staff informants.<sup>213</sup>

Secondly, the strongly negative impact of the 2008 dry year in Kunduz—partly as a consequence of the lack of support offered by Baghlan to Kunduz—had led to a set of complains from the MEW. For instance, a high ranking member of the MEW came from Kabul to Baghlan during the 2008 irrigation season to personally convey his dissatisfaction.<sup>214</sup> In 2009, a letter from the vice-president Ahmad Zia Massoud urging the resolution of water allocation issues between the two provinces provided an additional incentive for the Baghlan WMD to demonstrate improved results.<sup>215</sup>

Thirdly, the change in relations between the two WMD directors following the replacement of the previous Kunduz director has helped improve cooperation between the provinces. Several respondents noted the very tense relations that existed between both directors in 2008, as demonstrated by the arrival in Baghlan at the start of that year's water shortage of the Kunduz WMD director backed by a delegation of commanders. In the event, his threatening accusations of "Kunduz water rights being abused by Baghlan" only served to upset the Baghlan WMD director and water users representatives.<sup>216</sup> The Baghlan WMD director remembers:

*I argued with Khalil [the Kunduz WMD director in 2008] because every time he was criticising Baghlan and Takhar for not giving enough water instead of finding a proper way to talk. We have a proverb that says, "the sorrow and sadness comes from Merciful Allah, but we blame our neighbours."<sup>217</sup>*

The WMD in Baghlan District confirmed, along with other water user representatives that:

*In 2008 the Kunduz people came for asking *abandâz* by showing their muscles instead of making a proper request. Khalil started fighting and complained to Sultan Mahmood [the Director*

209 Interviews # 1; 3; 4; 6; 7; 19; 20; 22; 23; 27; 28.

210 Interviews # 48; 50; 53; 59; 68; 70.

211 Author's personal observation, confirmed, for instance, in interviews # 48; 52; 53; 60; 8; 4; 11; 12; 13; 50; 63; 64; 65; 66; 67; 69; 70; 72.

212 Interview # 82.

213 Interviews # 82; 8; 64; 65; 66; 68.

214 Interviews # 67; 69; 70.

215 A copy of the letter was provided by the Baghlan WMD during interview #62.

216 Interview # 66.

217 Interview # 62.

*General of Water Affairs Management at the MEW in Kabul]. At that time Amir Gul [the Baghlan district governor] was in Dubai, otherwise he wouldn't have given them water for even an hour with such behaviour.*<sup>218</sup>

Several respondents,<sup>219</sup> mainly from Baghlan, pointed to these events as an important factor in explaining the failure of *abandâz* implementation during the 2008 dry year.<sup>220</sup>

Finally, there is the fact that the governors of both provinces were changed between 2008 and 2011.<sup>221</sup> Although the consequent shift in interpersonal relations was not as dramatic as the thaw that took place between the two WMDs, there was still some noticeable positive change. According to one key informant, “Everybody knows that during the dry year of 2008 the provincial governor of Baghlan belonged to Hizb-i-Islami while the governor of Kunduz was with Jamiat. Both parties had strong rivalries which hampered their relationship.”<sup>222</sup> In 2011, by contrast, both governors belonged to the more dominant Hizb-i-Islami. Moreover, the governor’s representative in Kunduz (also a formal member of the Kunduz WAC) is also close to the Baghlan WMD director, who noted that “this year the WMD of Kunduz had a good relationship with us. It was the same with the provincial governor of Kunduz and his representative, Mr. Makhdoom, who is my close friend.”<sup>223</sup> For many informants including the Baghlan WMD director, this was also considered as an important point in facilitating increased support from Baghlan to Kunduz.<sup>224</sup>

Overall, a changing political context, lessons learnt from 2008, indirect pressure from the MEW and the president’s office as well as other timely opportunities are critical factors in explaining the relative success of the 2011 *abandâz*. It is also important to note that these factors are unstable, unpredictable and hard to control—including through policy intervention.

### 5.3 Outcomes and results in the LKSB

Following the paper’s conceptual framework, this section analyses whether the Kunduz WAC was able to:

- Generate results in terms of improved water access for downstream water users;
- Collectively engage in issues and fact-finding; and
- Mobilise support from other institutions.

#### *Criteria for evaluating the generation of results and support*

##### Improved water distribution

The results are first assessed in terms of improved water access for Kunduz in comparison of the previous dry year of 2008, when the social mobilisation around water allocation was reportedly unsuccessful.<sup>225</sup> This is then followed by an exploration of how far water allocation agreements have played a role in the changing performance. As a proxy for absent data on actual water distribution, NDVI analysis will be used. It is impossible to directly assess the impact of social processes on water access and agricultural production as they cannot be isolated from other contributing factors—whether hydrological, political, social, or economic—many of which may also have undergone changes between 2008 and 2011. Nevertheless, the comparison of irrigated areas and cropping patterns through NDVI remains a useful basis for suggesting hypotheses on

218 Interview # 70.

219 For instance, interviews # 62; 63; 65; 66; 68; 70.

220 A number of accounts from key informants at MEW point to underlying personal rivalries which acted as a catalyst in the incident of 2008.

221 Engineer Omar was killed on 8 October 2010 by a suicide attacker.

222 Interview, key informant in Baghlan (21 November 2011).

223 Interview # 62.

224 Interviews # 62; 63; 65; 66; 68; 70.

225 Personal observation from a post-irrigation season workshop held in Kunduz in September, 2008.

how changes in decisions over water allocation have—together with other factors—played a role in generating improvements for downstream areas.

### Conflict limitation

A second criterion in assessing the outcome of the efforts of the Kunduz WAC in its interactions with Baghlan over water allocation is the occurrence or reduction in conflict, especially in comparison to 2008. In light of the tension between both provinces and the resulting intervention from the central MEW in Kabul after the 2008 dry year, there was apprehension that a further water shortage would once again generate conflicts. The capacity of the MSP to contain these conflicts has thus been considered as part of the results it should generate in order to be seen as effective and legitimate.

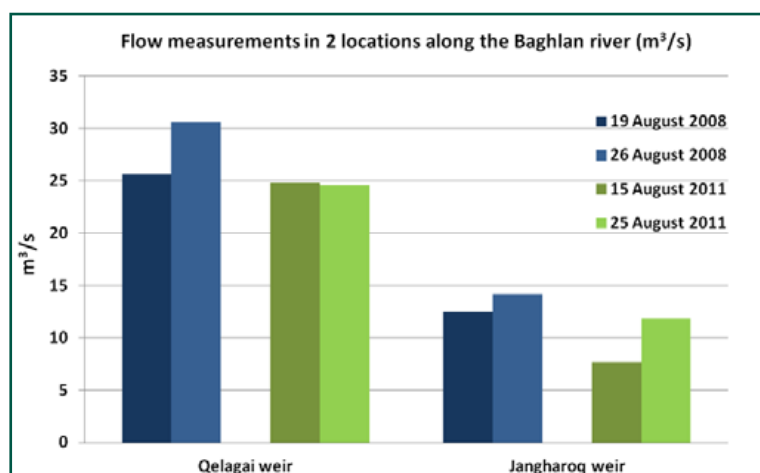
### Capacity in mobilising and generating support

As mentioned in the conceptual framework, it is assumed that the better access to material, financial, institutional and other support an MSP has, the more likely it is to provide better and more sustainable results.

### Results: Improved water distribution

In terms of balanced water access between upstream (Baghlan) and downstream (Kunduz) provinces, the improvement from 2008 to 2011 is significant. While 68 percent of Kunduz was dry (or with very low water access) in 2008, this figure dropped to 45 percent in 2011 (see Map 8). In contrast to this, it was unanimously agreed that the water levels in the Baghlan River were lower in 2011 than in 2008.<sup>226</sup> Although flow measurements from these periods are not numerous enough to allow a statistical comparison throughout the irrigation season, two measurements

**Figure 15: Comparison of the river flow in August 2008 (blue) and August 2011 (green) at two upstream locations on the Baghlan river**



Source: PARBP flow measurements from 6 September 2011

taken in August tend to confirm that the flow in 2011 was at the very least unlikely to have been higher than in 2008<sup>227</sup> (see Figure 15).

The improvements in irrigated area are thus not due to better surface water availability in 2011 as compared to 2008. Interviews with Kunduz stakeholders clearly indicate the perception that the *abandâz* in July made a difference.<sup>228</sup> However, although the description of the decision-making and implementation process would indicate that this is true, it is only part of the reason behind the positive change.

For instance, canals in Qala-i-Zal District (the furthest downstream district in Kunduz) did not benefit from the *abandâz* with Baghlan since their share of water was diverted by Ali Abad and Chahar Dara districts. Instead, the better results for Qala-i-Zal canals (around 58 percent dry for the most downstream area in 2011 instead of around 74 percent in 2008) are almost entirely

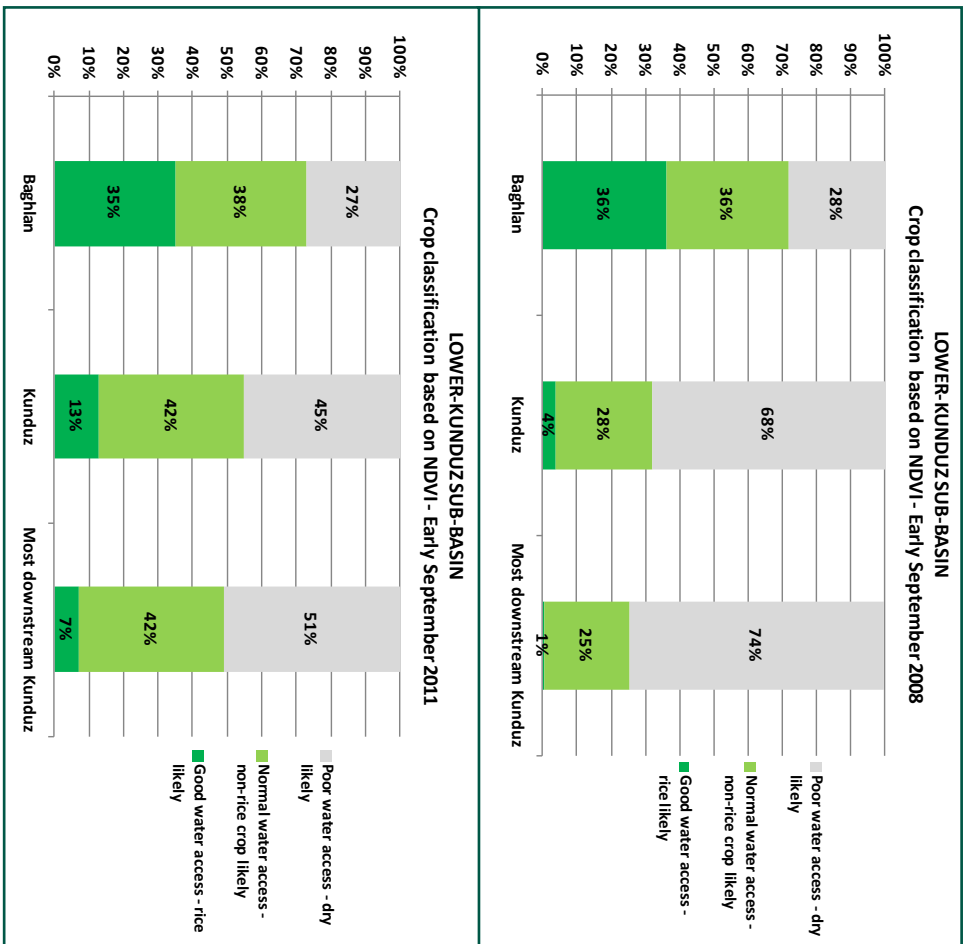
226 Interviews # 48; 51; 52; 53; 54; 58; 59; 60; 63; 64; 65; 66; 68; 71; 72.

227 In the case of the TSB, the accuracy and reliability of flow measurements have been criticised, especially concerning the “area-velocity” method in a turbulent and braided river profile. In the case of the Qelagai and Jangharoq weir the accuracy is expected to be better as the measurement is done through a broad-crested weir.

228 Interviews # 1; 3; 6; 7; 19; 20; 22; 23; 27; 28.

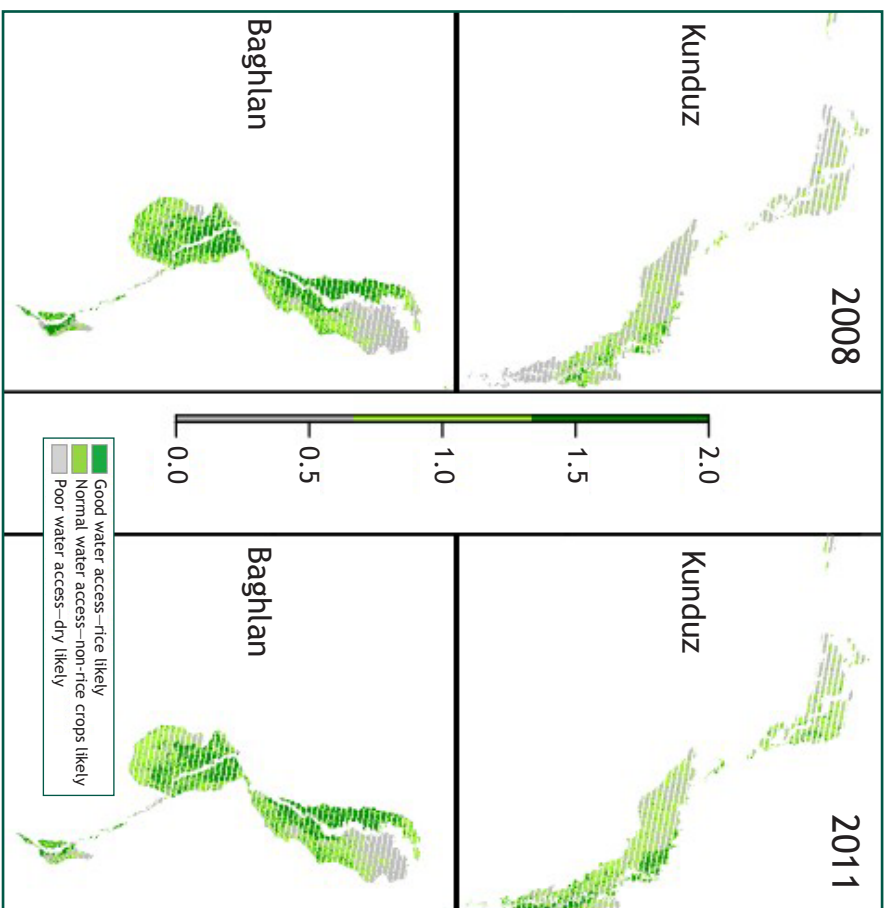


**Figure 16: Comparison of estimated cropping patterns along the LKSB during the dry years of 2008 and 2011**

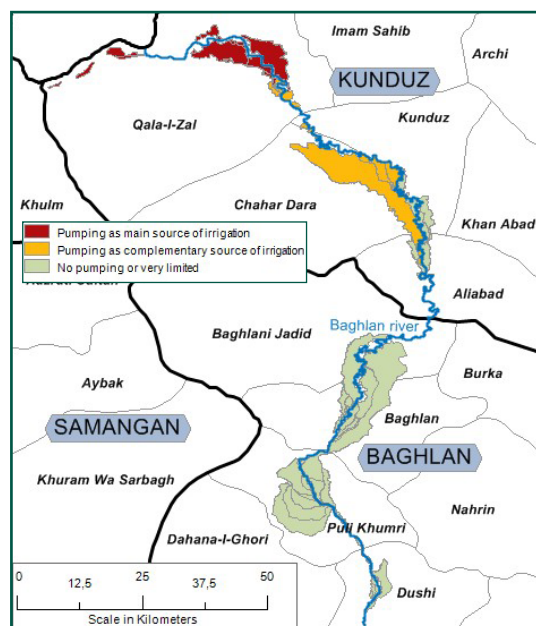


Note: The results of this NDVI analysis present some differences with the results of the NDVI analysis for the year 2008 as found in Thomas and Sabawon, "Sharing Irrigation Water Equitably." There are few reasons for this. First, the zones selected for analysis were slightly different in both cases. For instance, the zone "Downstream Lower-Kunduz sub-basin" used by Thomas and Sabawon is not the same as the zone "Most downstream Kunduz" in this research. Second, the satellite imagery used for the analysis was not the same. The image from Thomas and Sabawon dated from early August 2008 which was earlier in the irrigation season and gave a more positive outlook in terms of "cultivated" versus "dry" areas. This is because at this time, some crops had not yet failed. The NDVI analysis in this research was conducted in early September (closer to the end of the irrigation season but before the harvest), which should provide more accurate results. However, the differences do not alter the conclusion of the findings.

**Map 8: NDVI Map covering the LKSB command areas, September 2008 and September 2011**



**Map 9: Pumping activities during the 2011 irrigation season along the LKSB irrigated areas**



Note: In 2008, pumping as a coping mechanism against very low surface water access was almost nonexistent

from these most affected areas also explained that the resurgence flows in the Kunduz River bed in the downstream parts of the province were better in 2011 than in 2008.<sup>232</sup> This also helped in forming pools in the river for setting pumps. Furthermore, due to two consecutive years of good rain and snowfall, the groundwater table was high in the lowlands of Qala-i-Zal—only four to five metres below surface—which facilitated water extraction through small pumps.<sup>233</sup>

The other lesson from the NDVI analysis is that even though more water may have reached Kunduz Province in 2011 owing to a more effective *abandâz*, this was not necessarily matched by a significant reduction in surface water use in Baghlan—at least, not one large enough to cause a change in cropping patterns or the loss of crops. Although few interviews reveal that some farmers from Pul-i-Khumri lost some crops, NDVI analysis indicates that there was neither a reduction in rice cultivation nor an increase in the dry area in Baghlan Province between a dry year (2008 or 2011) and a wet year (2009; see Figure 21 in the Annex 2). In addition no complementary pumping practices were recorded in Baghlan, meaning that irrigation was exclusively conducted using surface water.<sup>234</sup> Even in a year like 2011 when *abandâz* was relatively effective, it thus still remained within a limit that allowed Baghlan cropping patterns to remain constant.

## Results: Conflict limitation

### Inter-Province: Baghlan and Kunduz

Almost all respondents in Baghlan explained that in 2011, the Kunduz WAC was very well organised,<sup>235</sup> containing a selection of “good people who know how to talk in front of a governor.”<sup>236</sup>

229 Interviews # 3; 19; 26; 27; 28.

230 Estimation based on NDVI analysis.

231 Chahar Dara *mirabbâshi* estimation.

232 Interviews # 3; 19; 26; 27; 28.

233 Interviews # 3; 19; 26; 27; 28.

234 The *mirab* of Jui Naw explained however that pumping might occur in future if the same seven days’ *abandâz* is imposed on them again. He argues that, for 2011, downstream farmers were hoping that the *abandâz* would not last so long in practice and thus did not prepare themselves with acquiring pumping equipment.

235 Interviews # 51; 54; 60; 61; 62; 63; 64; 65; 66; 67; 68; 69; 70; 71.

236 Interviews # 62; 65; 66; 67; 71.

Another key element cited among Baghlan water users was that the Kunduz WAC did not come with threatening demands about *haqabah*—as they had done in 2008—when they explained their water shortage problems. The better preparation and communication of the Kunduz WAC in 2011 thus played a positive role in avoiding unnecessary tension and ultimately securing support from the Baghlan WMD, provincial and district governors and water users. Furthermore, the formal agreement that was signed resulted in a well-organised and legitimate monitoring process of the *abandâz* during which no serious incidents were reported.<sup>237</sup>

### Baghlan Province

In comparison to the reduction of inter-provincial tensions, the *abandâz* generated hostility and resentment within Baghlan, especially between Pul-i-Khumri water users and the local authorities. The seven days' *abandâz* were perceived as an imposition, lacking serious room for discussions about local concerns. Pul-i-Khumri water users deplored in particular the fact that local authorities exploited a power vacuum in the area to enforce their demands. This power vacuum was itself due to an increasingly unstable security situation in the run-up to the 2011 irrigation season. Although Pul-i-Khumri users expressed no resentment against Baghlan District water users for having only a two to three days *abandâz* by comparison, this imbalance<sup>238</sup> increased the bitterness they felt toward the WMD and the provincial governor. In the end, although open conflict may have been avoided between provinces, the situation in Pul-i-Khumri raises concerns about the future viability of such an *abandâz* given its low level of social acceptability among water users.

### Kunduz Province

The insecure situation in Chahar Dara District—where even the police are reluctant to venture—was not initially caused by water sharing issues. However, it did provide a cover for Chahar Dara water users to default from their water sharing agreement with downstream districts. Indeed, despite the formation of the WAC in Kunduz and formal agreements on water sharing between the three Kunduz districts involving both canal representatives and the authorities, the implementation of water turns between canals within Kunduz has been a source of conflict. *Mirabs* in Chahar Dara who had signed these agreements explained that they did not have the authority to stop powerful defaulters from using water. However, while the WAC could not solve that problem as a group, members from Qala-i-Zal did take an active part in curbing a possible military escalation between their *arbakai* (local militia) and Taliban-influenced Chahar Dara. Still, despite a non-violent outcome in this particular case, the social capital of the Kunduz WAC was so depleted that there was little question of it being able to ask Baghlan for a second *abandâz*.<sup>239</sup>

### Reflection

Overall, the capacity of the different stakeholders involved in water allocation issues to limit conflicts appears mixed. On the one hand, the anticipated inter-provincial tensions were successfully diffused in 2011. Intra-Provincial tensions, on the other hand, have persisted in both provinces. It is ultimately hard to answer with confidence whether the situation would have been better or worse under a different set-up. The consensus among Kunduz WAC members and other canal representatives (except Chahar Dara) was that the issues and conflicts in Chahar

<sup>237</sup> One noticeable incident occurred however in Baladuri. On the second day of *abandâz* in this canal, an incident among local water users erupted and led to a serious injury. However it did not directly involve the Kunduz water users who had come to monitor the intake.

<sup>238</sup> Post-irrigation season, the WMD tried to justify the two to three days *abandâz* by their downstream position. This point has been seriously contested by Pul-i-Khumri water users for the following reasons: First, when a canal is closed it does not matter if it is upstream or downstream. Second, arguments concerning the size of the command area combined with the conveyance capacity are much more important. Indeed, once the *abandâz* is over it may take additional days to provide water to all parts of the command area. In this regard, canals like Gawhargan and Darqad are in no better position than many canals in Baghlan District (like Qomaroq, Jangharoq, Akhtashi, or Sirkary). Third, the type of soil (waterlogged, clay or sandy) is also important when estimating the length of time an area goes without receiving water. Again, many canals in Baghlan District are in a better situation than Pul-i-Khumri canals in this regard. It is the opinion of the author, based on five years' field experience in the area, that the above listed arguments are very accurate.

<sup>239</sup> Interview # 4.

Dara would not have been avoided even if the decision-making process and composition and activities of the WAC had been any different.<sup>240</sup> Instead, the vast majority of respondents felt that things would certainly have been worse had the WAC not been formed.<sup>241</sup> Overall, they believed that only better government control over security would result in better respect of agreements. In Baghlan, by comparison, while “agreements” that were largely government-imposed led to resentments, these were for the most part kept under control.

The overarching issue is therefore one of trade-off. The increased resentment in Baghlan was perhaps the price to pay for avoiding a serious crisis in Kunduz. There is certainly no guarantee that a different process would have resulted in a better balance between “results” (in terms of improved water access in Kunduz) and “conflicts.”

### **Mobilising and generating support**

#### **Financial support from PARBP-TA**

The stakeholders in the WAC who were involved in formal meetings for decision-making and monitoring activities were financially compensated by PARBP-TA, as was also the case in the TSB. This included taxi costs, phone cards, and per diems or daily subsistence allowances.<sup>242</sup> PARBP-TA spent more than US\$9,000 a month to subsidise the activities of the Kunduz WAC and the other stakeholders involved.<sup>243</sup> This is not in any way a sustainable source of funding. Landell-Mills—the consultancy firm running the PARBP-TA—has an interest in maintaining good relations with communities and government officials. They may therefore continue to subsidise the RBCs/RBAs for some time, but only as long as their mandate in the PARBP extends.

Financial sources for the future functioning of any future RBCs have not been studied or discussed so far. Baghlan has limited interest in contributing financially to an RBC under the current polarised set-up. Indeed, it has little to gain in the process since its dependency on Kunduz in other aspects of water management is extremely limited. It is also doubtful that Kunduz farmers are ready to contribute financially to an institution whose services are not guaranteed. For the canals in Qala-i-Zal District, for example, the WAC’s efforts did not pay off. None of the representatives interviewed in Kunduz believed that farmers would be willing to pay for the services received in 2011 even if they felt that results were better than in 2008.<sup>244</sup>

#### **Information support from PARBP-TA**

For the past few years, the PARBP-TA has organised drought and flood forecast workshops in April/May to estimate the likelihood and anticipated intensity of floods and dry years in the upcoming irrigation season (May to September). The forecast preparedness system is based on snow cover and snow-water equivalent estimates.<sup>245</sup> Based on warnings in May 2011, MEW and MAIL advised water users to limit paddy cultivation. However, according to PARBP informants including the facilitator for the LKSB, this warning did not lead to a significant change in cropping patterns prior to the dry year. NDVI analysis also indicates little decrease in paddy cultivation as compared to a dry year in upstream parts of Baghlan where reduction in water demand could have helped decrease pressure on the system. The early warnings also did not result in the early formation of a joint WAC to discuss possible water allocation scenarios in advance. For example, the Kunduz WAC was formed much later, and planning organised at the last minute when farmers started to complain to the WMD and the governor of Kunduz. Although drought forecasting is a potentially valuable tool in warning stakeholders months

240 Interviews # 1; 3; 6; 7; 9; 17; 19; 20; 22; 23; 24; 27; 28.

241 Interviews # 1; 3; 6; 7; 19; 20; 22; 23; 27; 28; 48; 51; 52; 53; 54; 58; 59; 60; 63; 64; 65; 66; 68; 71; 72.

242 Yet there have been numerous complaints from Baghlan (similarly to Takhar and Kunduz) government authorities and water users’ representatives that many months after the end of the irrigation season, they had still not received their due.

243 Interviews # 21; 12; 13.

244 Interviews # 1; 3; 6; 7; 19; 20; 22; 23; 27; 28.

245 J.Beekma and J. Fiddes, “Floods and Droughts: The Afghan Water Paradox,” in *Afghanistan Human Development Report 2011—The Forgotten Front: Water Security and the Crisis in Sanitation* (Kabul: Center for Policy and Human Development, 2011).

before water shortages arise, it therefore remains to be seen how it leads to better technical and managerial measures on the ground to deal with water allocation issues as they subsequently arise.

### **Institutional support: weak links with the PC and IDLG in Baghlan**

Although there was no formally-defined WAC in Baghlan, the decision making process on *abandâz* gives some insights into the possible role that different organisations could play in supporting RBAs and RBCs. These include the Independent Directorate for Local Governance (IDLG), the PC, and the Afghanistan National Disaster Management Authority (ANDMA); see definitions in Box 5.

#### ***The Provincial Council***

During the decision-making process about the duration of *abandâz*, some water users from the Pul-i-Khumri canals tried to get support from PC members in resolving their differences with the WMD director. In this specific case, the PC member managed to secure an appointment with the provincial governor and WMD director, but was unable to change their decisions. However, the same PC member was able to play a more successful mediating role later in the year. During August, water users from Gawhargan and Darqad—two canals sharing their intake with the main hydropower station in Pul-i-Khumri—complained to this PC member that too much water was being saved for electricity generation while demand for irrigation went unmet. The PC member organised a mediation with the WMD department (also in charge of hydropower), and a schedule was jointly designed to balance both interests. He also successfully managed to secure funding from local NGOs for emergency repairs to one Pul-i-Khumri canal. Although the PC does not function effectively as a united body in Baghlan,<sup>246</sup> its individual members may in certain instances have sufficient power to influence a decision or at least initiate a decision-making process. Importantly, their status as elected representatives also ensures—at least in theory—some level of accountability to water users.

#### ***The Independent Directorate for Local Governance***

Given its responsibilities described in Box 5, the IDLG has, on paper, some legitimacy as an observer and independent advisor, especially during decision-making processes. During 2011, however, the IDLG was not involved in or even invited as observer to any meeting on water allocation. An IDLG member who was also from the command area of the Ajmir canal and was therefore well informed about the *abandâz* expressed the following concerns:

*What I have seen and heard regarding this abandâz is not good governance. Basically, on the first the governor promised water to Kunduz and the WMD director even promised at least seven days' abandâz without preliminary consultation with users. After that, the governor gave responsibility to the WMD who was then leading the discussions and decisions. At least there should have been consultations with water users before making promises to Kunduz because then it is difficult to backtrack on what has been promised.<sup>247</sup>*

The argument the Baghlan WMD director gave for not involving the IDLG was the same one he used to justify the exclusion of the provincial Department of Agriculture, Irrigation and Livestock. In his opinion, these actors lacked technical understanding of the issues at stake or were unfamiliar with the actors involved and how similar issues had been dealt with in the past.<sup>248</sup>

#### ***Afghanistan National Disaster Management Authority***

The ANDMA was only involved through its provision of food relief in areas suffering from more acute water shortages. At no point during the irrigation season was there any contact between the Kunduz WAC or other stakeholders and the ANDMA.

#### ***Afghan National Police***

Although the Kunduz WAC formally included a representative from the NDS, he rarely attended its meetings and discussions.<sup>249</sup> On several occasions, Kunduz WAC members petitioned the governor

246 Interview # 57.

247 Interview # 56.

248 Interview # 62.

249 Interview # 4.

**Box 5: Definition and main responsibilities of bodies positioned to provide institutional support to RBAs/RBCs**

***The Provincial Council***

PC members are elected to represent a single provincial constituency. Elections happen every four years, most recently 2009. The 2007 Provincial Council Law is vague on the Councils' responsibilities, and significant confusion remains about their exact role—while a mandate exists, it is ambiguous and does not allocate them decision-making authority. A new version of the law drafted in 2010 was aimed at clarifying some of these issues, but it has yet to be ratified.

As they stand, PCs' duties include monitoring of government department activities, giving advice to heads of department at provincial level, and reporting on government activities to people in the province and their representatives in the *Meshrano Jirga* (upper house). They are also expected to participate in the development of the provinces, help improve administrative affairs, and advise provincial administrations on issues such as development planning. Their role in a given province is often dependent on the relationship between the Council and the provincial governor.

***The Independent Directorate for Local Governance (IDLG)***

The Independent Directorate of Local Governance (IDLG) was established by presidential decree on 30 August 2007 with a mandate to improve governance and achieve stability at the subnational level. In May 2008, the IDLG was tasked with leading the process of creating a subnational governance policy for Afghanistan, which involves 23 ministries and government agencies.

The IDLG's mission is "to consolidate peace and stability, achieve development and equitable economic growth and to achieve improvements in service delivery through just, democratic processes and institutions of good governance at subnational level thus improving the quality of life of Afghan citizens."

***Afghanistan National Disaster Management Authority (ANDMA)***

The role of ANDMA is to both prevent potential losses from hazards and assure prompt and appropriate assistance to victims. In theory, the ANDMA works in coordination with line ministries and regional offices. Pre-disaster activities include reviewing and ensuring preparedness of line ministries as well as warning dissemination and coordination. During disasters, ANDMA activities include mobilisation of "assessment" and "quick response" teams. Post-disaster activities include the evaluation and implementation of compensation and rehabilitation schemes. ANDMA was aiming to have an effective system of disaster preparedness by the end of 2011.

Source: Partly adapted from "The A to Z Guide to Afghanistan Assistance - 2011 Ninth Edition" (Kabul: AREU, 2011). For ANDMA, see more details at [www.unescap.org/idd/events/2010\\_Reg-ICT-DRR/AFGANI-1.pdf](http://www.unescap.org/idd/events/2010_Reg-ICT-DRR/AFGANI-1.pdf) (accessed 16 April 2012).

to mobilise to the police in supporting the enforcement of agreements, most notably in Chahar Dara. However in most cases these requests were met with inaction, highlighting the problems inherent in dealing with defaulters in volatile areas.

***Capacity to collectively engage in issues and fact-finding***

As indicated in the conceptual framework, it is assumed that the legitimacy of water allocation plans depends on the capacity of stakeholders to jointly generate, access, exchange and analyse information before deciding on a course of action. This section evaluates whether and how this happened in 2011 among the sub-basin stakeholders.

In reference to Figure 4, it is arguable that in the LKSB, “consensus on values” is low. This is illustrated by multiple and opposite claims for a “fair” water allocation at sub-basin level (see Table 11, for instance). “Certainty on data/knowledge” is also low, partly due to the absence of flow measurements data and other information defining the sub-basin profile. According to Hisschemöller’s framework, this suggests the need for “policy as learning/joint fact finding.”

The implementation and monitoring of the *abandâz* in the LKSB did not require the collection and analysis of data such as flow measurements, making it relatively simple to monitor. As discussed earlier, power relations were probably the most important factor in shaping the eventual duration of the *abandâz*. Nevertheless, certain criteria have sometimes been used during formal meetings or during interviews to either justify decisions on *abandâz* duration, or contest them later on. These include:

- The location of the canals along the river (i.e. upstream versus downstream) within Baghlan Province;
- The soil type in the canal command area (i.e. waterlogged or not);
- The crops grown in the canal command area (water intensive-paddy and vegetables versus less intensive mung-bean);
- The conveyance capacity of the canal; and
- The existence, duration and timing of water turns within canals and the subsequent time it would take water to reach downstream areas after the conclusion of *abandâz*.

However these criteria were never investigated thoroughly through a comprehensive, participatory and inclusive fact-finding process. Nevertheless, it is important to note that even if it had been deemed necessary, there would have been no time for such a process during the 2011 dry year.

In the absence of systematic and consensual analysis of these criteria, the decisions passed appeared unfair to certain users (for example in the Pul-i-Khumri canals). This suggests that joint fact-finding on canal profiles in Baghlan in particular could have ensured a more transparent and thus more socially acceptable decision-making process and outcome. Promisingly, there has been some realisation in hindsight among government authorities that this kind of participatory process could have been useful. Even though it was not originally planned for, the meeting between Baghlan District canal representatives and Kunduz water users facilitated some level of acceptance on the Kunduz side and boosted the image of the Baghlan WMD director.<sup>250</sup> There may therefore be scope for more comprehensive and inclusive joint fact-finding in future, although this process may carry its own risks (see Section 7 for further discussion).

## 5.4 Conclusion

### *Decision-making*

- Although there are opposing claims for water allocation along the LKSB, upstream Baghlan Province continues to maintain the traditional system of *abandâz* as the defining water allocation system—a system that awards no fixed or secured water rights to downstream Kunduz Province.
- Along the LKSB in 2011, the room for participation in decision-making and the resulting actions were shaped by the balance of power between WMD directors, provincial and district governors, and water users themselves. In Baghlan Province, for instance, the higher the relative power of the WMD, the less chance water users had to influence decision-making, but the more advantageous the decisions on *abandâz* were for Kunduz. Joint decisions and actions are thus far from being taken on the “level playing field” envisioned in an ideal MSP.
- Power gaps along with local political interests and opportunities shaped the decision space and decision-making processes and the nature of participation along the LKSB.

<sup>250</sup> Interview # 62.

Different “dialogue and negotiation strategies” have been deployed. In 2011, several factors were particularly influential in securing more cooperation with Kunduz compared to 2008. They include: A changing political and security context in Pul-i-Khumri District reinforcing government authority in the area; direct pressure on the Baghlan WMD and provincial governor from the MEW and the president’s office in Kabul, based on lessons learned from mismanagement during the 2008 dry year; the possibility of promotion of the Baghlan WMD director encouraging him to act in support of Kunduz; and the replacement of a number of actors between 2008 and 2011 (including the Kunduz WMD director and both provinces’ provincial governors), all of which facilitated better support to Kunduz. However, it is important to note that these factors are neither stable, durable, predictable nor controllable—including through policy intervention.

- Individual power and authority as well as interpersonal relationships played a more important role than formal position and official title in shaping decision-making over water allocation and over the implementation of plans.

### **Composition and adaptivity of MSPs**

- In contrast with the expected MSP set-up proposed by the Water Law, water allocation was not decided on through one single sub-basin platform. Instead, water allocation in the LKSB was mediated through various platforms, including the WAC. Significantly, these organisational arrangements remained demarcated along provincial boundaries. Kunduz had a WAC to formally engage with government representatives when dealing with inter-provincial arrangements. This same WAC also dealt with intra-provincial issues but with more flexibility in composition. In Baghlan, no WAC was officially formed, and decision-making instead followed an ad-hoc procedure through meetings with flexible composition shaped by evolving circumstances. Thus, the MSPs’ arrangements were defined by a strong adaptivity.
- In Kunduz, decision-making meetings for water allocation within Kunduz were not always limited to formal WAC members. This flexibility in composition was dictated by the need to include actors who could represent and, in theory, influence the communities involved.
- The Kunduz WAC and other ad-hoc platforms were in most cases multi-partite but uni-sector, limited to addressing irrigation issues. The observed arrangements were thus more related to issues of Participatory Irrigation Management (PIM) than IWRM.
- The WMD and provincial governor are considered legitimate actors in deciding the composition of the WAC and taking a leading role in water allocation negotiations. In fact, it was the involvement in these influential non-water users that placed greater emphasis on the idea of inter-dependency between both provinces, thus creating room for a degree of cooperation regarding water allocation. In practice in the LKSB, the parallel interests between the Baghlan WMD and Kunduz stakeholders in particular helped in defining and implementing an *abandâz* that was relatively beneficial to Kunduz.
- Water users and government representatives expressed general satisfaction about the composition of the WAC in Kunduz, although some adjustments were recommended. In the Kunduz WAC the provincial governor, provincial WMD director and PC members took the lead in supporting the interests of water users in their province. In Baghlan however, the series of ad-hoc meetings that followed initial consultations between the Kunduz WAC and Baghlan authorities did not satisfy a large group of canal representatives, especially from the Pul-i-Khumri District canals.
- When it comes to the paramount issue of water allocation at sub-basin level, the decision-making boundaries and the subsequent composition of the WAC did not exactly follow natural hydrological boundaries. For example, due to practical limitations and high transaction costs, the small canals along upper catchment valleys were not considered relevant enough to participate in decision-making over water allocation. This contrasts with the approach proposed by policies and regulations for the composition of RBAs/RBCs. The “relevant” geographical borders of the actual—rather than potential—problem-shed are thus smaller than the entire sub-basin.

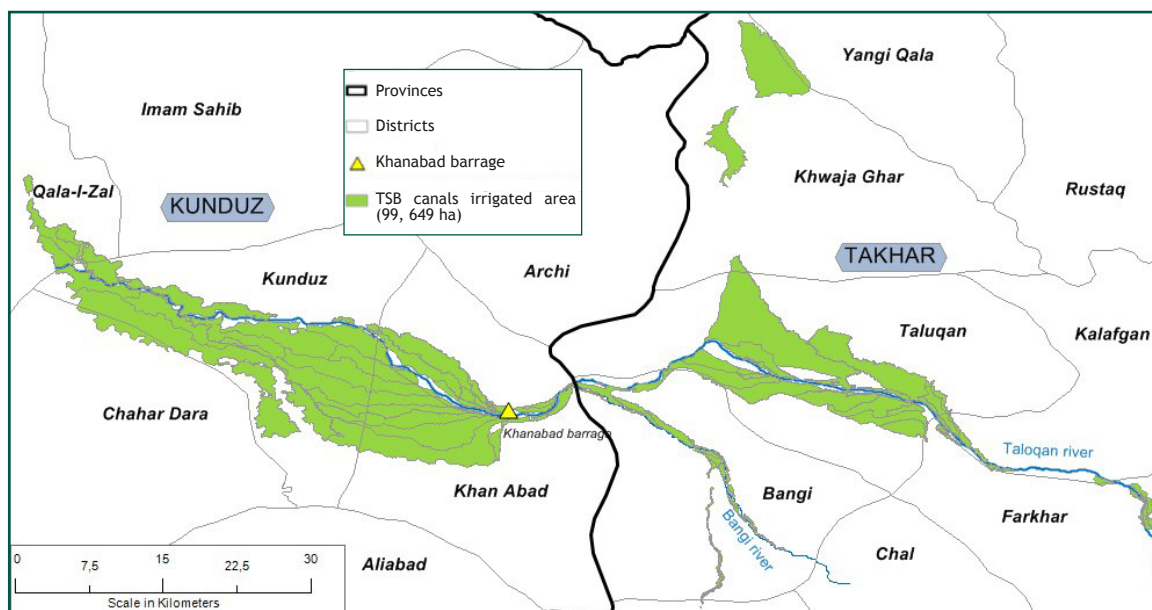


### Outcomes and results

- The balance in water access along the LKSB between upstream and downstream areas has clearly improved between 2008 and 2011. While around 68 percent of Kunduz Province had little or no water access in 2008, this figure dropped to 45 percent in 2011.
- The general opinion in Kunduz was that improved *abandâz* of 2011 when compared to 2008 was one of the reasons behind this positive change. Nevertheless, the wider use of underground water as a coping mechanism was another key factor.
- The capacity of the Kunduz WAC and the Baghlan WMD director and governor to avoid tensions and conflicts between provinces was acknowledged as a significant achievement, especially in comparison to the situation in 2008. However, this came at a cost: resentment increased against the Baghlan local government, especially in areas where the *mirabs* and water user representatives felt that decisions were imposed on them.
- The capacity and efforts of the WAC and other actors to collectively engage in fact-finding or mobilising institutional support remains limited. Linkages between local institutions engaged in water allocation (like the WAC) and other potential support agencies such as the PC, IDLG or ANDMA are insufficient and remain based on individual initiatives. To some extent, the WAC is thus functioning in a vacuum.
- Ineffective support from government security forces in a volatile security context meant that the Kunduz WAC struggled to enforce its decisions within the province.
- It is uncertain whether or not the WAC or future RBCs will be financially sustainable in the long run. In 2011, the WAC was entirely subsidised, and the PARBP-TA has currently no plan as to how it could support WACs or sub-basin councils in generating revenues necessary to engage in future activities similar to or bolder than the ones observed in 2011.

## 6. Taloqan Sub-basin Case Study

Map 10: TSB irrigated areas



### 6.1 Decision-making space, power balance and multi-stakeholder platform composition in the TSB

Decision-making power over water allocation along the TSB has involved different processes at different scales. This case study therefore makes the distinction between decision-making between and within Provinces.

#### *Decision-making between Takhar and Kunduz Provinces: From presidential decree to ad-hoc compromise*

In 2011, water allocation along the TSB was defined according to a 2009 presidential decree, which was also endorsed by MEW, the Ministry of Agriculture Irrigation and Livestock (MAIL), the Ministry of Interior (Mol) and the Supreme Court. At the end of June 2011, a delegation from Kunduz composed of government actors and water user representatives went to Takhar to discuss water allocation between the two provinces. The presidential decree was at the centre of the negotiations. This section examines how the decree took shape, as well as how local actors have contested both its formation and its content. It then goes on to describe how these actors have attempted to find a compromise in resolving tensions over water allocation.

#### The origins of the presidential decree: The 2008 dry year

The origins of the presidential decree date back to 2008, when more than 60 percent of the most downstream part of Kunduz along the TSB could not irrigate a second crop (see section 3.3 for more details). During that year's irrigation season, Kunduz water users and government authorities tried to obtain *abandâz* from Takhar. However, the agreements were poorly-defined and barely implemented.<sup>251</sup> During this period, influential community leaders in Kunduz attempted to mobilise their PC members and members of parliament (MPs). At the time, one of the most active MPs was Shukria Paykan. She summarised the situation as follows:

*The people of Khanabad<sup>252</sup> called me many times to intervene and I first discussed the problem with MEW in Kabul. The Takhar people said they would release water to Kunduz by closing*

251 Conclusion of end of irrigation season workshop, October 2008; Interview # 95.

252 Shukria Paykan is originally from Khanabad District.

*some of their intake gates for few days, but as soon as Kunduz people were not watching they would open their intake again. [...] Later on, more than 100 elders and mirabs wanted to come to Kabul to discuss directly the issue with MEW. I told them to wait and I went straight to the minister. He said that he would send a delegation to the area. But I was not happy with that because I knew that his delegation would be welcomed by the governors of Kunduz and Takhar who would just slaughter a sheep and give them money to write a nice report saying that there are no problems. Unfortunately, I had to leave the country at the time. The delegation went to Kunduz and Takhar for a short visit. When they arrived, the Takhar people closed their intakes and made promises to share water with Kunduz but as soon as the delegation left they closed their intakes again. So nothing changed. I was very angry with MEW. The people of Kunduz wanted to demonstrate and block the road to Kabul. I was going to MEW every day but they were trying to avoid me. So I decided to bring a delegation of elders and talk to the president. But we could only meet [second vice-president] Khalili.<sup>253</sup> Of course, he promised he would look into the issue but it was already late in the irrigation season. I even went to the US Embassy to discuss the issue of water sharing between Takhar and Kunduz when I heard that the Ambassador was planning to visit the northern provinces. But the Kunduz and Takhar governors gathered their supporters to form a delegation, which made assurances that there was not really any problem. [...] Although in 2008, no decisions were taken by Kabul to resolve the water allocation issue between the two provinces, we tried to put the president and MEW under pressure to take action.*

According to Shukria Paykan and two other Kunduz MPs, the Kunduz and Takhar governors were at the root of the problem.<sup>254</sup> Kunduz MP Moheen Marastyar was also deeply concerned by the water allocation issues between Takhar and Kunduz, explaining:

*The origin of the problem was with the Kunduz governor at the time, Engineer Mohammad Omar. He was from Takhar, and he had a lot of connections with the warlords and ex-mujahiddin of Takhar. He himself had a lot of land in Takhar and they acquired even more government land in the province. [...] We have four Ministries who should be looking at this issue: MEW, MAIL, the Ministry of Rural Rehabilitation and Development, and the Ministry of Justice. But they have not taken any action to resolve the problem. Engineer Mohammad Omar could therefore do whatever he wanted, including maintaining the status quo and avoid signing any protocol for water sharing.<sup>255</sup>*

The head of the presidential delegation in charge of defining water allocation between Takhar and Kunduz—offered an identical version of these events, as well as the Kunduz WMD director and another key informant from Takhar.<sup>256</sup>

Although the Kunduz MPs' late intervention resulted in little if any change during the 2008 irrigation season, they continued their action through the end of 2008 and into early 2009. As a result, Moheen Marastyar managed—with the backing of other MPs and senators—to approach the president and convince him to take action before the next irrigation season.<sup>257</sup>

### Question marks around a controversial process

On 19 April 2009, President Karzai ordered his advisors to set up a commission to define *haqabah*—or permanent water rights—between both provinces.<sup>258</sup> Mohayuddin Balouch, the presidential advisor in charge of the process, explained:

*I was the head of the mission and there were people from different ministries: MEW, MAIL, IDLG, and security commanders from the North. The provincial representatives and the senators were also involved in that. I think that the president was afraid that conflict would arise if no*

<sup>253</sup> This visit was confirmed in a 31 October 2011 interview with Dr. Fatima Aziz, another Kunduz parliamentarian, who facilitated the meeting.

<sup>254</sup> Interviews # 86; 80; 83.

<sup>255</sup> Interview # 83.

<sup>256</sup> Interviews # 84; 24; 31.

<sup>257</sup> Interview # 83.

<sup>258</sup> Report of appointed delegation for water rights conflict on Taloqan River between Kunduz and Takhar; 06-02-1388 (26 April 2009) to 08-02-1388 (28 April 2009).

*solution could be found. The previous year brought a lot of tensions between provinces so for the year 2009 Karzai didn't want to take any risk. We called six people from each province to discuss the issue. MEW, MAIL, and the provincial governors were also involved.*<sup>259</sup>

However, interviews with government authorities and water users in Takhar and Kunduz leave very little doubt about the non-participatory nature of the process. They also highlight the significant discontent among Takhar stakeholders regarding both the process and the decisions of the commission. As the Takhar WMD director put it: "The delegation came to collect data, not to hear our opinion."<sup>260</sup> One of the province's PC members who was familiar with water management issues confirmed: "We [members of the PC] were not involved in the discussion or decision of the presidential decree. We didn't even know when the delegation came to Takhar and met with some government authorities."<sup>261</sup>

Hajji M. Azad, an influential elder from Takhar and retired Government officer gave the following account:<sup>262</sup>

*The delegation came for only half a day. Their visit was symbolic. They had already taken their decision. But of course they tried to make it look like they would not favour Kunduz. In 2010, we went to Kabul to meet Popal [the head of the IDLG], who is himself a close friend of Karzai, but we could only see his deputy. With Wakil Tura Khan [a former MP from Takhar] we accused him of bringing a biased delegation to Takhar. He tried to tell us that they met some elders in Takhar but I told him: "Maybe you are right, but you forget two issues: first you never told anyone that you were going to decide about water rights and those who met you are not the people who can represent water users' problems. Your meetings were just symbolic."*<sup>263</sup>

Even the Kunduz WMD director (whose province benefited from the decree) recognised that the process was not participatory:

*The delegation just came to ask for data such as the command area in both provinces and the type of crops grown. [...] The delegation went back to Kabul and took its decision there. Nobody was asked to comment, not even the governors. There was no chance to comment because they didn't say anything during the visit.*<sup>264</sup>

In Takhar, government officials express a general feeling of suspicion about Kabul's intervention. The WMD director argued:

*The simple fact that the delegation was sent from Kabul was not acceptable for the people here, because they are convinced that Kabul politicians sent a delegation to serve personal political interests in this matter. It was not for the people of Takhar or to play a neutral role.*<sup>265</sup>

Hajji Qudduz, an influential community leaders from Gawmali canal confirmed:

*There is a common view among people in Takhar that the delegation from Kabul was not neutral and was here to privilege Kunduz. No one was consulted when the decree was decided. Even WMD, MAIL and the governor didn't know what happened.*<sup>266</sup>

Hajji M. Azad went one step further in criticising the partiality of the presidential delegation:

*The delegation that came here was totally under the influence of Moheen Marastiyar [see above], an ex-MP from Khanabad and advisor of Karzai. Although he was not a member of this delegation he came to visit both provinces with the delegation. This is because he wanted to keep the delegation under his influence and favour Kunduz at any cost.*<sup>267</sup>

259 Interview # 84.

260 Interview # 32.

261 Interview # 43.

262 He would later on be leading a Takhar delegation in Kabul that was trying to get the decree nullified.

263 Interview # 36.

264 Interview # 24.

265 Interview # 32.

266 Interview # 35.

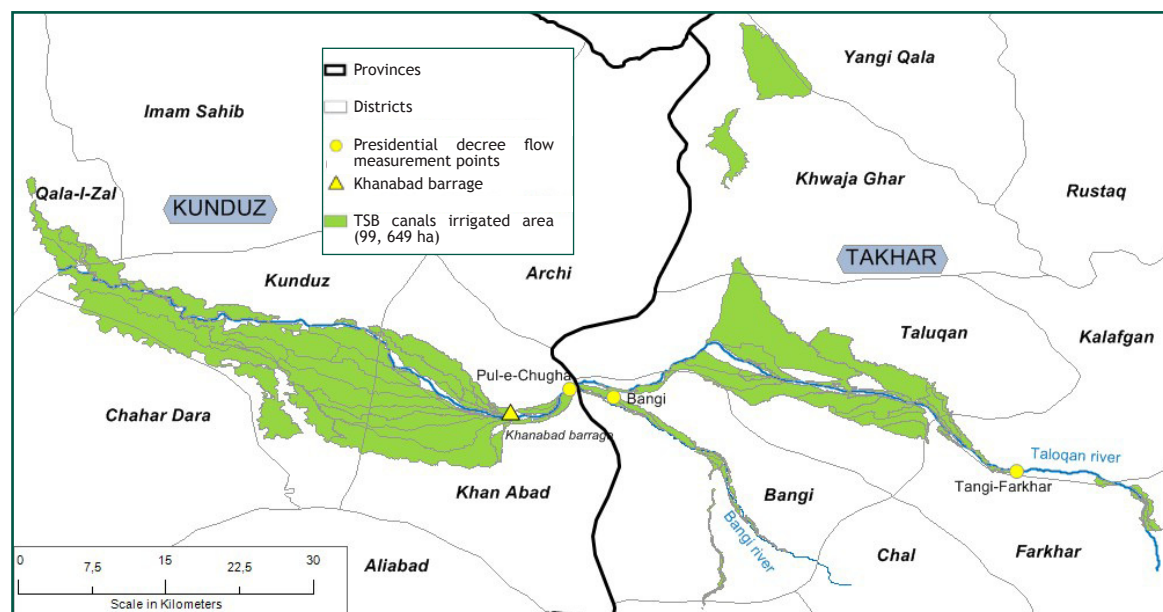
267 Interview # 36.

Even government officials like the Takhar WMD director openly denounced a perceived political manipulation along ethnic lines: “People who have signed this decree are Pashtun...the deputy director of MAIL, Mohammad Sharif...was Hazara. As you can see, he didn’t sign the decree.”<sup>268</sup> Along with another key informant in Takhar, Hajji M. Azad saw this decree as a political manipulation in favour of the Pashtun population (more numerous in Kunduz than in Uzbek- and Tajik-dominated Takhar Province) ahead of the presidential elections of September 2009: “That was a very crucial time, because Moheen Marastiyar was part of Karzai’s presidential campaign so he knew it was a good time to ask Karzai about this favour, and Karzai obliged.”<sup>269</sup> It is however doubtful that the making of the presidential decree was directly motivated by electoral considerations; interviews with local members of the Karzai election campaign committees suggest that the issue of Kunduz-Takhar water allocation was not a topic of discussion in his campaign speeches. As one local campaigner from Khanabad in Kunduz who was also a WUA member for Alchin canal explained:

*We decided not to talk about the decree during the campaign, because we knew that the implementation would depend ultimately on Takhar as they are upstream. So there was a risk that Karzai’s decree could not be implemented, and it would have looked bad to promise something that might not materialise.*<sup>270</sup>

Overall, the above accounts demonstrate that the president’s office, as well as MEW and MAIL, were not interested in facilitating a genuine participatory process for defining water allocation between both Provinces.

**Map 11: Location of flow measurement points for the water allocation presidential decree of 16 May 2009**



### The content of the presidential decree

On 16 May 2009, president Karzai followed the recommendations of his delegation based on a report dated 28 April 2009 (see Box 6 for the full text of the decision). Although the text of the decree does not provide any explanations on where the flow of the Taloqan river has to be measured, the mission report of the delegation explains that the flow measured at the Pul-i-Chugha station in Kunduz Province should be equal to 62.6 percent of the river flow measured in Tangi-Farkhar and Bangi Bridge measurement stations combined. Map 11 indicates

<sup>268</sup> Interview # 32. The WMD director showed a copy of the presidential decree without the signature of the deputy minister of MAIL. However, another copy of the same decree provided by a MEW senior official contained the signature of the deputy minister of MAIL. Mr Mohamad Sharif, who soon after resigned from this position to join the private sector, refused to comment on this point.

<sup>269</sup> Interview # 36.

<sup>270</sup> Interview # 96.

**Box 6: Unofficial translation of the Presidential decree on water allocation between Takhar and Kunduz Provinces**

Order number: 1406

Date: 26-02-1388 (16 May 2009)

**Decision based on observations**

The water right of Kunduz province is 62.6 percent from the Taloqan River, while the water right of Takhar is 37.4 percent. This is based on the recommendations of the assigned delegation and should be applied until further surveys of irrigated lands of both provinces are conducted.

In order to monitor the mentioned water right, a joint commission composed of Takhar and Kunduz farmers should be formed. It should be composed of three farmers from Takhar and three farmers from Kunduz and one person from the line ministry of MEW and MAIL from each province. The chairman of the commission should be a farmer from Kunduz and the deputy chairman should be a farmer from Takhar.

MAIL, MEW, and the governors of Takhar and Kunduz are requested to fully cooperate in this regard.

Signature of Hamid Karzai

President of the Islamic Republic of Afghanistan

Signature of Moyahudin Balouch, senior advisor for the president's office, *Wazir Moshawar* [status similar to Ministry], leading the group

Signature of Eng. Zyaee, deputy minister of MEW

Signature of Abdul Malik Sediky, deputy director of IDLG

Signature of Mohamad Sharif, deputy minister of MAIL

Signature of General Jamel Bassir, deputy director of administration and recruitment department, Mol

Signature of Abdul Ahat - member of the Supreme Court

the location of the stations. It is important to note, however, that these stations are not yet operational.<sup>271</sup>

*Criteria and data for assessing water rights*

The delegation made a distinction between "rice" and "non-rice" crops. It also estimated (based on information from MAIL) that rice requires three times more water than non-rice crops. Land under rice cultivation was thus weighted three times more heavily in the calculation of the "total equivalent land" for each province, which in turn governed the final percentage of water rights allocated to each province (see Table 12 below).

The decree was counter-signed by MEW, MAIL, IDLG, Mol and the Supreme Court. As highlighted earlier, it is unclear whether the deputy minister of the irrigation and natural resources department of MAIL actually approved this decree since he refused to confirm or deny the claims of key informants that he had not signed it.

In theory, the IDLG should have been interested in keeping a critical eye on the quality of the decision-making process at local level in line with its mandate (see Box 5). However, it is clear that the involvement of its deputy director in the process was at best limited. As he explained:

<sup>271</sup> The World Bank is responsible for installing gauging stations in the PARB, but by the time of the 2011 irrigation season, it had not yet managed to finalise their calibration, making them impossible to use.

**Table 12: Cropland figures used for the May 2009 presidential decree on water allocation between Takhar and Kunduz**

	<i>Kunduz</i>	<i>Takhar</i>	<i>Total</i>
Rice land (ha) (weight: 3)	71,178	31,882	103,060
Non-rice land (ha) (weight: 1)	4,003	33,889	37,892
Total equivalent land (weighted)	217,537	129,535	347,072
% equivalent land (weighted)	62.6 %	37.4 %	100 %

Source: Based on presidential delegation report entitled: “Report of appointed delegation for water right conflict on Taluqan River between Kunduz and Takhar; 06-02-1388 (26 April 2009) to 08-02-1388 (28 April 2009)” (May 2009).

*MEW and president Karzai made the decree. I was not involved in that. Once it was made, they mentioned to me that my name was on the paper and that I had to sign. Ziaye [deputy minister of MEW] told me that it would solve the problem of water sharing between Takhar and Kunduz. That’s all I needed to know and I signed. But I don’t know about the decree.*<sup>272</sup>

By contrast, MEW was clearly fully included and supportive of the process.<sup>273</sup> For its part, the Supreme Court declined to comment, while the representative for Mol mentioned that his signature was required due to the sensitivity of the issue:

*They wanted to have somebody from the security department too; because people in Kunduz mentioned—and this was also reported by police in Takhar and Kunduz to the Mol—that there were plans to block the main road and that gunmen in Khanabad wanted to block the main Takhar-Kunduz road by making illegal checkpoints in the Khanabad area. This was really dangerous, since the security was not good in Kunduz at that time. This is why president Karzai wanted to have a representative from the Mol as well.*<sup>274</sup>

A key reason behind the strong resentment in Takhar against the presidential delegation was the way data was collected and used. All water user representatives interviewed refused to believe that the data giving Kunduz almost two-thirds of the surface water flow was correct.<sup>275</sup> The Takhar WMD director, the deputy governor, Hajji M. Azad and a PC representative deeply involved in the process all explained that the Takhar MAIL director gave the wrong data to the delegation.<sup>276</sup> This view was also shared by interviewees among Takhar water users. The PC member Mr Mujiburahman explained:

*After receiving the decree, the PC met with the MAIL director to ask why he hadn’t shared correct data with the delegation. The director told us, “I told the governor that the figures I had were not updated and I needed time to give updated data to the delegation, but the governor ordered me to forget about updates and give the available data I had.”<sup>277</sup> So the MAIL director had no option. Although some people still think that the MAIL director is a traitor, it is not his fault. I think that the governor of Takhar didn’t want to create conflicts with a presidential delegation influenced by a Kunduz MP close to Karzai. This is also why he didn’t invite us [the PC members]; because he knew we would never have let MAIL give these data.*<sup>278</sup>

The Takhar WMD director and Hajji M. Azad also mentioned the pressure on the MAIL director from the delegation.<sup>279</sup> For Hajji M. Azad, this was the reason why the former deputy ministry of MAIL did not sign the decree.<sup>280</sup>

272 Interview # 81 (by phone).

273 Interviews # 85; 82.

274 Interview # 98.

275 Interviews # 29; 30; 34; 35; 37; 38; 39; 40; 42; 44; 45; 47.

276 Interviews # 32; 33; 36; 51.

277 At the time, the Takhar governor was originally from Kunduz.

278 Interview # 43.

279 Interviews # 32; 36.

280 Interview # 36.

On the other hand, the head of the presidential delegation, Mohayuddin Balouch, explained: “The WMD of Takhar was trying to mislead us with data advantaging Takhar. So we used different data.”<sup>281</sup> In his view, the decree was necessary to correct an injustice against Kunduz originating from the time when the then-governor of Kunduz Engineer Mohammed Omar had an incentive to favour Takhar as he had vested interests there.<sup>282</sup>

### Acceptability of the decree: The incomplete attempt to revise the decree between 2009 and 2011.

The 2009 irrigation season started at approximately the same time as the decree was issued. However none of the stakeholders from Kunduz or Takhar who were aware of the decree applied it on the ground or even mentioned it to a wider audience of water users. This was due to the fact that 2009 was a wet year with abundant flow in the river, meaning that no water allocation discussion at sub-basin level was necessary. It was only several months later that the Takhar WMD shared the information with water user representatives. The Takhar WMD director explained that he could not go against his superiors, but encouraged water users to formulate complaints.<sup>283</sup> In October 2009, a group of 23 influential community leaders and MPs sent a letter to the provincial governor requesting his support in refusing the application of the decree, and that the higher authorities in Kabul revise it. The request was endorsed by the governor, who forwarded it to the IDLG in Kabul. Both letters—from elders to the governor and from the Governor to the IDLG—were critical of the process and content of the decree:

*The report of central government representatives regarding specifying water rights between Takhar and Kunduz provinces from 24-28 April 2009 during the current year was done in the absence of the MPs, farmers and mirabs of Takhar, and also without informing the provincial governor of Takhar Province. The one-sided decision made under the pressure of Kunduz Province farmers was detrimental for our water users in Takhar Province. It is therefore not acceptable.*<sup>284</sup>

The report further presented a series of arguments directly criticising the technical content of the decree and questioning the reasoning behind the numbers. Takhar stakeholders refused the idea of differentiating water demand based on the type of crops grown.<sup>285</sup> In relation to this point, they argued that the taxes applied on rice land and non-rice land were similar and on this basis there was thus no reason why water demand should be differentiated. They contested the figures used concerning the irrigated area in Takhar arguing that they were likely to be “50 years old.” They stressed that the recent development of rice cultivation in Takhar—clearly under-evaluated in the report used for the decree—is in accordance with Sharia law. Finally they assert that the water shortages faced by Kunduz should be blamed on climate change. Significantly, the Takhar WMD director was very influential in supporting water users in developing these arguments.<sup>286</sup> He also highlighted some of the other technical issues and inconsistencies discussed in Box 6.<sup>287</sup>

The Takhar letter went unanswered. In 2010, a delegation of around a dozen influential Takhar leaders thus went to Kabul to meet the president, led by the former MP Wakil Tura Khan and Hajji M. Azad. As Azad explained:

*Although it is very difficult to see Popal [the director of the IDLG] because he is the right hand of Karzai, Popal is a good friend of Dr. Mushahid [the brother of Wakil Tura Khan]. so through Dr. Mushahid we were able to see Popal, who was very cooperative. He presented our request to Karzai and got him to order the formation of a committee of governors, PC members, senators, WMDs, MAIL staff and water users of both provinces to discuss the issue*

281 Interview # 84.

282 Interview # 84.

283 Interview # 37.

284 Letter from Takhar Governor to the IDLG Kabul in Kabul, 15 October 2011.

285 See also the discussion in Box 7.

286 Interviews # 32; 35; 37; 38; 47.

287 Interview # 32.



### ***Box 7: Technical questions on the presidential decree for water allocation between Takhar and Kunduz Provinces.***

An analysis of the technical design of the presidential decree reveals a number of technical inconsistencies and unusual choices. It also reveals the introduction of concepts of local water allocation that were foreign to both water users and local governments (i.e. WMDs):

#### **The illogical choice of Bangi Bridge as a measuring point**

Bangi Bridge is located downstream of the Bangi irrigated area. Requesting that a certain percentage of the flow located at Bangi Bridge is reserved for Kunduz thus effectively excludes the Bangi irrigated area—representing a little under nine percent of the total irrigated area in Takhar—from any water use limitation. Logically, the percentage should therefore be applied to a flow located upstream of the irrigated area. Unfortunately, there are no measurement stations upstream of Bangi.

#### **Does the 62.7 percent of the flow apply to Bangi and Tangi-Farkhar in the same proportion?**

The first problem here is that the percentage is applied to a sum of two flow measurements taken in two different locations. It is not clear whether the same percentage should apply equally in both areas. Since all the water measured at Bangi Bridge goes to Kunduz already, there is also little point in requesting that a certain percentage of the Bangi Bridge flow should be allocated to Kunduz. The logic would again be that a certain percentage of the flow measured in upstream Bangi goes to Kunduz.

The second problem is that the ratio of water available to command area for both Bangi and Taloqan has not been taken into account, and in any case there is no data for the upstream Bangi area. If, for instance, the water available in upstream Bangi were equivalent to three litres per second per hectare (l/s/ha) and that the water available for Taloqan from Tangi-Farkhar were equivalent to two l/s/ha, it would be illogical for both areas to contribute the same percentage of their flow to Kunduz. Unfortunately the high uncertainty in the accuracy and reliability of the flow measurements taken by PARBP and WMD in 2008 and 2011 does not allow for accurate verification of any difference in water availability for Bangi and the Taloqan plain.

#### **Why not take ETo and soil characteristics into account when considering crop water requirements?**

It is highly questionable that—as assumed in the decree—crop water requirements are similar in Takhar and Kunduz. Although there is no data for Takhar, the available ETo data from FAO shows large differences between the neighbouring provinces of Baghlan and Kunduz (see Figure 9). Similar differences may exist between Kunduz and Takhar. Similarly, it may be important to consider soil types as part of the irrigation requirements.

#### **What relevance in giving higher rights to rice crops?**

The issue of unregulated expansion of rice cultivation in the TSB over recent decades has been highlighted as one of the factors increasing the impact of dry years on downstream areas. This point has been stressed several times by different WMD directors in both concerned provinces. The PARBP has been trying to introduce a different method of rice cultivation (the System of Rice Intensification, or SRI) to offer a less water-intensive alternative to rice growers.\* Yet by giving more water rights to rice growing areas, the presidential delegation is basically encouraging more water-intensive rice cultivation at the provincial level. This runs counter to the logic of encouraging a reduction in water demand at sub-basin level as a way to limit potential conflict over water access during dry years.

#### **The inconsistency in water rights at different scales**

As demonstrated below, there is no consistency between the water rights across provinces as proposed by the presidential delegation, and the water rights that apply within Kunduz Province itself. While the presidential decree proposes water rights on the basis of crops, the water allocation principles within the province are proportional (in principle) to the amount of land. The presidential delegation has thus introducing principles of water allocation that are alien to local water users. Interviews with Takhar stakeholders show that they are strongly opposed to the idea of giving water rights based on crops grown.\*\*

#### **What relevance in introducing percentage of river flow when there are no functional flow measurement stations?**

Although hydrometric stations have been installed for years at the locations indicated by the presidential decree, they currently remain idle.

\* Thomas and Ramzi, "SRI Contributions to Rice Production."

\*\* Interviews # 29; 30; 34; 35; 37; 38; 39; 40; 42; 44; 45; 47; 32; 33; 36; 41; 43.

*and come to an agreement acceptable to both parties. Karzai ordered this committee to gather all necessary information in both provinces and make a fair decision.*<sup>288</sup>

However, when the delegation came back with Karzai's order, water shortage issues were not an immediate priority:

*When we came back, there was enough water in the river and no-one among the ministries or water users was immediately interested in working on this order. From 2010 till the beginning of 2011, Dr. Mushahid went two or three times to follow up with MAIL. The minister told him he would do it, but he did not.*<sup>289</sup>

When the dry year of 2011 came, the revision process for the decree had not even started:

*When the drought started and the people of Kunduz came to Takhar [on 25 June] to demand water based on the decree of 2009, the Takhar people realised that they had wasted too much time, and that it was too late for this year.*<sup>290</sup>

### **Toward a compromise and the formation of a joint water allocation commission**

On the 25 June 2011, a delegation from Kunduz came to Takhar to discuss the issue of water allocation between the two provinces (see Table 13). Both provinces had representatives from water users, line-ministries (MEW and MAIL), PCs, and the governors' offices. A national consultant from PARBP was also invited as facilitator and representative of the PARBP.

However, a few days prior to the meeting, the Takhar WMD director had invited a large gathering of water user representatives, PC members and elders to talk about the presidential decree. More than 40 people gathered at the WMD mosque. The discussion confirmed that the decree's content was not acceptable to Takhar stakeholders.

During the meeting itself, the Kunduz delegation highlighted through the governor's representative the need to respect the presidential decree's stipulation that 62.6 percent of the Takhar's water was supposed to be available for Kunduz. In response, one PC member from Takhar strongly criticised the decree and Kabul's intervention in the process: "Karzai is not from Takhar, does he walk along canals to understand how our irrigation systems work? This letter is not acceptable for us."<sup>291</sup> The Khanabad district governor (from Kunduz Province) challenged him: "You are just a farmer and Karzai is at the top of our leadership. He got advice from people in the ministries who know about water. They have collected data about the area and divided water according to the irrigated area. If you don't accept this plan you can go out." Hajji Ghulam Nabi, the WUA chairman in Zargar canal (Takhar), summed up the conclusion of the meeting:

*Water users and PC members in Takhar did not agree to accept the mentioned decree so they rejected the water allocation it mentioned. Officially, both the deputy governors and WMDs of both provinces were trying to solve the problem through the decree but due to harsh response from the Takhar water users and PC members they decided to give this authority to a WAC to manage the water allocation to Kunduz. At the end of the day both parties decided to forget the decree and said that the WAC would decide about how much water would flow to Kunduz and when.*<sup>292</sup>

In other words, the idea was to show officially that a WAC was formed as per the decree to implement the presidential order, but in reality it was a smokescreen.<sup>293</sup> The Kunduz WMD director summarised the situation as follows:

*We asked participants of meeting to be quiet and listen to both provincial governors; they told them their decision and people said that they accepted it. Then we talked about the procedure*

288 Interview # 36.

289 Interview # 36.

290 Interview # 36.

291 Minutes from PARBP-TA facilitator (undated), confirmed in interview # 13.

292 Interview # 37.

293 The deputy head of the Takhar PC used the word *jooramad*, or "arrangement" to qualify the decision to find a compromise instead of a strict application of the presidential decree.

**Table 13: Composition of the first meeting between Takhar and Kunduz regarding water allocation issues between the two provinces**

<b>Name</b>	<b>Position/organisation</b>	<b>Location</b>	<b>Type of stakeholders</b>
Zaki	Deputy of the Takhar provincial governor	Takhar	Provincial governor reps
Khaleqyar	PC member, Takhar	Takhar	Elected representative
Sayed Abullah	MAIL director, Takhar	Takhar	Line ministry (MAIL)
Eng. Salem	WMD director, Takhar	Takhar	Line ministry (MEW)
Maamor Azad	Elder (who dealt with changing the presidential decree)	Takhar	Water user reps
Abdul Satar	<i>Mirab</i> , Joy Daraz	Takhar	Water user reps
Mir Ahamd	<i>Mirab</i> , Said canal	Takhar	Water user reps
Najibullah	WUA chairman, Said canal	Takhar	Water user reps
Sherkhan	WUA Member, Sharawan (Khwaja Ghar)	Takhar	Water user reps
Abdul Qudous	WUA Member, Gowmali	Takhar	Water user reps
Ghulam Sakhi	WUA chairman, Sharawan	Takhar	Water user reps
Saifullah Beg	WUA chairman, Zargar	Takhar	Water user reps
Ghulam Nabi	WUA chairman, Zargar	Takhar	Water user reps
Abdul Ahamd	<i>Mirab</i> , Chaman canal	Takhar	Water user reps
Akbar	NDS representative	Kunduz	NDS representative
Abdul Salam Makhdoom	Provincial governor's representative	Kunduz	Provincial governor reps
Hamdullah Quraishee	Provincial governor's deputy	Kunduz	Provincial governor reps
Abdul Qadir Hussaini	Deputy PC chairman, Kunduz	Kunduz	Elected representative
Khalil khan	MAIL extension manager	Kunduz	Line ministry (MAIL)
Engineer Lutfudin	WMD/Hydrologist Engineer	Kunduz	Line ministry (WMD)
Engineer Sayed Ahmad	WMD director	Kunduz	Line ministry (WMD)
Hajji Amirjan	WUA Chairman, Goltepa	Kunduz	Water user reps
Qumandan Sultan	Deputy chairman, left bank canal, Khanabad	Kunduz	Water user reps
Alawudin khan	Head of WUA, right bank canal, Khanabad	Kunduz	Water user reps
Malem Zahir khan	Head of WUA, left bank canal, Khanabad	Kunduz	Water user reps
Ghulam Hazrat	<i>Mirab</i> , Goltepa	Kunduz	Water user reps
Mohammad Zahir	<i>Mirab</i> , Naqi Kunduz	Kunduz	Water user reps
Hajji Habibullah	Elder, Khanabad	Kunduz	Water user reps
M.Afzal	Elder, Zarkharid Village	Kunduz	Water user reps
Sayed Atullah	Elder, Sehदारک	Kunduz	Water user reps
Shah Wali	WUA Member, Gawkush	Kunduz	Water user reps
Hajji Khalilulrahman	Elder, Goltepa	Kunduz	Water user reps
Qari-e-Deen Muhammad	Elder, Char Toot Village, Khanabad	Kunduz	Water user reps
Hajji Hashemi	Facilitator/PARBP	-	Consultant

*of monitoring and reporting, again showing that we were applying the decree. This problem has been solved but honestly, we didn't apply the decree because it was dangerous for the relationship between both provinces. As you know, we had to send a final report to MEW, and this is why in appearance we have shown that we are applying the decree. We also shared this issue with Sultan Mahmood [Director General for Water Affairs Management and focal point for the PARBP at MEW] and he accepted.<sup>294</sup>*

At the end of the meeting, four water user representatives were chosen among the Takhar representatives. These individuals formed a joint commission with four water users representatives from Kunduz (see Table 14).<sup>295</sup> Although only water users were selected, they were supervised by the WMD and provincial governors. It was informally agreed that in case of problems, the WAC members should report to the WMD who would, with the support of the governor, enforce the decisions of the joint WAC.

**Table 14: Composition of the joint Water Allocation Commission implementing water allocation between Takhar and Kunduz**

Name	Position/organisation	Location	Type of stakeholders
Hajji Amirjan	WUA chairman, Goltepa canal	Kunduz	Water user reps
Qumandan Sultan	Deputy WUA chairman, Qobai Qochi canal	Kunduz	Water user reps
Alawudin khan	WUA head, right bank canal, Khanabad	Kunduz	Water user reps
Malem Zahir khan	WUA head, left bank canal, Khanabad	Kunduz	Water user reps
Ghulam Nabi	WUA chairman, Zargar	Takhar	Water user reps
Abdul Qudous	WUA member, Gowmali	Takhar	Water user reps
Hajji Ghulam Shakhi	WUA chairman, Sharawan	Takhar	Water user reps
Sherkhan	WUA Member, Sharawan (Khwaja Ghar)	Takhar	Water user reps

### Implementation: Operational agreements

Following the meeting, the joint WAC defined operation rules regarding the Takhar canals' headwork.<sup>296</sup> Negotiations started at the headwork locations about how many gates should be kept open—for water to enter the main canal—and how many gates should be closed—for water to remain in the river flowing towards Kunduz. In the absence of an agreement on quantified water allocation plans, gate adjustments could only be based on a compromise between different subjective appreciations of what was “fair.”<sup>297</sup> It is important to note that none of the water users had much experience in the adjustment of gates or understanding of the impact this would have on the main canal flow. This is because most of the headworks were—only a few years old and no training had been given on how to operate them or measure flow. In the end, no major disagreements were recorded except for in Sharawan canal, where Kunduz representatives felt that the gate adjustments were unfair.<sup>298</sup> For the few canals that still had traditional intakes,<sup>299</sup> a decision was made on the spot on how many sandbags to remove in order to reduce the flow from the river to the main canal. In some instances, the joint WAC used scales to check the level in the main canal from one day to the next.<sup>300</sup>

294 Interview # 24.

295 The four water users from Kunduz were also members of another WAC within Kunduz (see elsewhere below).

296 In this context, canal headwork refers to a hydraulic structure composed of several adjustable gates operated to regulate the flow of water entering the main canal.

297 Interviews # 93; 35; 37; 38; 47; 10; 15; 16; 99.

298 In the case of Sharawan, two out of eight gates were kept closed.

299 Traditional intakes are basically made of boulders and sandbags which are arranged to divert part of the river flow toward the main canal.

300 Interview # 30.



Image 2: Sharawan headwork (right, eight gates) and Sharan spillway (left, three gates)

The smallest canals—especially those with a limited command area—were ignored altogether since Kunduz representatives felt they would be too much work to monitor.<sup>301</sup> The Bangi canals were not covered by any agreement or operational arrangements,<sup>302</sup> and all attention instead focused on the Taloqan plain. In fact, the Kunduz WAC insisted mainly on monitoring the right bank of the Taloqan plain, including the Sharawan, Gawmali and Jui Daraz canals.<sup>303</sup> The rationale for doing so rested on two points. First, these canals represent more than 60 percent of the province command area; second, the water they acquire from the river does not eventually drain back into it, but leaves the sub-basin through the Sharawan canal;<sup>304</sup> and third, their intakes are located further upstream than most other right bank canals. These factors also explain why three out of the four Takhar representatives were chosen from the right bank.

The joint WAC agreed that Kunduz representatives could come on a regular basis to monitor gate positions, while the Takhar representatives (the WMD and the governor) would assist them in case of problems.

#### Implementation: enforcement and power relations

The implementation of these headwork operation agreements was not without defaults. In fact, Takhar water users adjusted the gates several times over the course of the irrigation season when members of the Kunduz WAC were not present.<sup>305</sup> The PARBP facilitator, who patrolled with the Kunduz representatives, recalls:

*Sometimes we would go to the intakes and we would see that the gates had been half opened and that the mechanisms were damaged so that they could not be operated anymore. People argued that they needed money to hire a mechanic. In fact I think they had just removed some parts. Sometimes they would put wooden beams at the bottom of the gate to let some flow pass. They argued that it had been carried by the river and got stuck, thus blocking the*

301 Interviews # 10; 15; 16; 99.

302 This does not mean that the Kunduz WAC did not attempt to acquire water from Bangi by other means (see below).

303 Field visit observation with Kunduz WAC members.

304 The Sharawan canal cuts across the natural borders of the river basin. For a description of the origins of Sharawan canal see also P.Gentelle, “Milieu naturel et techniques d’irrigation en Asie centrale aux Ages du Bronze et du Fer: problèmes nouveaux?” *Asie Centrale*, 223-288.

305 Interviews # 13; 10; 15; 16; 99.

*gates... In many cases we would arrive at the spot and see that the gates were in place as per agreement. But that doesn't mean they remained so when we weren't there. You see, when a gate is supposed to stay closed for a long period you can see that the screw is getting dusty and dry. But every time we went to check the Takhar intakes, you could see the grease was fresh along the screw, which means that gates had been manipulated before we came.<sup>306</sup> Also, the Sharawan mirabs switched the two gates that were supposed to remain open. At the Sharawan intake, the flow is not evenly distributed across the eight gates. There is more pressure and more flow passing through the right gates as opposed to the most extreme left gates where there is some sedimentation. So they closed the left gates.<sup>307</sup>*

One of the Sharawan WAC representatives admitted that many water users were involved in breaking agreements:

*From the people's side, nobody did what they promised and many times people in Takhar were trying to avoid the promises they made. Sometimes they were stopping water at night. Some commanders were encouraging local people to make problems.<sup>308</sup>*



*Image 3: The grease on the screw from a Sharawan gate indicating that it has been opened while it should have been kept closed*

For a key informant with long experience in SWM projects in Takhar, these were just one example of the kinds of games that upstream water users play all the time:

*Most people in Takhar knew from the beginning that this decree would not be implementable. They knew that they had the upper hand. Takhar has powerful people and it is located upstream so they know that if they constantly play the game of respecting the agreements when people from Kunduz are there and not respecting them when they aren't, the Kunduz people will eventually get tired.<sup>309</sup>*

For the Kunduz representatives of the joint WAC, the adjustable gates of the modern headworks have largely played a facilitating role in the mishandling of gate operation:

*When we close a gated headwork in a canal, as soon as we leave the area it is easy for someone to come and open the gate again. With traditional intakes, when we remove a line of sandbags it is less likely that people will close it again because it is costly and it takes more people and effort.<sup>310</sup>*

The WUA chairman of the left bank canals in Khanabad (also a WAC member) confirmed the limitations of infrastructure rehabilitation when allocation is contested:

*In the past, before PARBP came, almost all the intakes were traditional or broken. So it was more difficult for farmers to control the water. Regularly the intakes would be washed away, which was beneficial for us as we received water regularly as a result. Nowadays, they are many modern intakes and headworks with gates, so they can control the flow better and take more water and nothing is left for us. When we see the EC flag on the intakes of Taloqan we are not happy. Although we are very happy with the barrage in Khanabad because that gives us better control.<sup>311</sup>*

306 This was also a personal observation during a field visit with the Kunduz representatives of the joint WAC.

307 Interview # 13.

308 Interview # 38.

309 Interview # 31.

310 Interview # 88.

311 Interview # 15.



Image 4: Khanabad barrage in August 2011

The other general problem was that intakes could not be monitored at night due to an unfavourable security context.<sup>312</sup> As the chairman of the Zargar canal WUA explains:

*During the night, the government doesn't have access to areas away from the road. People are openly moving with weapons. So it means nobody can monitor water during the night. You can monitor intakes during the day, but not the whole canal.*<sup>313</sup>

Additionally, it was also considered unsafe for people from outside Takhar to be staying in the province at night. For the Kunduz representatives, it was better not to risk raising tensions or create incidents when Takhar was already upset at external interferences from Kabul and Kunduz concerning the presidential decree.<sup>314</sup>

However, the many attempts to illicitly change the gate operations were still contained to a certain extent. On a few occasions, the Kunduz representatives of the WAC faced stronger resistance from powerful people—particularly from right bank canals such as Sharawan, Jui Daraz or Gawmali.<sup>315</sup> In those instances, they decided to ask the authorities to take action. The WMD director personally went to the Sharawan and Jui Daraz headworks to discuss the decree and the need to release water to Kunduz with local elders.<sup>316</sup> In Jui Daraz, the police came at least once to monitor and talk to the local WAC representative and elders.<sup>317</sup> In another instance, the gatekeeper (also a WMD staff member) of Sharawan was beaten by people who wanted to increase the flow in Sharawan main canal. The police were sent by the governor to calm the situation down and keep the gates closed.<sup>318</sup> Hajji Ghulam Nabi, a Takhar representative of the joint WAC, recalls another such event at the Sharawan canal:

*During the WAC activities some people tried to make trouble in Baharak and Khwaja Ghar districts. They tried to stop water flowing to Kunduz. Together with the Kunduz WAC members, we went to both areas and saw a lot of people with weapons and farming implements. Then we*

312 Interviews # 29; 42; 37; 45; 38; 47; 30; 35.

313 Interview # 45.

314 Interviews # 15; 16.

315 Interviews # 10; 13; 15; 16; 99; 37; 38; 47; 35.

316 Interviews # 32; 30.

317 Interview # 30.

318 Interview # 32.

*visited the governor and, with the cooperation of Takhar provincial authorities, we succeeded in managing these tensions.*<sup>319</sup>

One of the Sharawan representatives of the joint WAC admitted that the arrival of the police had an impact on limiting further defaults.<sup>320</sup>

Although all these actions were possible thanks to the involvement of the governor due to his ability to mobilise the police, it is important to note that he was not responding only to the requests of the Kunduz WAC. As the PARBP facilitator explained, there was also pressure coming from MPs in Kabul:

*On July 12, one representative from downstream Goltepa [i.e. downstream Khanabad] called an MP from Kunduz for support. She then called the Takhar governor and mentioned that he had to follow the order from Karzai concerning the water sharing plan between Takhar and Kunduz. The governor then directly called the mirabs of Sharawan as well as the district governors, ordering them to reduce water use in Sharawan or else he will have to take his decision [i.e. send in security forces].*<sup>321</sup>

Although parliamentarians are not supposed to have any authority over provincial governors, these MPs were part of the group that had participated in convincing the president to order water allocation through decree. Furthermore, as a key informant mentioned:

*The current Takhar governor is from the same political party [Hizb-i-Islami] as most of the influential parliamentarians who pushed Karzai to initiate this decree. This is another incentive for him to respond to such pressure.*

According to water user representatives interviewed in Takhar, the governor took the issue of water allocation between Takhar and Kunduz seriously.<sup>322</sup> Nevertheless, there are also limits to how much coercion a governor can apply, as well as how far this will produce results. As an experienced key informant from Takhar put it:

*Of course there was more pressure on the governor and he had to use the police but that quickly reaches its limits of social acceptability and legitimacy. The police are from Takhar and they never play a neutral role. They cannot push too much against their own people if it is seen as favouring Kunduz. So they may send soldiers once in a while to show that they care about the decree but was it really significant in Sharawan? [...] People were quick to compare the governor and those who wanted to enforce the decree with the Taliban, who sometimes apply force. At some point, the government thus has to deal with a credibility issue.*<sup>323</sup>

Overall, the governor as well as the WMD had to find compromises. WAC members explained that the governor had been trying to buy time for 2011, promising Takhar water user representatives that he would support them in reviewing the decree. For some, he even played a double game; one informant described how he encouraged users to take water, but make sure that they avoided any open conflicts: “The WMD and Governor told us [the Takhar WAC members]: ‘Whatever you do, I’m fine with it as long as you keep both sides calm.’”<sup>324</sup> However, there is a long-term danger with those compromises. As a key informant explains:

*The governors often bargain with influential leaders and ask them to keep the people quiet, in exchange for which he will support these leaders in the future, to the extent he can. But sometimes governors make promises without knowing if they will still be governors in the future. It’s always short-term interest. Sometimes they play a dangerous game, because they can’t always give as much as they promise.*<sup>325</sup>

319 Interview # 37.

320 Interview # 38.

321 Interview # 13. This was confirmed by the Goltepa representative (interview # 10) and also by the MP involved. She was already strongly involved in supporting Kunduz in 2008.

322 Interviews # 29; 30; 34; 35; 37; 38; 39; 40; 42; 44; 45; 47; 32; 33; 36; 41; 43.

323 Interview key informant, Takhar, 25 November 2011.

324 Interview # 35.

325 Interview # 31.



Although interviews did not reveal any such promises this time round, the WMD director felt that the situation, apparently under control during the 2011 dry year, might not be stable and reproducible if water shortages extended into 2012:

*This year we managed to keep the problem under control but force had to be used together with coercion and negotiations with powerful people in Takhar. If there is another drought next year I will simply give my resignation. I don't want to be involved because the conflicts will be more severe and we won't be able to solve the problem again.*<sup>326</sup>

The governor's strategy of "keeping both sides calm" may be a viable solution if conflict dynamics do eventually dampen down with time. However, it could conversely be little more than a short-term fix, storing up more severe conflicts for the future.

Despite knowing that the water received was far from the amount stipulated by the decree and feeling that agreements on headwork operation had been broken, the Kunduz representatives of the joint WAC remained convinced that monitoring had a positive effect on water access in Kunduz. They were also convinced that the presidential decree had helped in this respect, despite the fact that Takhar had rejected it.<sup>327</sup> As Mohamad Zaher, a WAC member from Kunduz, put it:

*In my opinion, without the letter from the president we wouldn't have received water because we wouldn't have had that much pressure on the governor and the WMD. And without the cooperation of the WMD and the governor there is nothing that can be done.*<sup>328</sup>

Hajji Ghulam Nabi from the Takhar WAC made a similar observation:

*This time the decree helped Kunduz because it allowed them to be far more confident in their claim for water. Because of the decree, the police were very active in helping the WAC when there was tension or resistance from people in Takhar. If there had not been a decree, the police would never have come to support the WAC during these moments of tension.*<sup>329</sup>

#### Way forward: Toward a revision of the presidential decree?

At the start of 2012, Takhar water user representatives (i.e. the main actors who have led previous delegations, such as Hajji Mamoor Azad, Wakil Tura Khan and his brother Dr Mushahid) were still planning to go to Kabul and push the Minister of Agriculture, Irrigation and Livestock to initiate a comprehensive survey of the Takhar irrigated area., As Hajji M. Azad explained:

*This year during irrigation season we went to Karzai to get his support and insist that MAIL take action. But he told us, "You can follow up with the minister and I will also give him a reminder." After our meeting with Karzai, we went to the minister of MAIL but he was in Germany [at the December 2011 Bonn conference] so we couldn't meet him...We have to organise more elders from Takhar with the support of PC members and MPs from Takhar to go directly to the minister of MAIL and ask him why he is delaying the resurveying of our area.*<sup>330</sup>

Thus, in contrast with the LKSB case study, the Takhar representatives were ready to revise the content of the decree and thus engage in the formulation of water rights between provinces. However, it remains to be seen whether this willingness will translate into practice on the ground.

### Decision-making within Kunduz Province

#### Decision-making and composition

On 18 June, a WAC was formed within Kunduz in response to water shortages below the Khanabad barrage. It originally started with farmers' formal complaints and requests for support to the WMD.<sup>331</sup> At the time, Kunduz farmers anticipated that it would be necessary to go to Takhar to

326 Interview # 32.

327 Interviews # 10; 15; 16; 99; 35; 37; 38; 47.

328 Interview # 15.

329 Interview # 37.

330 Interview # 97.

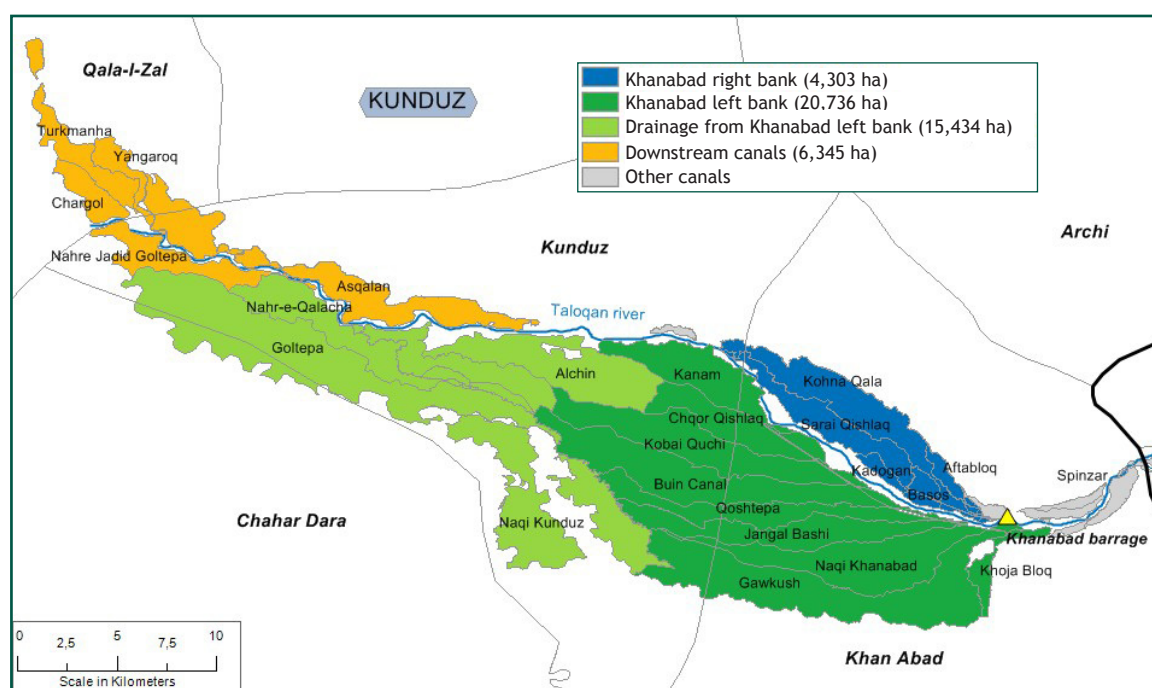
331 Interviews # 24; 13.

discuss water allocation for Kunduz (see elsewhere above), and that subsequently a platform for inter-provincial water allocation would be required. Nevertheless, it was also felt that a separate commission should be formed to deal exclusively for water sharing problems within Kunduz. At first, the WMD director organised a meeting of more than 50 water user representatives to suggest the formation of a Kunduz WAC. Later on, he invited PARBP-TA as a facilitating partner and to take charge of the logistical costs.

Following the recent completion of the Khanabad barrage, its gates became the first critical water distribution point within Kunduz, dividing 46,818 ha into four parts (see Map 12):

- **Left bank:** 20,736 ha (Khanabad left bank canals)
- **Drainage area:** 15,434 ha (canals receive water draining from the Khanabad left bank canals)
- **Right bank:** 4,303 ha (Khanabad right bank canals)
- **Downstream canals:** 6,345 ha (canals are not directly fed at the barrage location, but are located further downstream)

**Map 12: Canals irrigated below the Khanabad barrage**



The formation of the WAC (see Table 15 for its composition) was formally led by the WMD director and governor. The four water user representatives—landlords and influential community leaders—were largely the same as those who would later be selected to engage in discussions with Takhar stakeholders (see above). In the intra-Kunduz WAC, the chairman was a water user representative from the Qobai Qochi canal. Although he was not from the downstream canal area, he was selected because it was thought his influence within the Khanabad LB canals could support downstream canals such as Naqi Kunduz and Goltepa. The people representing the left bank and right bank of the Khanabad system had already been selected for this position by the WUA representatives of each canal during the Khanabad Irrigation Scheme Rehabilitation Project (KISRP).<sup>332</sup> Their appointment to the WAC was thus a demonstration of the WMD and governor taking existing institutions into account. Although PC members, MAIL and NDS representatives were also included in the WAC, the overall decision-making process was generally led by water user representatives and the WMD.

<sup>332</sup> The KISRP was an EC-funded project that focused first on the physical rehabilitation of the Khanabad barrage and the main infrastructure of the Khanabad Irrigation Scheme (primarily the main and secondary canals). A second component focused on institutional development which comprised the formation of WUAs first at canal level and then through a federation on the left bank and right bank.

**Table 15: Composition of the Kunduz WAC**

<b>Name</b>	<b>Position/organisation</b>	<b>Location</b>	<b>Type of stakeholder</b>
Hajji Amirjan	WUA Chairman, Goltepa	Goltepa canal Left bank (LB) - Khanabad Irrigation Scheme (KIS)	Water user reps
Qumandan Sultan	WUA chairman, Qobai Qochi	Qobai Qochi canal LB (KIS)	Water user reps
Alawudin khan	WUA Chairman, right bank canals	Right bank - KIS	Water user reps
Malem Zahir khan	WUA chairman, left bank canals	Left bank - KIS	Water user reps
Akbar	NDS representative	Kunduz	NDS representative
Abdul Salam Makhdoom	Provincial governor's representative	Kunduz	Governor's office
Khalil khan	MAIL extension officer	Kunduz	Line ministry
Engineer Lutfudin	WMD Hydrologist	Kunduz	Line ministry
Eng Sayed Ahamd	WMD Director	Kunduz	Line ministry
Abdul Qadir Hussaini	PC deputy head	Kunduz	Elected reps

Water allocation at the barrage followed a time-based rotation in proportion to the amount of land of the respective canal command areas (see Table 16). Although PARBP offered to use their Geographic Information System (GIS) database, the figures had to be adjusted due to *mirabs'* disagreement with them.<sup>333</sup>

The WMD director explained that when the right bank canals were getting their turn it was anticipated that their canal conveyance capacity would be limited, and the extra water should therefore be diverted to the left bank canals. A similar procedure was planned during the LB turns, although the conveyance capacity of the left bank canal was much higher and could accommodate most of river flow. It was therefore expected that the actual percentage of time share for the LB would ultimately be higher than indicated in Table 16. The agreement on rotation was considered as a major achievement at the time since it had been anticipated that the security context could be a hurdle to finding solutions acceptable to everyone.<sup>334</sup>

**Table 16: Water allocation at the Khanabad barrage**

<b>Canals/area</b>	<b>Command area (ha) - (based on GIS)</b>	<b>% of command area</b>	<b>Time of water turn (hours)</b>	<b>% of time</b>
Left bank + drainage area	36,170	77 %	117	66 %
Right bank	4,303	9 %	40	11 %
Downstream canals	6,345	14 %	20	23 %

Retrospectively, nobody had any complaints about the agreements, even though none of the downstream canals were represented at the meeting. The WMD explained that the drainage area representatives were also supposed to represent downstream canals. At the time, this was not much of a problem since the decision on rotation was quite favourable to downstream canals, and because they had in any case been informally involved in the decision-making process when they attended discussions with the committee.

333 Interview # 12.

334 Interviews # 25; 10; 16; 99; 9; 24.

**Table 17: Composition of “internal” Khanabad WAC**

<b>Name</b>	<b>Position/ organisation</b>	<b>Location</b>	<b>Type of stakeholder</b>
Zeyaulhaq	WMD director, Khanabad	Khanabad	Line ministry
Gul Karim	<i>Mirab</i>	Kanam canal (left bank)	Water user reps
Doctor Faizullah	WUA member	Qobai Qochi canal (left bank)	Water user reps
Khan Muhammad	<i>Mirab</i>	Naqi Khanabad canal (left bank)	Water user reps
Hajji Nimatullah	<i>Mirab</i>	Gawkush canal (left bank)	Water user reps
Saed mangal	<i>Mirab</i>	Qoshtepa canal (left bank)	Water user reps
Abdul Rahim	<i>Mirab</i>	Nahr-i-Qalacha (drainage area)	Water user reps
Mohammad Zahir	<i>Mirab</i>	Naqi Kunduz canal (drainage area)	Water user reps
Ghulam Hazrat	<i>Mirab</i>	Goltepa canal (drainage area)	Water user reps
Hameedullah	<i>Mirab</i>	Alchin canal (drainage area)	Water user reps

Soon after, another WAC was formed along similar lines. This time, the purpose was to develop rotation inside the Khanabad left bank and its drainage area. This time, it was mainly *mirabs* who were involved.

In this “internal” WAC, the Khanabad WMD director was designated as chairman, and was also in charge of selecting its members. In this case, his good inside knowledge of the area’s canals and the respect he wielded among its communities were considered key factors behind this choice. As the *mirab* of Naqi Khanabad explained:

*The WMD director of Khanabad was supportive and useful—not as a WMD employee, but because he knows everyone and people respect him. This is why he was the head of our committee in Khanabad.*<sup>335</sup>

He was thus picked because he was felt to be the right man for the job, and not on the basis of his position. Although the provincial WMD director was in charge of designating the chairman, the choice was open for discussion and the eventual decision was the result of a consensus.

The decisions made inside the Khanabad WAC were all informal and based on verbal agreements. In addition to the body’s appointed members, other *mirabs* from canals involved in the rotation were in many cases invited for discussion and to monitor or patrol canals when security allowed.<sup>336</sup> As the *mirab* of Naqi-Khanabad explained: “The committee was in fact changeable because different groups of *mirabs* were coming during their turns.”<sup>337</sup>

The decision on rotation among canals allocated set numbers of hours in proportion to the size of each command area. Although the rotation was technically agreed by the ten-member commission, according to both the Khanabad WMD and a PARBP facilitator, more than 100 water users gathered for its first meeting. During this event, the internal WAC asked 18 *mirabs* to jointly agree on command areas of each canal. However, the decision was regularly updated at adapted in order to compensate for defaults in the implementation.

### Implementation difficulties

#### **Problem 1: Khanabad left bank canals versus drainage area**

The drainage area below Khanabad left bank (including Naqi Kunduz, Goltepa, Nahr-i-Qalacha and Alchin) is dependent on upstream canals (i.e. those on the left bank) to receive water. One

335 Interview # 87.

336 Interview # 87.

337 Interview # 87.

of the main issues recurrently reported in PARBP-TA minutes and interviews is the tension existing between Gawkush/Naqi Khanabad (left bank canals) and Goltepa/Naqi Kunduz (drainage area canals).

The main explanation put forward was the security environment in Khanabad District. Due to the presence of *arbaki*, monitoring in the area was difficult. Historical tensions between different commanders in Khanabad and Goltepa also hampered the implementation of water allocation plans, since the punishment of defaulters was virtually impossible.<sup>338</sup> One *mirab* and WAC member for Goltepa explained:

*We have enough water in Khanabad but the problem is that people upstream are not releasing water, so it isn't reaching to us. In the past, people in Goltepa often went to Khanabad to ask for water, sometimes around 100 or 200 people. Now we cannot go to Khanabad because of the arbaki.*<sup>339</sup>

The *mirab* of Naqi Khanabad added:

*In most of the area people upstream have used more water and have not respected the rules and regulations to leave some water for downstream areas. In Gawkush there were lots of problems with people from Nasery [upstream], mainly between Mirab Malang and people in Naqi Kunduz and Goltepa. He was against the people downstream based on previous conflicts.*<sup>340</sup>

According to the WUA chairman of Asqalan:

*Hajji Malang was from Nasery area. Merza Nasery was the deputy of Noorullah Noory, leader of the Taliban in the North during their administration. This area was very powerful during the Taliban era. Now they still have bad relationships and lots of enemies with areas further downstream.*<sup>341</sup>

The PARBP-TA facilitator's minutes mentions repeatedly note this upstream/downstream problem. For instance, on 2 July they record the following:

*Unfortunately Hajji Malang [ex Mirab of Gawkush canal in the Nasery area] created problems and closed the water coming downstream from the Naqi Kunduz and Goltepa areas. So the internal commission members agreed to go and discuss with him to release water for people downstream, but they were not able to solve the problem... So they have prepared a letter to the governor [asking] him to push people in Nasery not to create further problems and release water for the people downstream in Naqi Kunduz and Goltepa.*

However, the governor and police repeatedly refused to take action.<sup>342</sup> As the WUA chairman of Goltepa put it: "In this context, the WAC doesn't have enough authority to enforce [its decisions]. The securities forces and other provincial government departments are not cooperative."<sup>343</sup>

The WAC member from the Khanabad right bank confirmed the difficulty of getting support from the authorities to tackle defaulters:

*Goltepa also has water rights, but Nasery, Malarghi and Katakhal are overusing and blocking more than their share of water, and not releasing it to Goltepa. We have reported the issue to the governor's office several times, but the government did not pay attention because in Kunduz it is weak and based on relationships. We also cannot go there to monitor the canal because anti-government elements exist there.*<sup>344</sup>

338 Concerning Khanabad area, Schetter talks about "a myriad of mini-fiefdoms," with power structures changing from village to village (see Schetter Conrad and Rainer Glassner, "Neither Functioning, nor Failing of the State: Seeing Violence in Afghanistan from Local Perspectives," in *From Fragile State to Functioning State: Pathways to Democratic Transformation in a Comparative Perspective*, ed. S. Collmer (Berlin: Piscataway, 2009).

339 Interview # 10.

340 Interview # 87.

341 Interview # 94. Soon after the end of irrigation season, *mirab* Hajji Malang died in roadside bomb attack in the Khanabad area.

342 Minutes PARBP-TA facilitator on 15 July, 16 July and 25 July 2011; interview # 13.

343 Interview # 10.

344 Interview # 16.

### **Box 8: Anecdotes on the security context in Khanabad during the 2011 irrigation season**

*On the Khanabad left bank, the head of the Kunduz WMD was monitoring a canal. He found someone who was overusing water; this person was an arbaki member. The WMD director called to him and questioned him, but he said, "I have 20 RPGs and I will fire on you and on your WMD." Then the WMD head left the canal.*

– Aleudin, WAC member and WUA chairman of Khanabad right bank WUA

*There was a problem between Sehdarak (and other downstream canals) and our own canal [Naqi Khanabad]. A person had opened the gates during the night and around 12 farmers were irrigating their land. Early the next morning, the mirab from Sehdarak area came and accused us of supporting the Khanabad canals. We told him that we were not informed. Then we went to the site and the defaulting farmer explained himself: "I was at home and I heard the sound of water, so I went out and saw that there was some water in the canal. I started irrigating my land; it is not even 2 jeribs." We also found that other pieces of land had been irrigated and that the person who had opened the gates was a commander. But before we could talk, the downstream canal people [i.e. Sehdarak area] abused that commander. So he asked his son to bring his gun because somebody had abused him in front of his house. His son went to get the gun but after a lot of discussion we were able to stop the irrigation and avoid further escalation.*

– Khan Mohamad, mirab of Naqi Khanabad canal (Khanabad Irrigation Scheme)

The mirab of Naqi Khanabad added: "The WMD, security Police, NDS—all of them are scared of people in Nasery and [Hajji] Malang."<sup>345</sup> Further anecdotes on the security context are provided in Box 8.

As mentioned above, the rotation plans had to be adapted due to repeated defaulting. For instance, on the 15 July, 48 additional hours were given to the LB and drainage area. However, this barely benefited the downstream area and in fact gave even more help to the left bank canals, as one informant reported:

*When we realised that Goltepa had some problems accessing water from Naqi Khanabad and Gawkush, the WAC agreed to give an extra 48 hours to that area. This made the rotation a bit longer, thus slightly reducing overall availability for other canals. But more unfortunately, the Goltepa area did not really see any of this water. Of course, the left bank was pushing for this agreement which was supposedly supporting the drainage area depending on them. It makes sense to agree to anything that lets water pass through your area, because you can take it on the way.<sup>346</sup>*

#### **Problem 2: The forgotten downstream canals**

Although in principle downstream canals such as Asqalan, Nahr-i-Jadid Goltepa, Yangaroq, Turkmanha and Chargol were supposed to receive water for 20 hours every week, this was not the case in practice. Because of the problems and tensions within Khanabad, the agreements for downstream canals got forgotten. As the *mirab* of Yangaroq explained:

*When we talked to the WAC for the Khanabad barrage, they said, "You have separate intakes so you should get some water from the river." We asked, "If it is not in your plans anymore to leave water for downstream canals how can we have water?" They said, "most of drainages and springs come to the river and you can solve your problems with that."<sup>347</sup>*

345 Interview # 87.

346 Interview # 13.

347 Interview # 95.

The WUA chairman of Asqalan went on:

*We went to the WMD, provincial governor, police, PC and MAIL but nobody supported us. When we asked for water from Hajji Sahib Amirjan [member of the WAC for Khanabad barrage and a representative for Goltepa and the downstream canals] he just said that the WAC can't bring water from Khanabad by force, and even the WMD and police can't pressure the defaulters to leave water for the downstream area. All relevant government departments in Kunduz are afraid of the 4,000 armed people in Khanabad.*<sup>348</sup>

Although water users within the Khanabad scheme acknowledged and welcomed the efforts devoted to finding an agreement on rotation, the downstream canals felt that their interests had not been sufficiently included and defended. Instead, they felt that the “internal” WAC was formed for the Khanabad scheme only.<sup>349</sup>

Water user representatives also explained that the problem was, as elsewhere, exacerbated by the new gates installed at the Khanabad barrage during the KISRP project. They explained that in the past (including in 2008), it was not possible to completely stop the water at the barrage, meaning that some water was always flowing toward downstream canals. However, with the new infrastructure in place, it is now possible to divert water exclusively to the right and left bank canals,<sup>350</sup> cutting off any flow to downstream canals from Asqalan to Turkmenha.

As a response, the water users of those canals preferred to revert to alternative coping practices to access water, such as channelling springs and resurgence flow<sup>351</sup> from the river to their canals.<sup>352</sup> Additionally, Khanabad left bank canals such as Choqor Qishlaq and Kanam<sup>353</sup> have been draining some water back to the river, which can then be captured by Asqalan and to a lesser extent by canals further downstream. The *mirab* of Asqalan explained that he had some personal contacts in those canals who could help make sure he received some water.<sup>354</sup> Similarly, Nahr-i-Jadid Goltepa, Turkmenha, Chargol and Yangaroq canals also have access to a few springs and resurgence flow. Along with complementary pumping, this allowed them to irrigate approximately 50 percent of their command areas (mainly for dry crops such as mung bean). Table 18 gives an indication of the area irrigated in the downstream canals based on NDVI and *mirabs*' perceptions (see above for more details on NDVI analysis).

**Table 18: Area irrigated in the downstream canals based on NDVI and *mirabs*' perception**

Canals	% of non-irrigated area (NDVI analysis)	% of non-irrigated area ( <i>mirab</i> estimation)
Asqalan	30 %	50 %
Chargol	37 %	n/a
Yangaroq	58 %	50 %
Turkmanha	49 %	50 %

The downstream canals stopped attending any meetings once they realised they would not get water from the barrage. Within the downstream area, it thus became a situation of “everyone for themselves.” In Asqalan, the *mirab* explained:

<sup>348</sup> Interview # 94.

<sup>349</sup> Interviews # 26; 5; 94.

<sup>350</sup> Interviews # 5; 26; 94.

<sup>351</sup> A resurgence comes from a natural situation where water flows to the surface from underground. In the specific case of this paper we talk about resurgence flow in the river bed.

<sup>352</sup> Interviews # 26; 5; 94.

<sup>353</sup> The NDVI map seems to indicate that those 2 canals were well irrigated and under paddy cultivation (see section on outcomes and results in the Taloqan sub-basin).

<sup>354</sup> Interview # 5.

*What happened to the downstream canals? They became dry. After our intake there are a few small canals but they didn't get anything. They never asked me anything and if they did I would not give them anything because we have to find our water ourselves from springs and resurgences. They can do the same.*<sup>355</sup>

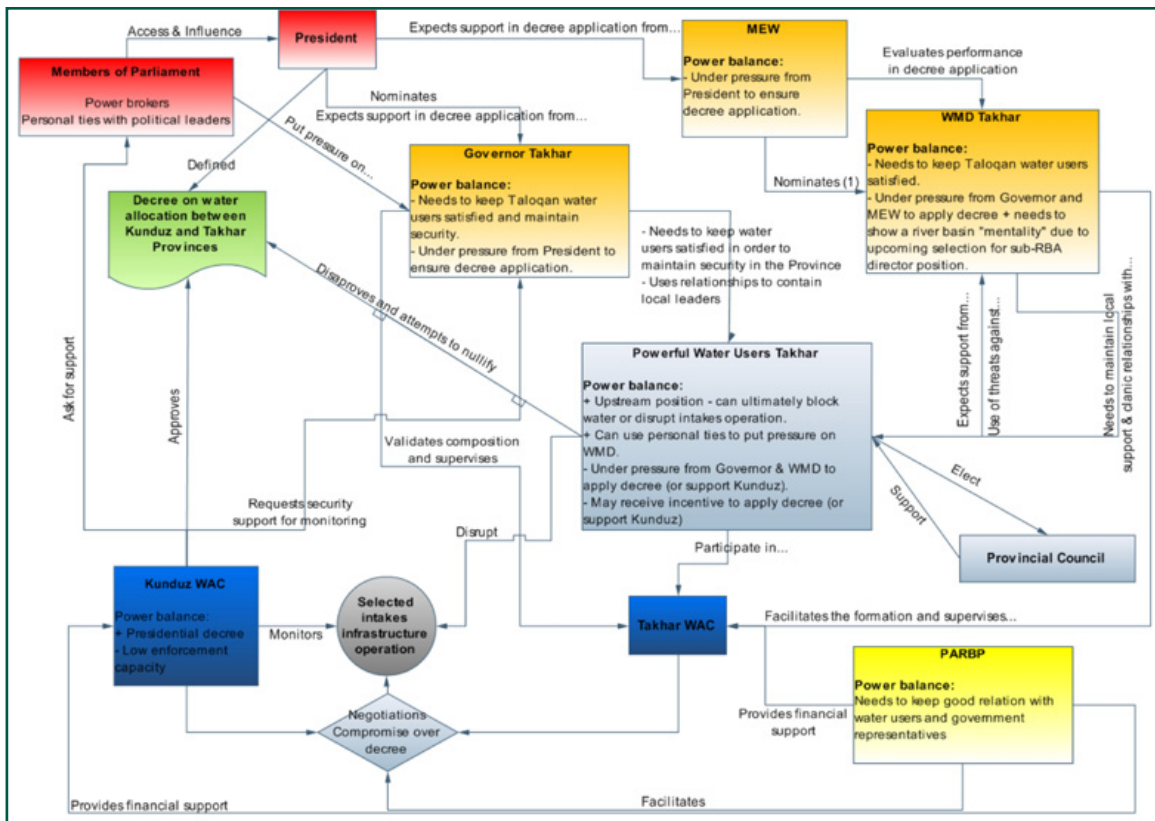
Overall, while Khanabad left bank and right bank canals irrigated approximately 82 percent and 86 percent of their command area respectively, the most downstream canals irrigated approximately 56 percent. Ultimately, the problem of low water access for the drainage area and most downstream canals in Kunduz was not one of decision-making, but rather of implementation. This was due to an unfavourable security context and a lack of enforcement capacity among the WAC and local government actors.

## 6.2 Reflection

### Understanding the power relations involved in implementing water sharing between Takhar and Kunduz

When questioned about the implementation of water allocation agreements between Takhar and Kunduz, many interviewees talked about “double games” played by most of the key actors involved, including the WAC members, the WMD and the governor. This needs to be understood in terms of the complex web of power relations that underpinned the process (see Figure 17).

**Figure 17: Power relations in Takhar concerning the implementation of the presidential decree/water allocation arrangements between Takhar and Kunduz**



(1) also selects future (sub) RBA directors

How far the presidential decree was applied in Takhar depended largely on the balance of different factors pressuring the governor and the WMD. On one hand, the governor had to demonstrate that a decree signed by the president—who had the sole power to nominate or remove him—was being implemented. Similarly, the fact that the decree was also signed by the deputy Minister of Energy

355 Interview # 5.



and Water meant that the WMD director (nominated by MEW) also had to produce results. In 2011, the WMD director was also a candidate for the position of sub-RBA director as appointed by MEW, giving him an additional incentive to perform. At the same time, however, the coercion capacity of the governor and WMD is limited. If the governor had pushed too strongly for the application of the decree, he could have faced demonstrations and instability. Since maintaining security is one of the main responsibilities of provincial governors, this could have resulted in a damaging exposure of his deficiencies in this regard.

This resulted in a delicate balancing act. For instance, the governor was able to demonstrate his support for the decree by sending police to the Sharawan intake to force the *mirabs* to close its gates as agreed. At the same time, however, he was lenient with defaulters who opened their intakes at night and when Kunduz farmers were not present to monitor their actions. Similarly, he encouraged water users and their elected representatives to openly complain during meetings with Kunduz, and signed letters of disagreement sent to Kabul by local elders. It is also possible that he promised his support to elders in the province (including from the Sharawan canal) if they could prevent demonstrations among water users, as is common practice among governors.<sup>356</sup>

The WMD director was also aware that his position and reputation were based on his ability to maintain good relations with powerful local leaders, especially from the right bank (including the Sharawan canal) where his tribe is well-represented. The PARBP-TA facilitator explained:

*Engineer Salim has to take into account the fact that people in the Sharawan canal are a potential threat for him. The most powerful people in Takhar are from this canal area, and he is from the same tribe as most of the dominant people in Sharawan so there are expectations of him. He has to try to show that he respects the presidential decree but at the same time, he knows that if he pushes too much for a “haqabah approach,” he will be threatened. And that has already happened.*<sup>357</sup>

As with the governor, it is very likely that negotiations took place between the WMD director and water users.

For their part, Kunduz water user representatives knew that they could use their MPs close to the president to put pressure on the Takhar and Kunduz provincial governors. On the other hand, they knew that too much pressure would have upset Takhar water users, who could then have decided not to give water to Kunduz. In such a case, the Takhar governor’s authority would not suffice to enforce water distribution agreements.

### ***Introduction of a new layer of legal pluralism at the inter-provincial level***

Until the 2011 irrigation season, water allocation between Takhar and Kunduz followed the traditional practice of *abandâz*, in which Takhar granted water to Kunduz as a “good will” concession (see Table 8).

In 2011, the presidential decree introduced a drastic change with the introduction of water rights (*haqabah*) for each province. As the Khanabad WMD director put it:

*In the past, Takhar gave water to Kunduz as a humanitarian gesture, saying, “We are giving water to Kunduz because they are our neighbours.” It meant that they did not acknowledge that people in Kunduz had a right [to access water]. But after this decree was established, it was no longer an issue of mercy or support to neighbours, but an issue of rights.*<sup>358</sup>

<sup>356</sup> After all, in a “government of relationships,” it is common practice to nominate governors for their ability of “using their relationships to deal with crises and achieve stability.” See H. Nixon, “Subnational State-Building in Afghanistan” (Kabul: AREU, 2008).

<sup>357</sup> Interview # 13. During the 2008 dry year, the SMWA project supported water user groups in implementing more equitable water sharing between Sharawan secondary canals. Based on the reaction of powerful upstream elites, the WMD director, asked the SMWA project to stop engaging in these activities (personal discussion with SMWA project leader, September 2008).

<sup>358</sup> Interview # 25.

**Table 19: Different claims for water allocation in the TSB**

<b>Actors/water allocation principles</b>	<b>Position</b>
Presidential decree	The presidential decree defines <i>haqabah</i> between provinces, taking into account the irrigated command areas and the types of crops involved. It has been endorsed by MEW and MAIL. Recently, the president has authorised a joint revision of the data on command area.
<i>Abandâz</i>	With <i>abandâz</i> , upstream water users release water for downstream water users under certain conditions. The decision on duration and occurrence belongs mainly to upstream water users as <i>abandâz</i> does not guarantee any rights to downstream users. However, it is considered morally unacceptable to refuse a minimum <i>abandâz</i> (i.e. a few days). Historically, upstream water users have never refused <i>abandâz</i> although their help has sometimes been very limited. This system prevailed until 2011 and the introduction of the presidential decree.
Kunduz stakeholders	In 2011, Kunduz stakeholders (water users, local government and elected representatives) pushed for the application of the decree. However, they ultimately accepted a compromise with Takhar stakeholders that did not fully comply with the decree.
Takhar stakeholders	Takhar stakeholders have forcefully rejected the decree. Although the system of <i>abandâz</i> is largely to their advantage, they are ready to consider a system of water rights based on the proportion of land in each province—provided that they feel these portions have been calculated correctly. They have thus requested a review of the command area stipulated in the presidential decree.
Islamic jurisprudence	Sunni jurisprudence: “For small rivers where the water must be stored to raise it to the required level (Ali ibn Muhammad 1903-8, 313 and 322) two general principles govern irrigation rights. When water is scarce, upriver pieces of land are irrigated first, but the quantity of water retained should not reach above the ankles; otherwise one can irrigate as much as one likes.”*
	Shia jurisprudence: “In the case of natural water courses, upstream landowners are entitled to first use of water. [...]The upstream proprietor is not obliged to let the water reach the plots downstream until he has finished irrigating his own crops in the described manner, even if the crops of downstream owners suffer as a result.”**
Local religious leaders	Members of the Ulema <i>shuras</i> in Takhar and Kunduz confirmed the principles of the Islamic jurisprudence regarding water entitlements. However, in their Friday speeches at the mosques, they emphasised the value of generosity under Islam, calling for more equitable water sharing between upstream and downstream users at both intra- and inter-canal levels.
Afghanistan Water Law	The determination of water allocation and the management of water rights in the river basin is the responsibility of the RBC (see Article 14 of the Water Law). The RBA (line ministry) plays to the role of advisor to the RBC on water allocation. Existing water rights should be gradually converted to permits (see article 20 of the Water Law).

\* Caponera, “Ownership and Transfer of Water and Land in Islam,” 96.

\*\* Caponera, “Ownership and Transfer of Water and Land in Islam,” 97-98.

As mentioned above, water allocation in the decree was based on command area and crop water demand. One major reason behind its rejection by Takhar stakeholders (including, unofficially, the provincial and district governors and the WMD) was the inaccuracy of the data it was based on. However, there was also a broader rejection of principles such as allocating more water rights to rice-growing areas.

Although Takhar stakeholders have requested a new survey on the amount of irrigated land in each province, it may well be that any results do not result in significant changes to the decree. Indeed, on the basis of PARBP GIS data, around 39 percent of the total land in the TSB is in Takhar Province, with approximately 61 percent in Kunduz. These are very close to the proportions outlined in the decree (although the decree came to this figure applying different criteria; see elsewhere above). Overall, NDVI analysis, flow measurements and qualitative perceptions of water users all suggest it is reasonable to say that more efforts are needed on the Takhar side if water is to be shared equitably with Kunduz. However, considering the tensions of 2011, it is doubtful whether this will be achievable in practice, and resistance to water allocation based on land area should be expected.

The WMD director in Takhar warned against too much change imposed too fast. Although he was in favour of a water allocation based on land area, he felt that affected water users would refer the issue to the Ulema (religious scholars), citing Islamic jurisprudence that gives priority to upstream areas.<sup>359</sup> As indicated in the LKSB case, both Shia and Sunni jurisprudence appear to give priority to upstream water users (albeit under certain conditions; see Table 19). This point is confirmed by senior members of the Takhar and Kunduz Ulema *shuras*.<sup>360</sup> However, one member of the Takhar *shura* explained that Friday speeches in mosques have often focused on the need to share water equitably, to avoid conflicts and “to think about Muslim brothers from downstream areas.”<sup>361</sup> Similar arguments were also used in cases where the Ulema were invited to support conflict resolution within canals.<sup>362</sup> It therefore appears that religious leaders can in some cases apply a more pragmatic approach to water allocation. However, none has ever been invited to participate in any of the WACs formed along the TSB.

As mentioned in the case of the LKSB, The Water Law of 2009 explains in article 20-1 that: “Existing water rights will be gradually converted to permits in accordance with the policies of the relevant River Basin Agency.” In the TSB, water rights have not yet been defined since the presidential decree is still contested. However, in contrast to the case of Baghlan in the LKSB, Takhar stakeholders were usually more receptive to possible discussions on rights (*haqabah*) as opposed to *abandâz*.

### **Conducive context for dialogue and negotiation strategies?**

This section explores whether mutual interests and interdependency between actors are conducive to effective water allocation decisions. We refer to the conceptual framework of Kok<sup>363</sup> (see Figure 14 on p. 54).

As in the case of the LKSB, the interests of Takhar and Kunduz water users are opposed to each other. Because of their upstream position, Takhar water users have the upper hand, and their low dependency on Kunduz water users allows them to apply a “take it or leave it” strategy in the case of water allocation. To some extent, this is what happened during traditional *abandâz*, where Takhar would release water to Kunduz as a moral obligation, but remain in control of *abandâz* definition.

The introduction of the presidential decree during the 2011 irrigation season has largely shaped the relationship between Kunduz water users and the Takhar authorities. Since they had a degree of obligation to satisfy Kabul’s requests, the interests of the Takhar governor and WMD director were aligned with those of Kunduz water users. To some extent, Kunduz water users could use their supporters in Kabul to put additional pressure on the Takhar authorities. However, Kunduz stakeholders remained dependant on Takhar authorities to make sure decisions were enforced among Takhar water users. In this case, maximum cooperation between Kunduz water users and the Takhar authorities was thus possible.

359 Interview # 32.

360 Interviews # 100; 101.

361 Interview # 100.

362 Interview # 100.

363 Kok, *Internationaal Onderhandelen. Problemen Bij Internationaal Zakendoen*.

To some extent, the interests of Takhar’s authorities and its water users were parallel, since the former would benefit by keeping the latter happy. Cooperation was thus possible. However, as a consequence of the pressure coming from Kabul to satisfy Kunduz, their interests were largely divergent. Nonetheless, there was also a level of interdependency between the two groups. The governor and WMD cannot control everything—especially given the limited resources at their disposal—and therefore rely on elders and water user representatives to implement water allocation. For their part, Takhar water users can up to a point refuse to abide by agreements with Kunduz, but they also cannot afford to push the governor too far, since they often rely on him to help solve their problems (whether water-related or otherwise). For instance, although Takhar water users could have relied on influential leaders to meet with Karzai and push for a revision of the decree, they went through the governor first. In addition to being a useful resource with direct access to the president, the governor also has a key role in ensuring security in the province, another reason why it might be unwise to alienate him. Overall there is therefore room for “accommodating” rather than “fighting” between Takhar authorities and water users, although in some cases the governor did show his readiness to mobilise police against defaulters where necessary.

Overall, the presidential decree has shifted the conducive context from a “take it or leave it” stand to one of “accommodating” by putting pressure on the Takhar governor and WMD. Nevertheless, as mentioned above there is fear among Takhar stakeholders that this “accommodating” could become “fighting” in the long run if the issue of water rights between Takhar and Kunduz is not successfully resolved.

### 6.3 Outcomes and results in the TSB

Following the paper’s conceptual framework, this section analyses whether the MSP has been able to:

- Generate results and support;
- Collectively engage in issues and fact-finding; and
- Develop synergy.

#### *Criteria for evaluating the generation of results and support*

##### **Improved water distribution**

The results are first assessed in terms of improved water access for Kunduz in comparison of the previous dry year of 2008, when social mobilisation around water allocation was reportedly unsuccessful.<sup>364</sup> This is then followed by an exploration of how far water allocation agreements have played a role in any change. As a proxy for absent data on actual water distribution, NDVI analysis will be used. It is impossible to directly assess the impact of social processes on water access and agricultural production as they cannot be isolated from other contributing factors—whether hydrological, political, social, or economic—many of which may also have undergone changes between 2008 and 2011. Nevertheless, the comparison of irrigated areas and cropping patterns through NDVI remains a useful basis for suggesting hypotheses on how changes in decisions over water allocation have—together with other factors—played a role in generating improvements for downstream areas.

##### **Conflict limitation**

A second criterion in assessing the outcomes of the efforts of the Kunduz WAC in its interactions with Takhar over water allocation, is the occurrence or reduction in conflict, especially in comparison to 2008 and in light of the presidential decree. In particular, the capacity of the MSP to contain tensions and conflicts has been considered as part of the results it should generate in order to be seen as effective and legitimate.

<sup>364</sup> Personal observation, post irrigation season workshop conducted in Kunduz during October 2008.

### Capacity in mobilising and generating support

As mentioned in the conceptual framework, it is assumed that the better access to material, financial, institutional and other support an MSP has, the more likely it is to provide better and more sustainable results.

### *Results: Improved water distribution*

The perception is that the flow in the Taloqan river was lower<sup>365</sup> in 2011 than it was in 2008 or similar dry years.<sup>366</sup> Although the PARBP-TA, MEW (Kabul) and WMD (Kunduz and Takhar) conducted flow measurements during the irrigation season, a number of limitations make these data too unreliable for any analysis (see Box 9).

#### **Box 9: Issues with flow measurements in the TSB**

##### **Low accuracy and differences in methods used for river flow measurements**

The overall method used was the area-velocity method. However, in cases with a large and braided river profile\* and turbulent flow—like the TSB—such methods can be quite inaccurate. Furthermore, different surveyors used different formulas to calculate flow velocity. While they all used similar floating devices (half filled small plastic bottles), some estimated overall flow velocity as 0.8 of measured surface flow velocity, while others did not. This was a critical limitation as in most cases, two different surveyors were measuring flow at different points on the same day (for instance, one at Bangi Bridge and another one at Tangi-Farkhar). Furthermore, staff conducting flow measurements often change from one year to the next, making comparisons over time highly doubtful.

##### **Low number of measurements**

During the critical months of July and August 2011, only three measurements per months were been conducted by PARBP-TA. In 2008, five measurements were conducted in August—but only for the second half of the month—while none were reported for July.\*\* This low overall number of measurements and the difference in period for data collection make analysis and comparisons rather uncertain. By comparison, the MEW mission sent from Kabul to assess the application of the presidential decree only conducted one measurement, as did MAIL.

##### **Possibility of misinformation**

As mentioned above, multiple actors were active in conducting flow measurements. Furthermore, over the course of the irrigation season, different figures and claims were made regarding this measured data. The potential biases of those involved thus raise further questions over the reliability of the data.

\* A braided river is composed of a network of small channels separated by small and often temporary islands. Braided streams occur in rivers with high slope and/or large sediment load.

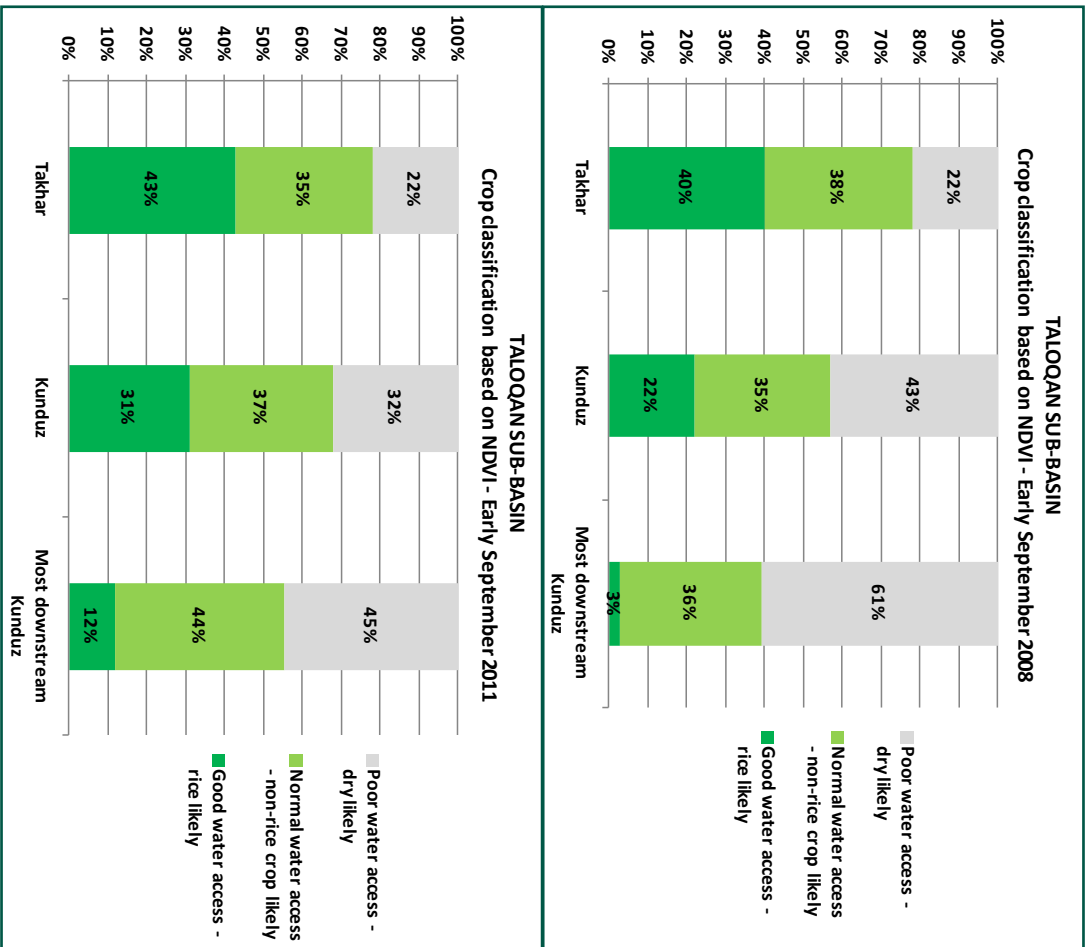
\*\* Based on flow measurement Excel sheet provided by PARBP-TA Kunduz office in August 2011.

Based on farmers' perceptions, it is thus assumed that the flow in the Taloqan River in 2011 was not higher than in 2008. On this basis, the NDVI analysis suggests that there has been an improvement in the equity of water distribution between Takhar and Kunduz from 2008 to 2011. While 43 percent of Kunduz was considered non-irrigated in 2008, this figure dropped to 32 percent in 2011 (see Figure 18 below). However, this improvement was not as significant as the one that took place in the LKSB.

365 Interviews # 29; 30; 32; 35; 36; 37; 38; 41; 42; 45; 46; 47; 74.

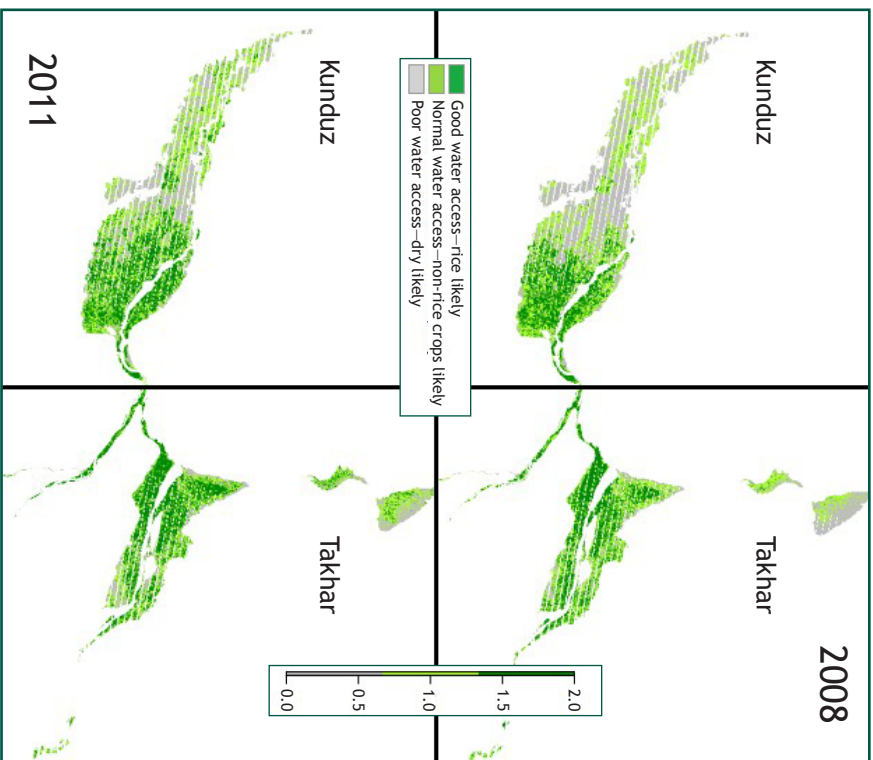
366 Interviews # 31; 34.

**Figure 18: Comparison of estimated cropping patterns along the TSB during the dry years of 2008 and 2011**

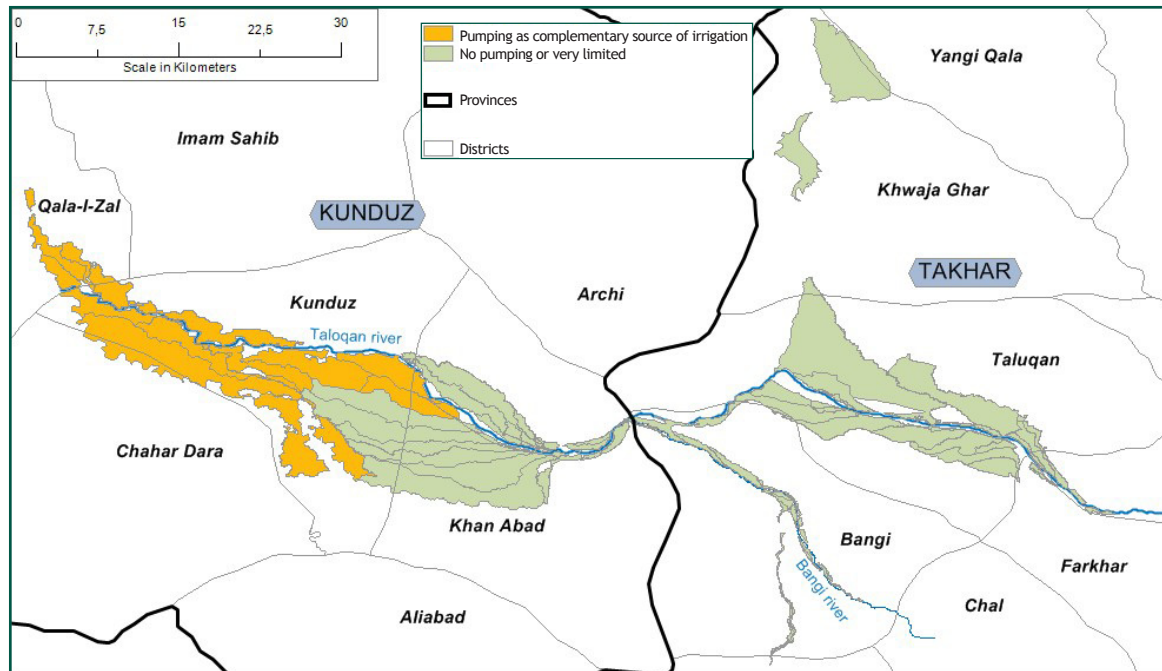


Note: For a discussion on the differences in NDVI analysis techniques used in 2008 and 2011, see note on p. 61.

**Map 13: NDVI Map covering the TSB command areas in September 2008 and September 2011**



**Map 14: Pumping activities during the 2011 irrigation season along the TSB irrigated areas**



What is similar to the LKSB case is the fact that the increase in cropped area from 2008 to 2011 cannot be fully attributed to an improvement in water sharing from Takhar to Kunduz. Once again, pumping practices virtually nonexistent in 2008 were recorded in most downstream Kunduz canals as a complementary source of irrigation (see Map 14). As in the case of the LKSB the experience of 2008 was a lesson for many farmers, who anticipated reduced water access, purchased equipment and dug wells earlier in the irrigation season. However, none of the Kunduz canals along the TSB reverted to pumping as their main source of irrigation, as was the case with most downstream canals in the LKSB.

For the five downstream canals<sup>367</sup> that have their intake at the river some 20-40 kilometres below the Khanabad barrage, the “dry area” was reduced from approximately 61 percent in 2008 to 45 percent in 2011. However, the surface water they accessed did not come as a result of water allocation agreements within Kunduz. Rather, it was acquired through drainage water reaching the river and being rechanneled to their canals. This drainage was either from natural origin or reaching the river through arrangements taking place outside of formal agreements (see comments from the Asqalan *mirab* above). Underground water was used for complementary irrigation. For these canals, the impact of the presidential decree and the work of the WAC was therefore limited, although not completely ineffective. As the *mirab* of Asqalan pointed out:

*In 2008, there were no water turns within Khanabad because they had no commission and only upstream Khanabad had some water. The work of the commission has been somewhat positive as they managed to get at least some water to downstream Khanabad without creating conflicts. Indirectly, this benefitted us as we could collect some drainage water.*<sup>368</sup>

Another similarity with the LKSB is the fact that the 2008 and 2011 dry years did not result in a change in cropping patterns in Takhar. NDVI analysis indicates that there is almost no reduction in rice cultivation in the province between a dry year (2008 or 2011) and a wet year (2009) while the increase in dry area is insignificant (see Figure 21 in Annex 3). This means that even if Takhar did attempt to supply more water to Kunduz in 2011, these efforts did not affect usual cropping patterns.

367 Asqalan, Nahr-i-Jadid Goltepa, Chargol, Yangaroq and Turkmenha.

368 Interview # 5.

## Results: Conflict limitation

### Inter-province: Takhar and Kunduz

All the TSB actors involved in the discussions, decisions or implementation of water allocation between Takhar and Kunduz praised the joint WAC for managing to avoid severe conflicts among water users.<sup>369</sup> In the words of the PARBP-TA facilitator, “There is no doubt that 2011 was much better organised than 2008, thanks to the WAC. There were more meetings and discussions to avoid big problems.”<sup>370</sup>

The Kunduz representatives of the joint WAC were also able to find the right balance when compromising with Takhar water users. As Khan Mohamad, a *mirab* of Naqi canal in Khanabad, explained:

*We had to be careful not to put too much pressure on the Taloqan people. We knew that if we asked for our actual water rights [i.e. based on presidential decree] we would face big problems and there would be no-one to resolve them. But at the same time the WAC kept some pressure on to ensure more water reached Kunduz.*<sup>371</sup>

The Kunduz WMD director confirmed that the WAC and government officials in Kunduz had to keep in mind that if Takhar water users were sufficiently upset, they could have stopped water sharing with Kunduz completely, and in that case, there would have been nothing the authorities could have done.<sup>372</sup> For Khan Mohamad, a Khanabad left bank representative and joint WAC member, “If the WAC had not been there, people would have managed the way they know: they would have blocked the road and demonstrated.”<sup>373</sup> Hajji A. Quduz, a Takhar member of the joint WAC, held a similar view: “...The biggest achievement of the joint-WAC is that we maintained good relations between Kunduz and Takhar and coped with any possible eruption of violence between people.”

However, nobody denied that the authority and legitimacy of the joint WAC was based at least in part in the presidential decree and the support the WAC enjoyed from the Takhar WMD and provincial governor. As the Khanabad left representative and joint WAC member put it: “Without the letter from the president we wouldn’t have received water because we wouldn’t have had that much pressure on the governor and the WMD.”

### Kunduz Province

As discussed above, the security context in Kunduz during the 2011 irrigation season was a serious obstacle to water distribution within the province, including between the upstream left bank Khanabad canals and the downstream drainage area. Despite this, the WAC helped in reaching agreements on water allocation plans both at the Khanabad barrage (i.e. among left bank, right bank and downstream canals), while the “internal” WAC did the same for the left bank canals and Goltepa. Conflicts on decision-making were thus avoided. The Khanabad District WMD director summed up a widely-shared view among interviewees:

*The hour-based water rotation was a big achievement because according to reports from security forces, there are more than 40,000 weapons inside Khanabad District. If there had been no WAC, there would have been a lot of killing and criminal cases due to water-related disputes.*<sup>374</sup>

However, the security situation hampered the implementation of the agreements. This was beyond the control of the internal Kunduz WAC; despite requests from the governor, even the police did not intervene. Nonetheless, most of the Khanabad water user representatives interviewed felt

369 Interviews # 2; 5; 9; 10; 13; 14; 15; 16; 24; 25; 26; 29; 30; 31; 32; 33; 34; 35; 36; 37; 38; 39; 40; 41; 42; 43; 44; 45; 46; 47; 74; 77; 78; 87; 88; 89; 90; 91; 92.

370 Interview # 13.

371 Interview # 14.

372 Interview # 24.

373 Interview # 15.

374 Interview # 25.



that even though the WAC could not enforce its decisions, it still managed to prevent potential conflicts from worsening.<sup>375</sup> Still, the *mirab* of downstream Yangaroq canal warned that tensions raised due to poor water access in downstream areas could not be contained for long in the absence of concrete results:

*We have asked the government to solve our problems during the irrigation season, but still nobody has been able to ensure that people upstream do not take our water. This is what drives our young generation to join the Taliban or leave the country. The government has to solve our problems with people upstream in Khanabad, otherwise we will collect everyone in the downstream area and start fighting and demonstrations against the Kunduz authorities, with the support of Taliban. They will block the road and kill the people that we want them to.*<sup>376</sup>

### Takhar Province

As mentioned earlier, no major conflicts erupted in Takhar. The few times that incidents did emerge, they were kept under control with the intervention of the joint WAC, the WMD and the provincial governor. In contrast with Baghlan—the upstream province in the LKSB—there was no resentment expressed against the local authorities despite their efforts to secure more water for Kunduz. However, there was a fear among staff in the provincial governor’s office and the WMD director that if water rights issues were not dealt with before the next dry year, they could become harder to control.<sup>377</sup> The WMD director felt that while the presidential decree and the activities of the WAC had been relatively successful, “the problem is that implementation has not been through mutually recognised and stable agreements.”<sup>378</sup>

### Capacity to collectively engage in issues and fact-finding

Ideally, an MSP should have a strong capacity to gather and collectively analyse data and knowledge that will enhance understanding, definition and implementation of water management plans. As discussed above, water allocation plans between Takhar and Kunduz were initiated in Kabul by a presidential delegation long before the existence of any WAC. The process of “issues and fact-finding” was thus not participatory in any way. When the WAC was formed, the concerned stakeholders negotiated adjustments in the headwork gates in an ad hoc fashion.

At the beginning of August 2011, Kunduz representatives of the joint WAC supported by their WMD director formally requested that flow measurements be provided (although it had been agreed informally a month earlier that the presidential decree would not be exactly applied). This was most likely a strategy to keep pressure on the Takhar authorities, since it was clear that they would not officially reject the decree. The way it was handled provides some insights into the limitations in the capacity of the joint WAC—including government stakeholders—to collectively and transparently conduct a joint fact-finding mission.

Although the Kunduz and Takhar WMDs were supposed to conduct flow measurements in coordination with PARBP, some of the data collection and analysis took place separately. On 7 August, the WMD of Kunduz conducted flow measurements at Pul-i-Chugha (i.e. as water was entering Kunduz Province), finding that the flow was 24.5m<sup>3</sup>/s. If the decree had been applied to the letter, the flow should have been 34.5m<sup>3</sup>/s. The Kunduz WMD director then sent an official letter to the Takhar WMD to request more water—despite being well aware that informal agreements had already been made about just how far the decree would be applied in practice. However, the Takhar WMD referred to his own set of measurements (partly collected by PARBP staff in Kunduz and partly collected by WMD staff in Takhar) that suggested a flow of 35 m<sup>3</sup>/s at Pul-i-Chugha, representing 67.7 percent of the flow at Tangi-Farkhar and Bangi Bridge and thus higher than the decree’s requirements. Considering that it is highly doubtful that the flow in Pul-i-Chugha increased by 43 percent in one day, some informants expressed doubts about the transparency of this data collection. As the PARBP-TA facilitator recalled:

375 Interviews # 10; 15; 16; 99; 25; 94; 5; 89; 14; 2.

376 Interview # 92.

377 Interviews # 32; 33.

378 Interview # 32.

*One day Engineer Salim [the Takhar WMD director] was with us monitoring canals in Takhar. He got a phone call and the person said that there was 40m<sup>3</sup>/s in Pul-i-Chughha [Kunduz], which we knew was impossible because that would be approximately the same flow that we can find in Tangi-Farkhar [upstream Takhar]. But he just said “you can go—there is plenty of water in Kunduz.”<sup>379</sup>*

During the same period, a delegation of two engineers from the Kabul MEW came to Kunduz to conduct flow measurements in support of the application of the presidential decree.<sup>380</sup> However, according to the PARBP-TA engineer who was asked to support the delegation, their collaboration with the Takhar WMD was not exactly constructive. Indeed, on 6 August the PARBP-TA local engineer in charge of conducting flow measurements sent a letter of complaint to his team leader, explaining:

*On 2 August, the Takhar WMD director brought the MEW Kabul delegation to visit Sharawan and Gomali canals, which was only to keep them busy and waste their time. The next day, an engineer was introduced on behalf of the Kunduz WMD representative to go and conduct water measurements in Takhar Province. On that day, the Takhar WMD didn't facilitate the assigned team and nobody was introduced from the Takhar WMD to join the PARBP team with Kabul MEW team and the engineer introduced by the Kunduz WMD. Therefore I have prepared this report to complain about both the Kunduz and Takhar WMDs because they are not eager to have the data and are not supporting water measurement.<sup>381</sup>*

In one meeting, the Takhar WMD director announced the figures mentioned above to demonstrate that the decree was being respected. However, the Kunduz WAC members remained sceptical.<sup>382</sup>

Overall, these events demonstrate a degree of mistrust among participants when it came to collecting and analysing quantitative figures, along with some seemingly clear attempts to distort results. The capacity of the WAC thus showed some signs of weakness in terms of jointly analysing information for better water management.

In reference to Figure 4, “certainty on data/knowledge” in the TSB is relatively low. This is illustrated by the unreliability of flow measurement data and the possibility of misinformation (see Box 9). Consensus on values is arguably “low,” but not as low as in the case of the LKSB. This is illustrated by the fact that despite Takhar stakeholders’ opposition to the presidential decree—both in terms of content and making procedure—they were not firmly opposed to the idea of defining water rights between Takhar and Kunduz. However, it would be premature to argue that consensus on values regarding water allocation principles is actually “high.” Based on Hisschemöller’s framework, resolution strategies may oscillate between “policy as learning/joint fact-finding” and “policy as negotiation.” While the 2011 dry year was an illustration of negotiated decisions, a new strategy of joint fact-finding had not yet been undertaken; nor had a planned review of the command area and other relevant data used in the presidential decree to define water allocation. This should take place in as participatory a manner as possible in order to raise the level of acceptability and legitimacy of its results among key stakeholders within the sub-basins and in Kabul.

### **Mobilising and generating support**

#### **Financial support from PARBP-TA: Helpful but unsustainable**

Financial support from PARBP-TA motivated the WAC members to organise or attend more meetings and engage in more frequent monitoring. As the PARBP facilitator explained:

*If there had not been any logistical support, some rich farmers and elders would have paid to go and talk to Taloqan and Bangi, and to monitor. But they would have gone two or three times at most, not as much as they did with the financial support from PARBP.<sup>383</sup>*

379 Interview # 13.

380 Informal discussion with the two engineers from the Kabul MEW delegation, 11 August 2011.

381 Extract from a report dated 6 August 2011, prepared by Engineer Asif, the PARBP water flow, measurement engineer in charge.

382 Interview # 15.

383 Interview # 13.

However, this does not represent a sustainable financial resource for the WAC. The recently-proposed regulations on the establishment and activities of RBCs<sup>384</sup> insist that they generate their own revenue. According to article 6 (12): “RBCs are the leading units in the river basins. Hence, they are obliged to enhance economic sustainability by generating income for the units.” However, since 2005 there have been no plans from PARBP-TA regarding income-generating strategies and the capacity development necessary for RBCs to become financially sustainable.

Despite the feeling that the WACs produced added value during the 2011 dry year in the TSB, there remains very little conviction among WAC members and PARBP facilitators that ordinary water users are ready to pay for such services. As the PARBP-TA facilitator for the TSB explained:

*It is important to find a source for a good budget as soon as April or May, when we know that there will be a drought. So far we have spent up to \$10,000<sup>385</sup> for the TSB. But I think that if there is another drought next year and it is farmers who have to collect this amount of money for these kinds of results, I'm sure they won't pay. I don't think we have reached the level of services that farmers expect before they will pay for them.<sup>386</sup>*

Despite representing an area that has benefitted from the joint WAC activities, the Khanabad left bank representative and joint WAC member was similarly sceptical:

*If we don't have funds for all the transport and some compensation for our activities in patrolling the canals, it becomes very difficult. We can form a WAC, we can make plans even if PARBP and EC are not here, but without money we can't implement anything. Though the WAC this year is providing better results, with the current level of results, no farmer will be ready to pay anything for the WAC activities. Our farmers don't even pay tax, so...<sup>387</sup>*

It is fair to assume that there is even less chance of Takhar farmers being willing to contribute since they have nothing to gain from the activities of a joint WAC.

In 2007, the issue of fees collection for RBCs was raised by the PARBP-TA during a sub-basin working group meeting. However, further discussion on the topic were postponed due to comments from working group members—including the current Kunduz WMD director<sup>388</sup>—basically dismissing the practicality and popularity of such a measure.<sup>389</sup> This discussion has yet to be resumed.

Considering that according to the Takhar deputy governor, the government lacks the resources to even implement and monitor water allocation,<sup>390</sup> the financial sustainability of the TSB WAC (or future RBC) appears to be in jeopardy. It would be wise for the PARBP to urgently look into this matter, considering that developing and implementing a strategy to ensure the long-term financial viability of an RBC will take time.

### Information support from PARBP-TA

As with the LKSB, the PARBP-TA organises a drought and flood forecast workshop for the TSB each April-May to estimate the likelihood and anticipated intensity of floods and dry periods for the upcoming irrigation season (May to September). The forecast preparedness system is based on snow cover and snow-water equivalent estimates.<sup>391</sup> In May 2011, MEW and MAIL advised water users to limit paddy cultivation based on the warning issued during this presentation. However, as was the case in the LKSB, this warning did not lead to a significant change in cropping patterns prior to the onset of water shortages, although at least one WAC member explained that he

384 “Regulation on Establishment and Activities of River Basin Councils (Draft - September 2011).”

385 Another source from PARBP-TA put this figure closer to \$9,000.

386 Interview # 13.

387 Interview # 15.

388 He was not WMD director at the time.

389 Personal observation.

390 Interview # 33.

391 Beekma and Fiddes, “Floods and Droughts: The Afghan Water Paradox.”

could therefore use that information against farmers by telling them they had been warned.<sup>392</sup> In Asqalan canal, where paddy cultivation was actually reduced, the *mirab* explained that he had enforced this decision irrespective of PARBP-TA information.<sup>393</sup> In a further similarity to the LKSB, NDVI analysis indicates no decrease in paddy cultivation upstream in Takhar, where a reduction in water demand could have had an impact in decreasing pressure on the system.

The early warnings also did not result in the early formation of a joint WAC to discuss possible water allocation scenarios. The different WACs in the TSB were formed much later and planning organised at the last minute when farmers started to complain to the WMD and the governor.

## 6.4 Conclusion

### Decision-making

- In the TSB, a presidential decree overruling the Water Law was used to determine water allocation between Takhar and Kunduz. The impetus for this decree came from Kunduz water users who mobilised different national actors including MPs to change a water sharing situation perceived as inequitable.
- There is a consensual agreement in both Provinces that the development process of the presidential decree was very far from participatory.
- The introduction by decree of new water allocation principles with fixed water rights as compared to the traditional system of *abandâz* created tensions between provinces.
- Despite the prescriptions of the presidential decree, final agreements over water allocation between provinces and concerning canal headwork operation were negotiated by a joint WAC through an ad hoc process that reflected local power balances. Ultimately, a compromise was found between *haqabah* (as stipulated by the presidential decree) and *abandâz*. This alternative water allocation procedure was more flexible and excluded fixed rules.
- Although not fully applied, the decree was influential in securing more water for Kunduz in comparison to past dry years. It also introduced a strong shift in water allocation principles in the TSB.
- The introduction of the presidential decree through the involvement of MPs, the president's office and the MEW in Kabul pushed the governor and WMD of Takhar to align their interests more closely with those of Kunduz water users. This subsequently created room for cooperation and support to the downstream province. To some extent, the decree therefore brought negotiations closer to a "level playing field" as it pushed Takhar stakeholders to improve water distribution to Kunduz.
- Although Takhar stakeholders did not accept any permanent rights for Kunduz in 2011, they are ready to discuss the possibility through the participatory assessment of new data.

### Composition and adaptivity of MSPs

- In the TSB, the formation of MSPs dealing with water allocation among canals followed an adaptive and pragmatic process based on developing events and emerging needs. Similar to the LKSB, water allocation in the TSB was not mediated through one single MSP but rather through multiple platforms at different scales along the sub-basin. As in the LKSB, there was a clear provincial demarcation in the arrangements of the WACs. For instance, Kunduz had a WAC to formally engage with government representatives in Takhar. This same Kunduz WAC also dealt with intra-Kunduz issues at the Khanabad barrage. Below the barrage, a separate commission was formed with high flexibility in its composition. Due to pressure from Kunduz WAC to apply the presidential decree, a joint WAC for both provinces was formed, composed of water user representatives and informally supported by government officials.

392 Interview # 15.

393 Interview # 5.

- The composition of the different WACs and other ad hoc arrangements involved both government representatives, elected representatives and water user representatives, but focused only on questions of irrigation along the sub-basin. The observed arrangements were thus more related to participatory irrigation management issues than IWRM.
- The Takhar WMD and governor were considered legitimate actors in deciding the composition of the WAC and taking a leading role in water allocation negotiations. Although it was left to water users' representatives to find pragmatic arrangements on headwork operation as a compromise to the presidential decree, the influence and involvement of the WMD and provincial governor was critical to a satisfactory implementation that benefitted Kunduz. Overall, the composition of the different WACs was not subject to criticism among water users. For instance, the governor, WMD director and PC members in the Kunduz WAC all took the lead to support the interests of water users in their province when it came to engaging in inter-provincial issues. Within Khanabad, decisions were left more in the hands of *mirabs* and district WMDs, and the role of the provincial and district governors was less relevant—at least in decision-making. However, overall satisfaction with the Kunduz WAC responsible for water allocation at the Khanabad barrage was low, since water users in most downstream canals felt that in practice, its decisions did not adequately consider their interests.
- Similar to the case of the LKSB, the boundaries of decision-making and the subsequent composition of the WAC and other informal platforms did not fit the natural hydrological boundaries of the sub-basin. Once again, the problem-shed, which shaped the composition of WACs and other informal platforms, did not cover many small canals along higher or narrower valleys. On the other hand, the boundaries of decision-making stretched far beyond the sub-basin's geographical borders, as far as Kabul and the president's office. This contrasts with the approach proposed by policies and regulations for the composition of RBAs/RBCs. It is, however, in line with relatively recent academic discussions on the issue.<sup>394</sup>

### Outcomes and results

- The imbalance in water access between Takhar and Kunduz improved from 2008 to 2011. While approximately 43 percent of Kunduz Province had little or no water access in 2008, this figure dropped to approximately 32 percent in 2011.
- Improvements in results for Kunduz Province can partly be explained by the presidential decree— although it was not fully applied—and the decisions of the joint WAC and government stakeholders. However, the use of groundwater as a coping mechanism was also a major factor, although in proportions that remain hard to quantify.
- Similar to the TSB, the implementation of WAC decisions in the TSB was largely dependent on enforcement capacity, which was particularly lacking within Kunduz. The failure of the governor and the police to improve the security situation in Khanabad especially limited the capacity of the WAC to monitor water distribution and take action against defaulters.
- Despite the security context acting as a significant impediment to the WAC's activities, it was able to play a major role in defusing or at least limiting conflicts among water users. This was particularly acknowledged in the case of water allocation issues between provinces.
- Financial viability remains a major issue for WACs or similar future platforms such as RBCs. Although the WACs were entirely subsidised in 2011, there remains no planning on how to generate enough revenues to engage in similar or bolder activities in future years.
- On one hand, the inaccuracy and unreliability of flow measurement data hampered the definition and monitoring of water allocation plans. On the other hand, ambiguous data can be used as a strategy to maintain uncertainty in the course of their application.

<sup>394</sup> See for instance, J. Warner, P. Wester and A. Bolding, "Going with the flow: River basins as the natural units for water management?" *Water Policy* 10, No. 2 (2008): 121-138; and L. M. Harris and S. Alatout, "Negotiating hydro-scales, forging states: Comparison of the upper Tigris/Euphrates and Jordan river basins," *Political Geography* 29 (2010): 148-156.

## 7. Discussion and Conclusion: Policy Models Meet Ground Realities

The following analysis first summarises the contrast between policy model and ground reality regarding water allocation at sub-basin level. It then discusses key themes that have characterised attempts at water sector reform in Afghanistan: devolution of power in decision-making, decentralisation in decision-making and participation through MSPs. Since the PARBP has been the pilot programme for the implementation of water sector reform since 2004, this section then goes on to question and underline certain apparent limitations in its effectiveness.

### 7.1 Are policy models adapted to ground reality challenges?

#### *Contrast between ground realities and policy models*

Table 20 summarises the key differences between ground realities on MSP arrangements and the policy model. In most cases, the key contrasting features apply to both sub-basins.

**Table 20: Contrast between policy models and actual MSP arrangements**

	<i>Sub-RBA/sub-RBC model</i>	<i>Actual MSP arrangements</i>	<i>Sub-basin</i>
1	Decentralised decision-making	Kabul very influential in shaping water allocation through MPs, ministry officials and the president's office	Mainly TSB
2	Single decision-making platform (i.e. sub-RBC)	Water allocation mediated through multiple platforms at different scales	TSB and LKSB
3	Structured along water users (sub-RBC) vs. line-ministries (sub-RBA) lines	Organisational arrangements demarcated mainly along provincial boundaries (downstream WAC/upstream informal platforms)	Mainly LKSB
4	Lack of clarity on the role and power of governors in sub-RBAs/ sub-RBCs	Governors as power brokers and critical figures for legitimising decisions on water allocation	TSB and LKSB
5	Line ministry as advisor only	WMD as critical figure in shaping decision-making and supporting enforcement	TSB and LKSB
6	Composition of sub-RBCs covering the whole watershed/ sub-basin (from upper-catchment to irrigation plain)	Borders of participation and decision-making reflect and are adapted to the "problem-shed"	TSB and LKSB
7	Composition of sub-RBCs based on multiple water sectors	Composition limited to the irrigation sector	TSB and LKSB

The existence of a gap between policy and practices as observed in this research is far from unfamiliar in the development world. As highlighted by Mosse and Lewis,<sup>395</sup> policies and ideas always need to be translated into workable practices if they are to make sense on the ground. The challenge that policymakers must now address is one of analysing and understanding what happens in this process of translation in order to adapt policies appropriately.

#### *Devolution of decision-making power: To what extent is it required?*

The policy model underpinning Afghanistan's water sector reform promotes the devolution of power and decision-making over water allocation to the river basin level. This approach makes

<sup>395</sup> D. Mosse, "Is Good Policy Unimplementable? Reflections on the Ethnography of Aid Policy and Practice," *Development and Change* 35, no. 4 (2004): 639-671; D. Lewis and D. Mosse, *Development Brokers and Translators: The Ethnography of Aid and Agencies* (Bloomfield: Kumarian Press, 2006).

water users the decision-makers when it comes to preparing and developing water resource management strategies, determining water allocation rights and monitoring their implementation at basin level.<sup>396</sup> Meanwhile, government authorities play a supporting role as technical advisors. In the light of the evidence presented in this paper, the question is whether or not results would be better than those observed in 2011 if this policy model were more strictly applied.

In the LKSB, the results for Kunduz were relatively positive. In fact, the 2011 *abandâz* was at least as good as any others in the basin's history. As mentioned, a strict application of the policy model would entail a decision-making procedure reliant on water users in the form of sub-RBCs, for example. However, the vast majority of Kunduz water users representatives interviewed along the LKSB viewed the idea of bypassing the government to interact directly with Baghlan water users as an unfeasible option.<sup>397</sup> They felt that without the governor and WMD's authority, water users would not take requests seriously or would not respect the implementation of *abandâz*—as in fact happened in 2008.<sup>398</sup>

In the TSB, the involvement of MPs and the president's office in water allocation decisions and the subsequent role of the Takhar governor and WMD director in supporting its implementation all had a positive impact for Kunduz. Resistance from Takhar resulted in an eventual compromise on water allocation, highlighting that decision-making was not entirely in the hands of government and state officials. However, several Takhar stakeholders and key informants admitted that without the government's strong influence on decision-making, the situation would have been worse for Kunduz, both in terms of water access and tension among water users.

The cases in each sub-basin call into question the relevance of applying a policy model that assigns state actors a much softer role in decision making. In fact, given the decisive role state figures played in the events of 2011, doing so would be unlikely to deliver better water access for Kunduz. At the same time, however, the cases of the LKSB and TSB show that their reasons for supporting downstream water users can be opportunistic and therefore unreliable. Were the political context to change, water allocation could end up much less favourable toward Kunduz.

In conclusion, any gains in the field of "good governance" through the strict application of the above policy model are currently likely to come at the expense of effectiveness in securing water access for downstream farmers.

### *Is the state really committed to the idea of devolution of power?*

In classic cases of MSPs for river basin management, the question is often about how much power the state is ready to relinquish. In the Afghan context, however, observation and analysis of ground practices raise the question of how much power the state is trying to (re)gain. The LKSB and TSB cases illustrate that state actors—such as the WMD, governors and MPs—have in fact been very proactive in shaping water allocation processes. It remains to be seen whether this is a temporary necessity or a trend toward greater control; however, indications suggest that it may well be the latter.

Recently, a number of influential MEW members active in water sector reform have started to show signs of scepticism about the feasibility and appropriateness of transferring power to water users in the current political context.<sup>399</sup> The head of MEW's water rights department explained that in his opinion, "It is not possible to let water users decide about everything in the current situation in Afghanistan."<sup>400</sup> Even the PARBP team leader expressed his concern:

*I'm not sure that we are all that right with these kinds of multi-stakeholder type best decisions. Because there are so many groups who in the absence of a certain authority cannot eventually come to an agreement. You come to a situation of division that you had in the mujahiddin time with little groups with their leaders looking only after their own interests. You end up having what you found in Zargar,<sup>401</sup> were you have three mirabs for a small canal system with each of*

396 See Article 6 in "Regulation on Establishment and Activities Of River Basin Councils—Draft September 2011."

397 For instance, the five members of the Kunduz Water Allocation Commission: interviews # 1; 6; 7; 19; 23.

398 Interviews # 1; 3; 6; 7; 9; 19; 20; 22; 23; 27; 28.

399 Interviews # 73; 95.

400 Interview # 73.

401 A canal in Takhar Province.

*them managing their own area but not having an integrated view of the system. When you have that on a larger scale, then nothing comes out of it.*<sup>402</sup>

It was thus implied that a higher level of decision-making control should be in the hands of the government. This points to a shift away from a rigid stand on the devolution of power, at least in the short term. In fact, both key MEW figures and the PARBP team leader evoked article 13 (2) of the Water Law to justify postponing any devolution of decision-making power through the formation of RBCs.<sup>403</sup> This again sends a rather clear signal about the state intention to determine when (if ever) and how far decision making should be in the hands of water users. Similarly, the signing of a presidential decree endorsed by MEW and drawn up in a non-participatory process further questions state actors' genuine interest and belief in the core principles of the Water Law, at least when it comes to power balance.

The findings of this research thus indicate not only the reluctance of the state to relinquish decision making power to users, but its intention to regain control in decision-making over water allocation at sub-basin level.

### **Decentralisation: How far and for whose benefit?**

The 2011 water allocation process in the TSB set a significant precedent: For the first time in the history of the TSB, water allocation at sub-basin level was defined by presidential decree.<sup>404</sup> The absence of a genuine participatory process clearly shows the intention of Kabul to resolve problems through a top-down approach. What, then, might become of the good water governance principles of the 2009 Water Law, particularly the decentralisation of decision-making?

As stated above, the Water Law proposes water allocation be regulated through sub-RBCs with local government playing a technical advisory role. The fact that the presidential decree was passed after the Water Law was published in the Official Gazette demonstrates a certain disregard for the Law by the president.<sup>405</sup> The fact that MEW signed the document and even sent staff to follow-up its application also raises questions about its sincerity about a framework that it has, in theory, pushed forward.

It could be argued that since there were no sub-RBCs in 2009, at the time when the decree was issued, an alternative settlement had to be found. However, nothing was actually preventing the government from initiating, supporting and facilitating a participatory process, for example through a temporary sub-RBC. It is also true that in the end, the decree was rejected by Takhar, leading to a compromise between water users and government authorities from both provinces. Nevertheless, actors in both Kunduz and Takhar all agreed with the observation that without the presidential decree, downstream water users would have had less access to water during the dry year. In other words, the 2011 mobilisation of political actors outside the boundaries of the sub-basin by Kunduz water user representatives has been paying off. For Kunduz farmers, this confirms that problems are still likely to be better resolved through their MP in Kabul than through discussions with fellow water users and government actors at the local level. The logic of decentralisation is thus yet to demonstrate its relevance.

Similarly, the relative success of the 2011 *abandâz* in the LKSB cannot be understood without acknowledging the significant role played by the MEW in Kabul. As early as 2008, the Kunduz WMD

402 Interview # 82.

403 Interviews # 82; 79; 73; 85. The English translation of this article stipulates that: "The Ministry of Energy and Water may delegate, as required, some of its powers to the River Basin Councils in accordance with law after improving the required working capacity and capability through technical trainings." Strictly speaking, this does not mean that the MEW has any authority to decide when the authority of the RBC as stipulated in the Law may apply. It only means that the MEW may transfer some of its own power to the RBC in addition to that already legally granted to it by the Law. The Dari version of the Law seems to have the same meaning. However, high ranking MEW and other key stakeholders involved in the making of the Law refute this. Instead, they argue that the idea is to provide the MEW (via the RBA) the authority to decide when the RBC will be ready to exercise its power as defined in the Law.

404 In other sub-basins this is not something completely new. As early as 1921, following a request from the Department of Agriculture, a law by King Amanullah was promulgated officially laying down water distribution times for Kabul Province (see "Kunduz Khanabad Irrigation Study: Final Report." Volume 2, 69).

405 The decree is also technically illegal, since gazetted laws have superior juridical value.



sent a letter to MEW in Kabul, raising complaints about the lack of support from the Baghlan WMD over the issue of *abandâz*.<sup>406</sup> MEW staff consequently visited Baghlan to increase pressure on its WMD to strengthen efforts to support Kunduz. Although this did not produce any significant results on the ground as it was relatively late in the irrigation season, this visit came as a warning for the future.<sup>407</sup> Before the irrigation season in 2009, a letter from the vice-president to the MEW and the Kunduz, Takhar and Baghlan provincial governors asked the relevant government stakeholders to find a socially acceptable solution for water sharing among the three provinces. This was likely to avoid a repeat of 2008, when Kunduz farmers started demonstrations and blocked roads. The failures of 2008 and the subsequent response from the line ministries and the president's office thus created an incentive for the WMD directors to improve cooperation and find ways to release water to Kunduz in 2011.

Clearly, despite the promotion of decentralisation and devolution of decision-making power to water users since 2004, by 2011 river basin management had become more centralised than ever in the pilot TSB and, to a lesser extent, the LKSB. Moheen Marastiyar, a former Kunduz MP and close advisor to the president who lobbied for the presidential decree expressed his views on the issue:

*In Afghanistan we have both local projects and national projects. The case of water sharing between Takhar and Kunduz is a national project because what is generated by agriculture in that region has implications for the whole of Afghanistan. The income and the food production are important for the whole country. This is the bread basket of Afghanistan. Thus, decisions on water allocation there should be made at the highest level. This means it should be decided by MEW, MAIL, the Ministry of Economy and the Ministry of Justice, together with high-level authorities such as the president. If we leave these issues only to Takhar and Kunduz, how will they solve that problem? They will think only about their own interests and not the national interest.*<sup>408</sup>

As one of the only (former) MPs with detailed knowledge of the Water Law, he openly questioned its value and effectiveness. For MP and lawyer Dr. Fatima Aziz, the case of 2011 was unlikely to be a one-off: "This is very common in Afghanistan, we have laws but many actions are driven by decrees. [...] Next year, if we have the same drought issues, people in Kunduz will come to us again."<sup>409</sup> Although it is true that leaders in Takhar obtained an agreement for revising the decree, the principle was the same: decisions were looked for and found in Kabul, in the president's office.

The justifications given above for enacting the presidential decree clearly show that the principles of the Water Law have not been internalised or even understood by many of the actors involved.<sup>410</sup> There is no buy-in and interest at the national level, at least among those who are influential enough to shape water allocation rules. A striking example in the TSB is the fact that the Supreme Council for Water Affairs and Management was never involved in the drafting of the presidential decree. In other words, the highest institution in the water sector, chaired by the vice-president, and responsible to "ensure proper compliance of the Water Law by the member ministries and agencies"<sup>411</sup> did not have anything to say about the irregularity of the procedure. The fact that the Council members are nominated by the president may be part of the explanation, but if so this would in itself raise questions over the independence of the council.

Overall, the ongoing failure of national and international implementing agencies to form alternative and valued institutions along sub-RBA and sub-RBC models (see Figure 5) has facilitated a shift in the focus of decision-making toward Kabul. At the same time, the potentially volatile consequences of unequal water sharing during dry periods makes them a matter of concern for both MEW and the president himself. This further questions how realistic it is to expect decentralisation to actually happen, considering the possible political implications of water-related conflicts between provinces.

406 Interviews # 62; 24; 67; 69; 70.

407 Interviews # 65; 69; 70; 66; 68.

408 Interview # 83.

409 Interview # 80.

410 For instance, the MP who was deputy head of the commission that reviewed the Water Law explained that core principle of river basin management was to form different *shuras* in charge of water management "at village, district and provincial level." In fact, the core principle is rather to shift from administrative boundaries to river basin (i.e. hydrological) boundaries.

411 "Water Sector Strategy."

In fact, the water access results of 2011 for downstream users—whether in the TSB or LKSB—adds weight to the argument that some involvement of Kabul may be the best (or the least bad) scenario. If this is the case, a rigid application of the decentralised policy model may not be appropriate, at least in the short term. However, in any case the events of 2011 point to the failure of institutional reforms as planned by EC and the Afghan government. Two years before the EC’s planned progressive disengagement from the PARBP, the prospect of the river basin (or sub-basin) becoming the most legitimate and effective level of decision making is thus thrown into doubt.

### ***Shifting from administrative to hydrological boundaries: The clash of nature versus politics***

In line with “good” water governance principles, the proposed new set of institutions for river basin management are designed to function along hydrological rather than administrative boundaries. This is based on the theory that “natural hydrological boundaries” rather than “political boundaries” are logically best adapted to meso-level water management.

Under Afghanistan’s water sector reform model, WMDs (with responsibilities falling under administrative boundaries) would disappear and their staff be integrated into the new RBAs. However, the influential role of provincial and district governors is neither acknowledged nor discussed in the Water Law and subsequent regulations. The authority of provincial governors—directly under the President—is independent from any ministry, and is thus unlikely to be challenged or overruled by the existence of the new sub-RBAs and sub-RBCs. Sub-RBAs are expected to have no decision-making power, while sub-RBCs will be composed of water users who are under the authority of a governor in many other spheres of political and daily life. How the authority of provincial governors will interact with that of the RBCs thus remains uncertain.

According to the PARBP team leader and a senior advisor to MEW, governors would simply be represented in RBAs through their advisory boards.<sup>412</sup> Strictly speaking, this would remove decision-making power from the governor in dealing with water allocation during dry periods. This is unlikely to be feasible as it would contradict his overarching authority in regulating provincial-level security issues and his legitimacy and responsibility to engage in cross-provincial matters—both directly related to water allocation issues. It is already clear from the case of the TSB in 2011 that when tensions rise between provinces, the problem is rather referred upwards to the president, parliament and ministries in Kabul, and not left to local institutions. The TSB case also shows that the political interests attached to water allocation in this part of Afghanistan—the “bread basket,” as the ex-MP Moheen Marastiyar described it above—stretch far beyond its hydrological borders.

On the basis of field observations, it is thus clear that the shift from administrative to hydrological boundaries combined with devolution of power to local users contradicts current practices. Moreover, it is unlikely to be applicable due to the forthright challenges it poses to the authority of provincial governors, and, as noted above, may not even be advisable as far as results are concerned.

### ***Does the Water Law offer a viable alternative in the legal pluralism set-up for water rights at sub-basin level?***

As discussed earlier, the Water Law attempts to find a balance between local traditions and internationally sanctioned concepts of water governance. In terms of water rights at sub-basin level, this balance will be hard to find—at least in the LKSB—because of the incompatibility of *abandâz* with formal permits. In the LKSB, forcing the application of the Law would in practice mean pushing for a shift from *abandâz* to *haqqabah*.

So far, although Kunduz is losing out in terms of water access in comparison to Baghlan, the flexible approach of *abandâz*, away from fixed rules, has at least avoided serious conflicts. The arguments made by Kunduz for water rights for each province on the basis of amount of land may appear legitimate, but as mentioned earlier, such a transition is risky; a change from *abandâz* to

412 Interviews # 79; 82.

fixed rights is more likely to exacerbate tensions than reduce them. Does the government and the PARBP have the ability to facilitate such a transition? What would be the transaction costs and the likely benefits compared to the status quo?

In the TSB, where an attempted shift from *abandâz* to *haqabah* was imposed in a top-down, non-participatory way, tensions have been high between provincial representatives, although ultimately, a compromise privileging flexible arrangements over fixed rules was achieved. Such experience echoes well documented cases on changes in water rights in India and Nepal, although in a different context. Meinzen-Dick and Nkonya summarise the experience in those words: “Local norms which form the basis for claiming water rights are principles rather than precise rules, subject to recurring negotiation. In many [...] cases it was attempts to formalize rights that often triggered conflict, rather than the use of the water itself.”<sup>413</sup>

Although a transition to formal water rights as promoted in the Law is still possible in the TSB, a question remains over how strictly they should be defined in order to find a pragmatic, peaceful solution. The compromise of 2011, although not ideal for Kunduz, was a significant improvement over 2008 and did not result in severe conflicts. This could be considered as a pragmatic strategy, at least for the short term, until there is a more favourable context for negotiation of formal water rights.

### ***RBC and sub-RBC composition: Multi-layered and flexible arrangements versus single formulas***

In both case studies, water allocation was mediated through a multi-layered arrangement of different platforms, the compositions of which varied according to the problems they were dealing with. It was thus the “problem-shed,” rather than the watershed, that shaped how different WACs functioned.

According to the Water Law, RBCs—composed mainly of water users—are in charge of defining allocation and regulating permits. Article 14 of the Law mentions that among other duties, RBC have to:

- Determine water allocations in accordance with national water policy in the respective basins;
- Manage and monitor the right to use water (water rights) in the respective basins; and
- Establish the necessary conditions in order to evaluate, adjust and deny use permits in the respective basins.

In addition, RBCs have authority over the sub-RBCs. This means that no plan from a sub-RBC can be passed without the approval of its RBC, while the RBC may give instructions to the sub-RBC. So far, the guidelines for RBC composition and decision-making processes have been approved<sup>414</sup> by the MEW, but those for the composition of sub-RBCs were still under discussion at the time of the writing.

Significant efforts have been made in Kabul in drafting the regulations defining the composition of these platforms. This section therefore examines both RBC and sub-RBC compositions, and looks at whether or not they would be able to deal with the same issues as those encountered during the 2011 dry year.

#### **RBC composition**

At RBC level, the composition criteria mentioned in the regulations refer to a mix of provincial and sub-basin representation. However, they do not refer to representation by water sectors (see Table 20).<sup>415</sup>

413 Meinzen-Dick and Nkonya, “Understanding Legal Pluralism in Water Rights.”

414 E-mail communication with PARBP team leader dated 5 December 2011. The document provided by PARBP-TA was entitled “Regulation on Establishment and Activities Of River Basin Councils—Draft, September 2011.”

415 “Regulation on Establishment and Activities Of River Basin Councils—Draft, September 2011.”

**Table 21: Seats per River Basin Council**

<i>Basin</i>	<i>Provinces</i>	<i>Sub-basins</i>	<i>Provincial reps.</i>	<i>Sub-basin reps.</i>	<i>Reserved (religious leaders, women)</i>	<i>Total</i>
Harirud / Murghab	3	3	6	12	2	20
Helmand	9	9	9	18	2	29
Kabul	12	8	12	16	2	30
Northern	5	5	5	15	2	22
Panj-Amu	7	7	7	14	2	23

Source: PARBP, “Regulation on establishment and activities of River Basin Councils.”

Using the example of the LKSB, this section discusses what influence a Panj-Amu RBC might have had on the issue of upstream versus downstream water allocation during a dry year similar to the ones in 2008 and 2011. In such case, there would be only four representatives within the RBC who would be directly concerned by this issue of water allocation between both provinces. This would include two provincial representatives—one from Baghlan and one from Kunduz—and two sub-basin representatives (for the LKSB), again assuming one from each province. With such a limited composition, it is very unlikely that any change from the status-quo would result.

Based on the research findings, it is reasonable to assume that the Kunduz and Baghlan representatives would have opposing opinions on reviewing the traditional principles of *abandâz*. This would leave a further 19 RBC members—all from outside the concerned sub-basin and with no direct stake or interest in the matter<sup>416</sup>—to play the role of referee. As a consequence, it again is very unlikely that any decision taken by such a body would achieve much legitimacy. Indeed, how would water users in Baghlan accept a change in procedure pushed by representatives from, say, Badakhshan, Samangan or Bamyan while many of them are powerful enough to oppose their WMD directors’ decisions (see the case of the Baghlan District canals)? In other words, the new policies on the composition of the RBC would face major obstacles in introducing any change in the context of such a polarised issue as water allocation along upstream/downstream lines.

### Sub-RBC composition

In one of the most recent LKSB working group meeting to date (its 20th), discussions on the future composition of sub-RBCs suggested a mix of sector-based representation—such as irrigation or hydropower—and geographical representation along upstream (upper catchment) and downstream (main cities and irrigated plains) lines. As a result, it appears that a single group limited to 15-25 people will be expected to cover both different water sectors and different river basin zones.<sup>417</sup>

This research suggests that such a general composition—whatever its criteria—is bound to be inadequate since it relates not to specific, practical problems, but rather to the virtual and theoretical issue of “river basin management.” It also leaves very little room for flexibility and adaptivity. A rigid composition of 15-25 elected or selected individuals is unlikely to be relevant because each specific problem (dry years, flooding, upper catchment development, dam projects for river regulation etc.) will rarely concern all 15-25 members selected. For instance, in 2011, representatives of upper catchments were not involved in water allocation discussions in the TSB

416 This may not be fully accurate if the religious leaders and women representatives are from Kunduz. In such case their vote may be influenced by their provincial origin. In addition, the references made by religious figures interviewed to Sharia and Islamic jurisprudence on water allocation were close to the principles of *abandâz*

417 In 2008, an attempt was made by the Taloqan sub-basin working group to define the composition of a possible sub-RBC. The composition—25 seats—already attempted to find a balance between sectors and geographical areas, with cross-cutting gender representation (see Varzi and Wegerich, “Much Ado About Nothing”).

and LKSB because they were not concerned by how river water should be shared between canals within and between provinces.

Similarly, each problem will rarely concern all the sectors represented. For instance, out of the 13 water sectors<sup>418</sup> proposed by the PARBP-TA facilitator, only two—“small-scale irrigation” and “large-scale irrigation”—were clearly relevant in the case of the 2011 dry year along the TSB. In practice “small-scale irrigation” in upper valleys was left outside of the equation for reasons discussed above. In fact, negotiations over water allocation affected the interests of three more areas—livestock, fishing and environment. However, unlike irrigation water users representatives from these sectors never raised complaints to their elected representatives or government officials. The eight other sectors—including tourism, business and transport—were hardly relevant to the process.<sup>419</sup> The situation was similar in the LKSB, although electricity production was an additional relevant sector since it ran into conflict with irrigation water use.

As discussed in the conceptual framework, genuine and inclusive participation through an ideal formula taking into account all sectors and all areas may thus not actually provide the best results in practice. What the TSB and LKSB case studies show is that the composition of the WACs that did form during the 2011 dry year did not resemble the classic model of MSP formation that PARBP-TA is trying to promote. Inter-sectoral issues are bound to emerge in the future, at which point a platform accommodating multiple water sectors will become relevant. However, in the short- to mid-term, PARBP-TA may continue to lack relevance in the eyes of local stakeholders if it keeps reasoning exclusively in terms of multi-sector representation, since such an approach does not align with the issue actually at stake—that of irrigation water allocation at sub-basin level.

Overall, it appears likely that RBCs and sub-RBCs formed according to the proposed regulations will have little legitimacy and even less ability to change the status quo in dealing with the water allocation at sub-basin level. It is thus important for PARBP-TA to understand and evaluate the logic and value of the WAC composition and formation process when developing possible scenarios for RBC and sub-RBC compositions.

### ***Is a change of policy on RBAs/RBCs likely to be favourable towards a more conducive context for dialogue and balanced decision-making?***

The paper’s conceptual framework argues that a conducive context for cooperative decision-making is largely a question of alignment of interests and a shared feeling of interdependency (See Figure 3). Assuming that an ideal decision-making environment should be conducive to “optimum cooperation” or “accommodating” strategies rather than “fighting” or “take it or leave it” approaches, the question becomes whether or not the new policy model is likely to result in such an environment?

In the case of the LKSB, for example, the opposing interests of Baghlan and Kunduz water users and the imbalance of dependency between the two groups is not going to change just because both communities belong to the same sub-RBC. However, by focusing on the entire sub-river basin, the proposed new institutional set-up should in theory support a shift in focus away from provincial-level interests. This would likely produce an environment more accommodating to demands from Kunduz. Similarly, this shift could also potentially remove the possibility of interpersonal conflicts—for example the one that took place between the Kunduz and Baghlan WMD directors in 2008—thus removing one of the risk factors in reaching agreement on *abandâz*.

However, it is uncertain whether the new decision-making arrangement will lead to better results for Kunduz than those achieved in 2011. As discussed earlier, a context-specific convergence of interests between Kunduz water users and the Baghlan WMD director supported strong (although

418 These are: mines, electricity, small-scale irrigation, large-scale irrigation, municipalities (construction, cleaning, city water supplies, wells, pipe schemes), health, environment, business, transport, fishing, livestock, tourism and industry.

419 This is not to say that these sectors will not be relevant in future. It is just that issues related to these sectors are either non-existent at present or not considered significant enough to be discussed.

limited) action by the Baghlan authorities. If the sub-RBA were restricted to an advisory role and if decentralisation principles were applied as envisioned in the Water Law, it is unlikely that this parallelism of interests with Kunduz would remain. Left in the hands of a sub-RBC, the strategy of Baghlan stakeholders could instead be restricted to a “take it or leave it” approach.

The dynamics influencing dialogue on water allocation thus need to be understood when tackling the issue of the composition or decision-making power of RBAs and RBCs. Rather than simply selecting RBC actors along sector-based lines, it would thus be better to develop a stakeholder analysis to understand which actors are more likely to support a conducive context for cooperative dialogue. Otherwise, it is likely that a strict application of policies may at best produce few results, and potentially make things worse. In any case, an important limitation remains since alignments of interest are often unstable and hard to predict, let alone control for. As seen in the LKSB, they may depend on changes in the local political and security situation, along with the circumstances and opportunities available to the individual actors involved.

### **Articulating river basin and sub-basin authorities: Practical limitations**

Implementing the policy model outlined by the Water Law may also encounter practical difficulties in allocating decision-making authority between RBCs and sub-RBCs. In the policy model, the sub-RBC makes and implements decisions with the consent of the RBC.<sup>420</sup> However, in the case of the LKSB and TSB, this relationship is complicated by issues of geography. Under current proposals, the LKSB sub-RBC will be located in Pul-i-Khumri, the TSB sub-RBC in Taloqan, while the overarching Panj-Amu RBC will be in Kunduz City. Considering that during recent dry periods, all initiatives have been initiated from Kunduz, it is hard to imagine Kunduz representatives going all the way to Pul-i-Khumri to look for solutions which would in any case need approval back in Kunduz. As currently defined, the sub-RBC is therefore effectively redundant, at least as far as water allocation during dry periods is concerned.

## **7.2 Piloting the water sector reform: Questioning the effectiveness of PARBP on institutional development at ground level**

### **Searching for PARBP-TA impact on river basin management institutions**

From 2005 to 2011, PARBP-TA has been facilitating the formation and capacity development of sub-basin working groups. However, the involvement and impact of these groups in attempts to deal with the dry years of 2008 and 2011 was effectively zero. The WMD directors of both Baghlan, Kunduz and Takhar all felt that the groups has neither the competence nor the legitimacy to deal with issues of water allocation.<sup>421</sup> As one of them put it:

*The sub-basin working group is just useless. The relevant departments send different staff to each meeting, so nobody knows what the agenda of the last one was, what the following one will be, and what people’s roles and responsibilities are. How could they define water allocation in that case? They don’t know the possible conflicts between communities. People in sub-basin working group meetings just come to criticise each other and eat, that is all. If we leave the water allocation to them, even the farmers who are close to the intakes will lose their crops.*<sup>422</sup>

Similarly, another WMD director from the study area clearly felt the WACs were much better placed to handle the 2011 dry year:

*These commissions [the WACs] are 100 percent better than the sub-basin working group for making decisions, because they are aware of the area, and they know about mobilisation*

420 Article 6 (9) in “Regulation on Establishment And Activities Of River Basin Councils” states that a core function and power of the RBC is “to amend or withdraw any decisions made by sub-basin councils, urban councils or water service providers.”

421 Interviews # 24; 32; 62.

422 Interview with one of the WMD directors in the study area.

*because NGOs have worked with them in forming WUAs. If you look at the sub-basin working group, we haven't seen anybody from line-ministry apart from the WMD directors who has come more than three times. How can we ask them to go and make decisions for water allocation or abandâz between provinces or districts? If we had this sub-basin working group to deal with the 2011 drought, we would have faced big conflicts between canals, districts and provinces. The WAC was the best way of reducing or preventing possible water-related conflicts.*<sup>423</sup>

Furthermore, although key actors involved in the various inter-provincial water allocation agreements—for example the WMD directors—also attend the sub-basin working groups, the above description shows practices falling far short of the “good governance principles” they are supposedly piloting.

From a “good governance” perspective, it may be possible to criticise the process of negotiation and accommodation that characterised water allocation in the LKSB and TSB during 2011. Nevertheless, there was widespread consensus on the positive—albeit limited—impact for Kunduz compared to previous dry years, including 2008. On the other hand, the sub-basin working groups have never been able to produce any water allocation plan or even define the basis for one, despite more than 23 meetings in each sub-basin under the leadership of PARBP-TA. PARBP-TA did itself suggest a rotation plan between canals in both the TSB and LKSB following the dry year of 2008. However, despite being much fairer to Kunduz and drawing no public opposition from Baghlan representatives, this plan was never raised as a possible solution during the 2011 dry year discussions in either sub-basin.

In addition, the PARBP-TA has not even been considered as a trustworthy source of data on command areas, or cropping patterns, despite facilitating discussions for defining river basin profiles as early as 2006 and despite having a well-equipped GIS office.<sup>424</sup> While Takhar representatives are seeking a review of the irrigated area in Takhar and Kunduz, none of them is aware of the possibilities of using reliable GIS data from the PARBP office in Kunduz.

However, part of the responsibility for not being able to draw a water allocation plan must also rest with the World Bank considering that since 2004, no precise data on river flow from measurement stations—for which it is responsible—has been available.

### ***The absence of social learning capacity and the failure to turn words into actions***

Already criticised for their lack of results prior to the 2008 dry year,<sup>425</sup> the PARBP-TA stopped the facilitation of the sub-basin working groups from 2008 to 2011. During this period, none of the people involved in these groups—including the 3 WMD directors—raised any concerns about the cessation of their activities. As described above, PARBP-TA referred to the absence legal framework to justify this halt. However, this argument is undermined by the fact that for almost two years after the official publication of the Water Law in April 2009, sub-basin meetings did not resume. Furthermore, international experiences show that the implementation of IWRM and decentralisation through MSPs can actually yield significant and practical results in the absence of or even outside legal frameworks, provided that strong efforts are put into facilitating experimentation and social learning.<sup>426</sup> Even within the PARBP, social water management projects at canal level, have achieved practical results with local institutions through the informal process of WUA formation and development. Some WUAs have been functioning continuously since 2006, although by the time of writing in late-2011 they had not yet been officially registered.

Ultimately, a capacity for social learning as a way to support resolution of water management problems will be critical if RBCs and RBAs are to add value, and thus legitimacy, to their roles.

423 Interview with one of the WMD directors in the study area.

424 In the case of the water allocation agreement at the Khanabad barrage, the PARBP-TA facilitator did offer to use GIS-based command areas. However, as discussed elsewhere above, numerous adjustments had to be made due to challenges from the *mirabs*. Similarly, in 2008, the Takhar WMD director had already refused to use GIS data when he proposed a water allocation schedule among Takhar canals in response to the dry year (author's personal observation).

425 Varzi and Wegerich, “Much Ado About Nothing.”

426 J. Bird, W. L. Arriens, and D. Von Custodio, “Water Rights and Water Allocation—Issues and Challenges for Asia,” (Manila: Asian Development Bank, 2009). The authors refer to the example of the Bang Pakong River Basin Committee in Thailand to demonstrate that the shift to a more participatory approach can be initiated even without full legal coverage.

However, it appears that this is one major area where PARBP-TA has failed to push home its efforts. It was expected that the lessons learnt by the sub-basin working groups would help them develop the social capital necessary to address the water allocation challenges of the kind encountered in 2011. Indeed, the dry years of 2008 and 2011 should have provided opportunities for them to learn lessons and capitalise on experience. Yet in both cases none of the stakeholders involved apart from the PARBP-TA facilitator took any initiative in using these experiences to develop better plans for similar events in future.

In the 23rd Taloqan sub-basin working group meeting on 21 December 2011, the focus of attention was again on forming an RBC working group in preparation for the election of a formal RBC in a year's time. A list of the 13 water sectors that would be involved—already identified in 2006—was shown for approval. As the WMD director of Takhar commented:

*Since 2006, PARBP has not been able to have even a stable working group for the sub-basins and now they ask us to choose RBC members for the coming year...In these meetings, they just talk about their own plan and keep repeating the same thing. This time they talked about selection of permanent members of RBC. This has been discussed already in 2006 and nothing happened. Now they want to renew that.<sup>427</sup>*

In the 22nd meeting—immediately following the 2011 irrigation season—the points on agenda as proposed by the facilitator included: “sub-RBC composition,” “drought prevention” and “conflict resolution.” Yet despite this, there was no discussion of the lessons learned in 2008 and 2011, and how these could be applied in addressing matters such as RBC composition and decision-making, support needs (human resources and capacity, financial, technical requirements and so on) and other critical aspects of RBM. Furthermore, recommendations remained extremely vague and contained no action plan. For instance, “drought prevention” recommendations were limited to the following bullet points:

- “Introducing water saving crops—such as SRI”;
- “Ban on rice”;
- “Training on flow measurements”;
- “Training on operations and maintenance”;
- “Construction of dams by the government”;
- “Fair distribution of water.”

Yet all these points had already been raised in similar meetings dating as far back as 2007.<sup>428</sup> The Baghlan WMD director expressed an opinion shared by his counterparts in Takhar and Kunduz: “Since the beginning, I have never seen any problem resolved through these sub-basin working group meetings. Every time we discuss, there are talks but nothing happens between the meetings, we keep saying the same things.”<sup>429</sup>

In fact, every one of the above bullet points would itself require in-depth examination, facilitated discussion, constant follow-up and targeted capacity development before it led to any tangible change in practices. It is worth examining these points—which continue to appear, without action, meeting after meeting, year after year—in more detail:

**SRI and water saving methods/ban on rice:** Since 2008, three NGOs<sup>430</sup> and the consultancy firm Landell-Mills have been training farmers and MAIL staff on SRI. Encouraging results have been measured, experiences documented and training materials developed.<sup>431</sup> MAIL and WMD

427 Interview # 93.

428 Author's personal observation during participation in these meetings.

429 Interview # 62.

430 Aga Khan Foundation, German Agro Action and Mercy Corps.

431 Thomas, and Ramzi, “SRI Contributions to Rice Production.”



provincial directors have been informed, while donors are fully aware of SRI's potential as a tool for reducing water demand in rice growing areas, especially during dry years. Yet despite MAIL launching a large on-farm water management programme, it has neither proposed nor requested the upscaling of SRI in the LKSB or TSB. This suggests that sub-basin working group members continue to lack capacity in seeking institutional support to turn its ideas or information into actions. In the mean time, working group stakeholders have been requesting a "ban on rice" for several years, despite knowing that it is clearly not feasible<sup>432</sup> without offering a viable alternative.

**Training on flow measurement:** At river basin level, there is little point in measuring flow as long as *abandâz* remains the water allocation principle, since flow data is unnecessary for planning or monitoring in a time-based system.<sup>433</sup> The fact that this demand was even made raises questions about the quality of facilitation in such meetings.

**Training on operations and management:** The main issue here is why, despite the fact that several large canal intakes and headworks have been completed over the past years,<sup>434</sup> no training has yet been provided. Just as important is the question of why no discussion has been initiated on who should have the responsibility for gate operation during dry periods, or who should provide maintenance for such large and expensive infrastructure. For instance, in spring 2010, the Qelagay intake suffered flood damage, while sedimentation occurred close to the main gate due to inadequate operation. Because of lack of clarity on who was responsible, no agency (including PARBP, WMD and others) was ready to deal with the repair. The blame was even placed on *mirabs*, even though they had not received—and are still yet to receive—any training.<sup>435</sup>

**Construction of dams:** This is already one of the main plans of MEW.<sup>436</sup> However, so far none of its feasibility studies have ever involved sub-basin working group members. This raises questions about both the participatory nature of large-infrastructure planning, and the perceived legitimacy of sub-basin platforms to engage in these discussions.<sup>437</sup>

**Fair distribution:** A vague recommendation, this is presented without any accompanying analysis of what this would mean, what changes it would require, and what capacity would be needed. This leads to the question of why there has been a complete absence of follow-up aiming at learning lessons from past experiences on the issue. For example, as mentioned above, the PARBP team leader presented a water allocation plan and distribution schedule in 2008, only to see it sink without trace. It is thus important to understand why this previous attempt at "fair distribution" failed.<sup>438</sup>

Clearly, lessons have not been learnt through the sub-basin working group, resulting in the repeated development of similar wish lists accompanied by no plan on what, how and through whom they should be achieved.

### Losing grip

Key members of the sub-basin working groups such as the WMD directors clearly felt unprepared and largely held PARBP responsible. According to the Takhar WMD director:

432 Thomas and Ahmad, "A Historical Perspective on the Mirab System."

433 Training on flow measurements in canals would be different. It has in fact been provided by a number of NGOs in response to specific demands in relation to local water management bylaws.

434 See for instance Qelagay, Jangharoq, Sharawan, Said or Zargar canals.

435 E-mail correspondence with PARBP-TA Senior Irrigation Engineer dated 30 July 2011.

436 See "Water Sector Strategy."; see also "Agriculture and Rural Development (ARD) Cluster—National Priority Programme (NPP) 1: National Water and Natural Resources Development Programme. Component A: National Water Resources and Irrigation Programme (NWRIP) - First draft, July 2011" (Kabul: Government of the Islamic Republic of Afghanistan, 2011).

437 This is for instance the case for the Qelagay and Nahrin dams. For Qelagay, despite the fact that the dam construction would imply submergence of a certain number of houses in Doshi, no discussion has ever been initiated.

438 This may also be due to the turnover in facilitators from 2008 to 2011, which has disrupted the institutional memory of the sub-basin working group.

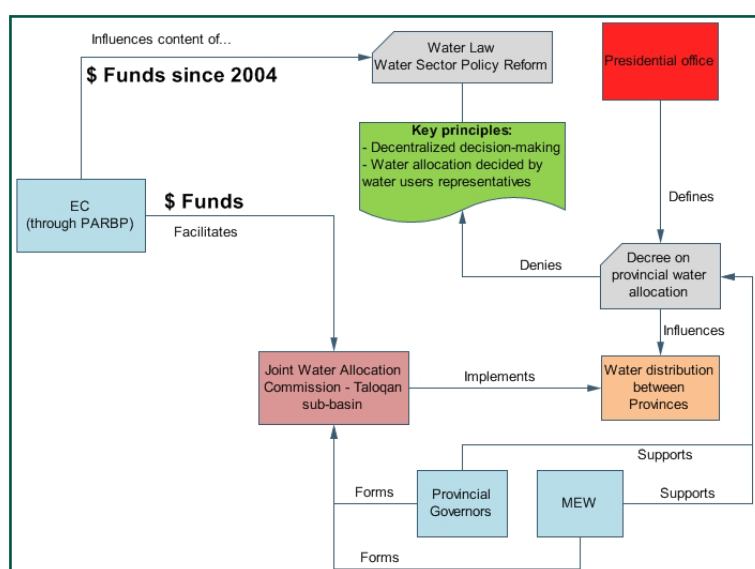
*In all provinces like Baghlan, Kunduz, Takhar, Bamiyan and Badakhshan even the line departments like MRRD, MAIL or the Ministry of Environment don't know about RBAs and RBCs. They don't know about the new policy on water management in Afghanistan. This PARBP has brought a system from outside the country and wants to implement it without even bringing awareness to the people. [...] I don't know how they will form the RBC and how they can give them the authority of making decisions while most people don't know anything about this new system. We have requested and recommended many times that PARBP raises awareness among relevant departments and water users but we still have not received any news from them. And I'm sure that they don't have any plan for that.*<sup>439</sup>

Similarly, the Kunduz WMD director explained:

*You know, forming RBAs and RBCs is not easy. It requires training from expert people with clear plans and knowledge of how to implement the plan, how to make the presentation on time, how to collect feedback etc. But in PARBP they don't have such people and they don't pay attention to it.*<sup>440</sup>

A change in the way PARBP-TA develops the capacity of its working groups is clearly needed if it wants the new institutions to play a meaningful role in dealing with water allocation during dry periods. This change needs to move away from a narrow focus on “forming groups and organisations” to an emphasis on “developing institutions”. Among many activities, this would require developing individuals’ awareness and capacity in different water management methods and concepts.

**Figure 19: Contradictions in funding from the EC and PARBP**



### ***In search of legitimacy***

During the 2011 dry year, the PARBP-TA maintained a semblance of legitimacy through its financial support to the activities of the different WACs.<sup>441</sup> To keep this legitimacy, the PARBP (and its funding agency EC) did not hesitate in supporting approaches contradictory to the ones it has been promoting since 2005. Figure 19 illustrates that in 2011, the PARBP and EC funded the activities of a WAC that oversaw water distribution largely influenced by a presidential decree, one which completely denied the key principles of the Water Law, the development of which was itself heavily influenced and funded by PARBP. Although it could be argued that WAC members

439 Interview # 93.

440 Interview # 107.

441 On that front, there were still critics from various actors (from water users to line ministries) about not receiving their due after the irrigation season.

from Takhar ultimately rejected the decree, the EC started funding the WAC before knowing that this would be the case. Secondly, the governor's representatives and WMD staff who officially support this decree as part of their responsibilities have also been supported financially by PARBP.

At the same time, PARBP has not yet suggested any strategy or plan for ensuring the future financial sustainability of the RBCs and sub-RBCs that it envisions will replace the WACs.

### 7.3 Final reflection on institutional development in the water sector in Afghanistan

In Section 1, this paper referred to the concept of institutional bricolage to warn that in many instances, new NRM institutions continue to refer to existing practices. Moreover, new institutional designs are especially hard to apply when they draw on foreign principles and ideas. It also used the concept of path dependency to highlight how existing local institutions often resist change by sticking to practices that reinforce local power imbalances.

Both case studies have offered insights into the challenges of institutional change in the context of a water sector reform inspired by foreign concepts. The case of the LKSB illustrates that the traditional system of *abandâz* is still deeply rooted in local practices, which resist the idea of clear water rights translated into permits. Similarly, local practices in both sub-basins show that local government in the form of the WMDs and provincial governors still maintains a critical decision-making role, and is eager to impose decisions and skip participatory processes when the power balance is in its favour.

Local practices also show how administrative boundaries still have a strong influence on decision-making processes over water allocation, partly because of the legitimate role of the provincial governor in supervising, validating and enforcing it. While new institutional reforms are promoting a shift from administrative to hydrological boundaries, it is clear that existing political boundaries cannot be dismissed so easily. Both the TSB and to a lesser extent the LKSB demonstrate that decision-making over water allocation is not limited to institutions confined within natural sub-basin borders. Indeed, local actors such as Kunduz farmers have been able to mobilise national institutions and actors including MPs and even the president's office, all of whom have an active influence over water allocation.

Furthermore, the composition of MSPs engaged in water allocation in the two basins during the 2011 dry year followed a different logic to that proposed by institutional reforms. On one hand, the reform broadly divides water users and line ministry representatives into different sub-basin organisations in the form of RBCs and RBAs respectively. In addition, the RBC is formed on the basis of representation among different water sectors. On the other hand, local practice produced interacting institutions with flexible, variable compositions shaped by the problem at hand rather than generic and pre-determined criteria. Overall, the case studies provide a classic example of institutional reforms failing to substantially influence local practices, showing how institutional development on the ground has followed its own path—one largely divergent from the principles laid down on paper in Kabul.

Furthermore, both case studies show that despite not fitting the “good water governance” model, local arrangements have produced positive results in terms of both water access for downstream users and containing conflicts. Lessons now need to be learned and strategies developed on how to balance existing practices with progressive adjustments toward better governance. A less rigid approach needs to be adopted, oriented toward practical and operational results rather than constitutional achievements such as the adoption of laws and regulations or the formation of groups.

In other words, rather than pushing for institutional changes on paper, it may be wise for the PARBP and similar programmes to work within existing local structures and look for solutions to problems these structures have themselves identified. In the process, the “good water governance”

concepts of the Water Law could be introduced if deemed relevant to the problems at hand. This means that PARBP will need to adopt a more adaptive approach rather than following a script which, so far, has triggered no buy-in at local or national level among key decision-makers.

## 7.4 Recommendations

This section provides recommendations mainly for the PARBP and the EU as funder of the programme.

### *Compromises on models*

As the research findings suggest, adopting a rigid approach to “good” governance as proposed by the Water Law may be counterproductive in the current contexts of the TSB and LKSB—at least as far as water access for downstream provinces is concerned. This does not mean that efforts to improve governance in Afghanistan’s water sector should be abandoned; rather, it means that the current model should not be seen as a blueprint to be followed strictly at all times. Based on the lessons learned from practices on the ground in the current context of institutional transition, compromises will need to be made to find a balance between performance—in terms of equitable water access—and good governance. This should involve more systematic monitoring of practices on the ground, and the allocation of sufficient resources to evaluate performance, analyse gaps and identify lessons learned. Currently, neither MEW nor MAIL have acknowledged the need for such efforts.

### *Less focus on laws and regulation, more focus on the resolution of practical problems*

In past years, the PARBP has focused a great deal on developing laws and regulations, but has devoted relatively few resources to developing practical responses to identified problems. Continuing along this trend will not improve the already low levels of buy-in of many local and national actors regarding the governance principles enshrined in the Water Law. Additionally, it will not improve the current sense of disenchantment with PARBP, at least when it comes to its governance component. In the run-up to 2014—the time when EC plans to withdraw its direct engagement—the PARBP should reduce its focus on further developing regulations, albeit without abandoning it completely. Instead, it should adopt a more utilitarian approach to addressing tangible problems in the ground. In doing so, PARBP could also identify entry points to promote a new model of governance and management. This would help demonstrate in practice that alternative management practices in line with the Water Law can ultimately generate better results than existing ones.

For instance, the PARBP now has a great opportunity to support the development of water rights at the sub-basin level between Takhar and Kunduz. Takhar stakeholders are generally open to discussion and review of the presidential decree, as long as the process is participatory and decisions are not imposed. However, at the time of writing the process seemed to be making very limited progress. There is thus a clear space for PARBP to play a facilitating role, including for fact-finding, role play and analysis of alternative water allocation scenarios.

### *More efforts on learning and collective fact-finding*

As part of efforts to resolve practical problems, it is important to develop river basins profiles which can then be used as a basis for participatory planning. For instance, flow measurement infrastructure needs to be functional and water balance analysis needs to be systematic and reliable. Achieving these ends will require a greater emphasis on technical capacity-building.

In the case of the TSB, the “policy as learning/joint fact-finding” suggested by Hisschemöller’s framework (see Figure 4) could very likely yield positive results. A well-facilitated joint fact-finding effort would improve the certainty of data for both Kunduz and Takhar water users. If these efforts are combined with facilitated discussions to build consensus on water allocation principles in both provinces, they could support a more structured approach to the water allocation problem, which would in turn open possibilities for easier regulation of the issue.

In the case of the LKSB, consensus on water allocation principles (i.e. fixed water rights versus *abandâz*) is less likely than in the TSB. In this instance, the *abandâz* system is likely to remain in place by default. Nevertheless, improved collective fact-finding can still yield improvements. Future definition of *abandâz* may create less resentment within Baghlan if it appears to be a negotiated outcome based on collective analysis. For the next dry year, facilitated discussions could start earlier in the irrigation season. On the Baghlan side, these could include joint definition and assessment of what criteria should be considered when defining a socially acceptable duration of *abandâz* for both Kunduz and Baghlan. Criteria could include soil type, location of canals, crops grown, canal conveyance capacity, and the existence, duration and timing of water turns within canals. Other socio-economic characteristics could be included if feasible and perceived as relevant by concerned stakeholders. The overall point is not to over-rationalise decision-making, but to increase the transparency and level of consensus of decisions taken.

However, while this approach could lead to more acceptable results, it is not without risks. Even with better transparency, the multiplication of debates and participants could lead to chaos if not facilitated skilfully. For example, if Baghlan District canals were to exploit their position of strength to impose their point of view, other canals defined by similar criteria could align with their position. This could then make *abandâz* less effective for Kunduz. It is therefore important that any such exercise is grounded in a firm understanding of local power dynamics.

### ***Rethink MSP composition and structure at sub-basin level***

There is need for a collective re-think of current discussions regarding the composition and structure of sub-RBCs and RBCs based on lessons learned regarding existing practices (starting with those documented in this paper). In the case of sub-RBCs, it may be better to think more in terms of several nested MSPs with more flexible compositions that can be adapted to a specific “problem-shed,” rather than generic models. This could involve including a number of community elders and respected leaders (including members of local government if relevant) as members of the sub-RBC. These individuals could then be responsible for supporting the formation of technical sub-committees depending on the type and scale of the issues at stake (drought mitigation, flood preparation, upper-catchment development planning, dams and infrastructure planning, etc). Elders’ understanding of the issues and experience of social and political dynamics in different areas of the sub-basins could also boost the legitimacy of these sub-committees. This would thus be a compromise between a permanent sub-RBC with a permanent structure on the one hand, and the flexibility of sub-committees mobilised in response to specific and evolving problems on the other. However, in the event of greater flexibility it may still be necessary to keep a certain number of criteria imposed by law in order to protect traditionally disadvantaged groups such as women or minorities.

### ***Engage in discussions and collective decision-making to evaluate different actors’ positions on key principles of water sector reform***

#### **On decentralisation**

Considering that strict decentralisation is unlikely to be feasible, there is a need to establish what decisions should be taken at national level and which decisions should be left to sub-RBCs. During a roundtable organised by AREU on 3 April 2012, a former PARBP team leader<sup>442</sup> argued that certain rules focused on public interest and resource protection should be defined at central level. This suggests that certain standards—such as minimum flows at certain points along the river—could be decided at the national level while other arrangements regarding water allocation could be left to sub-basin stakeholders.

#### **On devolution of power to water users**

There is also a need for discussion and decisions on what decisions should be left—as a case of last resort—to water users, and which ones should be left to the local government, governors

<sup>442</sup> During the research period, this individual was still the PARBP team leader. He resigned from this position shortly before the time of the roundtable.

or other actors. It may also be advisable to define conditions in which certain decisions may be overridden, such as in protecting the interests of vulnerable groups. Key questions in this respect include when it is legitimate for governors or sub-RBAs to intervene and take decisions, and under what conditions they should be excluded from the decision-making process.

### On the role of governors

While governors can be very influential in dealing with sensitive issues of natural resources management, their mandate should remain strictly tied to the provincial level. It is therefore important to examine how to best reconcile the necessity of working with governors on the one hand, and the importance of adopting a river basin management approach on the other. Although in 2011, upstream provinces' governors were supportive of downstream provinces' water users, it has been shown that the factors behind this support are not sustainable. Considering the influence of the president on governors—as demonstrated in the TSB case-study—it may be wise to circulate orders from the presidential office to encourage coordination between the governors of provinces with overlapping hydrological borders, as laid out in the principles of the Water Law. This may be particularly relevant to prevent a repeat of the situation in 2008, where strained relations between governors hampered the design and implementation of *abandâz* or other water allocation agreements. During the AREU roundtable discussion, the former PARBP team leader suggested that different governors could have alternating chairpersonship of the River Basin Advisory Board, and that regulations could be developed to this effect. However, a question remains over how occupants of this position would balance their advisory and decision-making roles.

### *Develop future sub-RBCs' social learning capacity and ability to mobilise institutional support*

The current resources offered by PARBP are not sufficient to develop performing sub-RBCs. In particular, more highly-qualified facilitators are required to transform sub-RBCs into a social learning platform. This could start with an independent evaluation of the functioning of the sub-basin working groups, an act which would in itself require significant resources to conduct surveys, FGDs and collect the opinions of various groups of stakeholders.

The social learning capacity of sub-RBCs and their ability to mobilise support both need to be considered as performance indicators, specifically:

1. Their ability to carry forward decisions and incorporate findings into other institutions' programmes and projects. This includes developing formal linkages with line ministries, NGOs, IDLG, PCs, ANDMA and others.
2. Their capacity to learn from experiences. As donor to the PARBP, the EU should regularly and objectively assess whether the local institutions they are developing are actually putting some lessons learned into practice. Any change in the understanding and behaviour of various stakeholders regarding good water governance and improved performance in water allocation needs to be closely monitored. Otherwise, it is very likely that programmes and policy agendas as defined by international agencies will continue have little influence on the ground. In order to ensure accountability, the agency in charge of facilitating the process of social learning and support mobilisation also needs to be evaluated in its capacity to foster such change.

### *Allocate resources to expand water governance discussions to national platforms*

The case of the TSB demonstrates that it is critical to engage with MPs and other key power brokers in Kabul on the “good governance” principles of the Water Law. There is a need to both raise greater awareness of the Law among these actors, and assess their perceptions of it. In relation to this, it is important to foster open debates about how much good governance can (or cannot) be achieved in the short- to mid-term, and what resources and actions are needed in this regard. This should include issues of devolution of decision-making power, decentralisation, and the role of governors in sub-basin planning and management.

### ***Define support role of the PC, IDLG and ANDMA to support RBC/RBA set-up and activities***

So far, the role of PC members in sub-RBCs has not been defined. It may be worth investigating their potential to act as facilitators between sub-RBAs and sub-RBCs. They could also help mediate or resolve conflicts by taking certain key decisions out of the hands of water users themselves, albeit while still remaining accountable to them. In theory, the IDLG could also provide regular and independent evaluations and assessments of the sub-RBAs and sub-RBCs. These assessments could then provide a basis for recruitment of sub-RBA directors, as well as supporting social learning for the sub-RBC. Given ANDMA's mandate of post-disaster intervention, it should include the different institutions (i.e. sub-RBCs and sub-RBAs) involved in dealing with dry periods in their planning for relief distribution. This would be one way to enhance the credibility of the sub-RBCs and sub-RBAs. It may also be advisable to link relief distribution with the performance of different canals in respecting their agreements on water allocation.

### ***Investigate the financial viability of sub-RBCs***

Since the activities of the WACs in the LKSB and TSB have to date largely been subsidised by the EU, it is critical to investigate how sub-RBCs (mainly composed of water users) can become financially self-sustaining. In the absence of financially viable sub-RBCs, it is very likely that sub-RBAs (composed of line ministries) will become the main actors leading discussions on water allocation. This would automatically increase their influence in the process, thus upsetting the aim of giving more decision-making power to the water users. The recent efforts of the PARBP-TA to allow sub-RBCs to levy fees are a step in the right direction, but will not be sufficient. Ultimately, the willingness of water users to pay fees will depend on the capacity of sub-RBCs to actually deliver tangible benefits.

### ***Devote fewer resources to hydraulic infrastructure, and more to successfully tested water-saving methods***

Hydraulic infrastructures rehabilitation and on-farm water management projects are both important and necessary components in improving water access for currently disfavoured communities. However if limited resources mean a choice has to be made between these two in the LKSB and TSB, it may be better to shift the focus from canal rehabilitation to reducing water demand. Considering the sensitivity of water rights issues and low enforcement capacity in several areas of the sub-basins, it may be more effective to reduce demand than to struggle on with improvements to technical control and the challenging of existing allocation principles. In both sub-basins, there is significant potential to reduce water demand on the ground. This is particularly true in rice growing areas. Methods such as SRI have demonstrated that it is possible to improve yields while reducing irrigation water demand. However, these would need to be adopted at a large scale in order to have an impact at the sub-basin level. This approach would be particularly relevant in the LKSB, where a change from *abandâz* to a more equitable system of distribution is currently not viable. Since MEW is currently more interested in infrastructure development, MAIL would be better placed to implement these changes, and on-farm water management is in fact one the important area of development in the ministry. However, the programmes remain confined to the provincial level and do not currently take a sub-basin development approach.

## Annex 1: List of interviews

Number	Name	Position	Location	District	Province	Sub-basin	Date
1	Nematullah	Mirab and WAC member	Abdullah canal	Ali Abad	Kunduz	LKSB	16/08/2011
2	Hameedullah	Mirab	Alchin canal	Kunduz	Kunduz	TSB	21/08/2011
3	Haji M. Baqi	Mirab	Aqtepa canal	Qala-i-Zal	Kunduz	LKSB	17/08/2011
4	Ahmad Zai	Facilitator	PARBP	Kunduz	Kunduz	LKSB	13/08/2011
5	Abdul Rayom	Mirab	Asqalan canal	Kunduz	Kunduz	TSB	17/08/2011
6	Arbab Mohammad Salih	Chak bâshi (mirab's assistant) and WAC member	Chahar dara canal	Chahar Dara	Kunduz	LKSB	21/08/2011
7	Hajji Ahmad Nashar	Mirab and WAC member	Chahar dara canal	Chahar Dara	Kunduz	LKSB	20/08/2011
8	Feraidoon Rustaqi	SWM project manager	Aga Khan Foundation	Pul-i-Khumri	Baghlan	LKSB	09/08/2011
9	Mr. Abdul Salam Makhdoom	Governor's office representative	Kunduz	Kunduz	Kunduz	TSB and LKSB	22/08/2011
10	Hajji Amir Jan	WAC member and WUA chairman, Goltepa canal	Goltepa canal	Kunduz	Kunduz	TSB	18/08/2011
11	Hamed Zaman	PARBP social mobilisation	PARBP	Pul-i-Khumri	Kunduz	TSB and LKSB	14/07/2011
12	Hamed Zaman	PARBP social mobilisation	PARBP	Pul-i-Khumri	Kunduz	TSB and LKSB	11/08/2011
13	Hashimi	Facilitator	PARBP	Kunduz	Kunduz	TSB and LKSB	11/08/2011
14	Khan Mohamad	Mirab	Naqi canal	Khanabad	Kunduz	TSB	13/08/2011
15	Mohamad Zaher	WAC member and WUA chairman	Khanabad left bank	Khanabad	Kunduz	TSB	13/08/2011
16	Aleudin	WAC member and WUA chairman	Khanabad right bank	Khanabad	Kunduz	TSB	13/08/2011
17	Azizullah (Aimaq)	MAIL director	Kunduz	Kunduz	Kunduz	TSB and LKSB	16/08/2011
18	Paenda	SWM project unit manager	Mercy Corps	Kunduz	Kunduz	LKSB	12/08/2011
19	Haji Mustafa Qul	WAC member, WUA chairman and mirab	Qala-i-Zal canal	Qala-i-Zal	Kunduz	LKSB	14/08/2011
20	Mehrabudin	WUA chairman	Qaryateem canal	Chahar Dara	Kunduz	LKSB	15/08/2011
21	Rayner Roth	Key informant	PARBP	Kunduz	Kunduz	LKSB	04/08/2011
22	Ghwand Alam	Mirab	Sufi canal	Chahar Dara	Kunduz	LKSB	14/08/2011
23	Sayed Shah	WUA chairman and WAC member	Tarboz Gozar canal	Qala-i-Zal	Kunduz	LKSB	14/08/2011
24	Engineer Sayed Ahmad Naser	WMD director	Kunduz	Kunduz	Kunduz	TSB and LKSB	24/08/2011
25	Zial Huq	WMD district director	Khanabad District	Khanabad	Kunduz	TSB	23/08/2011
26	Mohamad Youssef	Mirab	Yangaroq canal	Qala-i-Zal	Kunduz	TSB	22/08/2011
27	Noor Zaman	Mirab	Zolm Abad	Qala-i-Zal	Kunduz	LKSB	21/08/2011



28	Qamal	<i>Mirab</i>	Arabha	Qala-i-Zal	Kunduz	LKSB	21/08/2011
29	Abdul Ahad	<i>Mirab</i>	Chaman canal	Taloqan	Takhar	TSB	19/09/2011
30	Abdul Satar	<i>Mirab</i>	Jui Daraz	Taloqan	Takhar	TSB	25/09/2011
31	Key informant	Senior expert in SWM, project manager	n/a	Taloqan	Takhar	TSB	25/09/2011
32	Engineer Salem Akbari	WMD director	Taloqan	Taloqan	Takhar	TSB	22/09/2011
33	Farid Zaki	Deputy governor	Taloqan	Taloqan	Takhar	TSB	25/09/2011
34	Gull Rahman	WUA chairman	Qulbars canal	Taloqan	Takhar	TSB	19/09/2011
35	Haji Abdul Quduz	WAC member	Gawmali canal	Taloqan	Takhar	TSB	20/09/2011
36	Haji M. Azad	Key informant	Retired government official	Taloqan	Takhar	TSB	22/09/2011
37	Haji G Nabi	WAC member	Zargar canal	Taloqan	Takhar	TSB	20/09/2011
38	Haji G Sakhi	WAC member	Sharawan canal	Taloqan	Takhar	TSB	20/09/2011
39	Haji Qutbuddin	WUA chairman	Shurab canal	Taloqan	Takhar	TSB	11/09/2011
40	Haji Sarwar	WUA chairman	Bangi (upstream), Charcheshma canal	Bangi	Takhar	TSB	22/09/2011
41	Mohammad F. Sakhi	Deputy governor	Taloqan	Taloqan	Takhar	TSB	18/09/2011
42	Haji Najibullah	WUA chairman	Said canal	Taloqan	Takhar	TSB	24/09/2011
43	Mr. Mujeeburahman	PC deputy chairman	Taloqan	Taloqan	Takhar	TSB	19/09/2011
44	Qari A. Khaliq	WUA member	Bangi (downstream)	Bangi	Takhar	TSB	27/09/2011
45	Saifullah Bek	WUA chairman	Zargar canal	Taloqan	Takhar	TSB	18/09/2011
46	Senator Assadullah	Senator	Taloqan	Taloqan	Takhar	TSB	20/09/2011
47	Sher Khan	WAC member	Sharawan canal (downstream)	Khwaja Khar	Takhar	TSB	20/09/2011
48	Mohasel	<i>Mirab</i>	Baladori	Pul-i-Khumri	Baghlan	LKSB	16/11/2011
49	Mohammad Hussain	DAIL staff	Pul-i-Khumri	Pul-i-Khumri	Baghlan	LKSB	22/11/2011
50	Mohammad Naeem	<i>Mirab</i>	Darqad	Pul-i-Khumri	Baghlan	LKSB	17/11/2011
51	Faysal	PC member	Pul-i-Khumri	Pul-i-khumri	Baghlan	LKSB	21/11/2011
52	Jan Mohammad (Janan)	<i>Mirab</i>	Gawhargan	Pul-i-Khumri	Baghlan	LKSB	19/11/2011
53	Abdul Baqi	<i>Mirab</i>	Gurgorak	Pul-i-Khumri	Baghlan	LKSB	17/11/2011
54	Haji Abdul Karim	Head of NSP	Baladori canal	Pul-i-Khumri	Baghlan	LKSB	24/11/2011
55	Mofti Ghulam Rabbani	Ulema <i>shura</i> head	Doshi	Doshi	Baghlan	LKSB	21/11/2011
56	Mohammad Haroon Abid	IDLG	Pul-i-Khumri	Pul-i-Khumri	Baghlan	LKSB	22/11/2011

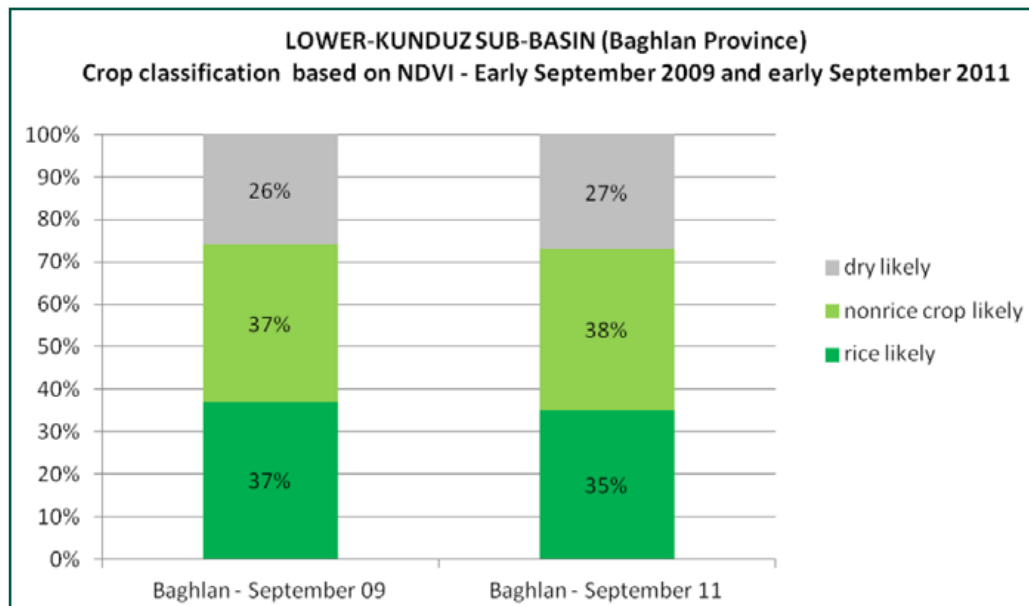
57	Qari Qutratullah	PC spokesperson	Pul-i-Khumri	Pul-i-Khumri	Baghlan	LKSB	20/11/2011
58	Mohammad Husain	<i>Mirab</i>	Qelagai canal	Doshi	Baghlan	LKSB	17/11/2011
59	Naimudin	WUA chairman	Qelagai canal	Doshi	Baghlan	LKSB	16/11/2011
60	Nassir	SWM project senior community mobiliser	Aga Khan Foundation	Pul-i-Khumri	Baghlan	LKSB	16/11/2011
61	Amir Gul	Baghlan District governor	Baghlan	Baghlan	Baghlan	LKSB	28/11/2011
62	Engineer Naeem	WMD Director	Pul-i-Khumri	Pul-i-Khumri	Baghlan	LKSB	22/11/2011
63	Gul Mohammad	WUA Chairman	Jangharoq canal	Baghlan	Baghlan	LKSB	16/11/2011
64	Haji Farooq	WUA cashier	Sarkary	Baghlan	Baghlan	LKSB	20/11/2011
65	Haji Nawrooz + Mamoor Allaghul	<i>Mirab</i> and WUA chairman	Ajmir canal	Baghlan	Baghlan	LKSB	17/11/2011
66	Imamudin	WUA member	Jangharoq canal	Baghlan	Baghlan	LKSB	21/11/2011
67	Atiquallah	WMD staff	Baghlan	Baghlan	Baghlan	LKSB	15/11/2011
68	Khudaidad	<i>Mirab</i>	Abqol canal	Baghlan	Baghlan	LKSB	19/11/2011
69	Nassim	WMD staff	Pul-i-Khumri	Pul-i-Khumri	Baghlan	LKSB	23/11/2011
70	Haji Atiquilla	WMD staff	Baghlan	Pul-i-Khumri	Baghlan	LKSB	26/11/2011
71	Qomandan Ghulam	Elder	Abqol canal	Baghlan	Baghlan	LKSB	21/11/2011
72	Rozudin	<i>Mirab</i>	Jui Naw	Pul-i-Khumri	Baghlan	LKSB	24/11/2011
73	Engineer Halim	Head of water rights department, MEW	Kabul	Kabul	Kabul	TSB and LKSB	14/09/2011
74	Mir Ahmad	<i>Mirab</i>	Said canal	Taloqan	Takhar	TSB	25/09/2011
75	Key informant	High ranking security commander from 2006 to 2010	Baghlan	Pul-i-Khumri	Baghlan	-	26/12/2011
76	Engineer Naseer Ahmad Fayeaz	Director of irrigation, MAIL	Kabul	Kabul	Kabul	-	03/10/2011
77	Hagi Ghulam Nabi	WAC member	Zargar canal	Taloqan	Takhar	TSB	20/12/2011
78	Abdul Qadeer	PC deputy chairman	Kunduz	Kunduz	Kunduz	TSB	25/12/2011
79	Sayed Sharif Shobair	FAO/EIRP national coordinator, senior advisor, MEW	Kabul	Kabul	Kabul	-	11/09/2011
80	Fatima Aziz	MP	Kabul	Kabul	Kabul	-	31/10/2011
81	Abdul Malik Sediky	IDLG deputy director	Kabul	Kabul	Kabul	-	01/11/2011
82	Jelle Beekma	PARBP team leader	Kabul	Kabul	Kabul	-	16/09/2011
83	Moheen Marastiyar	MP (2005-10)	Kabul	Kabul	Kabul	-	10/10/2011
84	Mohayudeen Balouch	Senior advisor to President Karzai	Kabul	Kabul	Kabul	-	17/10/2011
85	Sultan Mahmood	Director general, water affairs management, MEW	Kabul	Kabul	Kabul	-	06/10/2011

86	Shukria Paikan	Kunduz MP, member of the National Economic Commission	Kabul	Kabul	Kabul	-	23/10/2011
87	Khan Mohamad	Mirab of Naqi Khanabad canal (Khanabad left bank)	Naqi Khanabad canal	Khanabad	Kunduz	TSB	21/12/2011
88	Qomandan Sultan	Kunduz WUA member and head of Qobai Qochi WUA	Qobai Qochi canal	Khanabad	Kunduz	TSB	24/12/2011
89	Qomandan Ghulam Hazrat	Mirab of Goltepa	Goltepa canal	Khanabad	Kunduz	TSB	24/12/2011
90	Haji A. Baqi	WUA chairman	Asqalan canal	Kunduz	Kunduz	TSB	23/12/2011
91	Abdul Qadeer	PC deputy chairman	Kunduz	Kunduz	Kunduz	TSB and LKSB	25/12/2011
92	Mohammad Yussef	Mirab	Yangaroq canal	Kunduz	Kunduz	TSB	25/12/2011
93	Engineer Salem Akbari	WMD director	Taloqan	Taloqan	Takhar	TSB	21/12/2011
94	Haji Abdul Baqi	WUA chairman	Asqalan canal	Kunduz	Kunduz	TSB	24/12/2011
95	Sultan Mahmood	Director general of water affairs management, MEW	Kabul	Kabul	Kabul	-	18/12/2011
96	Sher Afzal	WUA member/member of Karzai's presidential campaign team	Alchin canal	Khanabad	Kunduz	TSB	27/11/2011
97	Haji M. Azad	Key informant	Retired government official	Taloqan	Takhar	TSB	22/12/2011
98	General Bassir	Former deputy director, administration and recruitment department, Mol	Kabul	Kabul	Kabul	-	25/01/2012
99	Qomandan Sultan	Kunduz WAC member and Kobai Quchi canal WUA deputy chairman	Kobai Quchi canal	Khanabad	Kunduz	TSB	24/12/2011
100	Maowlawi Abdul Samad	Takhar Ulema shura member, madrassa head	Taloqan	Taloqan	Takhar	TSB	20/12/2011
101	Maowlawi Khal Murad	Kunduz Ulema shura member, madrassa head	Kunduz	Kunduz	Kunduz	TSB	22/01/2012
102	Abdul Bassir Fakiry	Director of agriculture development programmes, MAIL	Kunduz	Kunduz	Kunduz	TSB and LKSB	25/12/2011
103	Miraqa Etubar	Head of ANDMA	Kunduz	Kunduz	Kunduz	TSB and LKSB	25/12/2011
104	Mutalib Beg	MP	Kabul	Kabul	Kabul	-	22/12/2011
105	Zaki	Deputy provincial governor	Taloqan	Taloqan	Takhar	TSB	22/12/2011
106	Sayed Najibullah	WUA chairman	Said canal	Taloqan	Takhar	TSB	20/12/2011
107	Engineer Sayed Ahmad Naser	WMD director	Kunduz	Kunduz	Kunduz	TSB and LKSB	24/12/2011
108	Engineer Salim	WMD director	Taloqan	Takhar	Takhar	TSB	22/12/2011
109	Hajji Abdul Khaliq and Abdul Bassir	Taloqan sub-basin WG members	Taloqan	Takhar	Takhar	TSB	21/12/2011

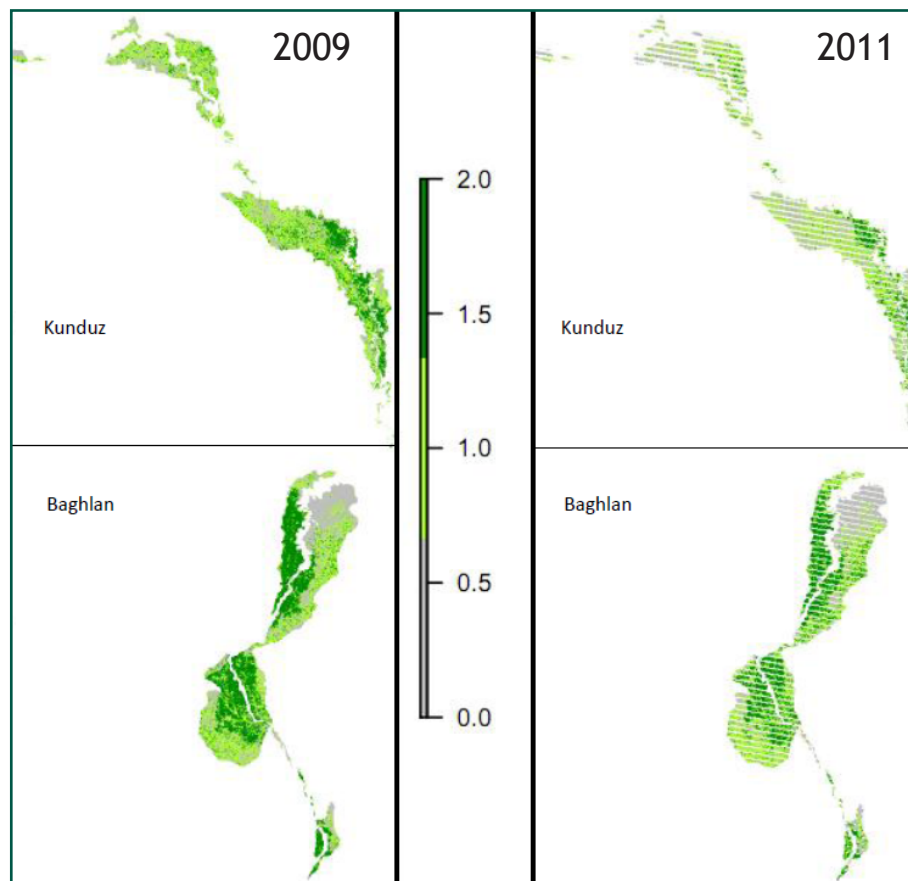
TL1	Bashi Muhammad Rahim	Elder	Gowargan canal	Pul-i-Khumri	Baghlan	LKSB	19/11/2011
TL2	Hajji Khal Muhammad	Elder	Qala-i-Zal canal	Qala-i-Zal	Kunduz	LKSB	28/11/2011
TL3	Hajji Muhammad Nazir	Elder	Goltepa canal	Kunduz	Kunduz	TSB	27/11/2011
TL4	Hajji Sayed Muhammad	Elder	Jangharoq canal	Baghlan	Baghlan	LKSB	26/11/2011
TL5	Hakim Khan	Elder and former <i>mirab</i>	Ajmir canal	Baghlan	Baghlan	LKSB	20/11/2011

## Annex 2: Crop Classification based on NDVI in the LKSB in 2009 and 2011

*Figure 20: Comparison of estimated cropping patterns in Baghlan Province in September 2009 and September 2011*

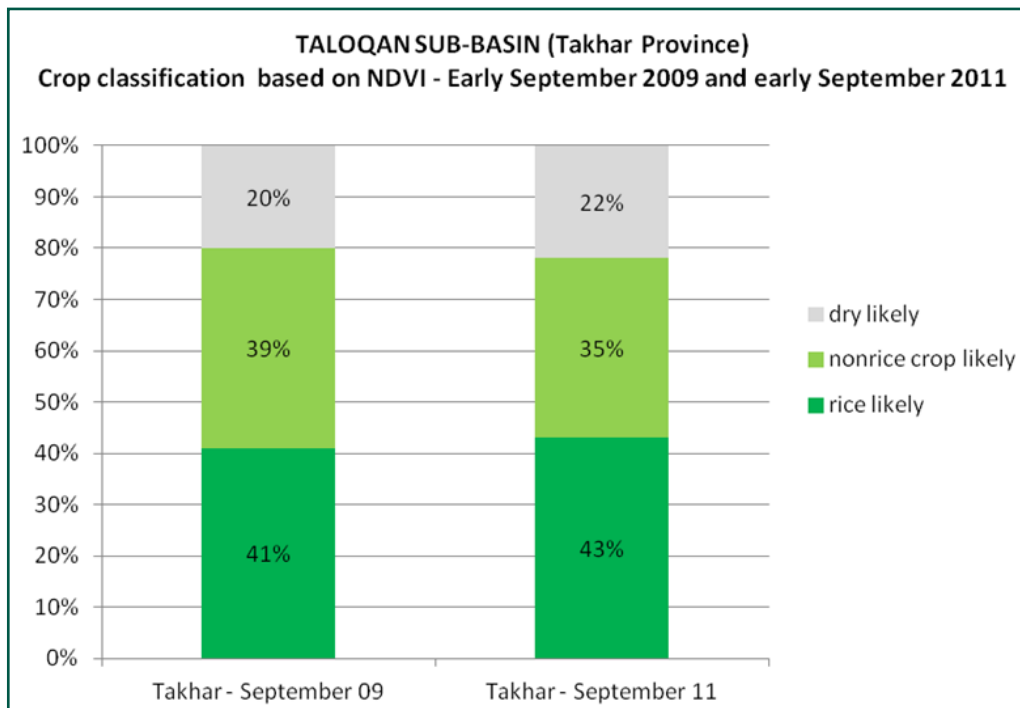


*Map 15: NDVI Map covering the LKSB command areas, September 2009 and September 2011*

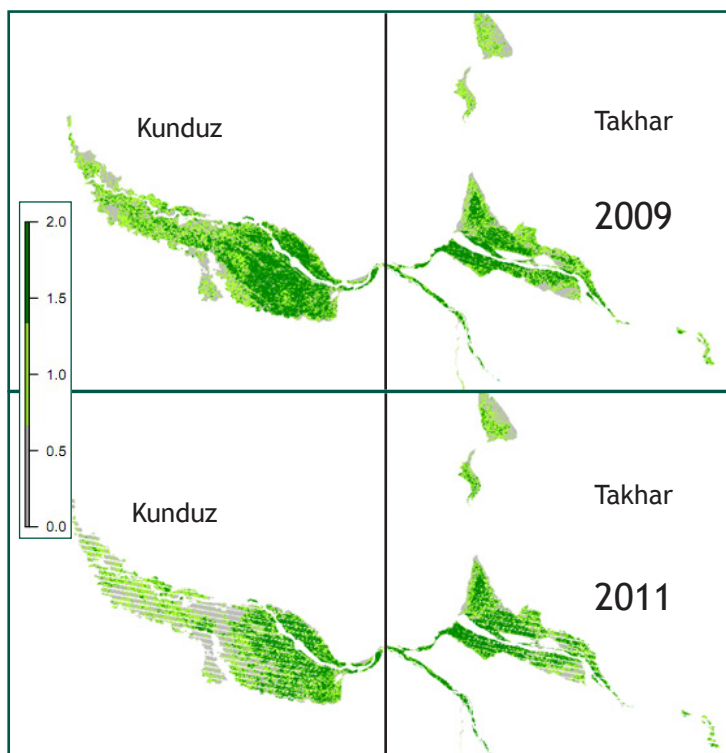


## Annex 3: Crop Classification based on NDVI in the TSB in 2009 and 2011

*Figure 21: Comparison of estimated cropping patterns in Takhar Province in September 2009 and September 2011*



*Map 16: NDVI Map covering the LKSB command areas, September 2009 and September 2011*



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